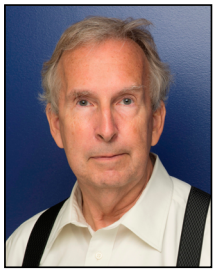
constructconnect

Summer 2022 (Published: May 2022)

U.S. Put-in-Place Construction Forecasts

Prepared by Alex Carrick, ConstructConnect® Chief Economist



Alex Carrick

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Quarterly U.S. Put-in-Place Forecast Report, Summer 2022

Today's crucial question is whether the economy can continue to make forward progress in the face of numerous obstacles being thrown in its path. Or is a 2022 recession in the cards? Or perhaps stagflation (i.e., little or no growth accompanied by high inflation)?

The case for downside risk argues that it will be hard to maintain broad-based buoyancy in consumer spending, which accounts for 70% of GDP, when a gas fill-up at a service station costs well beyond $100. Spending will inevitably be diverted away from other choices.

The interest rate hikes to restrain inflation (currently +8.3% y/y for the Consumer Price Index) are already raising debt carrying costs and softening stock market activity, which lowers estimations of wealth and subtracts from confidence. Housing affordability, both in terms of

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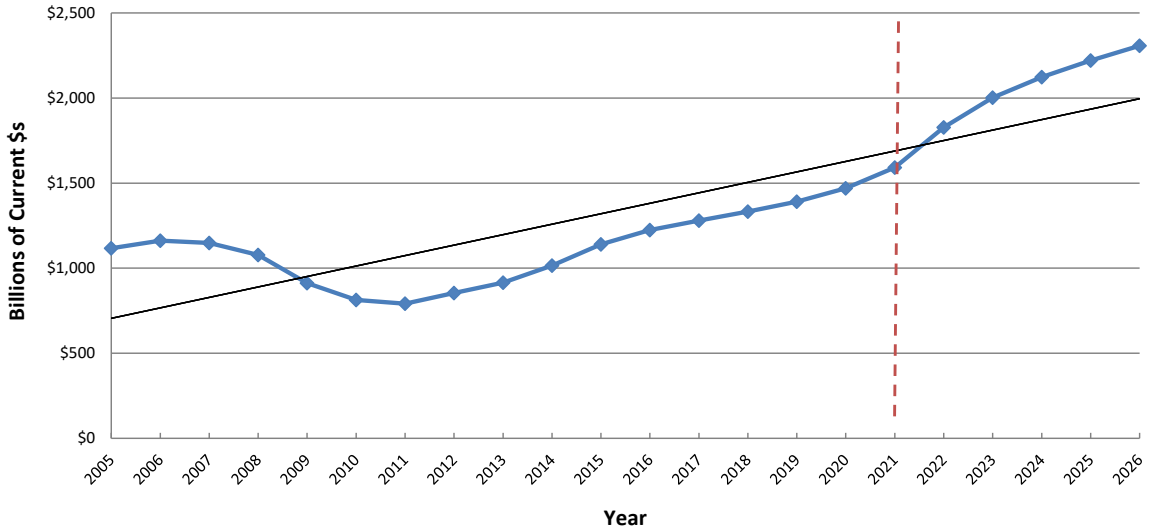
Graph 1: U.S. Grand Total Construction Spending Put-in-place (PIP) Investment



Graph includes a 'best fit' linear trend line.

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 $60 million office tower for which ground is broken in June 2022. For the 'starts' series, the entire estimated value ($60 million) will be entered in June 2022. In PIP numbers, it will be captured as spending of approximately $15 million in 2022; $25 million in 2023; and the final $20 million in 2024.

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price and mortgage charges, has become an issue and threatens to downscale demand for appliances, furniture, and home entertainment systems.

Supply chain interruptions have not yet been fully resolved and they've been exacerbated by Russia's invasion of Ukraine, particularly relating to agricultural products. Also, the foreign trade deficit has descended to a new record depth (-$1.5 trillion for 'goods', annualized), with no easy path towards resolution.

There are two major counterweights, however, to the banner of negativity currently being unfurled. Jobs creation throughout the economy remains remarkably strong and the not seasonally adjusted unemployment rate has decreased to a barely-there 3.3%. The strong employment gains and accompanying income increases provide an underlying momentum to carry the economy forward.

Furthermore, a refreshing wave of mega-sized construction projects is about to break on America's shores. In addition to the major initiatives under the Infrastructure Investment and Jobs Act (IIJA), there have been well-publicized billion-dollar-plus capital spending announcements tied to the assembly of electric vehicles, the production of batteries and computer chips, steelmaking, and liquefied natural gas (LNG) exporting facilities.

A slowdown or recession in the general economy may occur in the months ahead, but there are reasons to remain upbeat about hearty prospects for many aspects of building and engineering construction.

Table 1: U.S. Construction Spending (put-in-place investment)

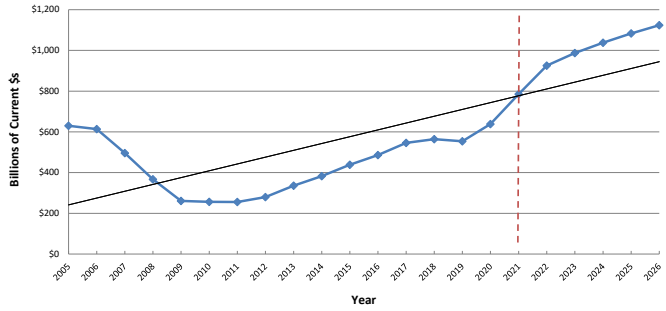
(billions of "current" $s)

	Actuals		Forecasts				
Type of Construction:	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Grand Total	1,469.2	1,591.7	1,827.3	2,002.4	2,122.6	2,220.2	2,307.3
(year vs previous year)	5.6%	8.3%	14.8%	9.6%	6.0%	4.6%	3.9%
Total Residential	638.1	785.3	925.4	987.4	1,038.0	1,083.2	1,123.9
	15.3%	23.1%	17.8%	6.7%	5.1%	4.3%	3.8%
Total Non-residential	831.1	806.4	902.0	1,015.0	1,084.6	1,137.1	1,183.4
	-0.8%	-3.0%	11.8%	12.5%	6.9%	4.8%	4.1%
Total Commercial/for Lease	203.3	192.9	206.8	229.3	244.6	257.1	270.5
	-1.6%	-5.1%	7.2%	10.9%	6.7%	5.1%	5.2%
Lodging	29.1	19.7	17.8	24.6	28.5	31.2	34.1
	-13.2%	-32.3%	-9.3%	37.8%	15.9%	9.6%	9.3%
Office	87.4	82.1	87.9	94.5	99.4	103.5	107.0
	-1.5%	-6.1%	7.1%	7.5%	5.2%	4.1%	3.3%
Commercial (retail/warehouse)	86.8	91.2	101.0	110.2	116.6	122.3	129.4
	2.9%	5.0%	10.8%	9.0%	5.9%	4.9%	5.8%
Total Institutional	204.5	187.5	197.0	210.0	220.8	229.6	237.4
	1.5%	-8.3%	5.1%	6.6%	5.1%	4.0%	3.4%
Health Care	48.1	49.1	53.6	57.8	61.5	64.6	67.1
	4.0%	2.1%	9.0%	7.8%	6.4%	5.1%	3.9%
Educational	107.4	98.2	101.2	106.0	111.2	115.1	119.2
	-1.4%	-8.6%	3.1%	4.8%	4.8%	3.5%	3.6%
Religious	3.5	3.0	2.7	2.8	2.9	3.0	3.0
	-6.2%	-12.9%	-10.8%	1.8%	4.0%	2.8%	2.9%
Public Safety	17.9	11.9	11.5	13.4	14.2	14.6	14.7
	48.8%	-33.2%	-3.8%	16.6%	5.8%	2.9%	0.5%
Amusement and Recreation	27.6	25.2	28.0	30.1	31.1	32.3	33.3
	-9.4%	-8.6%	11.3%	7.2%	3.4%	4.1%	3.1%
Total Engineering/Civil	351.2	347.5	390.8	438.2	468.5	493.9	515.8
(year vs previous year)	0.7%	-1.1%	12.5%	12.1%	6.9%	5.4%	4.4%
Transportation	59.7	56.2	63.0	69.5	72.6	75.8	77.9
	3.9%	-5.7%	12.1%	10.3%	4.4%	4.5%	2.7%
Communication	22.5	21.9	23.9	26.5	28.7	30.9	32.8
	1.5%	-2.9%	9.2%	11.0%	8.1%	7.7%	6.2%
Power	115.0	114.9	132.1	150.7	162.9	175.1	187.5
	-2.5%	-0.2%	15.0%	14.1%	8.1%	7.5%	7.1%
Highway and Street	99.9	100.4	112.0	121.8	130.5	137.8	143.4
	0.5%	0.5%	11.6%	8.8%	7.1%	5.6%	4.0%
Water Supply & Waste Disposal	45.1	46.6	50.5	58.5	61.8	61.7	61.7
	6.1%	3.2%	8.5%	15.8%	5.7%	-0.2%	0.0%
Conservation and Development	9.0	7.6	9.3	11.1	12.0	12.6	12.7
	-2.8%	-15.3%	23.0%	18.9%	7.8%	4.9%	0.8%
Total Industrial/Manufacturing	72.1	78.5	107.3	137.4	150.8	156.6	159.7
	-10.9%	8.8%	36.7%	28.1%	9.7%	3.8%	2.0%

"Current" means not adjusted for inflation.

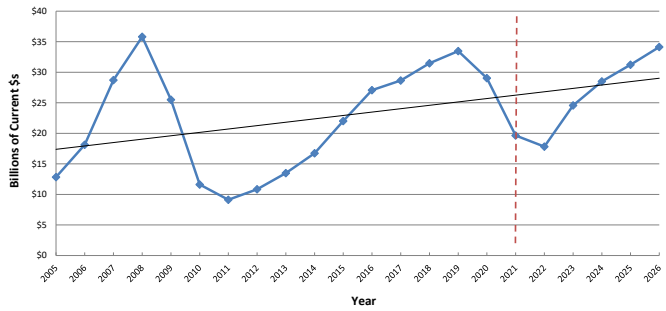
Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Table: ConstructConnect.

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



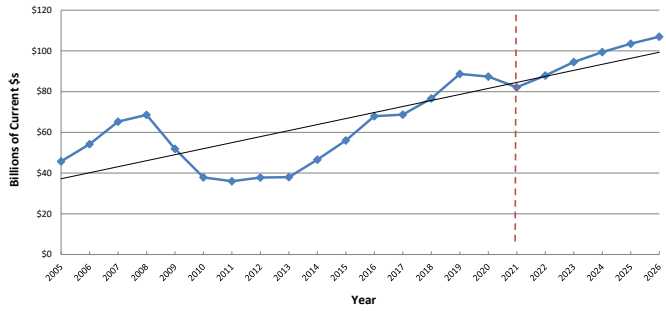
In 2022, total dollars spent on residential construction will likely surpass nonresidential activity. Early in the pandemic, the single-family market was boosted by workers and their families fleeing crowded downtown cores for the suburbs and rural communities. That trend is now reversing. Multi-unit housing starts are picking up more than single-family starts. Also, increases in building costs are driving the total dollar volume of residential onto a new higher trajectory.

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



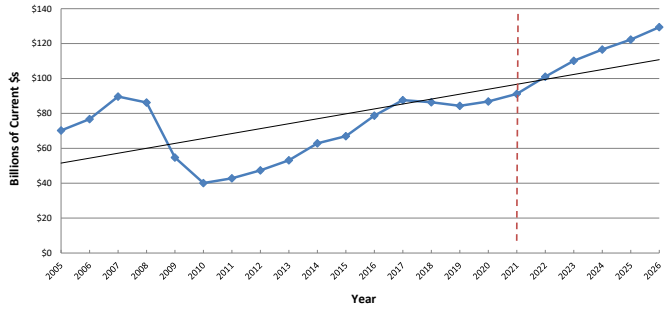
The travel industry has been making a nice comeback, but there's still uncertainty about the reach of COVID variants. Also, included in the present run-up in energy costs is jet fuel, which will impact airfares. 'Starts' statistics on hotel/motel work finally stopped falling and turned positive in 2022's Q1. It won't be until 2023, however, before the lagging put-in-place numbers revive. From 2023 on, the competitive streak of lodging providers will accelerate the rebound.

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



Some employers are becoming emphatic that their workers return to the office place. Personal interaction promotes collaboration and culture; and the training of new staff is easier when it's 'hands on'. On the flip side, working from home helps with the retention of older workers, who might be thinking of retirement. Plus, the commute cost of driving to work is becoming prohibitive. A hybrid approach will mute the growth of office space demand for some time.

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

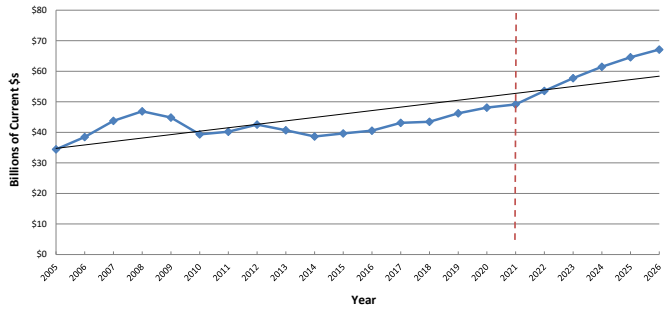


The explosive growth in Internet sales sent physical retail projects into freefall. The latest 'starts' numbers, though, say the plummet has ended. With the pandemic diminishing (fingers crossed), shoppers are returning to malls for browsing and entertainment. The bonanza of warehouse work to fulfill online purchases is settling down, but it's being replaced by another source of demand. Supply line breakages have taught manufacturers and distributors the advantages of stockpiling.

Graphs include a 'best fit' linear trend line.

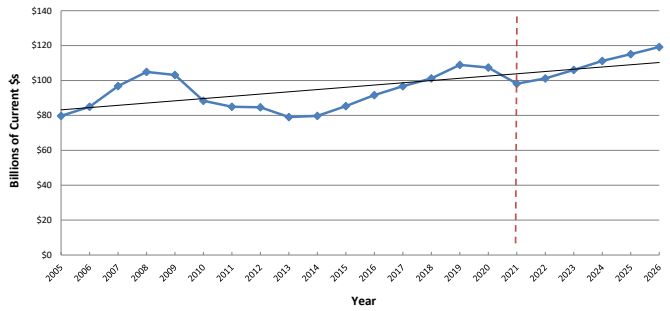
Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Charts: ConstructConnect.

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



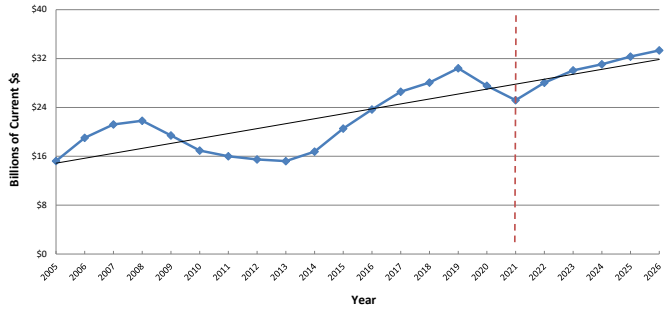
The recent weakness in hospital construction has been a surprise, given all the attention paid to health care during the pandemic. Looking after COVID patients has been a dominating priority. There have, however, been significant investments in teaching hospitals on university campuses. The outlook for hospitals, seniors' homes and medical clinics will benefit from one overriding fact. With each passing year, the aging of the population is becoming more pronounced.

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



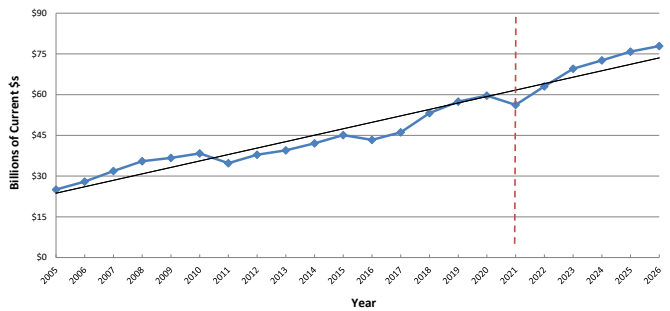
The strength in school construction has been waning for a variety of reasons. In K-12 facilities, student streaming has slowed due to a drop in the number of births and by fewer arrivals of young immigrant families with children. In higher education, courses are available online and foreign student enrolments have been discouraged. Action by state and federal officials to cut tuition fees in colleges and to waive some student debt may inspire a return to classrooms.

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



After two years in at least semi-isolation, everyone wants to mix and mingle and have fun again; to cheer at live sporting events; and to laugh and cry in theaters, cinemas, and casinos. The initial enthusiasm, though, is being dampened by inflation. When essential items cost much more (e.g., food and gasoline), difficult choices must be made. Nevertheless, restored plans for stadiums, trade show halls, and film, TV and recording studios will lead put-in-place investment higher.

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

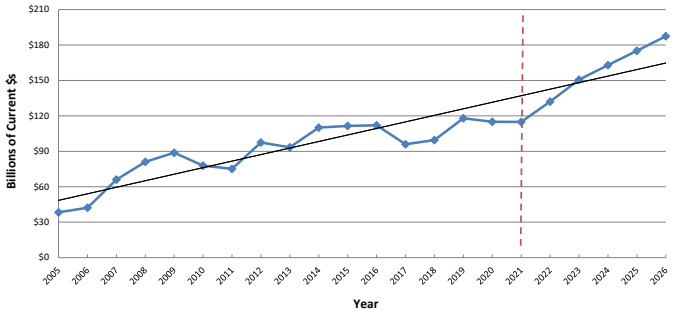


Improving the nation's infrastructure is one of the primary motivations for enactment of the IIJA. Urban dwellers want more miles of rapid transit. Locked-in-road-traffic drivers and businesses dependent on freight haulage want more travel-by-rail options. Hyperloop promoters, eager to see their visions brought fully to life, want to move beyond their pilot stages. And nearly every major city in America has an airport or two crying out for extra runways and passenger gates.

Graphs include a 'best fit' linear trend line.

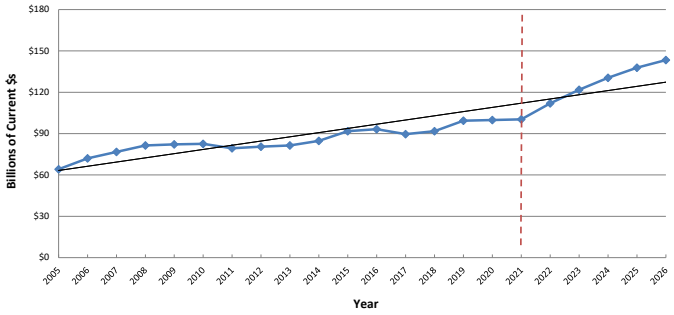
Source of actuals: U.S. Census Bureau/Forecasts: Oxford Economics and ConstructConnect/Charts: ConstructConnect.

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



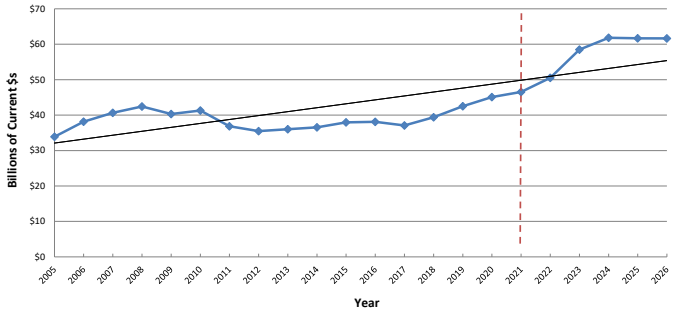
Striving towards a net-zero carbon emission goal for the U.S. economy will rely on greater use of electricity. Preferred spending initiatives will focus on sustainable wind, solar and geothermal power generation, perhaps also small modular (nuclear) reactors (SMRs), and an easier-to-access vehicle recharging network. More battery storage and transmission lines will also increase the demand for commodities and new compounds (e.g., copper, nickel, lithium, and polymers).

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



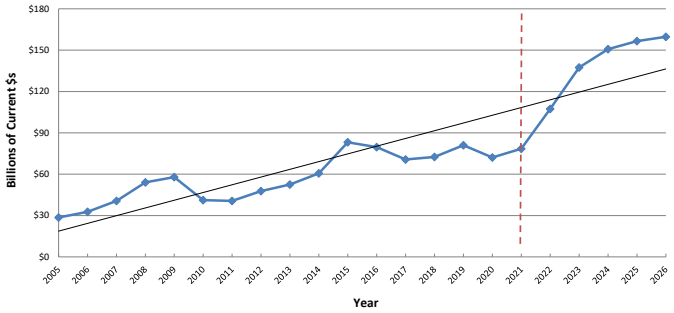
The dollar volume trend of roadwork 'starts' has long been mildly ascending. 2022's Q1 country-wide put-in-place number for highways and streets was +8.5% y/y. Strong single-family groundbreakings have been a boon to roadbuilding. Coming up, the prime drivers will be IIJA funds and a spate of bridge and tunnel jobs. Future logistics-related productivity gains will require a great roadway system, especially if the take-off in the price of diesel fuel persists.

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



Ten years of investment lethargy in water delivery and effluent removal are being rectified. Fixes are planned for communities where potable water is still being compromised by lead and other contaminants. With the damage now being wrought by severe weather events, formerly routine projects are being asked to show 'resiliency'. Big undertakings in storm sewer and spillover removal are becoming ever more integral to other types-of-structure work, such as subways.

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



Goods and commodity price escalations aren't entirely negative for construction activity. They encourage owners of production facilities and resource extraction sites to enlarge their footprints. Based on the preponderance of mega-sized projects announced by automakers, battery and computer chip manufacturers, steelmakers, and a host of others (e.g., hydrogen cos.), the outlook for industrial put-in-place construction appears bullish. Also, energy-related projects (fertilizer plants, LNG facilities), if they are allowed by regulatory bodies to proceed, are poised to reap the advantages of the favorable natural gas cost differential, North America versus Europe/Asia.

CURRENT VS CONSTANT DOLLARS

During most of the past decade, there wasn't much concern with simply talking about construction volumes in 'nominal' or 'actual' or 'current-dollar' terms. The role being played by price increases was relatively minor.

With the big current increases in material input costs, and wages too for that matter, and the flow-through impacts on project pricing, the difference between 'current' dollars and 'constant' dollars has become important once again.

'Constant' dollars remove the impact of inflation. For example, it's important to know that if a dollar volume increases by +10%, but prices have also gone up by +10%, then the 'real' change has been zero.

A price index or deflator is used to convert current dollars to constant dollars. A base period is chosen for a certain price level and it is assigned the value of 100.0. Then if prices increase by +5% over the next year, the index in year two moves to 1.05 x 100.0 = 105.0.

If prices rise by +4% in the third year, the index will shift up to 1.04 x 105.0 = 109.2. If prices change by -4% instead, the index value in the third year will become 0.96 x 105.0 = 100.8.

Market volumes divided by an appropriate price index or deflator will yield dollars that are termed 'constant' (i.e., in the sense that they've had inflation removed) relative to the chosen base period.

The PIP construction dollar volumes set out in this report, as calculated by Oxford Economics and ConstructConnect, are in 'current' dollars. The estimates of the year-over-previous-year pricing impacts, as provided by Oxford Economics, are +2.9% in 2020; +3.0% in 2021; and +10.0% in 2022. From 2023 onward, costs and pricing settle back down into an annual +2.0% to +3.0% range.

What this means is that in 'real' or 'constant' dollar terms, grand total PIP construction of +14.8% y/y in 2022 will yield a 'real' or 'constant' dollar increase of between +4.0% and +5.0%. The year 2022, by physical activity, will be about even with the year prior, 2021 (+5.0%), but less robust than in the year to follow, 2023 (approximately +7.0%).