2023 FACILITIES & CONSTRUCTION BRIEF

An Overview of the Education Construction Scene

2022 was a bit of a comeback year for construction on education facilities in both K–12 and higher education. Whereas 2021 saw the first decline in construction spending since 2013, 2022 rebounded slightly, though a number of lingering factors continue to challenge the sector — including labor shortages, increasing costs of materials and labor, uncertainties impacting planning and budgeting, and ongoing supply chain issues leading to, among other things, delays in completing projects.

Private construction spending on education saw substantial gains for the first time in three years, accounting for all of the growth from 2021 to 2022. Private spending totaled $18.89 billion, up more than $2.7 billion from 2021 and about $189 million from 2020.

Public construction spending on education, meanwhile, declined by $2 billion, the second decline in a row following seven straight years of growth. Public spending was $80.3 billion, down from $82.319 billion in 2021, which was down from $91.89 billion in 2020.

The biggest issues impacting construction in the last year? Workforce shortages and turnover, supply chain problems, and rising costs of labor and materials.

Said one participant in this year's Spaces4Learning Construction Brief survey: "Increasing costs [are] causing projects to come in over budget, and supply chain issues [are] impacting schedules (both during planning and unknowns during construction)."

Of course, funding continued to be a major hurdle as well.

By David Nagel, editor-in-chief and editorial director of 1105 Media's Education Group.

CHANGES IN POPULATION AFFECT ENROLLMENT

POPULATION CHANGE

Between 2020 and 2021, the population of the United States grew just 0.12%. Between 2021 and 2022, the rate of growth increased to 0.4%. That amounted to an increase of 1.256 million people to the U.S. population, bringing the total to 333,287,557, according to the United States Census Bureau.

For the second time in history (and the second year in a row), the natural increase in population (births minus deaths) fell below increases in population owing to international migration. In other words, there were more net international migrants adding to the U.S. population (1.011 million) than net gains through childbirth minus deaths (245,080) — although 2022 saw the largest year-over-year increase in births since 2007.

Some stats for the year based on current estimates (as of May 2023) include:

- The total population of the United States at the end of 2022 was 333.29 million, according to the U.S. Census Bureau. The total population at the end of 2021 was 331.9 million. The total population of the United States at the end of 2020 was 330.03 million. The population at the end of 2019 was 329.16 million.
- There was roughly one death every 10 seconds and one birth every nine seconds, with one net gain from immigration every 32 seconds.
- Twenty-four states, as well as Puerto Rico, saw more deaths than births (natural declines).
- Twenty-six states and the District of Columbia saw more births than deaths.

Eighteen states saw population declines from 2021 to 2022 — including the most populous state in the nation, California, which declined by 113,649 this year, following a decline of 260,000 last year. California saw the highest net loss of population from domestic "outmigration" (343,230 Californians moving to other states), while it also saw a natural increase of 106,155 and an increase through immigration of 125,715. New York once again saw the largest numeric and percent decrease in population, losing 180,341 inhabitants in 2022 (0.9%), following a decline of 319,000 the previous year.

Texas, which saw the highest growth, joined California as the only other state with a population greater than 30 million. Texas saw increases from natural change (+118,159), domestic migration (+230,961), and international migration (+118,614). Florida had the highest percentage growth, 1.9%, adding 416,754 residents, bringing the state's total population to about 22.245 million.

GROWTH BY NUMBER (2021 to 2022)

State	2022 Population	Growth
Texas	30,029,572	470,708
Florida	22,244,823	416,754
North Carolina	10,698,973	133,088
Georgia	10,912,876	124,847
Arizona	7,359,197	94,320
Louisiana	4,590,241	–36,857
Pennsylvania	12,972,008	–40,051
Illinois	12,582,032	–104,437
California	39,029,342	–113,649
New York	19,677,151	–180,341

Source: U.S. Census Bureau, Annual Estimates of the Resident Population for the United States, Regions, States, and the District of Columbia: April 1, 2021 to July 1, 2022 See census.gov/newsroom/press-releases/2022/2022-population-estimates.html.

ENROLLMENT ESTIMATES

PREK-12

While final data are not yet available for enrollment in 2022, the National Center for Education Statistics (NCES) projected that 49.935 million students would attend public PreK–12 schools in fall 2022. That is down by about 800,000 from the previous projection for 2022. About 1.55 million of those are pre-kindergarten level; 3.6 million kindergarten; 34.36 million PreK–8; 15.575 million grades 9–12. 2022's projected public school enrollment was up slightly from 2021. But following 2022, declines are projected in public PreK–12 enrollment every year.

(See nces.ed.gov/programs/digest/d22/tables/dt22_203.10.asp.)

Private PreK–12 school data are a bit more murky. NCES has not yet updated projections for private schools since early 2020, and its estimates then were based on pre-pandemic trends. We will include data on private schools from the 2020 source in the table below.

Overall, projections for enrollments in PreK–12 education have been revised downward — where revisions have been made to previous data — through 2030.

DEGREE-GRANTING POST-SECONDARY

In higher education, 18.96 million students were projected to attend colleges and universities in 2022. Of those:

- 11.55 million were full-time.
- 7.4 million were part-time.
- 13.86 million were enrolled in public institutions.
- 5.1 million were enrolled in private institutions.

Overall, projections for enrollments in higher education have been revised downward through 2030.

ENROLLMENT PROJECTIONS (IN THOUSANDS)

Year	All	pK-12	pK-12: Public			pK-12: Private***			Degree-Granting Postsecondary		
			Total	pK-8	9-12	Total	pK-8	9-12	Total	Public	Private
2010	75,886	54,867	49,484	34,625	14,860	5,382	4,084	1,299	21,019	13,703	4,379
2020	74,116**	55,089**	49,375**	34,061**	15,314**	5,714	4,183	1,531	19,027**	13,884**	5,142**
2021	73,812**	55,153**	49,453**	34,004**	15,449**	5,700	4,161	1,539	18,659**	13,543**	5,116**
2022*	74,609	55,648	49,935	34,360	15,575	5,713	4,171	1,542	18,961	13,863	5,097
2030*	73,157	52,991	47,253**	32,261**	14,992**	5,738	4,281	1,457	20,166**	14,736**	5,430**

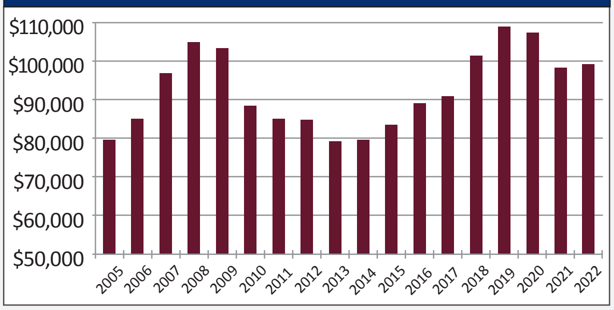
*Projected. Note that data are taken from three sources from NCES. Where data disagree, we have used the most recent source. Source for all data prior to 2021 and private PreK–12 data for 2021, 2022, and 2030: National Center for Education Statistics, Enrollment in elementary, secondary, and degree-granting postsecondary institutions, by level and control of institution, enrollment level, and attendance status and sex of student: Selected years, fall 1990 through fall 2029. Source for 2021, 2022, and 2030 public PreK–12 data: nces.ed.gov/programs/digest/d21/tables/dt21_203.10.asp. Source for 2021, 2022, and 2030 higher education data: nces.ed.gov/programs/digest/d22/tables/dt22_303.10.asp.
**Data or projections revised since our previous report
***NCES has not revised data or projections of private PreK–12 enrollment since before the pandemic.

EDUCATIONAL CONSTRUCTION SPENDING

The total dollar value of education construction work done in the U.S. (including all 50 states and the District of Columbia) is estimated to have been $99,191 billion in 2022. That is a modest increase from 2021 of about $665 million. That followed a steep decline from 2020 to 2021 of about $12.2 billion, when supply chain and staffing issues related to the public policy response to the pandemic seemed to have had a major effect on construction.

(See notes below the table.)Educational construction spending includes expenditures for new buildings and structures; additions; renovations; rehabilitations; major replacements (such as the complete replacement of a roof or heating system); mechanical and electrical installations; site preparation; and outside construction of fixed structures or facilities, such as sidewalks, parking lots, and utility connections. Educational facilities include preschools, primary/secondary schools, higher education facilities, trade schools, training facilities, and other educational spaces, including museums and libraries.

EDUCATION CONSTRUCTION (MILLIONS OF DOLLARS)



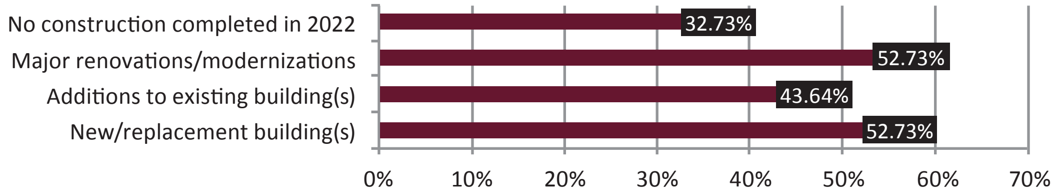
Source: U.S. Census Bureau

YEAR	TOTAL (Millions of Dollars)
2005	$79, 687
2006	$84,928
2007	$96,758
2008	$104,890
2009	$103,202
2010	$88,405
2011	$84,985
2012	$84,672
2013	$79,060
2014	$79,681
2015	$85,346
2016	$91,629
2017	$96,685
2018	$101,210
2019	$108,952*
2020	$110,692**
2021	$98,426***
2022	$99,191

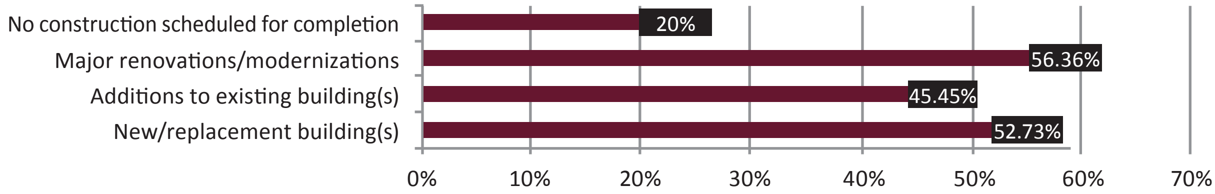
Source: U.S. Census Bureau, Annual Value of Construction Put in Place (Annual Totals).
* Revised using the most recent statistics available, as of May 2023. Previously reported at $105.374 billion.
** Revised using the most recent statistics available, as of May 2023. Previously reported at $107.435 billion.
*** Revised using the most recent statistics available, as of May 2023. Previously reported at $98,189 billion.

SURVEY ON PREK-12 SCHOOL CONSTRUCTION

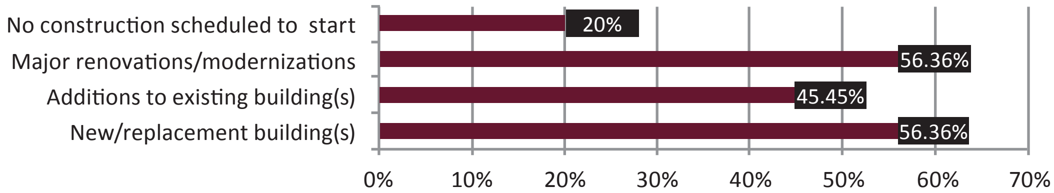
Did you COMPLETE any construction projects in 2022?



Will you COMPLETE any construction projects in 2023?



Will you START any construction projects in 2023?



What is your opinion on the funds available for construction compared to last year?

Survey Respondents: 55 PreK-12 school districts responded to this survey among 25 states.

KEY TAKEAWAYS

- In the previous PreK–12 survey at this time last year, a majority of respondents said they had not completed constructions during the survey period (2021). This year, a sizable majority (67.27%) did complete constructions in 2022.
- For this year's survey, more than half indicated they had completed major renovations or modernizations in 2022. That's up from 34.7% the previous year.
- A massive 80% of respondents indicated they will complete construction projects in 2023, well up from last year's 53%.
- 80% also said they will start new construction projects in 2023, up about 20 percentage points from the previous year's survey.
- Major renovations/modernization projects and additions were the major focus of projects completed in 2022; renovations/modernization also dominate plans for 2023.

OTHER ISSUES FACING INSTITUTIONS

Three overwhelmingly dominant themes emerged as challenges for survey respondents at the PreK–12 level this year:

- Shortages of qualified staff and labor;
- Inflation on material and labor costs; and
- Supply chain/material shortages.

Some other challenges cited by higher ed respondents included:

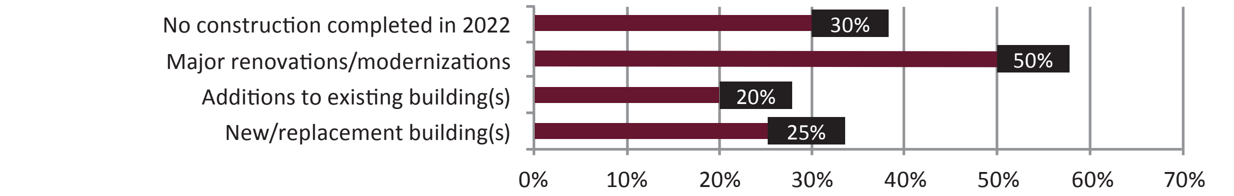
- Project management problems;
- Disconnects between schools and architects;
- Permits;
- Timeliness of project completion;
- Long lead times for equipment;
- Quality control issues;
- Issues dealing with municipal governments;
- Volatility causing issues with planning and cost estimates; and
- Funding.

Construction costs, delays, labor shortages, and material shortages were most frequently cited as major problems among PreK–12 respondents this year.

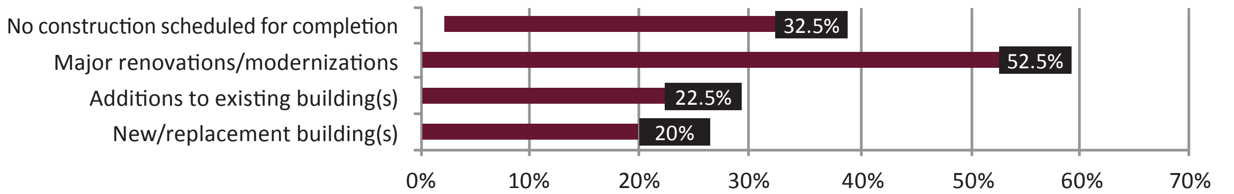
"[We're seeing] continued supply chain and procurement issues," said one PreK–12 respondent. "[We're also] starting to notice QC issues in some products used in new construction."

SURVEY ON COLLEGE AND UNIVERSITY CONSTRUCTION

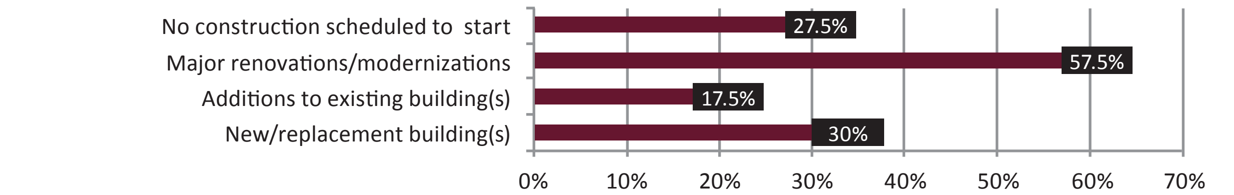
Did you COMPLETE any construction projects in 2022?



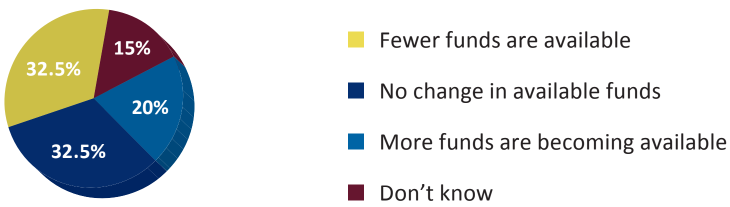
Will you COMPLETE any construction projects in 2023?



Will you START any construction projects in 2023?



What is your opinion on the funds available for construction compared to last year?



Survey Respondents: 40 colleges and universities responded to this survey among 29 states.

KEY TAKEAWAYS

- 70% of higher education respondents indicated their institution had completed construction in 2022, up from 54.43% in last year's survey.
- 72.5% of higher education respondents indicated they will complete construction projects in 2022, up from 60.76% in last year's survey.
- 72.5% of higher education respondents reported they will start new construction projects in 2022, up from 63.29% in last year's survey.
- Major renovations/modernizations were the major focus of projects completed in 2022; that will carry through in 2023.
- Institutions that reported that fewer funds for construction were available increased to 32.5% from 41.41% in 2022.
- Almost a third (65%) said they expect either fewer funds or no change in funding for 2023. That's less optimistic than last year, when only half said that.

OTHER ISSUES FACING COLLEGES AND UNIVERSITIES

As on the PreK–12 side, three themes dominated the list of challenges for survey respondents at the college and university level this year:

- Shortages of qualified staff and labor;
- Inflation on material and labor costs; and
- Supply chain/material shortages.

Some other challenges cited by respondents included:

- Prioritizing deferred maintenance;
- Aging buildings and prioritizing the backlog of projects;
- Personnel problems;
- Project management problems;
- Decision-making process on the part of leadership;
- Permits;
- Timeliness of project completion;
- Long lead times for equipment;
- Quality control issues.

"My biggest challenge is working with the right people with the same vision and goals as you when implementing the change or bringing a new upgrade project on board," said one higher ed survey participant.

"Aging buildings requiring more modernization or trying to address-ing the growing deferred backlog of projects," said another.