



US Construction Outlook 2022

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TWO CHARACTERISTICS OF CONSTRUCTION OVER THE NEXT FIVE YEARS



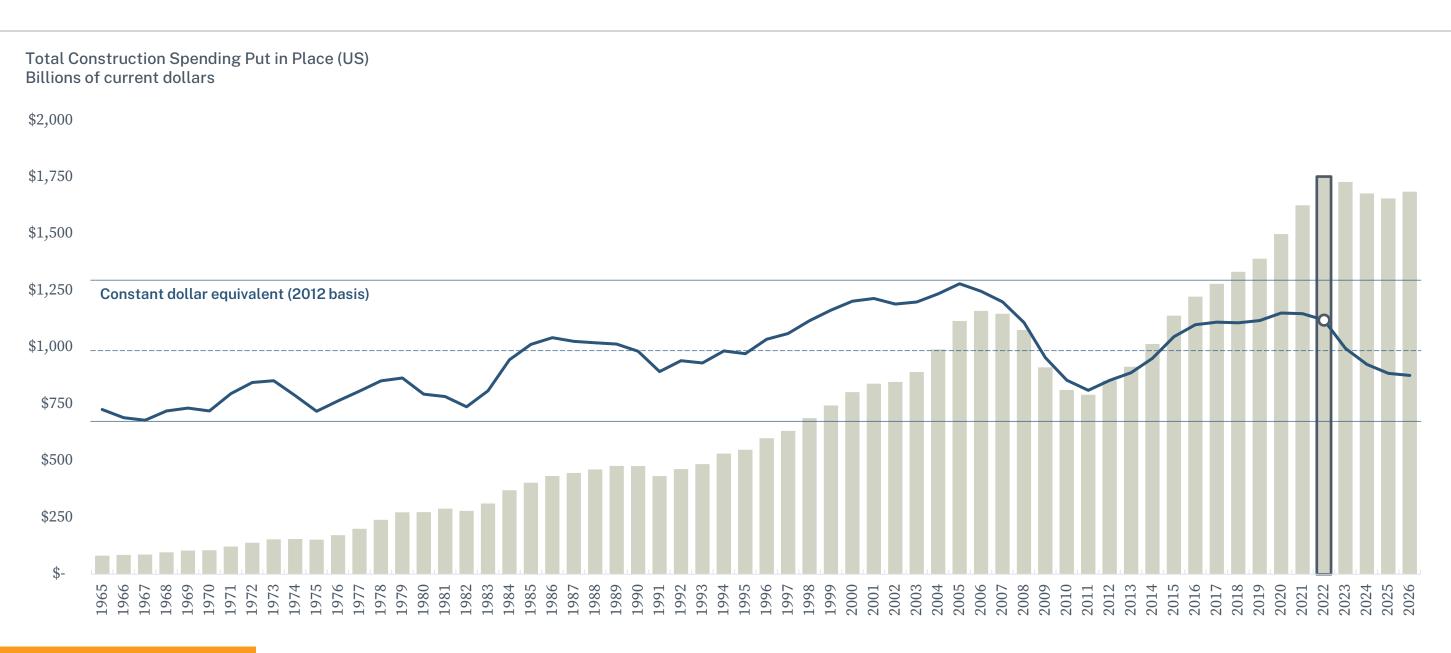
New Economy vs. Old Economy

Where can we expect continued demand regardless of market performance?

Location, Location

Does geography become a primary determinant of growth?

LESS FOR MORE

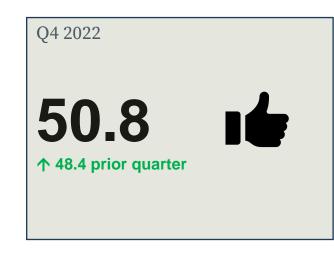


CONFIDENCE IS LOW

AEC Sentiment Indices

















Architectural Billings Index (ABI)

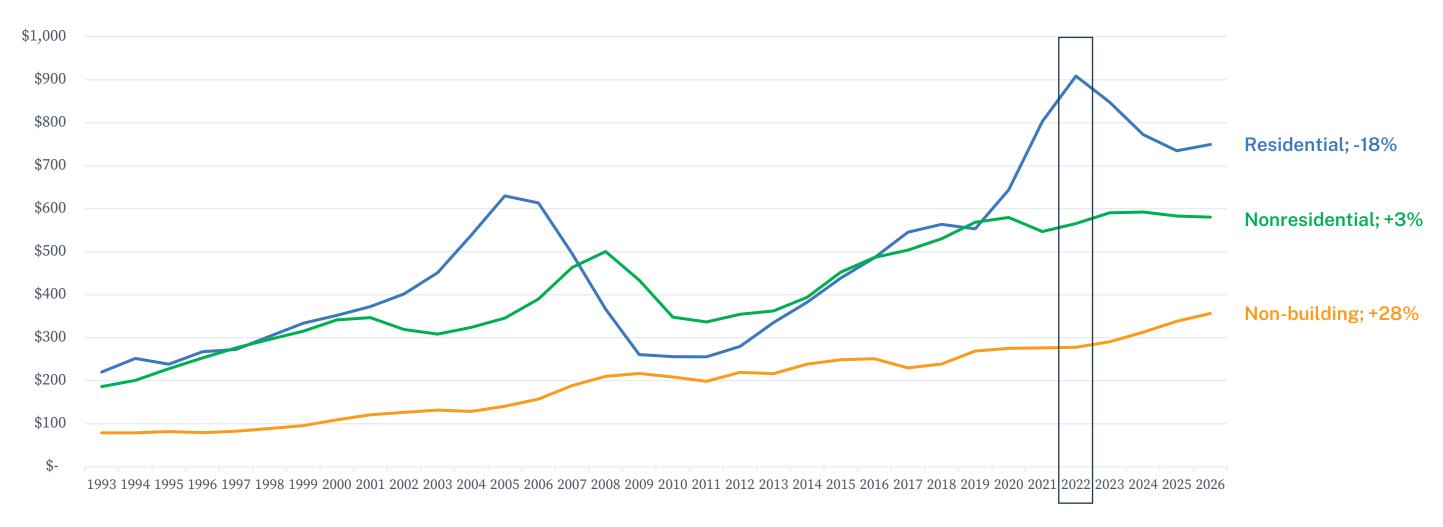
Nonresidential Construction Index (NRCI)

Heavy Civil Construction Index (HCCI)

CIRT Sentiment Index

BULLS & BEARS COEXIST AT ALL TIMES





NEW VS. OLD

New Economy...

Life Sciences



Data Centers



Semiconductor Fabrication



Food & Beverage Manufacturing



Logistics



Intelligent Transportation Systems



Urban Mass Transit



New Energy



Old Economy...

Lodging



Shopping Centers/ Malls



Automotive



Movie Theaters



Office



Sports/ Recreation



Amusement Parks



Banks



THE DIRECTIONAL ARROW OF PROGRESS













NEW ECONOMY TREND LINE

Urban Mass Transit Food & Beverage Manufacturing Life Sciences

Most of the US population is urban

- Almost 90% of the US population live in an urban environment
- Transportation averages 15% to 20% of American's monthly expenses
- Millennials drive almost 10% less than Baby Boomers

Americans are consuming more processed foods

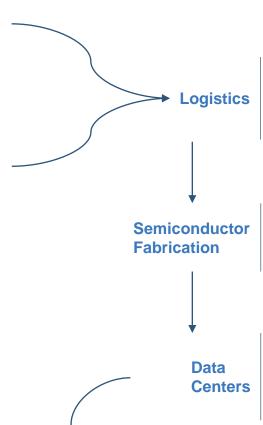
- Processed foods represent 70% of the daily caloric intake in the US
- Ultra-processed foods alone account for 67%

Pharmaceuticals are more prevalent

- Almost 60% of US adults use prescription drugs on an on-going basis
- 110 people per 1,000 take antidepressants in the US
- The number childhood vaccinations has doubled in the past 40 years

Energy demand is increasing as reliability is decreasing

- Power consumption has increased more than 50% since 1980
- 70% of the US power grid's transmission lines and power transformers are over 25 years old
- There were more than 180 large sustained outages in 2020 compared to less than two dozen in 2000



Distribution is increasingly relied on for consumer purchases

- Ecommerce sales have grown by almost 200% since 2015
- On-line purchases represent 15% of total retail activity
- Digital grocery buyers account for more than half the US population

Semiconductors are required to operate most products

- More than 932 billion computer chips were manufactured in 2020
- Computer chips are prevalent in most consumer and industrial products

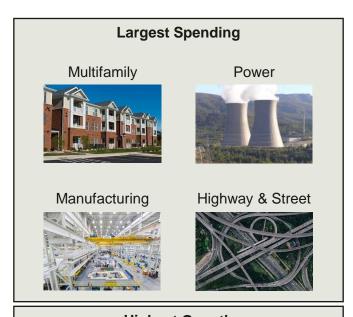
Data processing and storage has grown exponentially

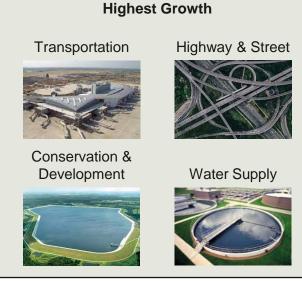
- The number of connected devices (IoT) has tripled over the past five years
- Almost 50% of people work remotely compared to less than 5% pre-pandemic
- The Federal Reserve is exploring the move to digital currency

New Energy



PRIVATE INVESTMENT DRIVEN SEGMENTS SUFFER





	Segment	2022- 2026 Average Construction Spending (Billions)	2022- 2026 Forecast Growth (CAGR)
Heavy Civil Nonresidential Buildings	Multifamily	127	-4%
	Lodging	16	-3%
	Office	76	-6%
	Commercial	92	-7%
	Health Care	53	2%
	Educational	101	3%
	Religious	3	0%
	Public Safety	12	4%
	Amusement and Recreation	26	-3%
	Transportation	69	10%
	Communication	29	8%
	Manufacturing	106	3%
	Power	114	2%
	Highway and Street	128	10%
	Sewage and Waste Disposal	37	9%
	Water Supply	26	8%
	Conservation and Development	10	8%

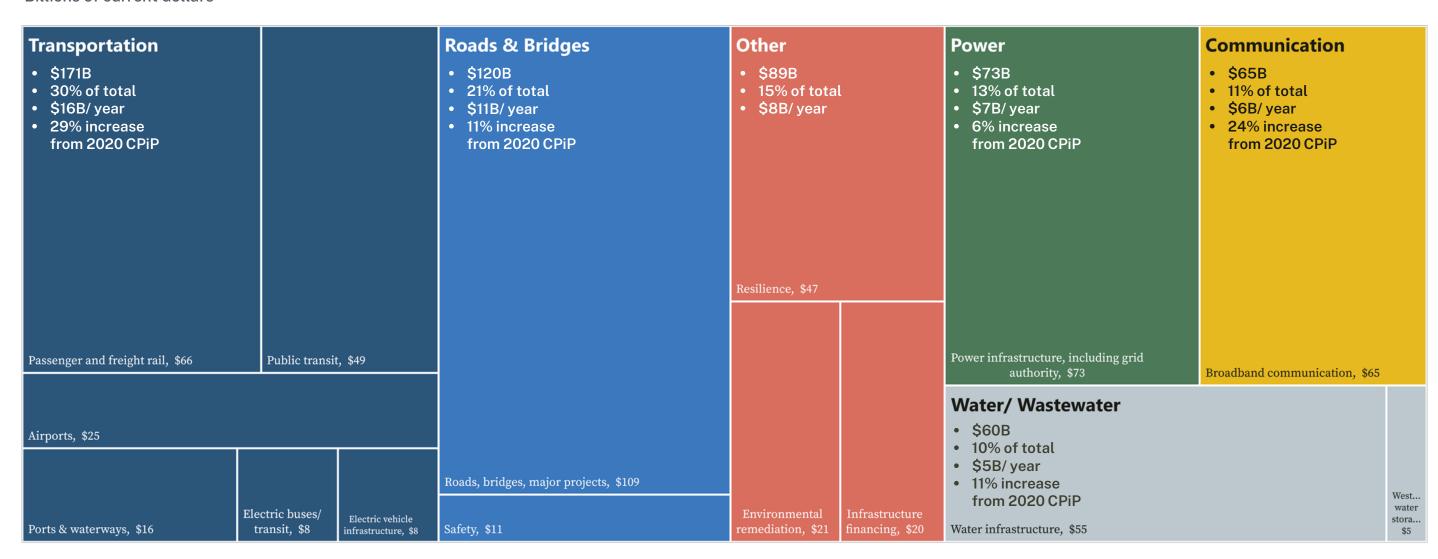
Data centers represent approximately 20% of the Office segment, and spending is forecast to increase by more than 50% over the next five years.

Warehouse represented more than 50% of the Commercial segment in 2021. Construction spending on warehouses increased by 35% from 2019-2021 compared to a 15% decline in all other commercial buildings.

Over the past decade, food & beverage, chemical, computer & electronics, and transportation equipment has led the manufacturing construction segment.

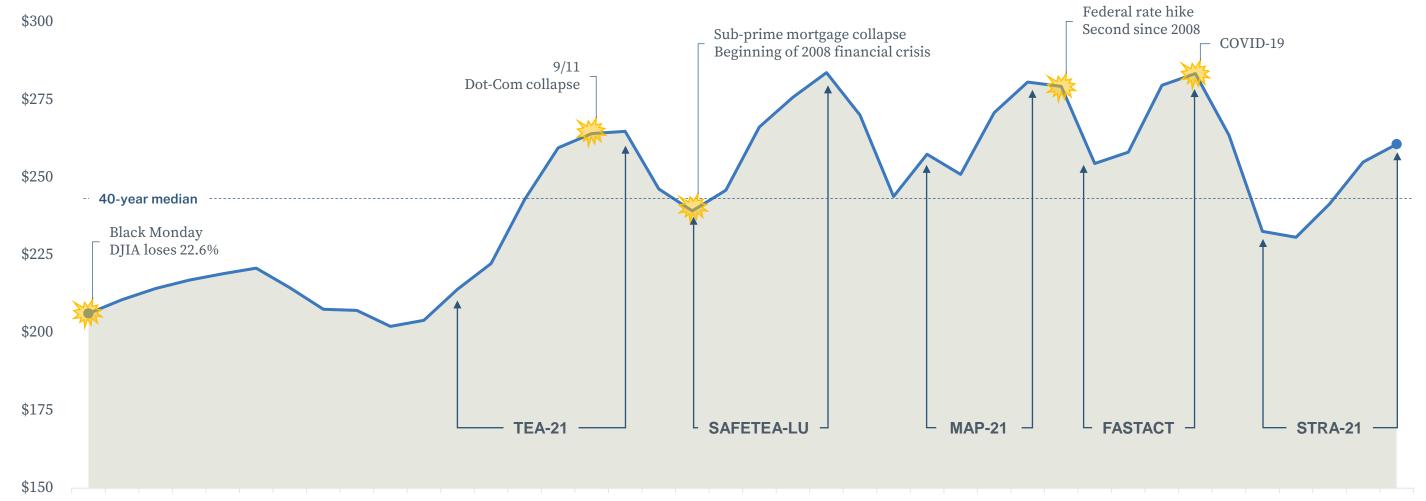
MORE THAN \$500 BILLION IN NEW FUNDING

Bipartisan Infrastructure Framework Billions of current dollars



ENTERING A FIVE-YEAR PERIOD OF EXPANSION

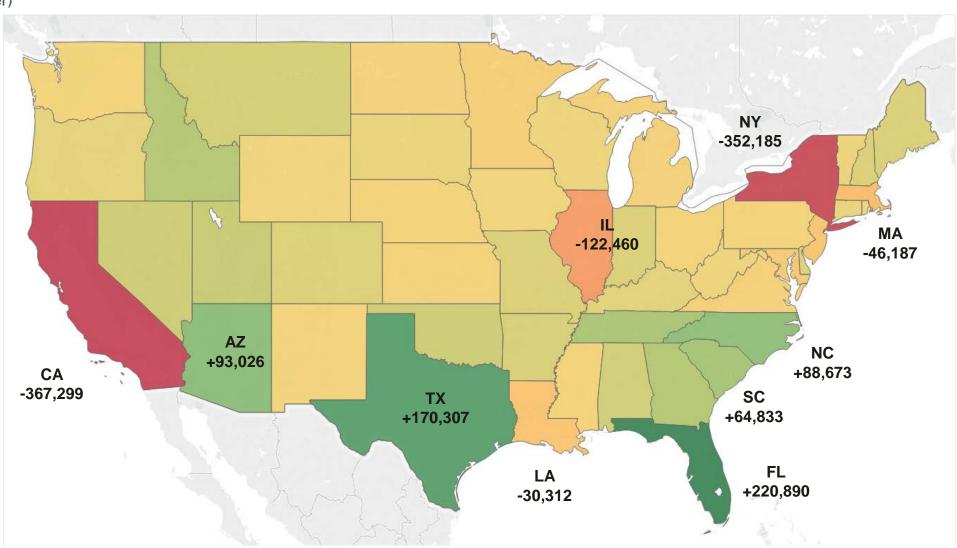
Inflation Adjusted Nonbuilding Structures and Transportation Buildings Construction Spending Put in Place (US) Billions of 2012 dollars



FOLLOW THE PEOPLE

Population Movement by State Total net migration (2000- 2021 color; 2020- 2021 number)

- Five of the top 10 largest-gaining counties in 2021, were in Texas. Collin, Fort Bend, Williamson, Denton and Montgomery counties gained a combined 145,663 residents.
- Los Angeles County, California experienced the largest population loss of any county, losing 159,621 residents in 2021.
- Seventy-one percent of counties (2,218) experienced positive net international migration.
- Four counties crossed the threshold of 100,000 residents in 2021—Cleveland County, North Carolina (100,359), Lancaster County, South Carolina (100,336), Bastrop County, Texas (102,058), and Grant County, Washington (100,297).
- Los Angeles County, California (9,829,544) and Cook County, Illinois (5,173,146), had more than 5 million residents in 2021, making them the top two most populous counties in the nation.



MORE THAN ONE-IN-THREE CONSTRUCTION DOLLARS ARE SPENT IN JUST 12 MARKETS

Total Construction Spending Put in Place Metropolitan Statistical Area (MSA); 2022-2026 sum

- Concentration of spending continues in fewer markets
- Old markets move down, and new markets move up
- Megapolitans can equal or rival metropolitans







2. Los Angeles



3. Dallas



5. Phoenix





7. Seattle



8. Washington, DC 9. San Francisco



10. Miami



12. Riverside

6. Atlanta



13. Denver

14. Austin

15. Boston

16. Philadelphia



19. Minneapolis

20. Charlotte







24. Sacramento

25. San Jose

26. Las Vegas 27. Nashville

28. Jacksonville

29. Salt Lake City

30. Detroit 31. Raleigh

32. San Antonio

33. Baltimore

34. Indianapolis

35. St. Louis 36. Sarasota

37. Kansas City 38. Columbus

39. Boise

22. Portland

40. Provo

41. Cincinnati

42. Fort Myers

44. Pittsburgh

45. Richmond

47. Charleston

46. Ogden

43. Virginia Beach

48. Cleveland 49. Oklahoma City

50. Tucson

51. Memphis

52. Colorado Springs

53. Lakeland

54. Milwaukee 55. Greenville

56. Honolulu

57. Naples 58. Providence

59. Louisville

60. Stockton

61. Myrtle Beach

62. Columbia 63. Daytona Beach

68. Reno 69. Birmingham 70. Melbourne

64. Grand Rapids

65. Knoxville

66. Fresno

67. Durham



81. Des Moines

97. Santa Rosa 100. Augusta 102. St. George 103. Ocala 104. Chattanooga 105. Salisbury 109. Savannah 110. New Haver 116. Valleio 119. Spartanburg 121. Lancaste 123. Bremerton 124. The Villages

129. Eugene 131. Tallahasse 132. Springfield 135. San Luis Obison 138. Toledo 157. Gainesville 139. Jackson 140. Fort Wayne 159. Lafayette

148. Punta Gorda 167. Gulfport 173. Logan

204. Yakima 205. Canton 186, Idaho Fall 189, Elkhart 196. Cedar Rapids

208, Kingsport 211. Lynchbur 215. Homosassa Spr 216. Warner Robins 219. Flagstaff

223. Napa 224. Pueblo 227, Las Cruces 246. Redding 230. Greenville 249. Madera 233. Utica 252. Bismarck 253. Valdosta 254. Huntington 235. Fort Smit 255. Albany 256. Houma 236 Lafavette 238. Iowa City 257. Joplin

247. Lake Charles 248. Winchester 273. Wausau

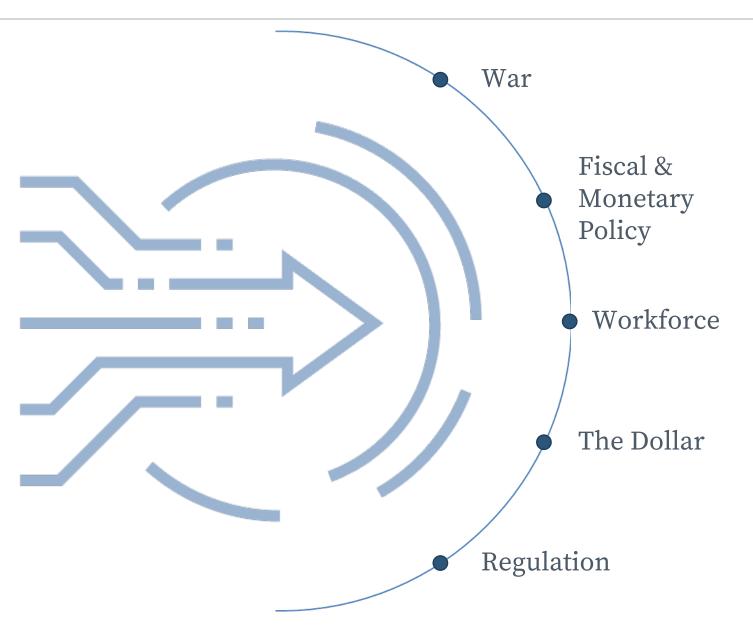
284. California 287. Hanford 290. Ocean City 276. Bloomington 295. State College

303. Bangor 306. Ithaca 309. Dubuque 315 Fast Strouds 322. Corvallis 323. Alexandria 325. Grand Forks 344. Walla Walla

347. Carson City 333. Terre Haute 352. Cape Girardeau

363 Kankakee 366 Decatur

INDUSTRY HEADWINDS





- Supply disruptions
- Cyber attacks



- Inflation
- Interest rate increases
- Asset price corrections



- Residential bust
- Asset price corrections



- Export reductions
- World reserve currency status



- Compliance
- Environmental

WHAT ELSE SHOULD WE BE CONSIDERING?





Understand the customer





Recruit the people you have





Leverage your strengths to overcome obstacles





Develop scenarios based on sustained 10% to 15% increase in cost





Build your network





Remember what's not going change in the next five to 10 years





Focus on the WIN – "What's Important Now?"

CONNECT WITH ME...



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Industries & Sectors:

- Construction
- Construction Managers & General Contractors
- Specialty Trades
- Materials Producers
- Construction Technology Firms
- Construction Industry Associations

Capabilities:

- Market Research & Segmentation
- Customer Buying Practices
- Competitor Analysis
- Strategy Development
- Market Strategy



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The Last Normal Day



Downright Dangerous Decisions



Our Latest Construction Outlook



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