National Industrial Report

November 2021

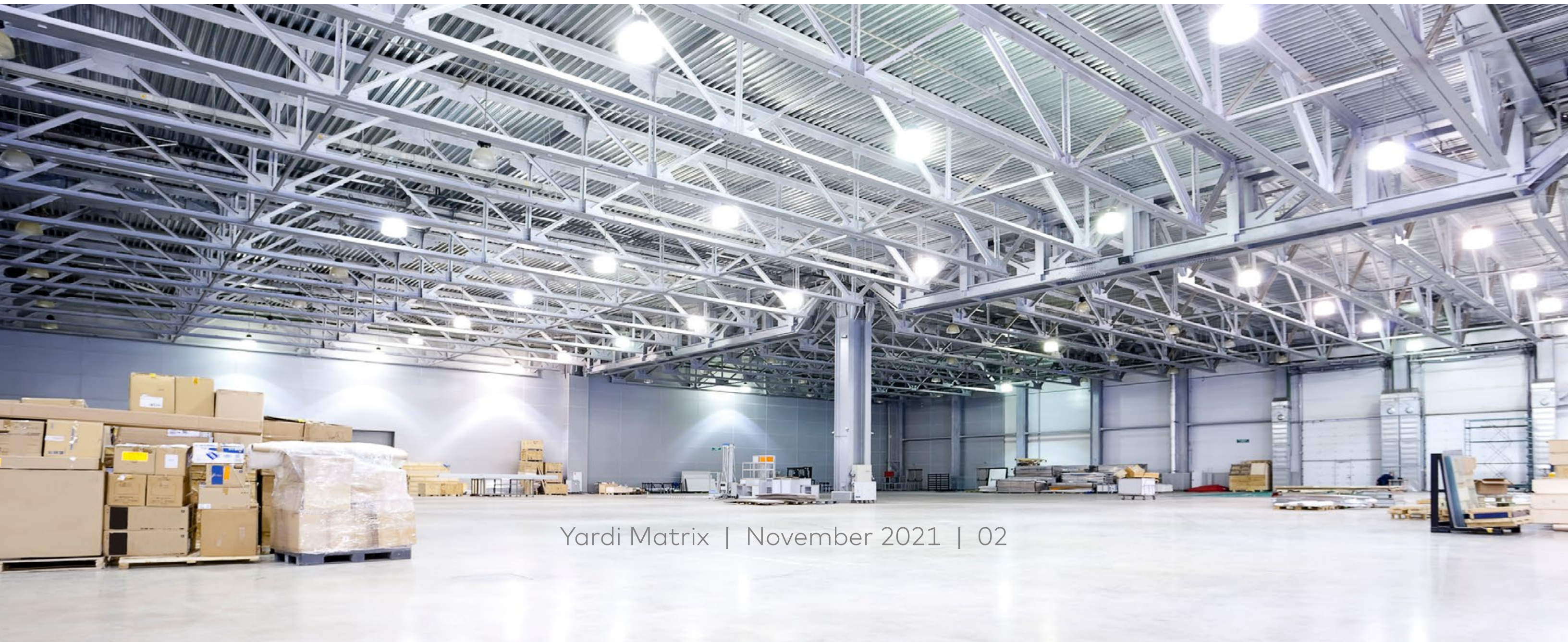
Chip Shortage Impacts U.S. Industrial

- The global shortage of semiconductors, also known as computer chips, is affecting manufacturers of all shapes and sizes. Used in everything from household appliances and cars to smartphones and video game consoles, chips are in short supply, causing headaches for both goods producers and consumers. Chip manufacturers have not been able to meet the escalating demand as the global economy has rebounded from the worst of the pandemic, and these chip shortages have caused bottlenecks in the production of many goods, contributing to inflation.

- The U.S. has outsourced a great deal of chip production in recent decades, falling from 37% of global share to 12% over the last 20 years, according to the Semiconductor Industry Association. The Biden administration is considering the issue a matter of national security and has made stateside chip production a priority to help strengthen domestic supply chains. A sweeping bill aimed at boosting U.S. production of chips passed the Senate in June but has since stalled in the House.

- Large semiconductor manufacturing facilities are being built in the U.S. and more will soon begin construction. If Phoenix—with Intel manufacturing semiconductors at their nearly four million square foot Chandler Octillo campus and a smattering of smaller chip manufacturers in the area—wasn't already the semiconductor capital of the U.S., it will be soon. Taiwan Semiconductor Manufacturing Co. (TMSC), which produces roughly half of the global supply of chips, recently began construction on a 3.8 million-square-foot facility in Phoenix's North-Gateway submarket, investing $12 billion in the chip giant's first U.S. plant. Intel, for its part, is investing $20 billion in a 670,000-square-foot expansion of its campus. Samsung is currently deciding where to locate a $17 billion factory in the U.S., as vice chairman Jay Y. Lee visits North America this month. While reporting suggests the frontrunner is a site in Williamson County, Texas, Samsung suffered hundreds of millions of dollars in damages due to shutdowns at its Austin facility when last winter's storm wreaked havoc on the Texas power grid. Arizona and New York are also reported to be under consideration.

- While these plants will take years to get up and running—TMSC won't start producing chips at its massive Arizona facility until 2024—they could have lasting impacts on chip production and the U.S. industrial market. The pandemic has exposed many weak links in the global supply chain, which could potentially lead to a reshoring of some manufacturing in coming years, making increased stateside chip production more vital.



Rents and Occupancy: New Jersey Driven by Port Activity

- National rents for industrial space averaged $6.37 per square foot in October, an increase of 3.9% over the last 12 months, according to Yardi Matrix. Leases signed over the last 12 months cost $7.19 per foot, 82 cents higher than the national average.

- Rent growth continues to be highest in port markets and the Sun Belt. The Inland Empire led the country with an increase of 6.6% for in-place rents over the last 12 months, followed by Nashville (6.2%), Los Angeles (5.7%) and New Jersey (5.7%).

- Rent growth has generally been weakest in Midwestern markets—Kansas City's rates fell by 0.2% and St. Louis's have increased only 1.2%—but two port markets have surprisingly seen weak rent growth of late. Boston rents have only grown 1.9% and Houston's 1.7%.

- The national vacancy rate in September was 5.9%, an increase of 20 basis points from last month.

- Vacancy rates are generally tightest in Southern California. Only 1% of space is vacant in the Inland Empire, the lowest in the country. Los Angeles has a vacancy rate of 2.9% and Orange County 3.7%. Midwestern logistics hubs Columbus (1.9%) and Indianapolis (4.2%) also have a low amount of vacant space.

- Outside of Southern California, the country's hottest market is New Jersey, with its 5.7% rent growth driven by a vacancy rate of 3.4%. Tenants have paid a hefty premium to sign new leases over the 12 months, $2.54 more than the market average. New Jersey market performance is impacted in large part by the Port of New York and New Jersey, the third-busiest port in the country, according to the U.S. Department of Transportation. The port handled 6.7 million 20-foot equivalent units (TEUs) in the first three quarters of this year, an increase of 24% over the amount of TEUs handled through the same point last year.

Average Rent by Metro

Market	Oct-21 Average Rent	12-Month Change	Avg Rate Signed in Last 12 Months	Vacancy Rate
National	$6.37	3.9%	$7.19	5.9%
Inland Empire	$6.45	6.6%	$8.05	1.0%
Nashville	$4.88	6.2%	$6.81	2.8%
Los Angeles	$10.20	5.7%	$12.23	2.9%
New Jersey	$7.92	5.7%	$10.46	3.4%
Bay Area	$10.87	4.8%	$12.00	6.0%
Philadelphia	$6.22	4.8%	$6.56	5.6%
Atlanta	$4.60	4.7%	$5.51	5.1%
Central Valley	$5.13	4.2%	$6.73	4.6%
Phoenix	$6.94	4.1%	$7.28	5.9%
Seattle	$8.95	4.0%	$11.18	6.7%
Memphis	$3.38	3.9%	$3.52	5.7%
Dallas–Fort Worth	$4.74	3.9%	$5.29	4.9%
Detroit	$5.79	3.6%	$6.83	10.9%
Portland	$8.10	3.6%	$7.06	6.0%
Miami	$8.78	3.6%	$9.88	4.9%
Cincinnati	$4.13	3.5%	$4.11	9.8%
Tampa	$6.21	3.3%	$6.41	4.6%
Orange County	$11.47	3.3%	$13.74	3.7%
Denver	$7.77	3.1%	$7.86	8.9%
Baltimore	$6.75	2.7%	$7.41	6.6%
Chicago	$5.36	2.6%	$5.68	6.8%
Charlotte	$6.26	2.4%	$5.97	9.7%
Twin Cities	$5.94	2.4%	$5.82	8.2%
Columbus	$4.02	2.3%	$4.21	1.9%
Indianapolis	$4.04	2.0%	$4.45	4.2%
Boston	$8.06	1.9%	$10.18	8.7%
Houston	$5.82	1.7%	$5.49	12.5%
St. Louis	$4.10	1.2%	$3.61	6.3%
Kansas City	$4.30	-0.2%	$3.72	5.1%

Source: Yardi Matrix. Data as of October 2021. Rent data provided by Yardi Market Insight. National rent and occupancy data is a weighted average of the top 30 markets.

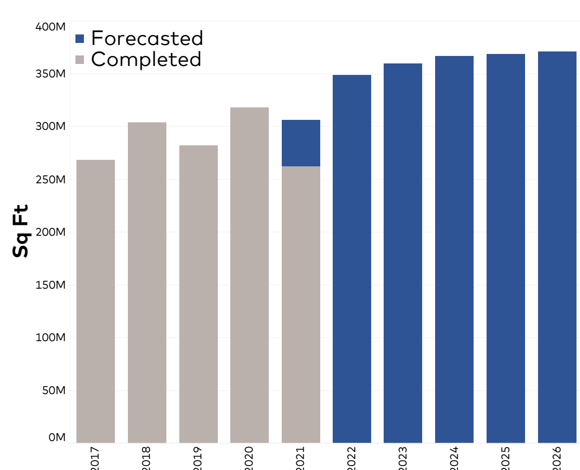
Supply:
Pipeline Booms but Supply Chain May Delay Projects

- Nationally, 522.5 million square feet of new industrial stock are currently under construction, a number that has increased by more than 20% in the last six months. An additional 540.3 million square feet are in the planning stages.

- The markets with the most new stock being built are Dallas (35.3 million square feet, representing 4.3% of stock), Phoenix (29.7 million, 11.0%) and Chicago (28.5 million, 2.9%). On a percent of stock basis, new supply pipelines are largest in Phoenix and Indianapolis (23.4 million, 7.6%). The Inland Empire's large pipeline (22.5 million, 3.8%) will likely be absorbed as soon as it delivers—if it isn't all preleased beforehand—due to a minuscule 1.0% vacancy rate.

- Despite historical levels of new supply under construction, new industrial space may not be able to keep up with demand. This is due in part to blistering demand growth with no end in sight, but labor and material shortages may slow down the rate at which new stock is delivered. The Producer Price Index (PPI) for new nonresidential construction increased 7.1% over the month in October, up 12.6% year-over-year. The PPI for inputs for nonresidential construction increased 1.4% month-over-month and 21.1% year-over-year.

National New Supply Forecast



Source: Yardi Matrix. Data as of October 2021

Supply Pipeline (by metro)

Market	Under Construction	Under Construction % Stock	UC Plus Planned % Stock
National	522,472,757	3.2%	6.5%
Phoenix	29,674,455	11.0%	24.8%
Indianapolis	23,366,395	7.6%	13.4%
Charlotte	9,842,576	3.7%	10.7%
Dallas–Ft Worth	35,259,723	4.3%	10.1%
Kansas City	8,915,531	4.0%	10.1%
Inland Empire	22,541,717	3.8%	8.9%
Philadelphia	13,850,855	3.5%	8.6%
Columbus	12,054,361	4.5%	7.2%
Seattle	11,769,846	4.4%	6.8%
Memphis	11,738,141	4.4%	6.7%
Chicago	28,517,694	2.9%	6.2%
Houston	17,681,306	3.3%	6.2%
Denver	7,989,695	3.3%	6.1%
Nashville	7,249,455	3.8%	6.1%
New Jersey	10,649,284	2.0%	5.0%
Central Valley	7,561,371	2.4%	4.8%
Atlanta	10,665,166	2.1%	4.5%
Boston	6,519,992	2.8%	4.4%
Bridgeport	5,994,067	3.0%	4.4%
Bay Area	4,795,853	1.8%	4.2%
Twin Cities	4,111,288	1.3%	3.9%
Tampa	4,756,007	2.3%	3.8%
Portland	5,267,919	2.9%	3.8%
Baltimore	3,496,445	1.7%	3.4%
Detroit	9,085,850	1.7%	3.2%
Los Angeles	6,812,552	1.0%	2.8%
Cincinnati	4,271,307	1.8%	2.5%
Orange County	1,851,051	1.0%	1.6%
Cleveland	3,490,164	0.9%	1.2%

Source: Yardi Matrix. Data as of October 2021

Economic Indicators:
Producer Price Index Historically High

- The Producer Price Index (PPI) for final demand increased 0.6% over the prior month and 8.6% year-over-year in October, according to the Labor Department. This year, every month since April has set a new record for year-over-year growth in the 12-year-old index. More than 60% of this month's increase is due to upticks in cost for goods producers, with a 1.2% increase in the month and 14.1% year-over-year. Services rose only 0.2% over last month. Core PPI—the measure that excludes volatile food and energy prices—was up 0.4% in the month and 6.8% year-over-year.

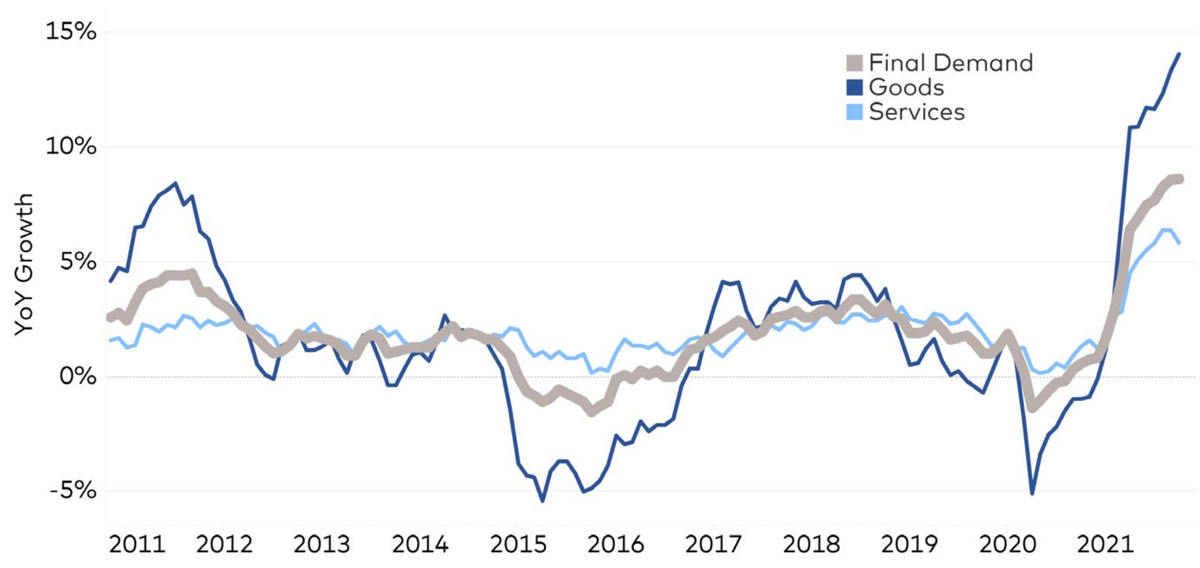
- The spike in the prices producers pay in the final demand for goods reflects the price pressures caused by ongoing transportation bottlenecks and material shortages gripping the economy. With these issues anticipated to last well into next year, producer price increases could continue to drive further increases in consumer prices as firms pass increased costs along to the consumer.

Economic Indicators

National Employment (October) 148.3M 0.4% MoM ▲ 4.1% YoY ▲	**ISM Purchasing Manager's Index** (October) 60.8 -0.3 MoM ▼ 2.0 YoY ▲
Inventories (August) $2,083.9B 0.6% MoM ▲ 7.4% YoY ▲	**Imports** (September) $240.9B 0.8% MoM ▲ 18.3% YoY ▲
Core Retail Sales (September) $451.7B 0.7% MoM ▲ 13.5% YoY ▲	**Exports** (September) $142.7B -4.7% MoM ▼ 17.0% YoY ▲

Sources: Bureau of Labor Statistics; Institute for Supply Management, U.S. Census Bureau; Bureau of Economic Analysis; Moody's Analytics

Producer Price Index



Sources: U.S. Census Bureau, Yardi Matrix

Transactions:
Average Sale Prices Continue to Climb

- Nationally, there have been $51.2 billion of industrial sales this year through October, with 2021 already surpassing last year's sales volume with two months left in the year.

- The average sale price of industrial assets has climbed all year and now sits at $110 per square foot, an increase of 25% over 2020. The average national sale price has increased each quarter this year, from $96 per square foot in the first quarter to $108 in the second and $120 in the third. An increasing number of investors are chasing industrial assets, driving up prices for commercial real estate's hottest asset class.

- Average sale prices have increased in nearly every market covered by Yardi Matrix. Of the major markets, the largest increase can be found in Detroit (from $39 per foot in 2020 to $69 per foot this year, an increase of 84%), Nashville ($73 to $109, 50%), New Jersey ($133 to $199, 49%) and Denver ($119 to $172, 45%).

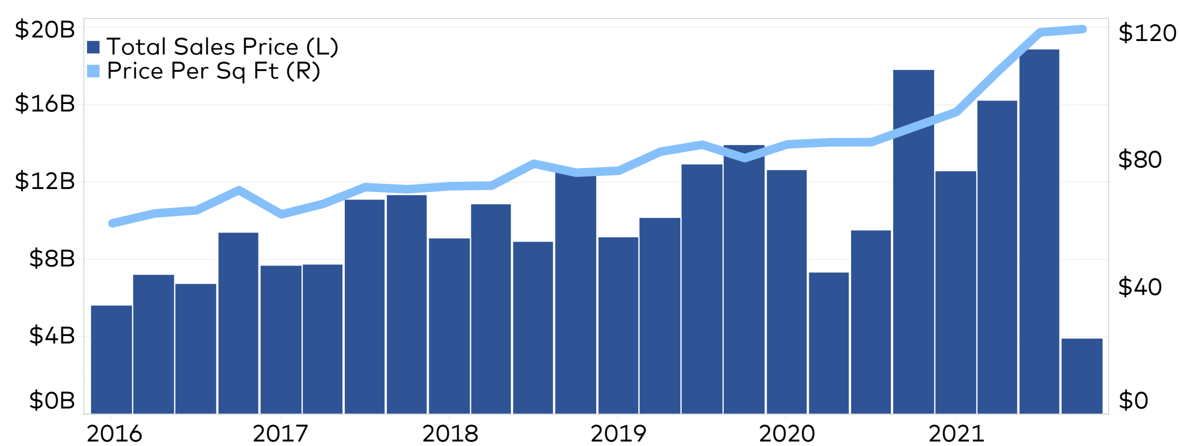
- Industrial buildings have averaged more than $200 per foot in four markets in 2021: Orange County ($294), the Bay Area ($223), Los Angeles ($221) and Seattle ($204).

Sales Activity

Market	YTD Sales Price PSF	YTD Sales (Mil, as of 10/31)
National	$110	$51,245
Los Angeles	$221	$3,849
Chicago	$80	$3,250
Inland Empire	$166	$3,065
Phoenix	$153	$2,888
Atlanta	$85	$2,241
New Jersey	$199	$2,131
Philadelphia	$89	$1,876
Bay Area	$223	$1,623
Boston	$136	$1,535
Tampa	$102	$1,260
Denver	$172	$1,244
Seattle	$208	$1,234
Orange County	$294	$1,121
Twin Cities	$85	$902
Baltimore	$99	$890
Central Valley	$95	$736
Columbus	$59	$725
Dallas	$89	$700
Houston	$83	$605
Nashville	$109	$598
Charlotte	$84	$480
Indianapolis	$60	$469
Memphis	$49	$419
Cleveland	$44	$368
Cincinnati	$63	$345
Bridgeport	$50	$291
Kansas City	$61	$232
Detroit	$69	$214
Portland	$125	$177

Source: Yardi Matrix. Data as of October 2021

Quarterly Transactions



Source: Yardi Matrix. Data as of October 2021

Definitions

Yardi Matrix collects listing rate and occupancy data using proprietary methods.

- Average Rents—Provided by Yardi Matrix Expert, a cutting-edge service that uses anonymized and aggregated data from other Yardi platforms to provide the most accurate rental and expense information available.
- Vacancy—The total square feet vacant in a market, including subleases, divided by the total square feet of office space in that market. Owner-occupied buildings are not included in vacancy calculations.

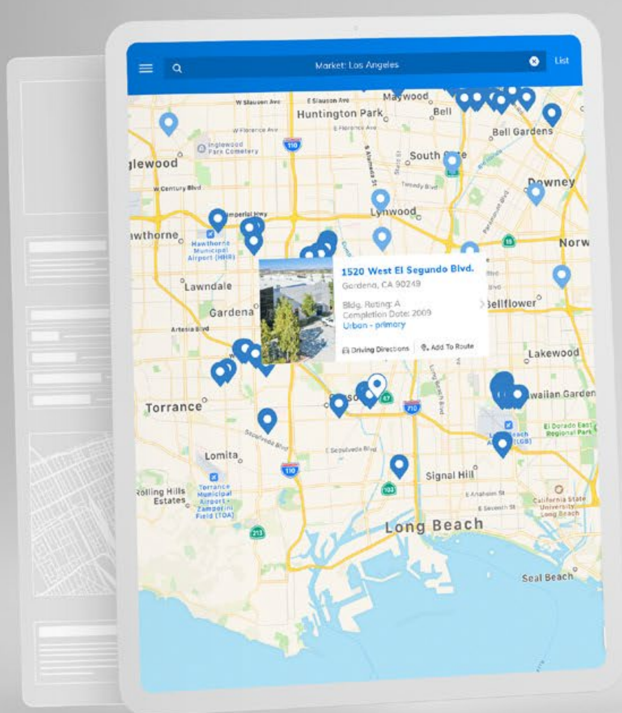
Stage of the supply pipeline:

- Planned—Buildings that are currently in the process of acquiring zoning approval and permits but have not yet begun construction.
- Under Construction—Buildings for which construction and excavation has begun.

Sales volume and price-per-square-foot calculations do not always include portfolio transactions or those with unpublished dollar values.

Yardi® Matrix

Power your business with the industry's leading source for originating, pre-underwriting and managing assets for profitable loans and investments.



Yardi Matrix Industrial delivers comprehensive property-level data, allowing you to make informed business decisions faster than ever.

Key features

- Active in 60+ major markets across the U.S., covering over 12 billion square feet
- Find acquisition prospects based on in-place loans, maturity dates, lenders and originators
- Pierce the LLC with true ownership and contact info
- Gain new supply pipeline information at the asset, competitive set and market level
- Benchmark performance to similar assets
- Access trend reports on sales, lease and listing comps as well as portfolios of owners, managers, buyers and sellers

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