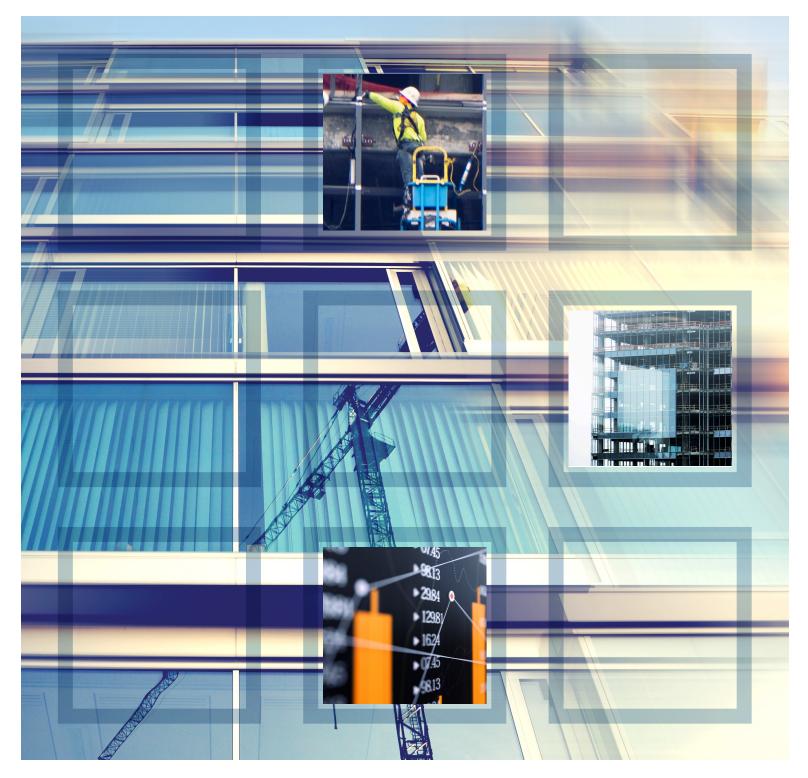


2021 North American Engineering and Construction Outlook

Second Quarter Edition



U.S. Key Takeaways

- Total engineering and construction spending for the U.S. is forecast to end 2021 down 1% compared to up 5% in 2020.
- Declines in 2021 will be led by decreasing investment in private nonresidential building segments, including lodging, office, commercial, and amusement and recreation. The impact will also extend into multifamily investment via mixed-use development along with reduced transporta-

tion, manufacturing, educational and religious spending.

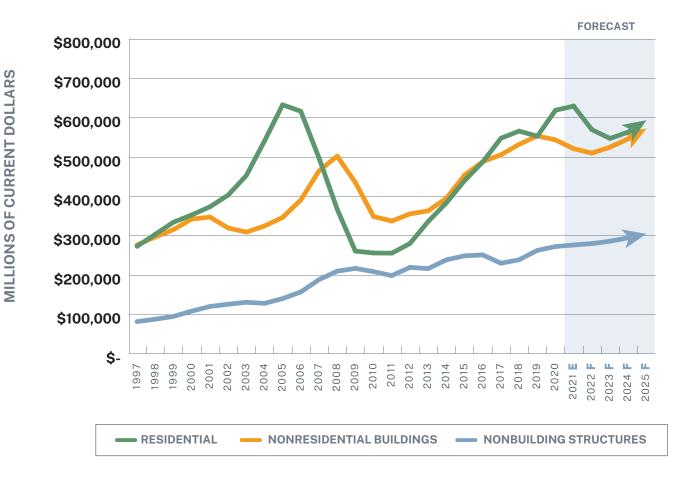
- Water supply is the only growth segment anticipated for 2021 year-end with rates more than 5%. Single-family residential, residential improvements and several other mixed public and private segments are expected to end the year with growth roughly in line with the rate of inflation, and therefore considered stable.
- The latest Nonresidential Construction Index (NRCI) feedback suggests significantly increased optimism heading into the second quarter of 2021, at 54.4, up from 47.1 in the quarter prior. The index has for the first time in a year broken into expansionary territory, surpassing the growth threshold of 50, and suggests increased engineering and construction opportunities ahead.

U.S. 2021 Segment Performance 2021/2020 Comparison

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



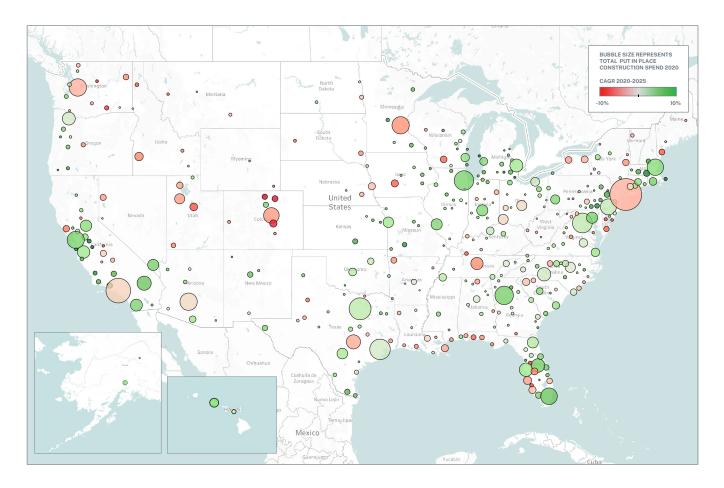
Total Construction Put in Place Estimated for the U.S.



SOURCE: FMI FORECAST Q1 2021



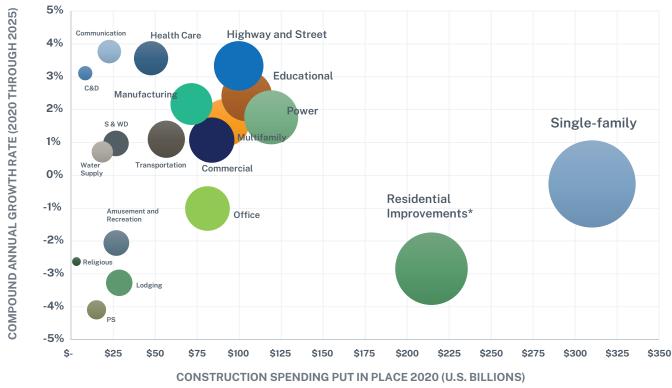
Total Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Metropolitan Statistical Area



SOURCE: FMI FORECAST Q1 2021



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



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

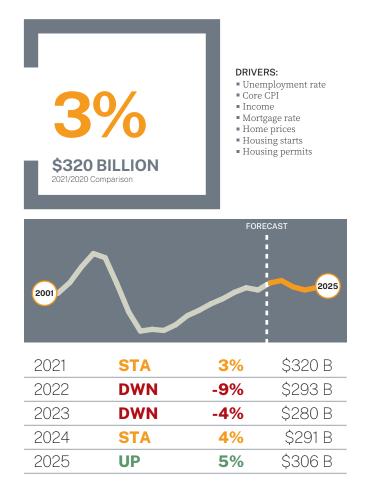
SOURCE: FMI FORECAST Q1 2021

Residential Construction Put in Place



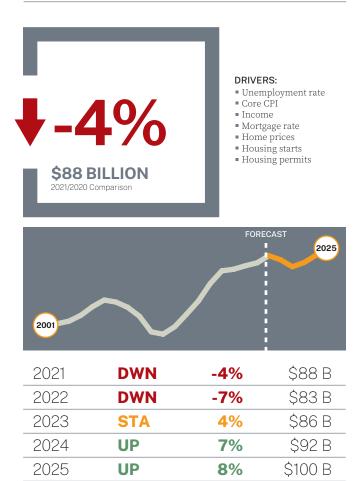


SINGLE-FAMILY RESIDENTIAL



- Heightened demand and limited supply will maintain investment levels through most of 2021.
- Extremely high construction costs via material prices will continue to strain builders' capabilities in supplying high-demand starter homes.
- Inventories are expected to rise swiftly into the second half of the year due to expiration of forbearance programs and declining virus concerns.
- Mortgage rates slowly climb, stalling home price appreciation while also limiting affordability.

MULTIFAMILY RESIDENTIAL



- Expect ongoing disruptions via delays or cancellations in mixed-use investment, heightened material costs and rising vacancies into 2022.
- Affordable housing becomes a more predominant issue as the nation settles into recovery amid higher unemployment.
- Urban multifamily may see redevelopment investment opportunity in newly oversupplied private nonresidential segments, including office, retail and lodging.
- Long-term demand remains robust.

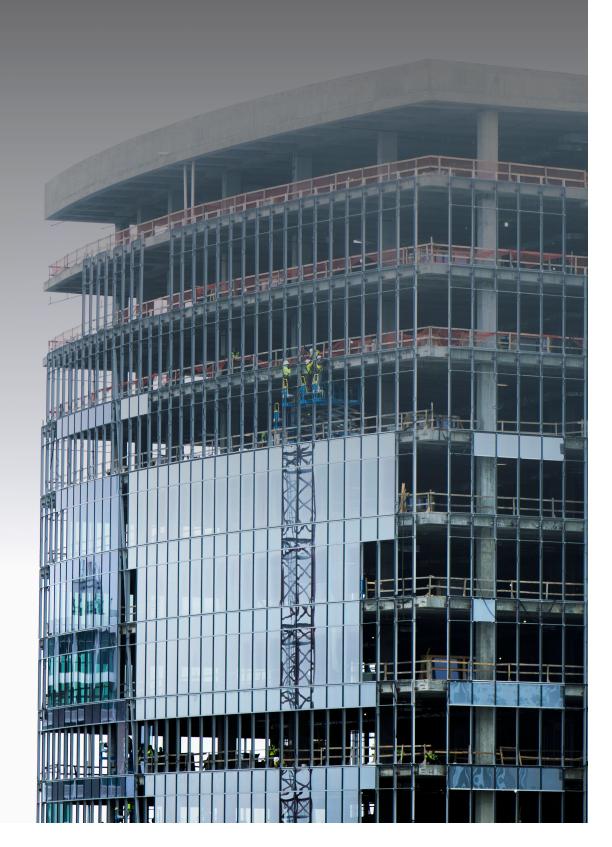


IMPROVEMENTS



- Extremely high material prices, reduced refinance activity and wavering home price appreciation will suppress investment levels into 2023.
- Demographics suggest improvements will remain healthy in those high-growth/high-performance secondary and tertiary markets proven favorable through the pandemic.

Nonresidential Construction Put in Place

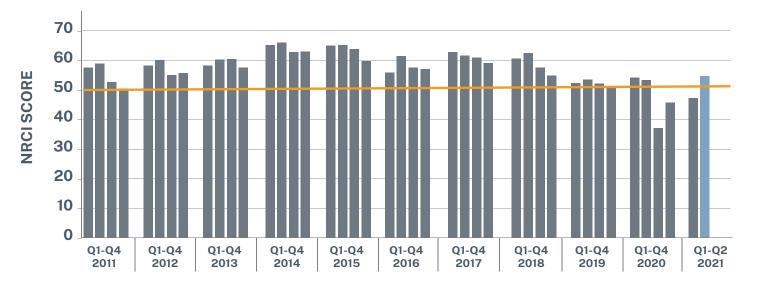




Nonresidential Construction Index (NRCI) Q1 2011 to Q2 2021

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).

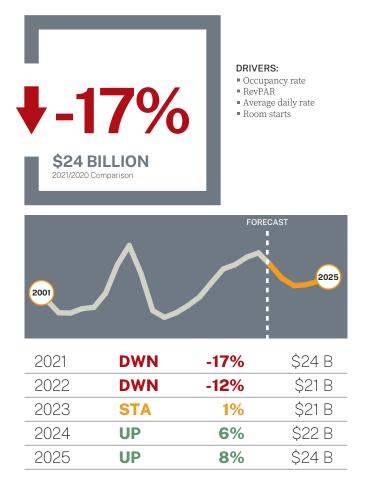




The data in the NRCI is presented as a sampling of construction industry executives voluntarily serving as panelists for this FMI survey. Responses are based on their experience and opinions, and the analysis is based on FMI's interpretation of the aggregated results.

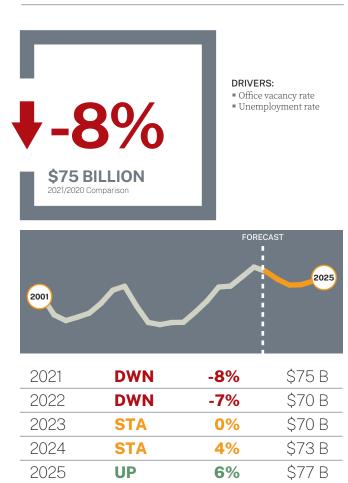


LODGING



- Costar research predicts nearly half of rooms will remain empty through 2021 with accelerated recovery into the second half of the year—significantly better than 2020, but still much worse than 2019.
- Revenue per available room (RevPar) remains under 60% of 2019 levels.
- Destination vacations and related markets (e.g., spring break) will lead lodging recovery over the next 12 to 24 months. Anticipate more permanent losses among business guests and travelers.

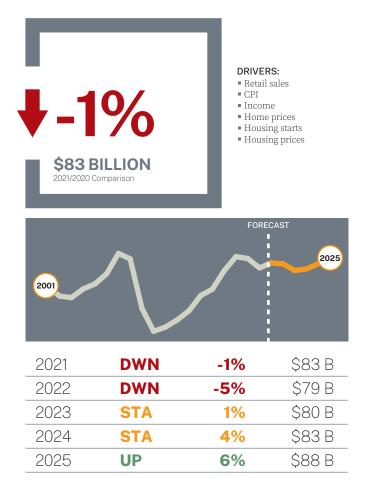
OFFICE



- Expect increased supply as organizations reduce their office footprints while navigating permanent remote and/ or hybrid staffing.
- Renovation "dedensification" investment increases as existing offices are reconfigured for a variety of purposes, including mixed virtual meeting spaces and enlarged collaboration areas.
- Corporate tax revisions encourage increased relocations.
- Data centers and life science research facilities continue to demonstrate strength.

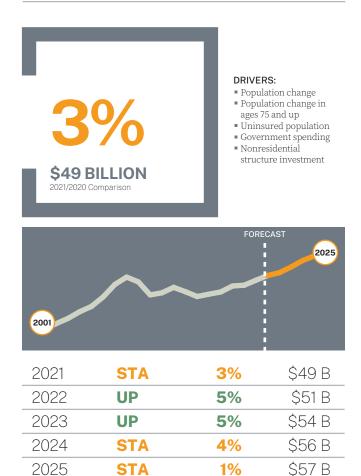


COMMERCIAL



- Share of e-commerce sales jumped significantly between 2019 (11%) and 2020 (14%) as consumers shopped online for goods and services.
- Investment in warehouse and distribution space has reached approximately half of all commercial spending and is stabilizing more significant declines. Construction costs for these facilities have also risen dramatically.
- Expect fewer new retail investments via delays or cancellations in mixed use alongside oversupply conditions due to shuttered/distressed businesses and restaurants.

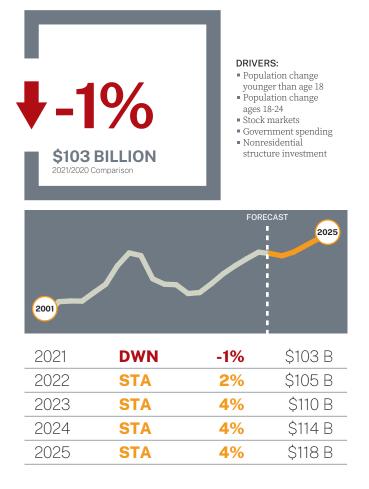
HEALTH CARE



- President Joe Biden's \$1.9 trillion coronavirus relief package includes \$123 billion for COVID-19 response and an additional \$105 billion in health care relief.
- Significant hospital investments are in planning stages across many major metropolitans.
- Demand for nursing homes dropped sharply in 2020 and will remain depressed through much of the five-year forecast period.
- Aging demographics (i.e., baby boomers) support increased health care investment through the forecast period and beyond.

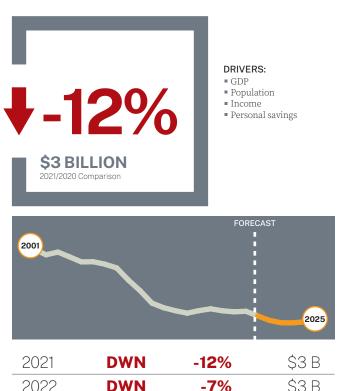


EDUCATIONAL



- Biden's \$1.9 trillion coronavirus relief package includes \$176 billion for education, with a large majority directed toward K-12 (\$129 billion) and higher education (\$40 billion) emergency relief.
- Biden's push for a return to in-person learning in 2021 largely upholds educational spending into 2021 and 2022.
- Significant and long-running K-12 renovation and reconstruction needs persist.
- Higher education owners face major challenges and restructures in the coming year(s), even as campuses are mostly able to reopen through 2021.

RELIGIOUS

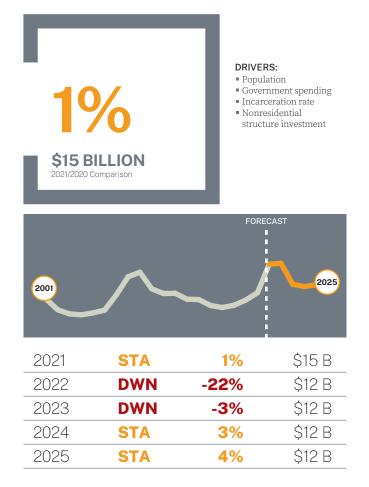


2022	DWN	-7%	\$3 B
2023	STA	0%	\$3 B
2024	STA	3%	\$3 B
2025	STA	4%	\$3 B

- Facility investments have largely been directed into civic-based needs to better attract and connect with communities.
- Successful religious institutions have leveraged communication technologies to increase participation and reach their audiences, ultimately reducing traditional facility needs.

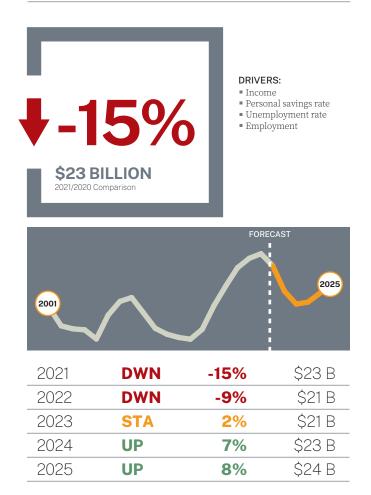


PUBLIC SAFETY



- Biden's coronavirus relief plan includes \$360 billion for state and local support to manage lost tax revenue and maintain programs.
- Social unrest continues into 2021 alongside reports of increased mental health concerns and violent crime.
- Ongoing and increased military and correctional spending is expected over the coming years.

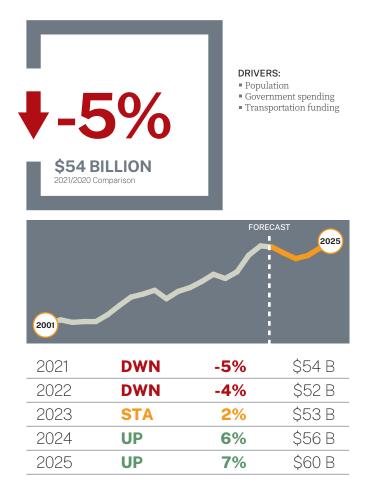
AMUSEMENT AND RECREATION



- Short-term construction spending will remain low as owners and financiers manage risk and navigate lost revenue as the economy reopens.
- Pent-up demand for leisure travel will slowly increase investment opportunities through the outlook period.
- Convention and business travel remains depressed through the forecast period, limiting opportunities in larger gathering places.

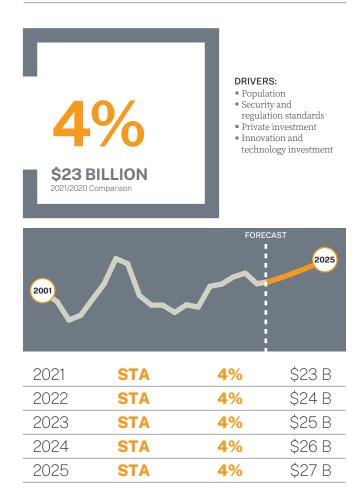


TRANSPORTATION



- Air and rail ridership levels are expected to remain low for many years due to lasting changes in business travel.
- Nearly \$70 billion in stimulus support from the latest coronavirus relief package helps balance industry losses and moves projects forward.
- New transportation megaprojects (i.e., projects of \$1 billion or more) are expected to return strong in the latter half of the forecast period.
- Electrification of transportation systems is expected to receive significant support in the coming years.

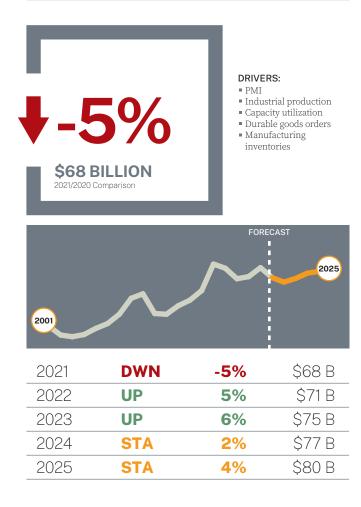
COMMUNICATION



- Spending growth will remain stable, supported by government stimulus and infrastructure funding for system expansion and hardening.
- **5**G and other network technologies continue to drive new opportunities for device and data integration.
- Investment demand overlaps with growth across data centers, distribution and logistics spending.



MANUFACTURING



- Supply chain constraints (e.g., lumber, semiconductors, etc.) are expected to remain in place well into 2021 as the global economy rebounds and international trade negotiations resume.
- Oil-related demand disruptions continue to weigh on manufacturing investment across chemical and refining operations well into 2021.
- Spending growth returns in 2022 as owners pursue modernization investments and resume expansion.

Nonbuilding Structures Construction Put in Place

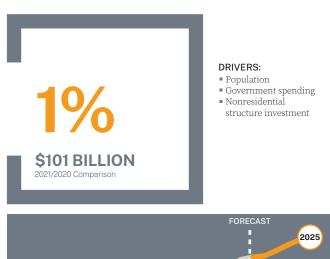


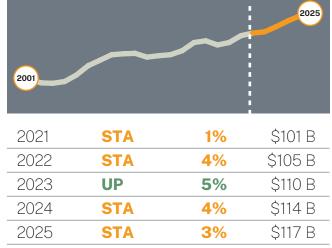
POWER

1 C \$120 2021/2020 C	billion Billion	■ Gove	
2021	STA	1%	\$120 B
2022	DWN	-1%	\$119 B
2023	STA	2%	\$122 B
2024	STA	3%	\$125 B
2025	STA	4%	\$130 B

- Stimulus and infrastructure spending in power is anticipated in grid hardening, safety, efficiency and environmental upgrades.
- A majority, or approximately 80%, of planned investment in generation capacity is to be directed into renewables, led by solar in 2021.
- The recent strong rebound in oil and gas prices is expected to drive increased production. Investment demand will be offset by a lack of political support, new rules and intensified oversight and regulation.

HIGHWAY AND STREET

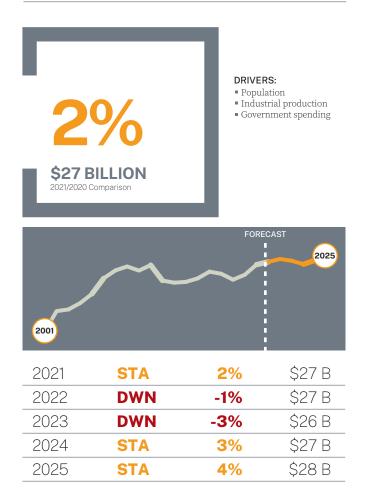




- States and municipalities received \$360 billion in financial aid from the latest coronavirus relief package, including \$10 billion specifically for infrastructure projects.
- Highway and street demand is expected to increase as states reopen and mobility rebounds. Details on Biden's multitrillion-dollar infrastructure and jobs package are forthcoming.
- Reauthorization of a federal surface transportation bill will be an important achievement in the second half of this year.



SEWAGE AND WASTE DISPOSAL



- Annual spending levels will be mostly upheld due to public water crises, aging assets, newer technologies and stimulus support (addressed as a portion of the \$360 billion directed toward state and local governments from the latest package).
- The 2021 American Society of Civil Engineers (ASCE) report card features a wastewater grade of D, a stormwater grade of D+, and a solid waste score of C+, highlighting 15% of the nation's 16,000 wastewater treatment plants are running at or above capacity while underground pipes are an average of 45 years old and aging.

WATER SUPPLY

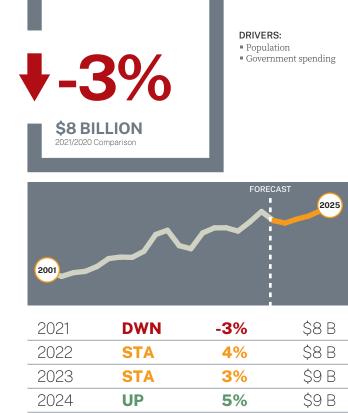


2021	UP	9%	\$20 B
2022	STA	0%	\$20 B
2023	DWN	-5%	\$19 B
2024	DWN	-2%	\$19 B
2025	STA	2%	\$19 B

- The Water Quality Protection and Jobs Creation Act of 2021 authorizes \$40 billion over the next five years into water and wastewater infrastructure through the Clean Water State Revolving Fund (SRF) and an additional \$10 billion in other federal grant assistance.
- This year, the Environmental Protection Agency (EPA) announced the availability of \$2.7 billion into state revolving funds to help provide safe drinking water.
- The 2021 ASCE report card highlights a drinking water grade of C- and recommends tripling annual appropriations needed to address system maintenance, safety, affordability and waste.



CONSERVATION AND DEVELOPMENT



The head of the EPA, Michael Regan, recently announced the agency is working on new rules to manage vehicle and power plant emissions.

6%

UP

2025

\$10 B

- Expect increased oversight in environmental justice to protect poor and underrepresented communities, which are found to be disproportionately impacted by climate change and pollution.
- Biden anticipates investing 40% of his \$2 trillion climate plan into disadvantaged communities.

Construction Put in Place Estimated for the United States

Millions of Current Dollars

1st Quarter 2021 Forecast (Based on 4th Quarter 2020 Actuals)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	242,939	270,365	289,855	280,398	310,059	320,392	293,141	280,230	290,580	306,053
Multifamily	79,112	80,403	83,411	85,880	91,947	88,441	82,553	86,177	92,253	99,575
Improvements*	163,913	194,986	190,611	184,664	214,470	218,097	191,639	178,835	178,661	185,683
Total Residential	485,964	545,754	563,877	550,942	616,476	626,930	567,334	545,241	561,494	591,311
NONRESIDENTIAL BUILDINGS										
Lodging	27,077	28,660	31,464	33,071	28,603	23,640	20,916	21,183	22,453	24,222
Office	67,907	68,685	76,662	84,862	81,146	74,519	69,595	69,807	72,887	77,131
Commercial	78,696	87,626	86,422	80,435	83,656	83,030	78,816	79,781	83,099	88,238
Health Care	40,574	43,120	43,450	45,560	47,573	48,765	51,206	53,987	55,934	56,681
Educational	91,629	96,685	101,210	105,374	104,519	103,051	105,457	109,524	113,536	117,775
Religious	3,752	3,586	3,499	3,544	3,158	2,771	2,571	2,565	2,650	2,765
Public Safety	8,177	8,539	9,353	10,530	15,082	15,201	11,873	11,506	11,795	12,238
Amusement and Recreation	23,652	26,569	28,068	28,803	26,882	22,844	20,790	21,103	22,507	24,227
Transportation	43,339	46,137	53,219	57,154	56,639	54,075	51,763	53,026	56,058	59,827
Communication	22,179	23,696	24,502	22,242	22,685	23,489	24,410	25,351	26,347	27,295
Manufacturing	79,633	70,682	72,508	80,079	71,588	67,828	70,987	75,478	76,968	79,701
Total Nonresidential Buildings	486,615	503,985	530,357	551,654	541,531	519,213	508,384	523,312	544,235	570,101
NONBUILDING STRUCTURES										
Power	112,067	95,951	99,569	113,885	119,070	119,757	119,071	121,612	125,130	129,958
Highway and Street	93,187	89,620	91,745	97,559	99,716	100,768	105,171	110,150	114,228	117,492
Sewage and Waste Disposal	24,151	22,901	23,931	26,089	26,666	27,288	26,906	26,171	27,035	27,990
Water Supply	13,940	14,168	15,477	15,882	18,510	20,250	20,160	19,168	18,770	19,181
Conservation and Development	7,745	7,464	8,229	9,126	8,358	8,143	8,481	8,737	9,180	9,741
Total Nonbuilding Structures	251,090	230,104	238,951	262,541	272,320	276,206	279,789	285,839	294,342	304,361
Total Put in Place	\$1,223,669	\$1,279,843	\$1,333,185	\$1,365,137	\$1,430,327	\$1,422,350	\$1,355,506	\$1,354,393	\$1,400,070	\$1,465,772

Construction Put in Place Estimated for the United States

Change From Prior Year - Current Dollar Basis 1st Quarter 2021 Forecast (Based on 4th Quarter 2020 Actuals)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	10%	11%	7%	-3%	11%	3%	-9%	-4%	4%	5%
Multifamily	16%	2%	4%	3%	7%	-4%	-7%	4%	7%	8%
Improvements*	10%	19%	-2%	-3%	16%	2%	-12%	-7%	0%	4%
Total Residential	11%	12%	3%	-2%	12%	2%	-10%	-4%	3%	5%
NONRESIDENTIAL BUILDINGS										
Lodging	23%	6%	10%	5%	-14%	-17%	-12%	1%	6%	8%
Office	21%	1%	12%	11%	-4%	-8%	-7%	0%	4%	6%
Commercial	17%	11%	-1%	-7%	4%	-1%	-5%	1%	4%	6%
Health Care	2%	6%	1%	5%	4%	3%	5%	5%	4%	1%
Educational	7%	6%	5%	4%	-1%	-1%	2%	4%	4%	4%
Religious	4%	-4%	-2%	1%	-11%	-12%	-7%	0%	3%	4%
Public Safety	-4%	4%	10%	13%	43%	1%	-22%	-3%	3%	4%
Amusement and Recreation	15%	12%	6%	3%	-7%	-15%	-9%	2%	7%	8%
Transportation	-4%	6%	15%	7%	-1%	-5%	-4%	2%	6%	7%
Communication	2%	7%	3%	-9%	2%	4%	4%	4%	4%	4%
Manufacturing	-4%	-11%	3%	10%	-11%	-5%	5%	6%	2%	4%
Total Nonresidential Buildings	8%	4%	5%	4%	-2%	-4%	-2%	3%	4%	5%
NONBUILDING STRUCTURES										
Power	1%	-14%	4%	14%	5%	1%	-1%	2%	3%	4%
Highway and Street	2%	-4%	2%	6%	2%	1%	4%	5%	4%	3%
Sewage and Waste Disposal	-2%	-5%	4%	9%	2%	2%	-1%	-3%	3%	4%
Water Supply	4%	2%	9%	3%	17%	9%	0%	-5%	-2%	2%
Conservation and Development	0%	-4%	10%	11%	-8%	-3%	4%	3%	5%	6%
Total Nonbuilding Structures	1%	-8%	4%	10%	4%	1%	1%	2%	3%	3%
Total Put in Place	7%	5%	4%	2%	5%	-1%	-5%	0%	3%	5%

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

Canadian Engineering and Construction Outlook



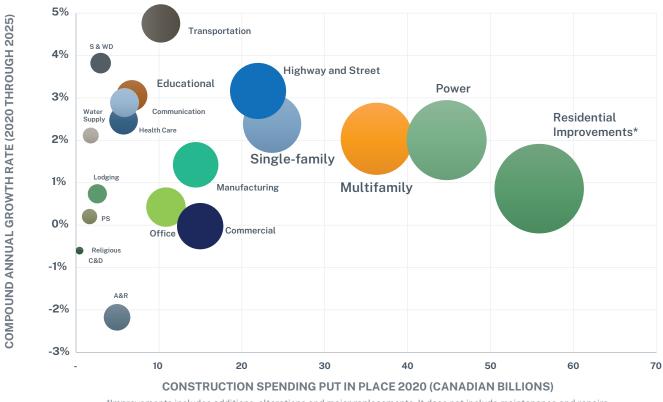


Canada 2021 Segment Performance 2021/2020 Comparison

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



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

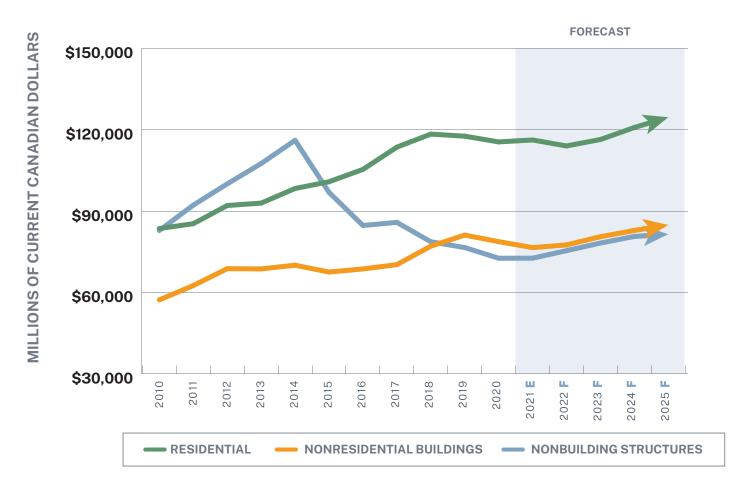


*Improvements includes additions, alterations and major replacements. It does not include maintenance and repairs.

SOURCE: FMI FORECAST Q1 2021



Total Construction Spending Put in Place Estimated for Canada



SOURCE: FMI FORECAST Q1 2021

Construction Put in Place Estimated for Canada

Millions of Current Canadian Dollars

1st Quarter 2021 Forecast (Based on 4th Quarter 2020 Actuals)

Total Put in Place	\$257,934	\$269,084	\$273,630	\$274,853	\$266,231	\$264,727	\$266,326	\$274,679	\$284,026	\$290,782
Total Nonbuilding Structures	84,404	85,571	78,292	76,112	72,106	72,122	74,948	77,805	80,288	81,127
Conservation and Development	611	482	442	704	703	679	731	507	531	549
Water Supply	3,000	3,145	1,680	1,735	1,768	1,804	1,858	1,878	1,930	1,963
Sewage and Waste Disposal	5,114	4,655	2,797	2,918	2,967	3,018	3,369	3,811	4,002	3,579
Highway and Street	17,725	19,706	20,480	21,163	21,957	22,945	24,301	24,970	25,576	25,660
Power	57,954	57,583	52,893	49,592	44,711	43,675	44,689	46,639	48,247	49,377
NONBUILDING STRUCTURES										
Total Nonresidential Buildings	68,077	69,691	76,624	80,799	78,332	76,093	77,104	80,183	82,533	84,601
Manufacturing	13,038	12,177	14,525	15,558	14,433	13,926	14,308	15,051	15,332	15,490
Communication	5,781	5,904	6,327	6,725	5,852	5,838	6,097	6,342	6,577	6,748
Transportation	7,074	7,510	10,214	10,454	10,217	10,971	11,891	12,450	12,640	12,893
Amusement and Recreation	4,429	4,488	4,090	4,113	4,943	4,051	3,850	4,044	4,232	4,429
Public Safety	970	1,289	1,250	1,697	1,629	1,489	1,520	1,567	1,615	1,645
Religious	413	386	382	444	413	380	368	380	391	400
Educational	6,645	7,729	7,678	6,744	6,733	6,887	7,208	7,548	7,652	7,826
Health Care	4,823	5,168	5,252	5,319	5,723	6,101	6,212	6,326	6,386	6,468
Commercial	13,357	13,472	14,002	15,748	14,979	13,816	13,273	13,798	14,465	14,963
Office	8,977	9,011	10,138	11,302	10,847	10,213	9,998	10,212	10,677	11,079
Lodging	2,569	2,557	2,766	2,695	2,563	2,422	2,380	2,465	2,567	2,659
NONRESIDENTIAL BUILDINGS										
Total Residential	105,454	113,821	118,714	117,941	115,792	116,512	114,273	116,691	121,205	125,054
Improvements*	53,223	57,287	60,460	61,121	55,871	54,661	53,206	54,676	56,447	58,317
Multifamily	25,267	28,428	31,860	33,981	36,269	36,935	36,594	37,186	38,843	40,117
Single-family	26,964	28,106	26,394	22,839	23,653	24,915	24,473	24,829	25,915	26,619
RESIDENTIAL BUILDINGS										
	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F

Construction Put in Place Estimated for Canada Change From Prior Year - Current Canadian Dollar Basis 1st Quarter 2021 Forecast (Based on 4th Quarter 2020 Actuals)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	5%	4%	-6%	-13%	4%	5%	-2%	1%	4%	3%
Multifamily	6%	13%	12%	7%	7%	2%	-1%	2%	4%	3%
Improvements*	3%	8%	6%	1%	-9%	-2%	-3%	3%	3%	3%
Total Residential	5%	8%	4%	-1%	-2%	1%	-2%	2%	4%	3%
NONRESIDENTIAL BUILDINGS										
Lodging	4%	0%	8%	-3%	-5%	-6%	-2%	4%	4%	4%
Office	-2%	0%	13%	11%	-4%	-6%	-2%	2%	5%	4%
Commercial	-6%	1%	4%	12%	-5%	-8%	-4%	4%	5%	3%
Health Care	-6%	7%	2%	1%	8%	7%	2%	2%	1%	1%
Educational	12%	16%	-1%	-12%	0%	2%	5%	5%	1%	2%
Religious	-7%	-7%	-1%	16%	-7%	-8%	-3%	3%	3%	2%
Public Safety	-36%	33%	-3%	36%	-4%	-9%	2%	3%	3%	2%
Amusement and Recreation	26%	1%	-9%	1%	20%	-18%	-5%	5%	5%	5%
Transportation	14%	6%	36%	2%	-2%	7%	8%	5%	2%	2%
Communication	11%	2%	7%	6%	-13%	0%	4%	4%	4%	3%
Manufacturing	0%	-7%	19%	7%	-7%	-4%	3%	5%	2%	1%
Total Nonresidential Buildings	2%	2%	10%	5%	-3%	-3%	1%	4%	3%	3%
NONBUILDING STRUCTURES										
Power	-15%	-1%	-8%	-6%	-10%	-2%	2%	4%	3%	2%
Highway and Street	-7%	11%	4%	3%	4%	4%	6%	3%	2%	0%
Sewage and Waste Disposal	-7%	-9%	-40%	4%	2%	2%	12%	13%	5%	-11%
Water Supply	-19%	5%	-47%	3%	2%	2%	3%	1%	3%	2%
Conservation and Development	78%	-21%	-8%	59%	0%	-3%	8%	-31%	5%	3%
Total Nonbuilding Structures	-13%	1%	-9%	-3%	-5%	0%	4%	4%	3%	1%
Total Put in Place	-3%	4%	2%	0%	-3%	-1%	1%	3%	3%	2%

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

ABOUT THE AUTHORS



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