

Fall 2024 (Published: September 2024)

U.S. Put-in-Place Construction Forecasts

Prepared by Michael Guckes, ConstructConnect® Chief Economist



Michael Guckes

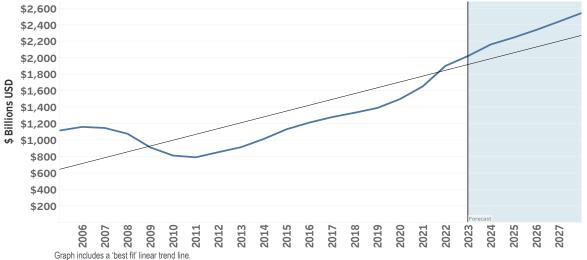
Michael Guckes has over 20-years of economics experience including 8-years in civil construction and 6-years in manufacturing. During these years he spent 5 as Chief Economist. In 2022 Michael joined Construct-Connect's economics team, shifting his focus to the nonresidential and civil construction markets. He received his BA in economics and political science from Kenyon College and his MBA from The Ohio State University.

Quarterly U.S. Put-in-Place Construction Forecast Report, Fall 2024

At the mid-year mark for 2024, Put-in-Place construction continues to benefit from the delayed effects of stimulus spending, especially that of mega projects from past quarters and even years. The latest 2024 projection estimates total construction at \$2,164 billion, up from the previous estimate of \$2,075 billion, a 4.3% increase.

At the end of the second quarter of 2024, US inflation-adjusted gross domestic product (GDP) clocked in at \$22.918 Trillion , representing 1% and 3.1% growth over the previous 6- and 12-month periods. The conditions under which these gains occurred were notable for multiple reasons. Chief among these was that the Federal Reserve over this period held the Federal Funds rate —effectively a brake on the economy—at its highest level in nearly two decades. However, as of late August, the Fed had all but promised that it would begin to lower the Fed Funds rate and in doing so begin to allow other rates to fall as well. Falling rates will certainly help to relieve some of the building pressure that has impacted CRE owners and developers since early 2022 when Cont'd on page 2

Graph 1: U.S. Grand Total Construction Spending Put-in-place (PIP) Investment



Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

'Starts' versus Put-in-place (PIP) Statistics

'Starts' compile the total estimated dollar value of all projects on which ground is broken in any given month. By way of contrast, put-in-place capital spending statistics are analogous to work-in-progress payments as the building of structures proceeds to completion.

Consider a \$100 million mixed use complex for which ground is broken in June 2024. For the 'starts' series, the entire estimated value (\$100 million) will be entered in June 2024. In PIP numbers, it will be captured as spending of approximately \$25 million in 2024; \$60 million in 2025; and the final \$15 million in 2026.

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rates moved higher in response to rapidly rising inflation.

The promise of falling rates couldn't come soon enough for both Commercial Real Estate (CRE) lenders and their clients. As the pool of owners and developers falling behind on their commercial mortgage obligations has grown over the last two years, banks have responded by "extending and pretending". A term used to describe the practice of extending loan terms, or modifying loans, to avoid recognizing losses on underperforming or distressed properties, thereby postponing potential defaults. Estimates suggest that over \$900 million of CRE debt that was due in 2023 took advantage of this process. In doing so this almost certainly saved the industry from seeing a collapse in CRE prices. Many news outlets reported during 1H2024 that some of the more highly recognized properties which did go into foreclosure sold at up to a 50% discount from their previously assessed value.

Looking ahead, the combined expectations of falling interest rates,

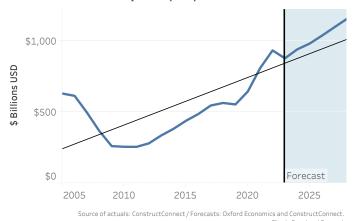
slowing wage growth, and the continuance of only modest movements in the overall price of construction materials should support future industry growth. It is for these reasons that ConstructConnect has strong confidence in the steady growth of total Put-in-Place construction over the forecasted period. It is important to note however that category and subcategory levels outlook expectations are mixed. The outlook for Civil Engineering activity led by Power Infrastructure and Communications remains very strong thanks to the rising use of electric products throughout the economy. In contrast, Office and Manufacturing expectations are more muted but for very different reasons. Office construction continues to feel the effects of the work-from-home trend, which has sapped demand. Manufacturing spending, on the other hand, continues to normalize as the boom in starts activity in recent years fades, leading to the normalization of put-in-place activity in the forecasted period.

| Table 1: U.S. Construction Spending (put-in-place investment) (billions of "current" \$s) | | | | | | | | | | | |
|--|---------|---------|--------|--------|-----------|--------|-------|--|--|--|--|
| | Actuals | | | | Forecasts | | | | | | |
| Type of Construction: | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | | | | |
| Grand Total | 1,902.7 | 2,023.7 | 2163.7 | 2246.8 | 2339.9 | 2441.7 | 2545 | | | | |
| (year vs previous year) | 15.1% | 6.4% | 6.9% | 3.8% | 4.1% | 4.3% | 4.2% | | | | |
| Total Residential | 932.8 | 877.6 | 940.5 | 981.0 | 1037.0 | 1095.6 | 1154 | | | | |
| | 15.3% | -5.9% | 7.2% | 4.3% | 5.7% | 5.6% | 5.3% | | | | |
| Total Non-residential | 970.0 | 1,146.1 | 1223.2 | 1265.8 | 1302.9 | 1346.1 | 1391 | | | | |
| | 14.9% | 18.2% | 6.7% | 3.5% | 2.9% | 3.3% | 3.39 | | | | |
| Total Commercial/for Lease | 247.1 | 265.4 | 252.8 | 264.3 | 274.5 | 285.5 | 297. | | | | |
| | 19.7% | 7.4% | -4.8% | 4.6% | 3.8% | 4.0% | 4.1% | | | | |
| Lodging | 20.2 | 24.7 | 23.6 | 26.0 | 28.4 | 30.8 | 33.2 | | | | |
| | 6.1% | 22.3% | -4.6% | 10.4% | 9.2% | 8.3% | 7.9% | | | | |
| Office | 95.4 | 99.0 | 100.1 | 101.6 | 103.1 | 105.5 | 108. | | | | |
| | 6.1% | 3.8% | 1.1% | 1.5% | 1.5% | 2.3% | 3.09 | | | | |
| Commercial (retail/warehouse) | 131.5 | 141.7 | 129.1 | 136.7 | 142.9 | 149.2 | 155. | | | | |
| | 35.0% | 7.8% | -8.9% | 5.9% | 4.5% | 4.4% | 4.29 | | | | |
| Total Institutional | 208.6 | 240.1 | 256.8 | 261.5 | 266.6 | 272.5 | 280. | | | | |
| | 7.3% | 15.1% | 7.0% | 1.8% | 2.0% | 2.2% | 2.99 | | | | |
| Health Care | 58.1 | 65.4 | 69.2 | 72.3 | 74.2 | 76.4 | 79.5 | | | | |
| | 15.4% | 12.6% | 5.8% | 4.4% | 2.7% | 2.9% | 4.0% | | | | |
| Educational | 104.0 | 120.2 | 127.2 | 129.1 | 131.2 | 133.1 | 135. | | | | |
| | 3.0% | 15.6% | 5.8% | 1.5% | 1.6% | 1.5% | 1.9% | | | | |
| Religious | 3.2 | 3.8 | 3.9 | 3.5 | 3.5 | 3.6 | 3.6 | | | | |
| | 2.8% | 19.3% | 3.8% | -10.1% | -0.2% | 0.6% | 1.0% | | | | |
| Public Safety | 11.7 | 14.4 | 18.7 | 18.2 | 17.4 | 17.1 | 17.1 | | | | |
| | -8.7% | 22.9% | 29.6% | -2.6% | -4.2% | -2.0% | 0.3% | | | | |
| Amusement and Recreation | 31.5 | 36.2 | 37.8 | 38.4 | 40.2 | 42.3 | 44.4 | | | | |
| | 16.3% | 14.8% | 4.3% | 1.6% | 4.9% | 5.2% | 5.09 | | | | |
| Total Engineering/Civil | 389.2 | 447.0 | 484.2 | 529.0 | 562.6 | 593.1 | 621. | | | | |
| (year vs previous year) | 7.6% | 14.8% | 8.3% | 9.3% | 6.3% | 5.4% | 4.89 | | | | |
| Transportation | 60.9 | 65.2 | 67.9 | 74.0 | 79.0 | 83.4 | 87.6 | | | | |
| | 3.1% | 7.1% | 4.1% | 9.0% | 6.7% | 5.6% | 5.0% | | | | |
| Communication | 24.4 | 28.0 | 28.9 | 30.9 | 32.4 | 34.1 | 36.0 | | | | |
| | 5.5% | 14.9% | 3.2% | 7.0% | 4.8% | 5.2% | 5.69 | | | | |
| Power | 121.6 | 134.0 | 154.2 | 183.1 | 201.3 | 217.5 | 232. | | | | |
| | 2.1% | 10.2% | 15.1% | 18.8% | 9.9% | 8.1% | 6.89 | | | | |
| Highway and Street | 115.7 | 138.1 | 145.2 | 150.9 | 157.9 | 164.1 | 169. | | | | |
| W.I. O. I. O.W. I. D. | 11.9% | 19.4% | 5.2% | 3.9% | 4.6% | 3.9% | 3.5% | | | | |
| Water Supply & Waste Disposal Conservation and Development | 57.3 | 69.9 | 76.1 | 77.2 | 78.9 | 80.8 | 82.7 | | | | |
| | 16.7% | 22.0% | 8.8% | 1.4% | 2.3% | 2.4% | 2.49 | | | | |
| | 9.4 | 11.7 | 11.9 | 12.9 | 13.0 | 13.1 | 13.2 | | | | |
| | 18.7% | 24.8% | 1.8% | 7.9% | 1.4% | 0.4% | 0.7% | | | | |
| Total Industrial/Manufacturing | 125.0 | 193.6 | 229.4 | 210.9 | 199.3 | 195.0 | 191. | | | | |
| | 52.4% | 54.9% | 18.5% | -8.1% | -5.5% | -2.1% | -1.69 | | | | |

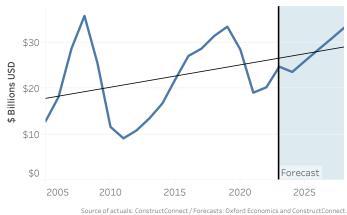
"Current" means not adjusted for inflation.

Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Table: ConstructConnect.

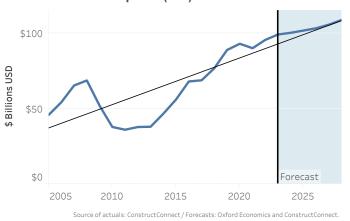
Graph 2: U.S. Construction Spending: Residential Put-in-place (PIP) Investment



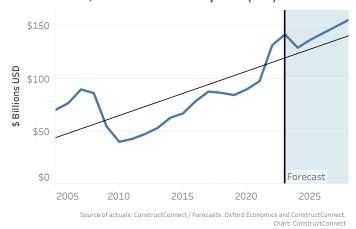
Graph 3: U.S. Construction Spending: Lodging Put-in-place (PIP) Investment



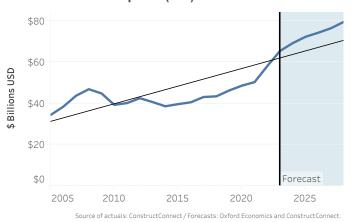
Graph 4: U.S. Construction Spending: Office Buildings Put-in-place (PIP) Investment



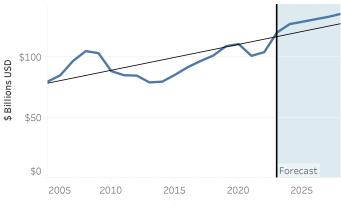
Graph 5: U.S. Construction Spending: Retail, Warehouse, Restaurant Put-in-place (PIP) Investment



Graph 6: U.S. Construction Spending: Health Care Put-in-place (PIP) Investment



Graph 7: U.S. Construction Spending: Educational Put-in-place (PIP) Investment

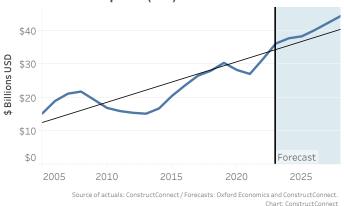


Source of actuals: ConstructConnect / Forecasts: Oxford Economics and ConstructConnect

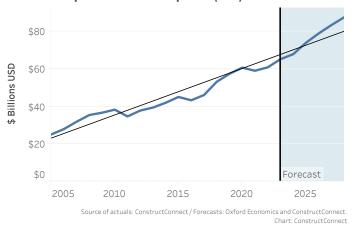
Graphs include a 'best fit' linear trend line.

Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Charts: ConstructConnect.

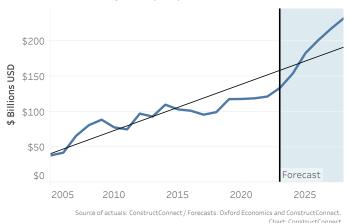
Graph 8: U.S. Construction Spending: Amusement and Recreation Put-in-place (PIP) Investment



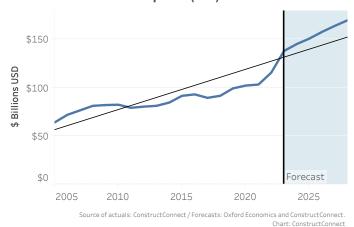
Graph 9: U.S. Construction Spending: Transportation Put-in-place (PIP) Investment



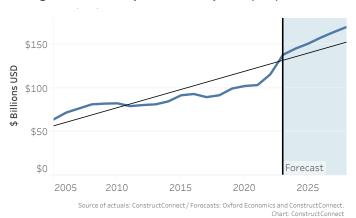
Graph 10: U.S. Construction Spending: Power Put-in-place (PIP) Investment



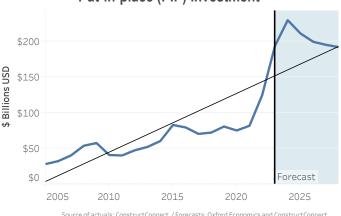
Graph 11: U.S. Construction Spending: Highways and Streets Put-in-place (PIP) Investment



Graph 12: U.S. Construction Spending: Water Supply, plus Sewage & Waste Disposal Put-in-place (PIP) Investment



Graph 13: U.S. Construction Spending: Manufacturing Put-in-place (PIP) Investment



Source of actuals: ConstructConnect / Forecasts: Oxford Economics and ConstructConnect.

Chart: ConstructConnect

Graphs include a 'best fit' linear trend line.

Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Charts: ConstructConnect.

CURRENT VS CONSTANT DOLLARS

In the years immediately after COVID, the industry experienced a surge in both material and labor costs. As a result, the price tag associated with projects moved quickly higher while the amount of physical construction performed increased far less. Although this disconnect between the change in the cost of work and the physical amount of work performed was extremely evident in 2021 and 2022 this disconnect is always in effect. For this reason, it is necessary to have a tool that monitors prices relative to work performed, known as a "deflator". The deflator table below, created with the help of our partners at Oxford Economics, allows the industry to compare spending levels at two different points in time while removing

the distortions caused by changing (that is, generally rising) prices.

In the table below the number of dollars spent from 2015 to 2023 increased by nearly \$900 billion from \$1.132 trillion to \$2.023 trillion, representing a 79-percent increase in the amount of money spent on construction. However, the amount of physical construction between these years did not increase by 79 percent as well. To know how much of that increased spending went toward additional physical construction requires knowing how much the price of work changed (increased) for the same amount or "unit" of work. By monitoring the price of construction work overtime the Census Bureau observed that the price for a unit of construction

work increased in price between 2015 and 2023 by 54.5 percent. Comparing the rise in spending (79%) against the rising cost of work (54.5%) indicates that most of the increased dollar spend in 2023 as compared to 2015 was used to offset higher prices for labor and materials. Viewed from the perspective of the value of the dollar today, the amount of work accomplished in 2015 would require \$1.767 trillion dollars today.

Looking ahead, between 2023 and 2028, spending is expected to increase by \$521.6 billion, or almost 26%. Of that increase, expected inflation will erode nearly 10% of the spending "power" of those dollars, leading to an estimated increase in 'real' work of about 15%.

U.S. 'Constant' Dollar or 'Real' Put-in-Place Construction Spending

| Year | Construction Output Price Index (2015 = 100) | Change in Price Index Y/Y | Current' \$ PIP Construction Spending (\$ billions) | % Change Y/Y | Constant' \$ PIP Construction Spending (\$ billions) | Real' Y/Y % Change in Total PIP Construction Spending |
|------|--|------------------------------|--|-----------------|---|---|
| 2015 | 100.0 | | \$ 1,132.1 | | \$ 1,132.1 | |
| 2016 | 103.6 | 3.6% | \$ 1,213.2 | 7.2% | \$ 1,170.5 | 3.4% |
| 2017 | 107.1 | 3.3% | \$ 1,279.9 | 5.5% | \$ 1,194.9 | 2.1% |
| 2018 | 110.4 | 3.1% | \$ 1,333.2 | 4.2% | \$ 1,207.3 | 1.0% |
| 2019 | 115.9 | 4.9% | \$ 1,391.1 | 4.3% | \$ 1,200.4 | -0.6% |
| 2020 | 119.2 | 2.9% | \$ 1,499.6 | 7.8% | \$ 1,257.8 | 4.8% |
| 2021 | 122.6 | 2.8% | \$ 1,653.4 | 10.3% | \$ 1,348.6 | 7.2% |
| 2022 | 141.6 | 15.5% | \$ 1,902.7 | 15.1% | \$ 1,344.2 | -0.3% |
| 2023 | 154.5 | 9.1% | \$ 2,023.7 | 6.4% | \$ 1,310.1 | -2.5% |
| 2024 | 156.1 | 1.0% | \$ 2,163.7 | 6.9% | \$ 1,386.2 | 5.8% |
| 2025 | 159.2 | 2.0% | \$ 2,246.8 | 3.8% | \$ 1,411.3 | 1.8% |
| 2026 | 162.2 | 1.9% | \$ 2,339.9 | 4.1% | \$ 1,442.4 | 2.2% |
| 2027 | 165.6 | 2.1% | \$ 2,441.7 | 4.3% | \$ 1,474.6 | 2.2% |
| 2028 | 169.3 | 2.2% | \$ 2,545.3 | 4.2% | \$ 1,503.4 | 2.0% |

Source of Price Index: Oxford Economics Table: ConstructConnect

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