

Building Beyond Today

A special presentation for the Dallas Builders Association

Michael Guckes
Chief Economist

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| Construction Strategy:

There are four primary categories which will impact every construction firm's success:

1. Macroeconomic Environment
the "terrain"
2. Labor
3. Finance
4. Entrepreneurship / Strategy
(What is possible by bringing the lenses together)

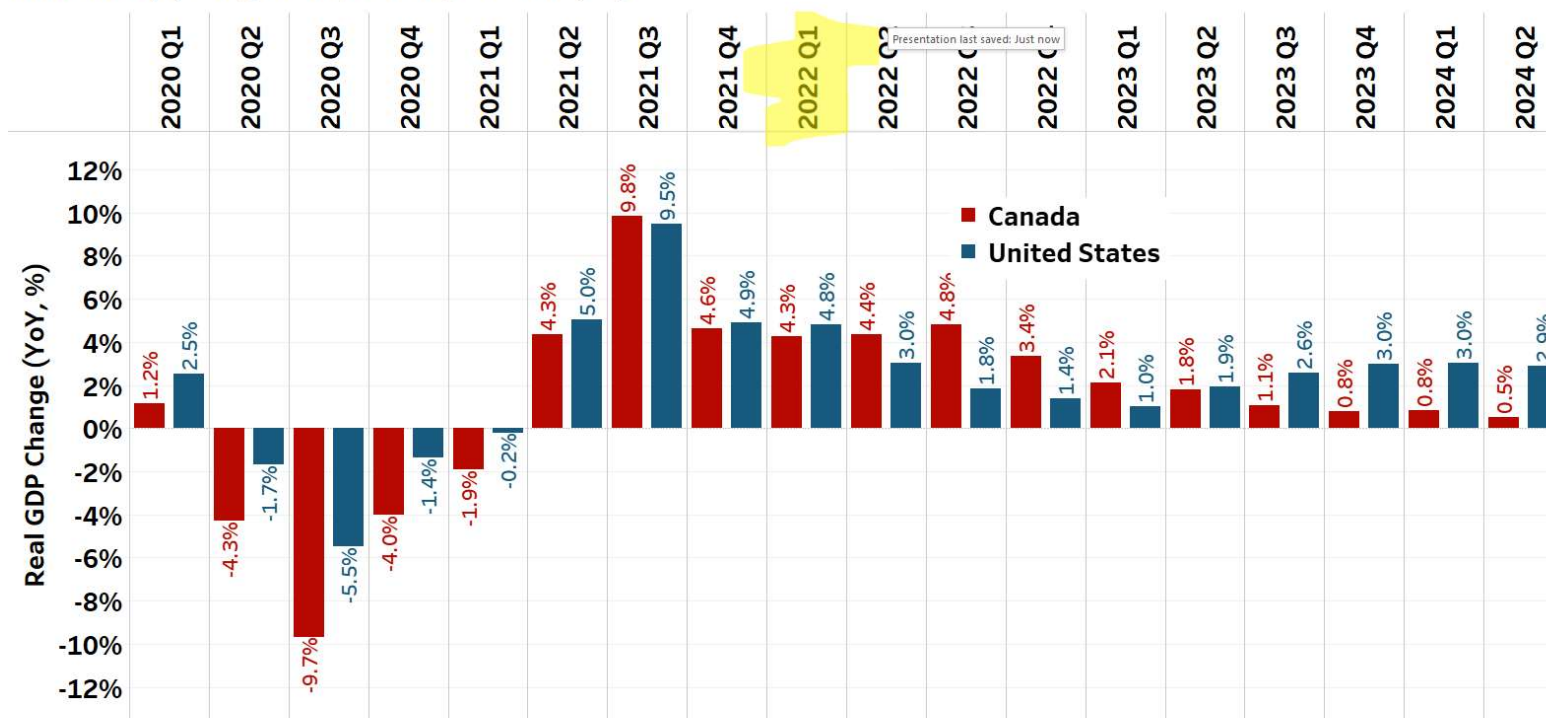


| **Macroeconomic Environment or, “Economic Terrain”**

- The economy’s “terrain” varies by:
 - Verticals
 - New/Renovation
 - Sector (private/public)
 - Geography
- To some degree you can “select” your path through this terrain.
- Then through shrewd decision-making you can customize your company’s ability to travel the selected path & terrain.

Macroeconomic Terrain

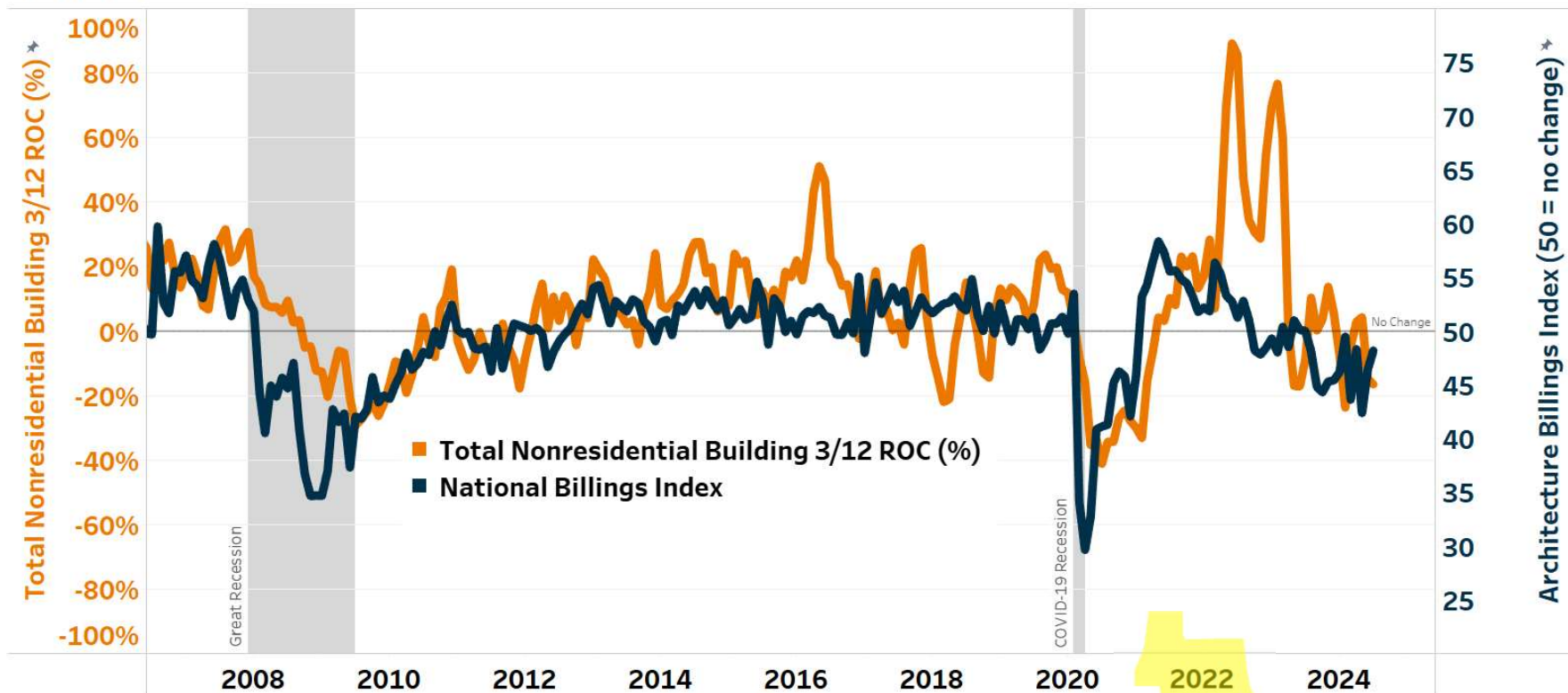
Higher Interest Rates Are Having a Slowing Effect on Economic Growth Across North America, (GDP growth year-on-year "YoY", %)



Source: Bureau of Economic Analysis

Architecture Billings Index Leading Nonresidential Building Lower

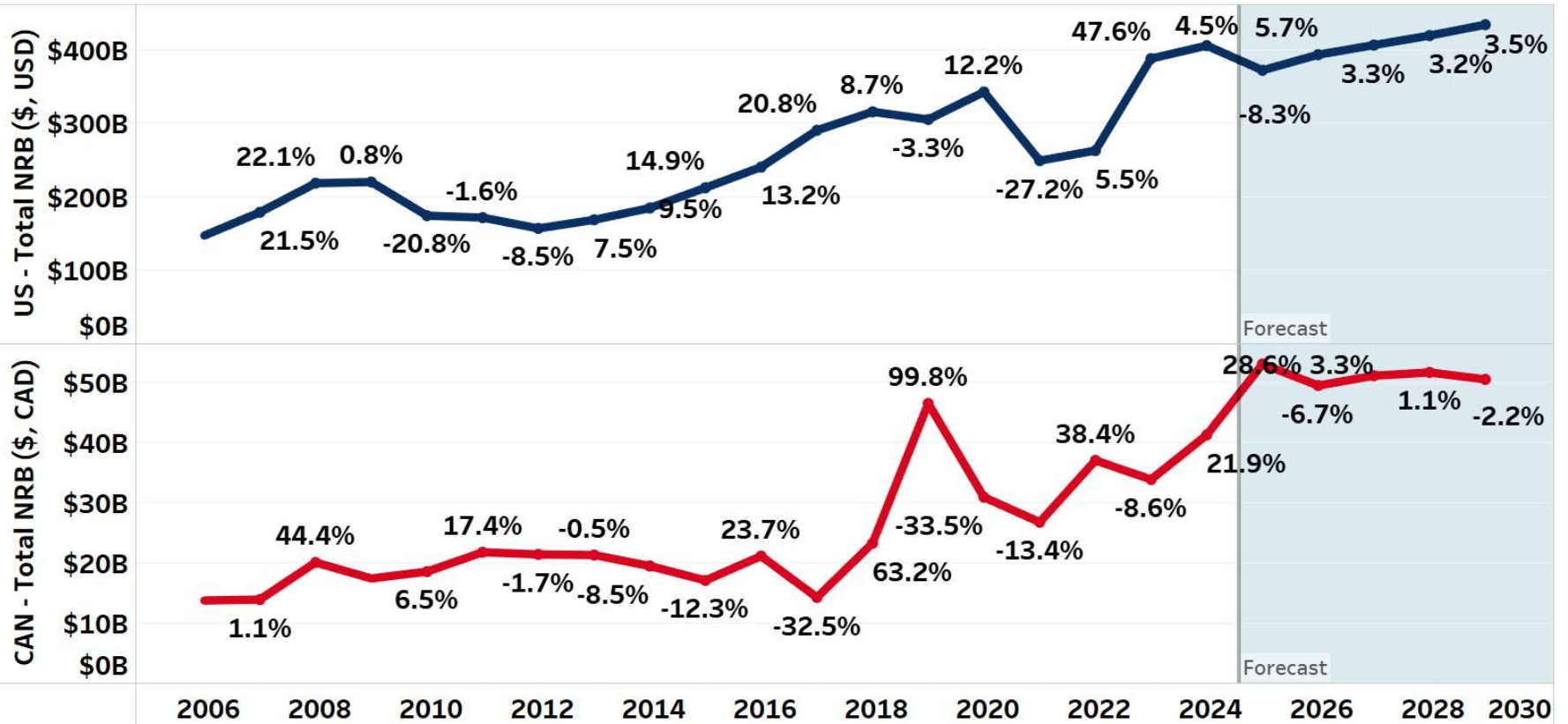
The ABI and ConstructConnect's latest actuals through YTD-2024 both point to challenging Nonresidential Building market conditions



Source: Architecture Billings Index, American Institute of Architects; Total Nonresidential Building Starts Spending, ConstructConnect

Canadian & U.S. Nonresidential Building Historic Starts and Forecast

(Billions of \$ in native currency, NSA)



Source: ConstructConnect Starts Forecast, 3Q2024 Release

U.S. Mega Projects Are Providing Substantial Support to the Industry

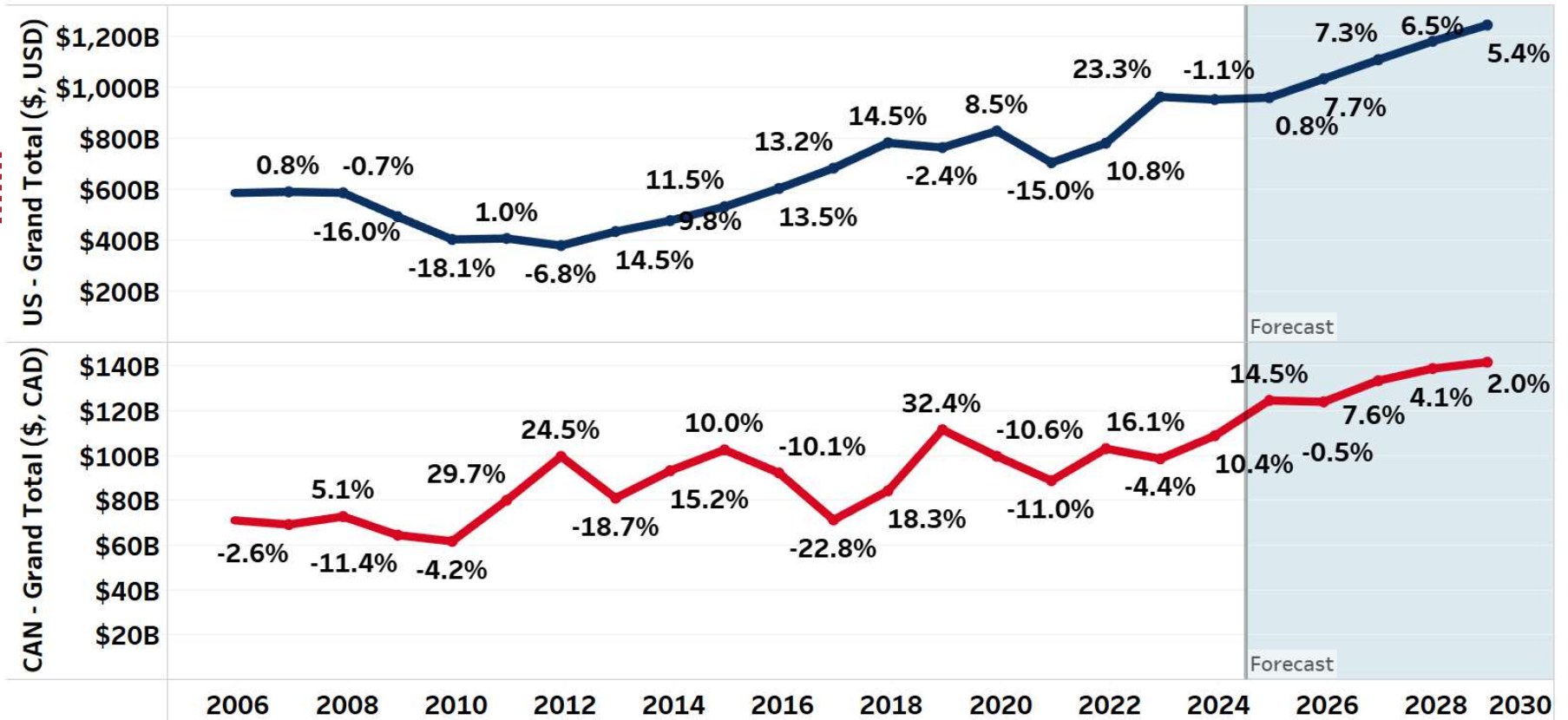
(Value of Mega Projects, \$ Millions, 12-month moving average)



Source: ConstructConnect Insight Leads Database

Canadian & U.S. Grand Total Historic Starts and Forecast

(Billions of \$ in native currency, NSA)



Source: ConstructConnect Starts Forecast, 3Q2024 Release



U.S. Type-of-Structure Construction 'Starts' Forecasts

(\$, Billions USD)

	Actuals		Forecasts				
	2022	2023	2024	2025	2026	2027	2028
Main Categories							
Residential	373.7	317.8	316.5	359.2	405.9	450.8	487.9
<i>(Yr/yr % change)</i>	3.1%	-15.0%	-0.4%	13.5%	13.0%	11.1%	8.2%
Commercial	130.9	139.7	134.0	146.2	155.6	163.7	171.7
<i>(Yr/yr % change)</i>	14.8%	6.7%	-4.1%	9.1%	6.4%	5.2%	4.9%
Industrial (Manufacturing)	115.4	103.3	70.1	72.8	70.0	68.3	69.3
<i>(Yr/yr % change)</i>	229.0%	-10.5%	-32.1%	3.8%	-3.9%	-2.3%	1.4%
TOTAL NON-RES BUILDING	388.2	405.9	372.3	393.5	406.6	419.5	434.3
<i>(Yr/yr % change)</i>	47.6%	4.5%	-8.3%	5.7%	3.3%	3.2%	3.5%
Engineering	202.0	229.9	272.4	282.2	297.8	312.0	324.2
<i>(Yr/yr % change)</i>	29.1%	13.8%	18.5%	3.6%	5.5%	4.8%	3.9%
GRAND TOTAL	963.9	953.6	961.1	1,034.9	1,110.2	1,182.3	1,246.4
<i>(Yr/yr % change)</i>	23.3%	-1.1%	0.8%	7.7%	7.3%	6.5%	5.4%

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



U.S. Type-of-Structure Construction 'Starts' Forecasts

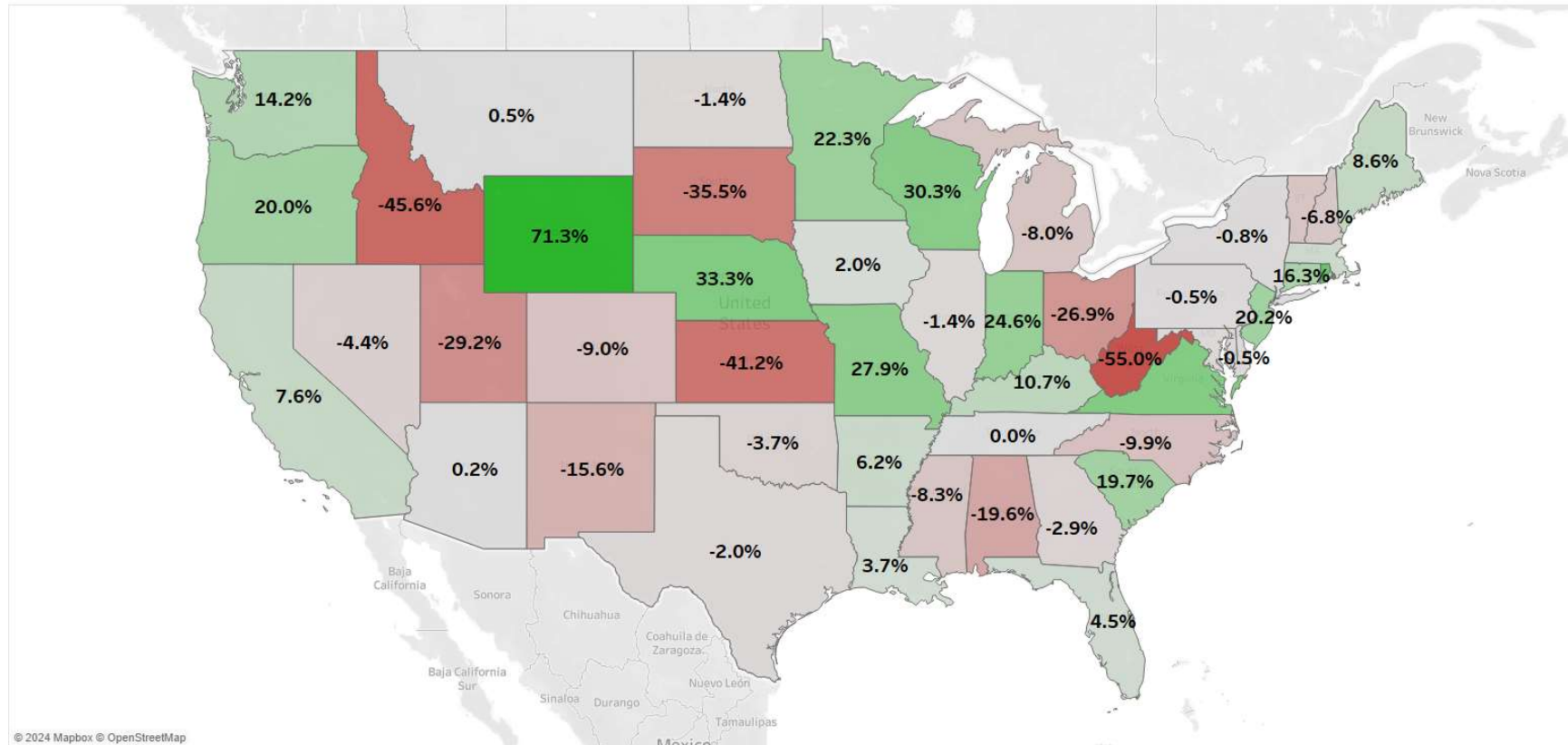
(\$, Billions USD)

Sub-categories	Actuals		Forecasts				
	2022	2023	2024	2025	2026	2027	2028
Shopping/Retail	15.4	14.5	14.8	17.7	20.0	22.0	23.4
<i>(Yr/yr % change)</i>	<i>19.4%</i>	<i>-5.8%</i>	<i>1.9%</i>	<i>19.9%</i>	<i>12.9%</i>	<i>10.3%</i>	<i>6.4%</i>
Private Offices	24.6	32.3	27.6	30.0	30.9	32.1	34.2
<i>(Yr/yr % change)</i>	<i>17.4%</i>	<i>31.4%</i>	<i>-14.6%</i>	<i>8.7%</i>	<i>2.9%</i>	<i>4.1%</i>	<i>6.4%</i>
Warehouses	30.5	22.5	21.0	23.8	25.3	26.4	27.5
<i>(Yr/yr % change)</i>	<i>7.9%</i>	<i>-26.1%</i>	<i>-6.9%</i>	<i>13.6%</i>	<i>6.4%</i>	<i>4.5%</i>	<i>4.1%</i>
Hospitals/Clinics	25.8	21.7	22.3	24.6	26.1	27.5	28.6
<i>(Yr/yr % change)</i>	<i>38.0%</i>	<i>-16.1%</i>	<i>2.7%</i>	<i>10.4%</i>	<i>6.2%</i>	<i>5.3%</i>	<i>4.2%</i>
Educational Facilities	74.5	92.0	97.3	98.5	101.6	104.8	107.8
<i>(Yr/yr % change)</i>	<i>24.5%</i>	<i>23.5%</i>	<i>5.7%</i>	<i>1.3%</i>	<i>3.1%</i>	<i>3.2%</i>	<i>2.8%</i>
Roads	84.5	95.3	104.4	109.0	114.7	120.3	125.6
<i>(Yr/yr % change)</i>	<i>25.4%</i>	<i>12.8%</i>	<i>9.5%</i>	<i>4.4%</i>	<i>5.2%</i>	<i>4.9%</i>	<i>4.4%</i>
Water & Sewage Treatments	43.4	47.8	55.9	56.4	58.9	61.3	63.8
<i>(Yr/yr % change)</i>	<i>28.2%</i>	<i>10.1%</i>	<i>17.1%</i>	<i>0.9%</i>	<i>4.4%</i>	<i>4.1%</i>	<i>4.1%</i>
Misc Civil (Power, etc.)	29.4	40.4	59.0	61.8	65.4	68.9	71.2
<i>(Yr/yr % change)</i>	<i>25.0%</i>	<i>37.5%</i>	<i>46.1%</i>	<i>4.7%</i>	<i>5.9%</i>	<i>5.2%</i>	<i>3.4%</i>

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

2024 Year-End Starts Forecast by State

Total Construction Starts, Dollar Change from Prior Year, (YoY, %)

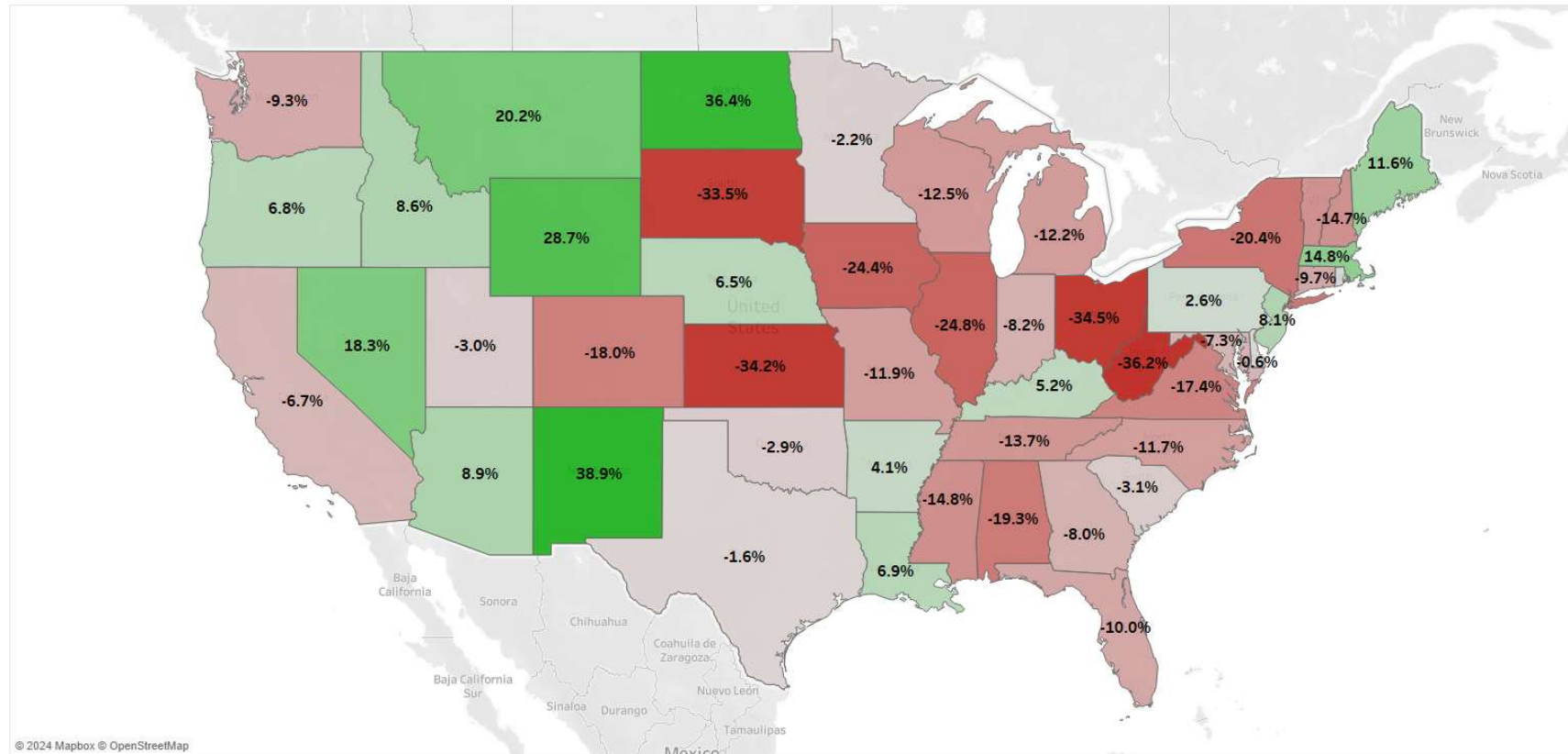


© 2024 Mapbox © OpenStreetMap

Source: ConstructConnect Insight

2024 Year-End Starts Forecast by State

Total Construction Starts, Square Foot Change from Prior Year, (YoY, %)



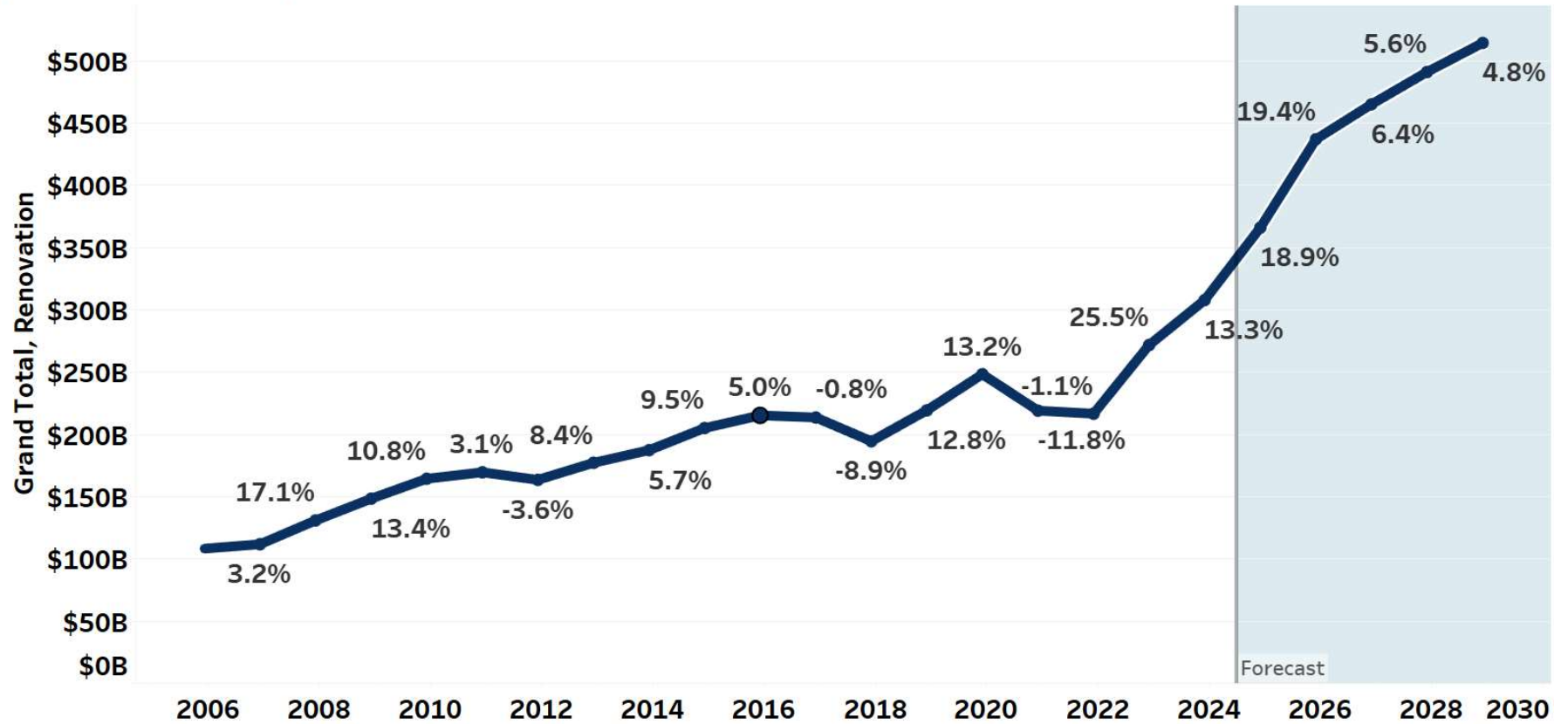
© 2024 Mapbox © OpenStreetMap

Source: ConstructConnect Insight

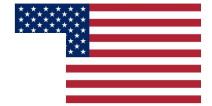


U.S. Renovation Starts and Forecast

(Billions of \$ USD, NSA)

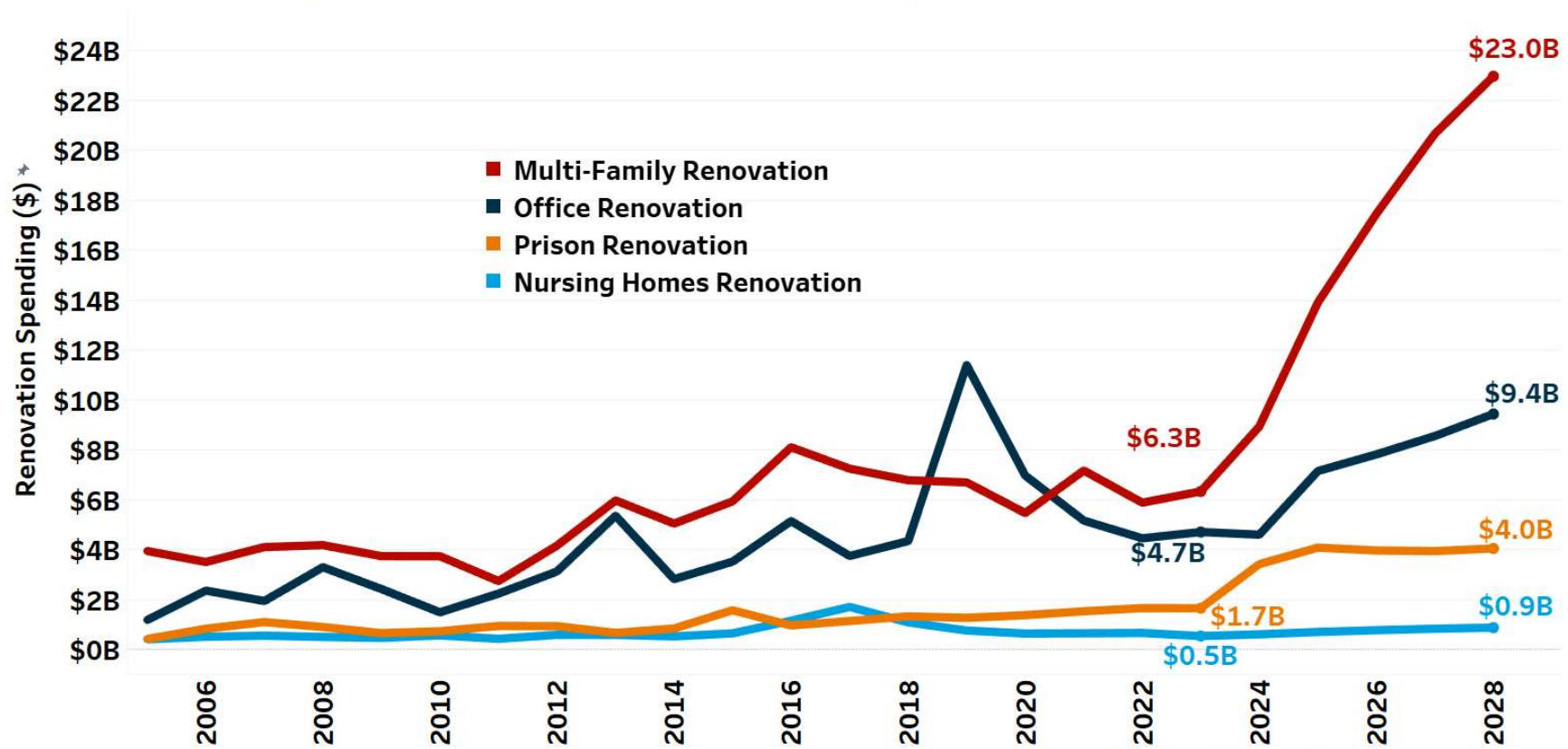


Source: ConstructConnect Starts Forecast, 3Q2024 Release



Office and Multifamily Renovation Work Expected to Surge Through 2028

Steep decline in Existing CRE will make renovation an attractive value option.



Source: ConstructConnect Insight

“Summer” 2024 NATIONAL Starts Statistics Highlights

- Contracting 2024 Total Nonresidential Outlook, -4.8%
 - **Strengths:**
 - **RENOVATION**
 - **ENGINEERING:** Dam/Marine, Water/Sewage, Miscellaneous Civil
 - Miscellaneous Medical, School/College
 - Fire/Police/Courthouse/Prison
 - **Weaknesses:**
 - Warehouse, Miscellaneous Commercial, Nursing/Assisted Living
- **REMEMBER:** Improving YE2024 Total Nonresidential Forecast: +1.8%

Many of the above resources are FREELY available

- <https://www.constructconnect.com/economic-resources>

Economic Insights

Access the latest construction economic news, forecasts, and webinars.

Reporting
Project Stress Index
Economic Brief
Expansion Index
Economic Webcast
News
Media Kit
Contact

Construction Economy Reporting

Resource data may be used in publications with attribution to ConstructConnect and, where applicable, the ConstructConnect economist.



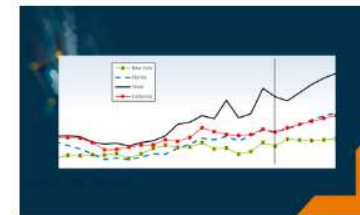
Construction Economy Snapshot

Monthly Construction starts include the total estimated dollar value and square footage of all nonresidential projects on which ground is broken.



Construction Starts Forecast

Quarterly A 5-year forecast of construction starts by type of structure and by state as well as drivers influencing each building sector.



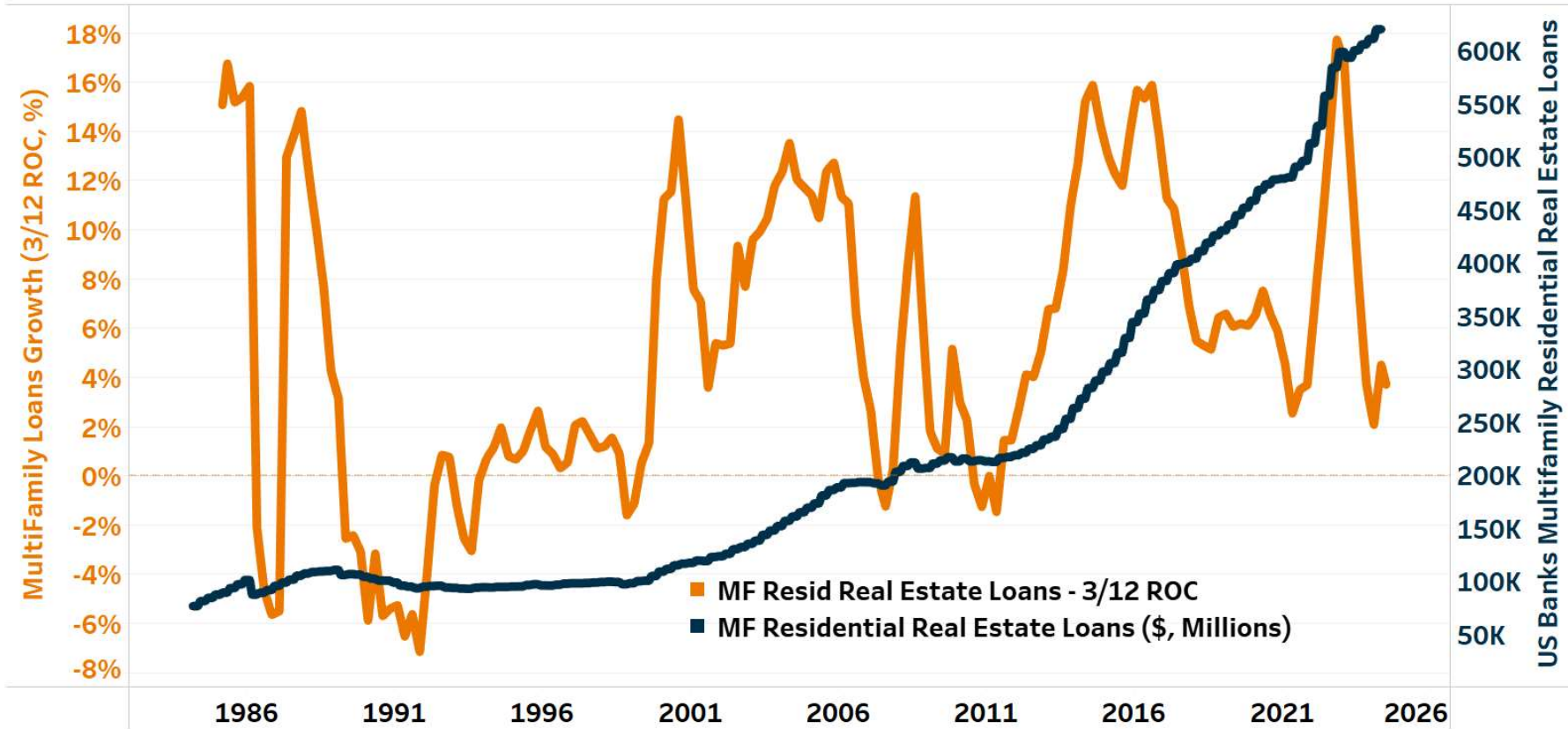
Put-in-Place Forecast

Quarterly A 5-year forecast of work-in-progress payments, created in partnership with Oxford Economics, and covers 18 types of construction across residential, commercial/industrial, and infrastructure.

Residential Construction Supply and Demand

Multifamily Spending Quickly Slowing in 2024

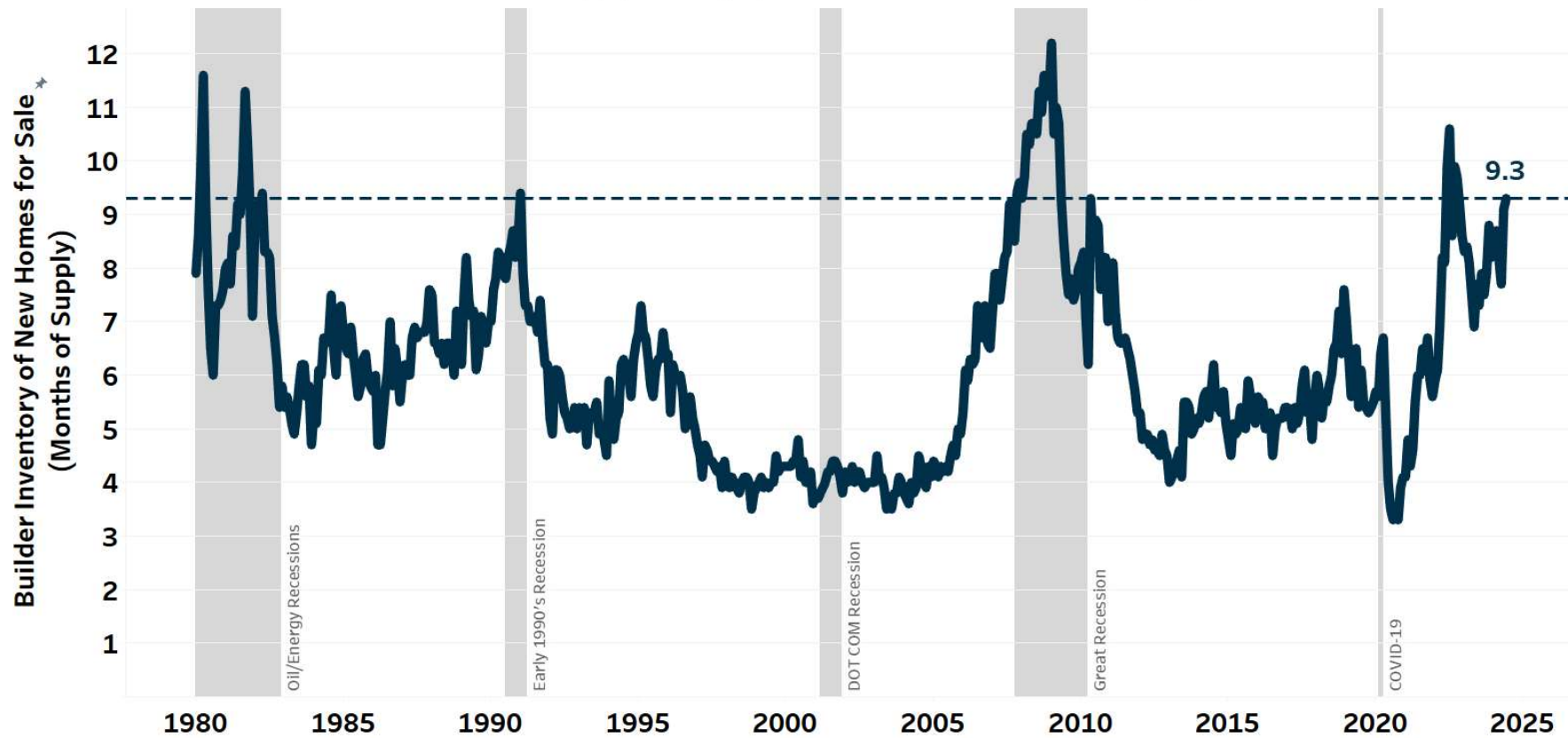
Spending Growth Slowed from over 18% to 2% since 2022



Source: U.S. Bureau of Labor Statistics

Inventory of New Homes for Sale

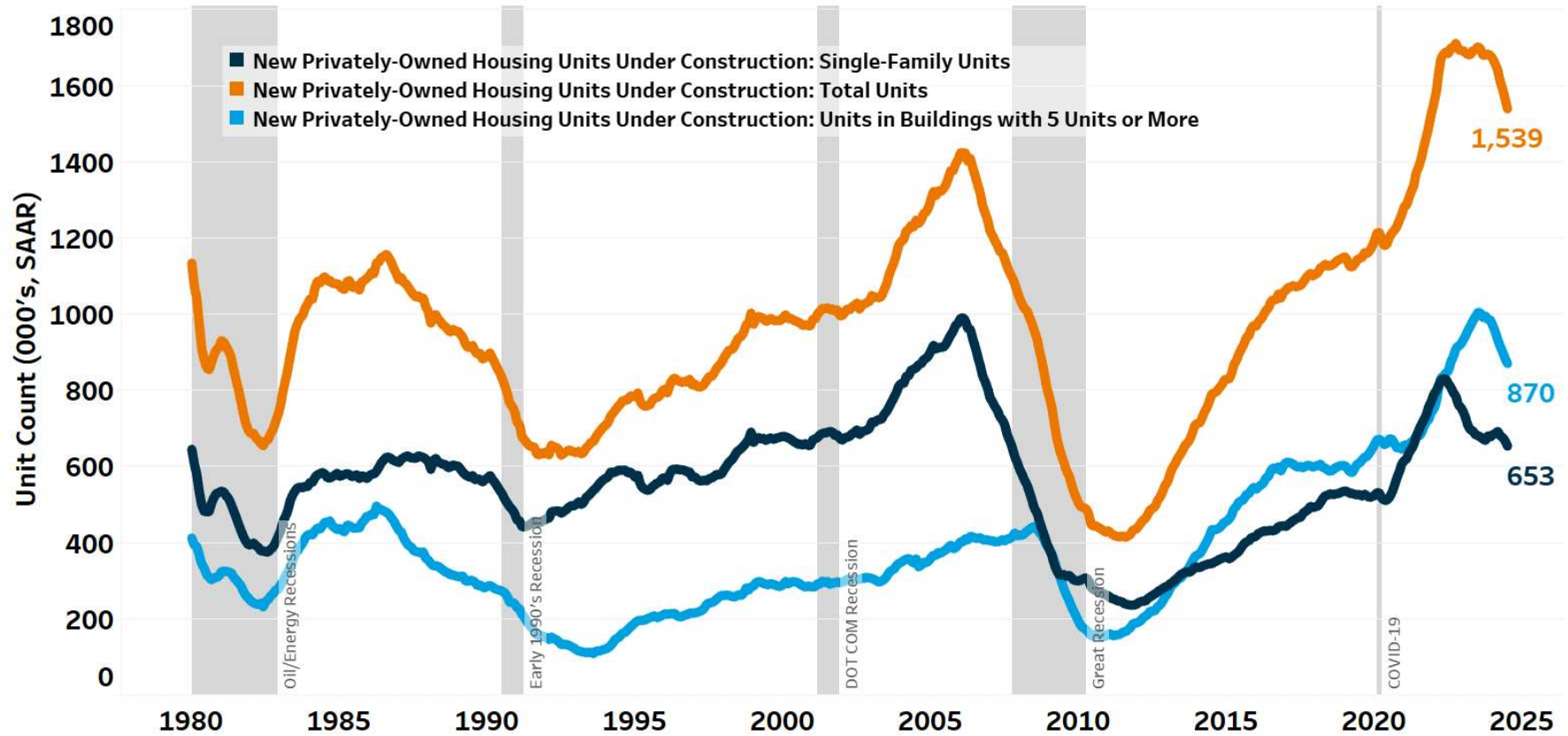
New home inventories exceeded a 9-month supply leading up to 5 of the last 8 recessions going back to 1970



Source: U.S. Census Bureau

Homes Under Construction

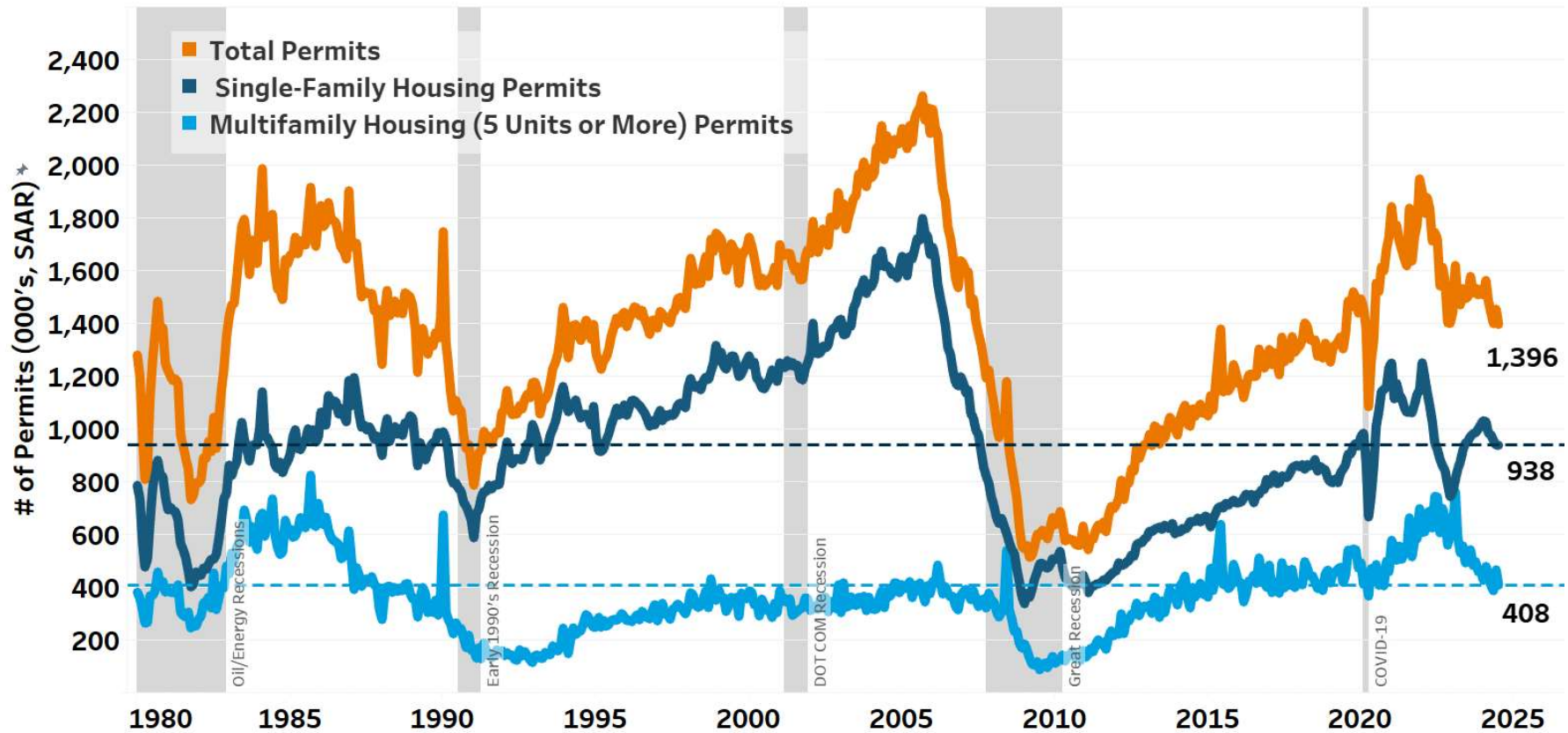
Count in 000's by type, (000's, seasonally adjusted annual rate)



Source: U.S. Census Bureau

Housing Permits Declines Often Lead Recessions

Permit declines have lead most recessions by 1-5 years. (# in 000's, Seasonally Adjusted Annual Rate "SAAR")



Source: U.S. Census Bureau

Texas-Specific Considerations & Challenges

Texas' Economy Remains Exceptional

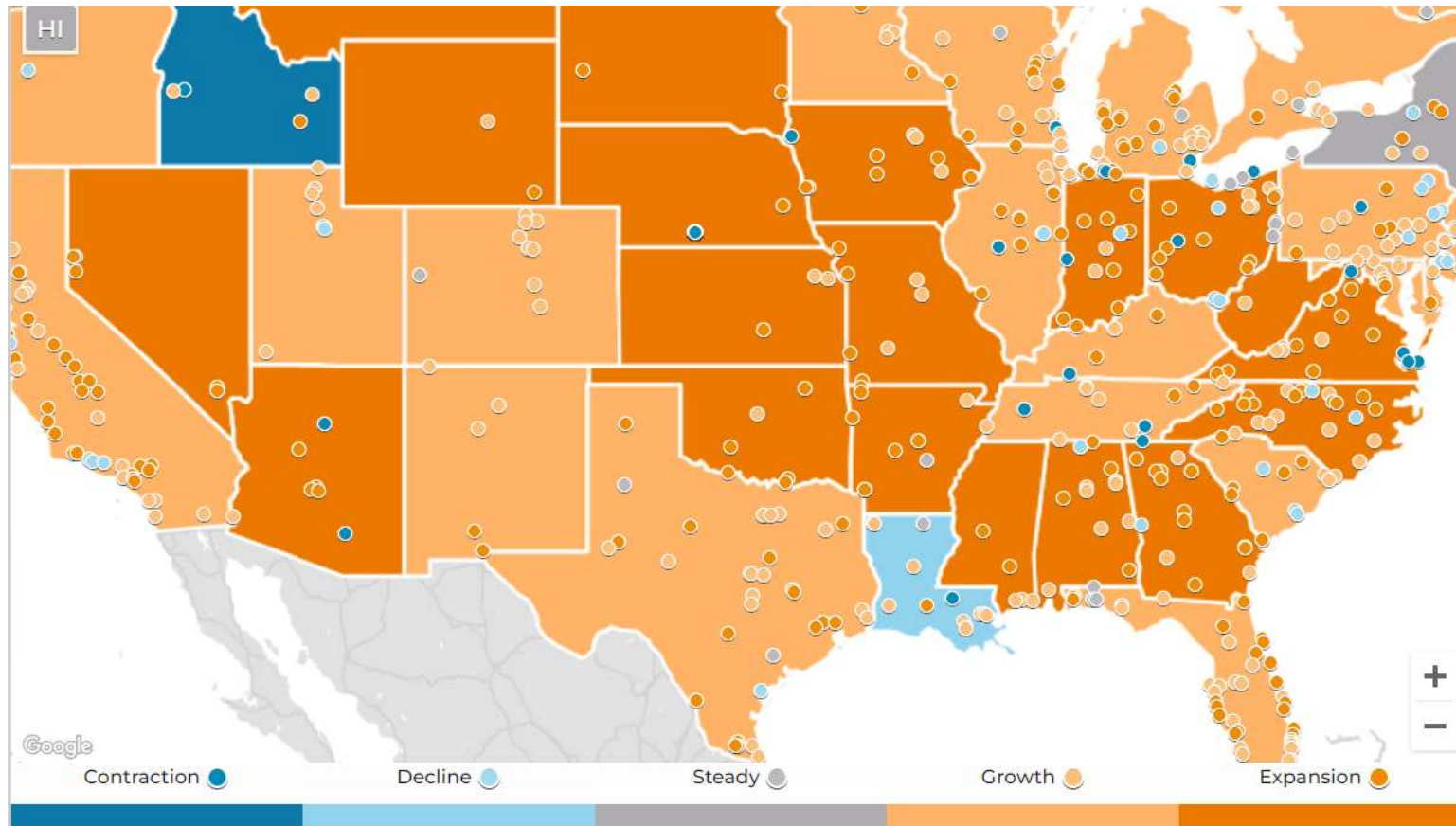
- Texas unemployment rate: +4.0%
 - US unemployment rate: 4.3%

- Texas Real GDP: +5.0% (1q2024)
 - US Real GDP: 3.0%

- Texas Resident Population (2023): +1.6%
 - Total US: +0.5%
 - California: -0.2%
 - New York: -0.5%
 - Florida: 1.6%

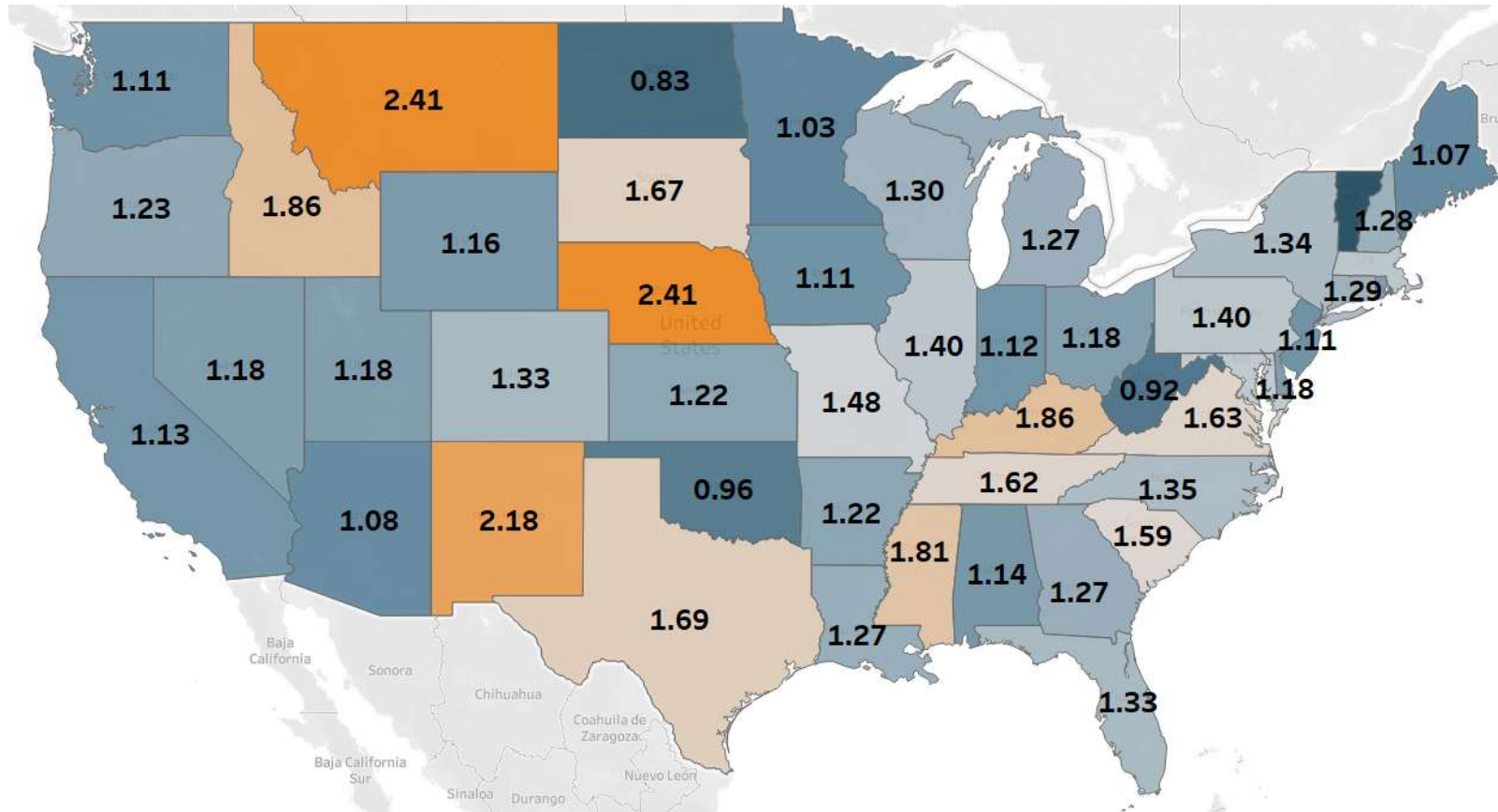


Texas' Economy Remains Exceptional



Source: *Expansion Index*

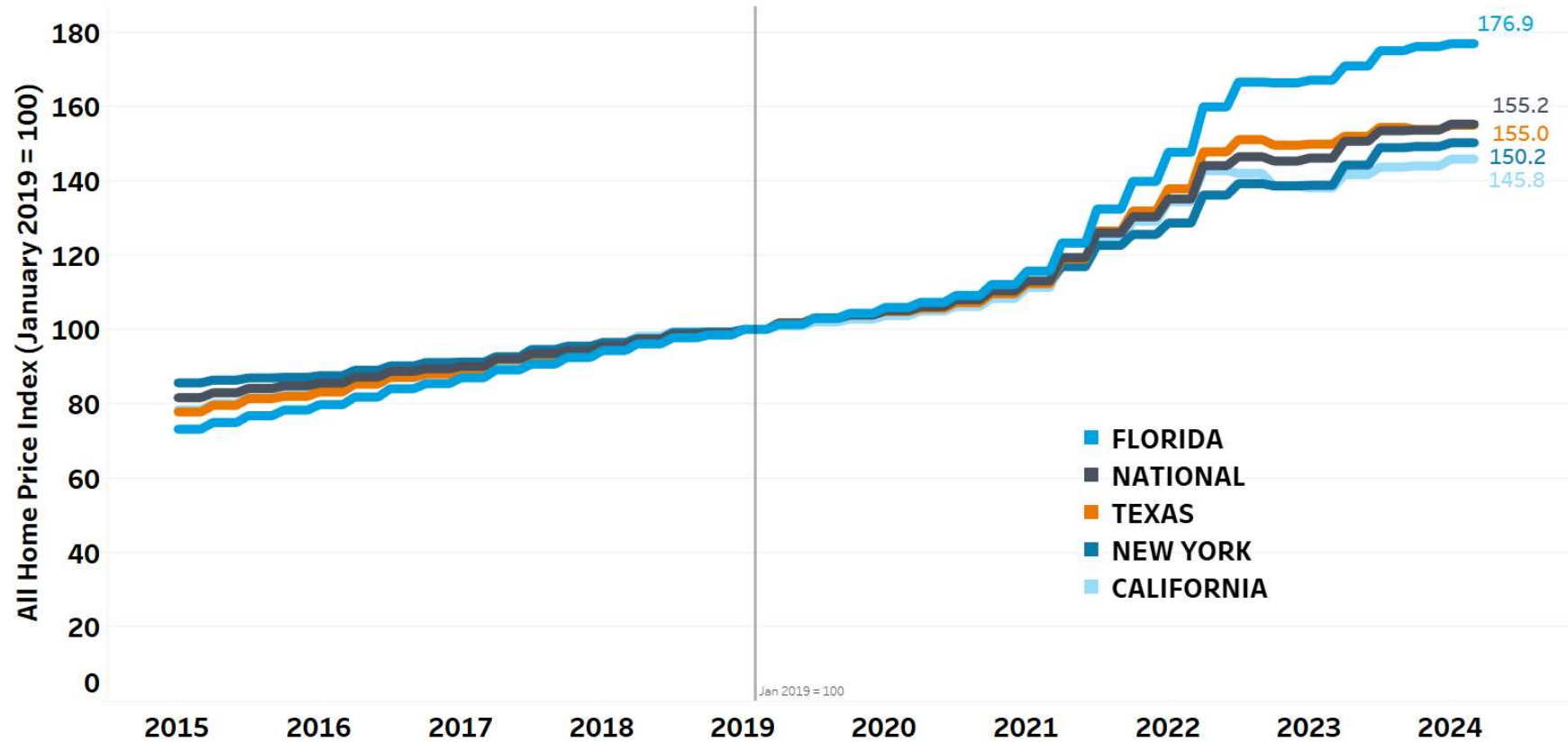
Texas' Economy Remains Exceptional: Multifamily Activity by State



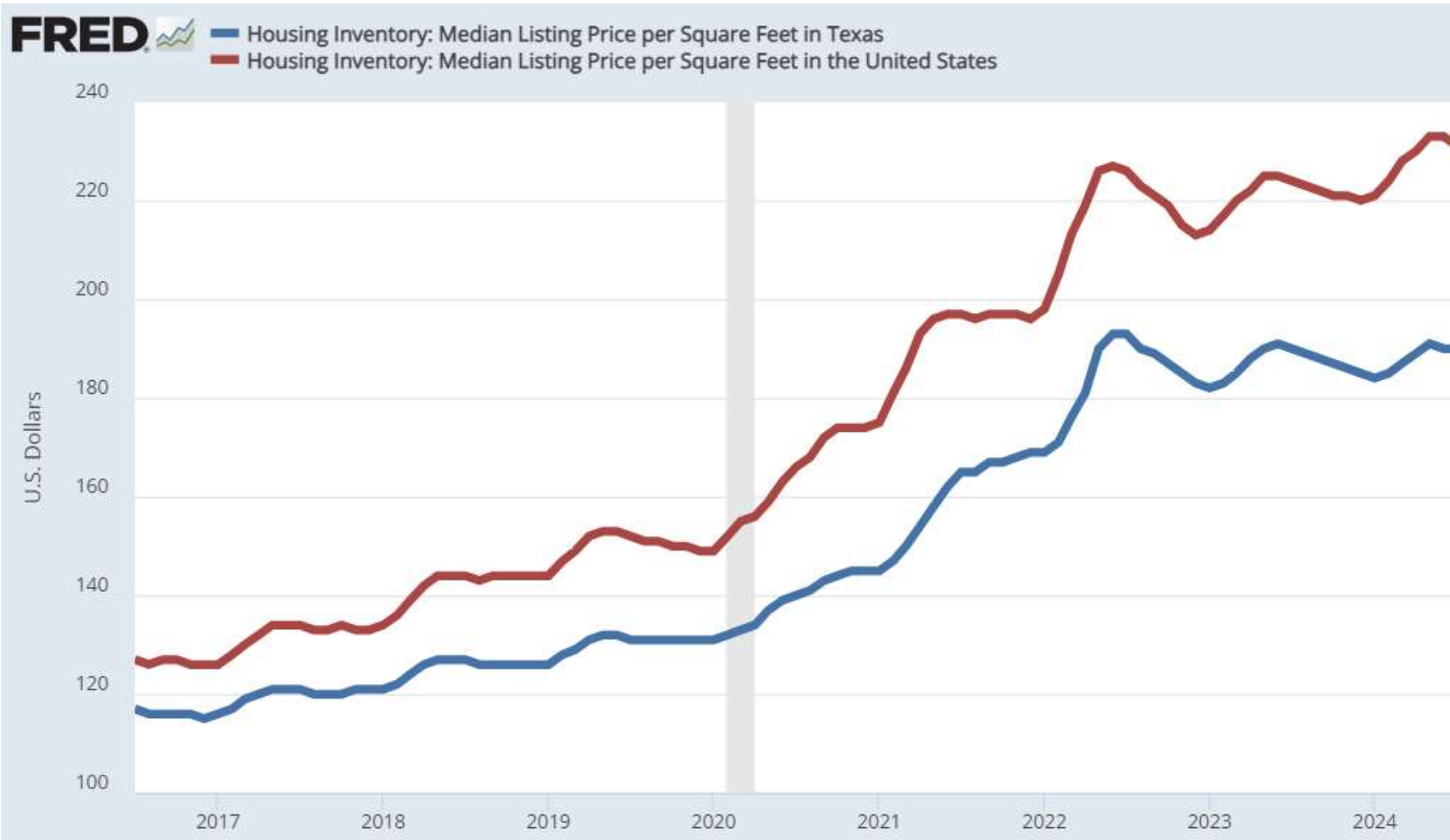
Source: Expansion Index

Texas Home Prices Represent Great Value For A Fast Growing State

All-Transaction home prices are up 55% since January 2019, in line with the national average



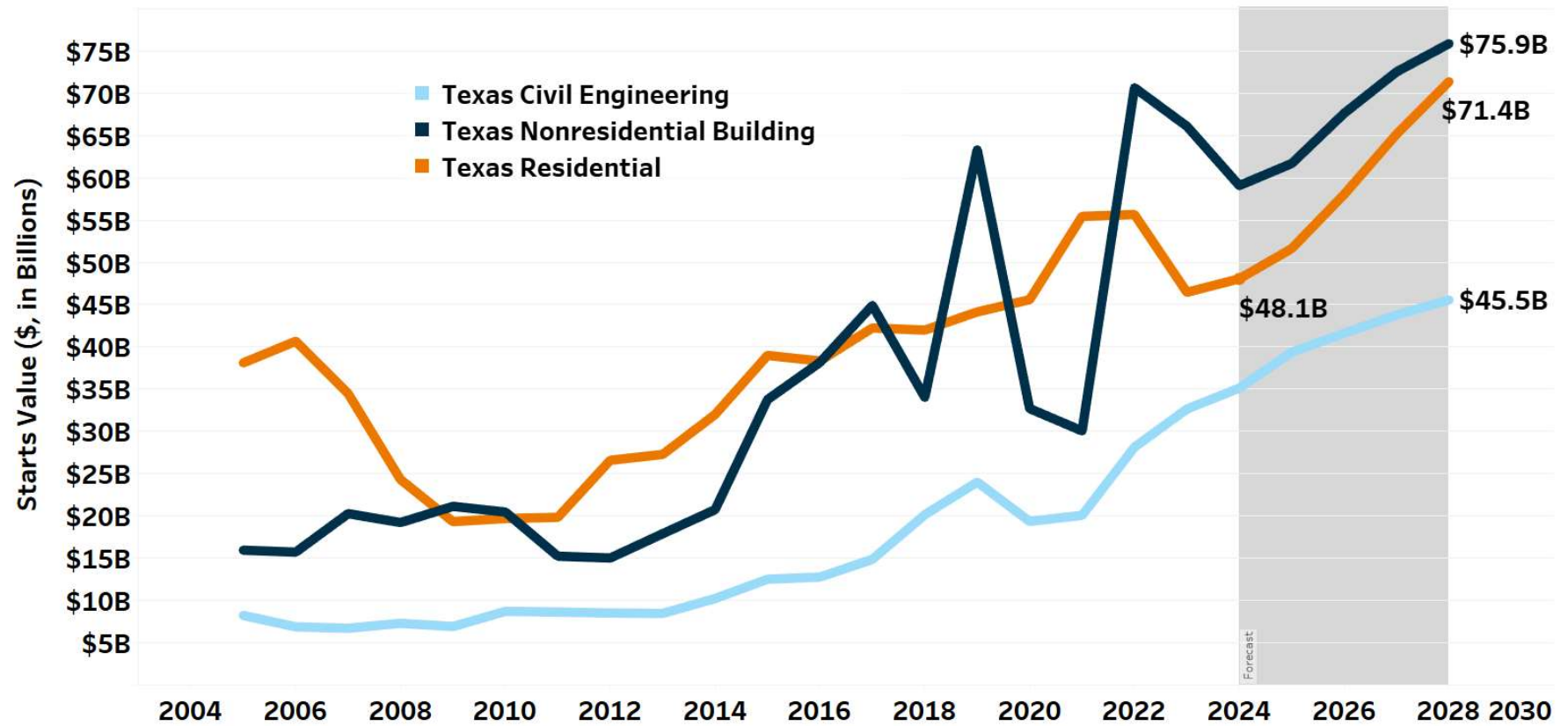
Source: U.S. Federal Housing Finance Association



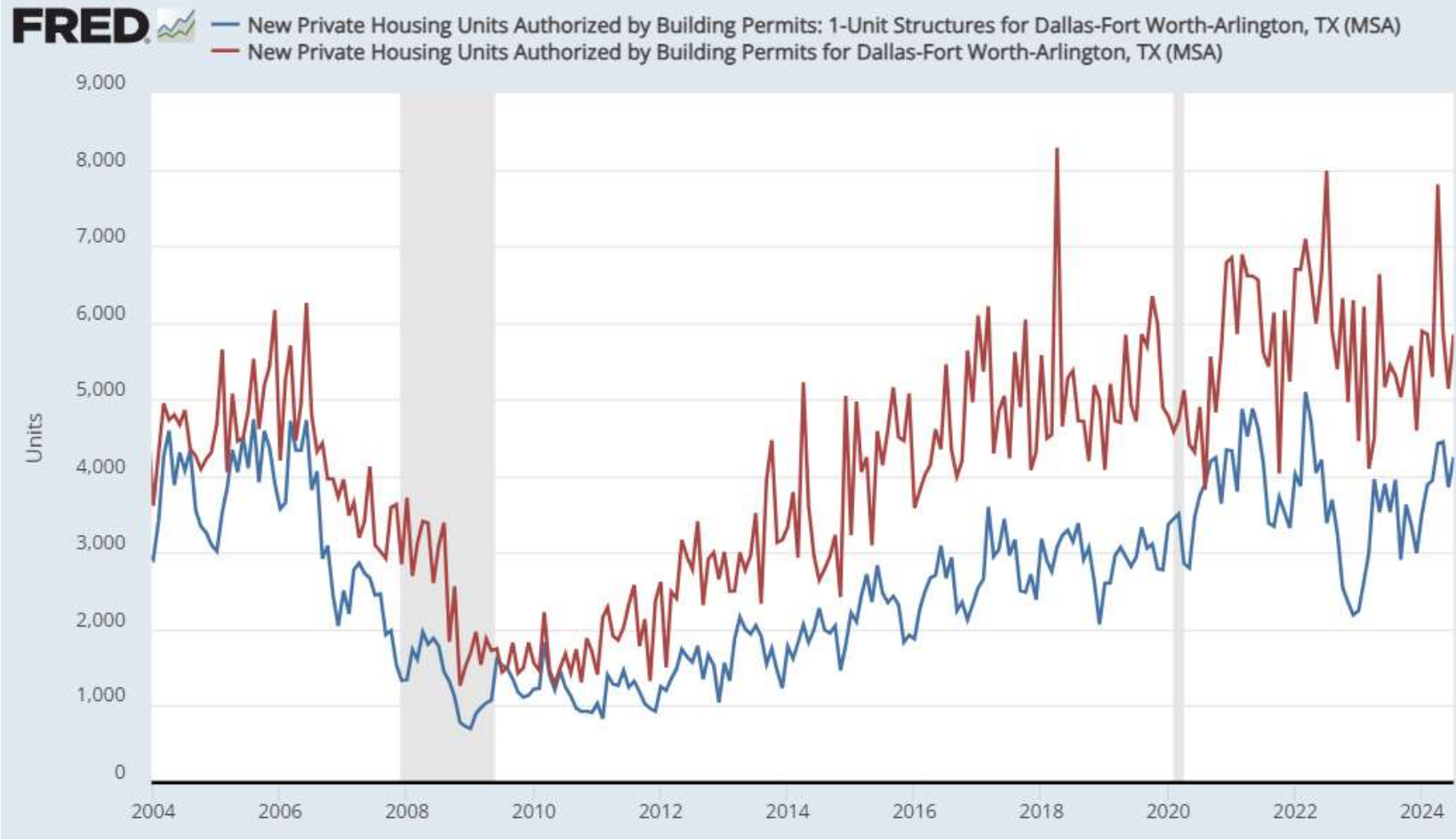
Realtor.com, Housing Inventory: Median Listing Price per Square Feet in the United States [MEDLISPRIPERSQUFEEUS], retrieved from FRED, Federal Reserve Bank of St. Louis;

Texas: Type-of-Structure Forecast

Residential construction is expected to growth at 10.4% annually through 2028 (\$ Billions, USD)



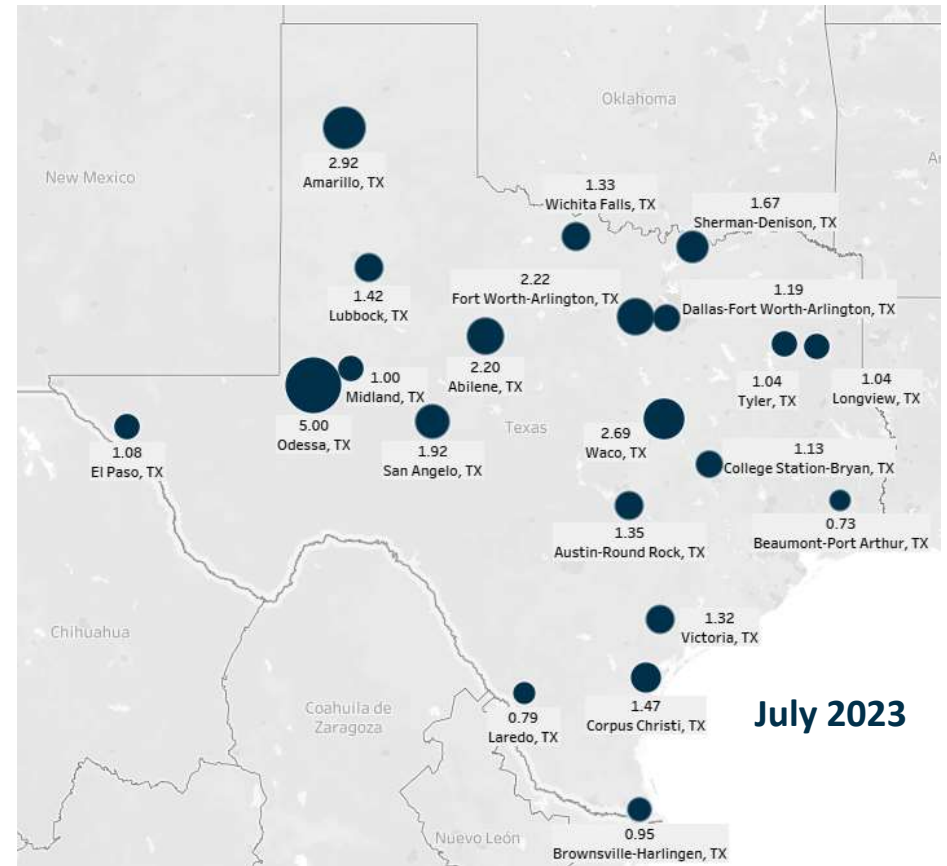
Source: ConstructConnect Starts Forecast



Texas Multifamily Residential Activity by MSA Now & 1-Yr Ago:



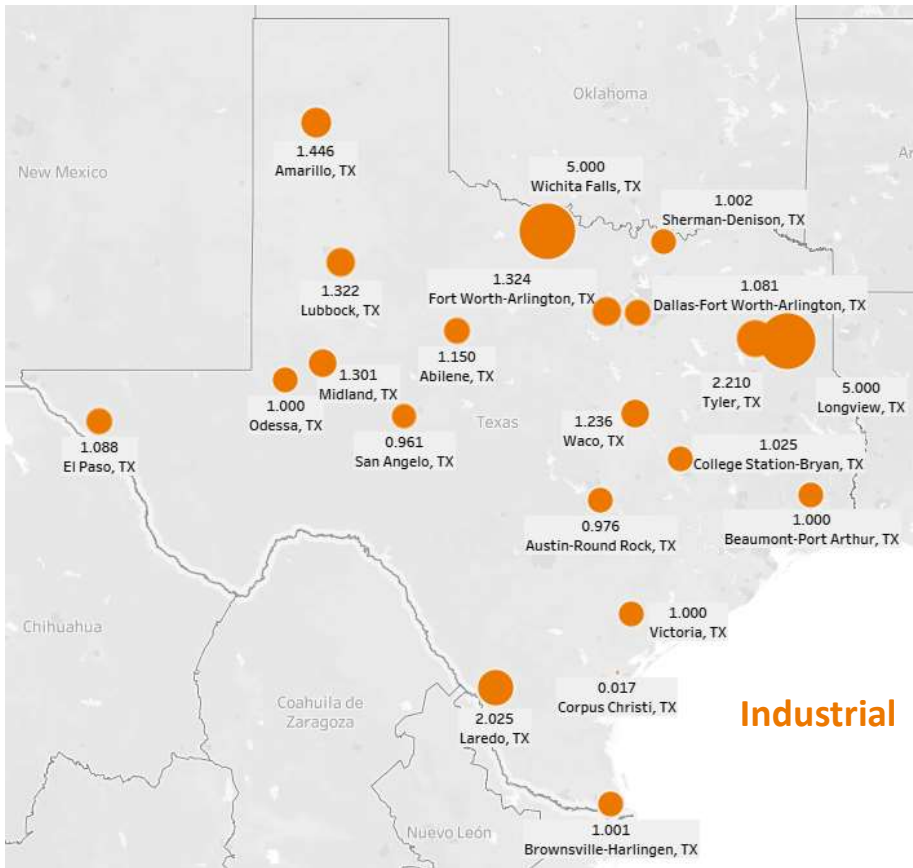
July 2024



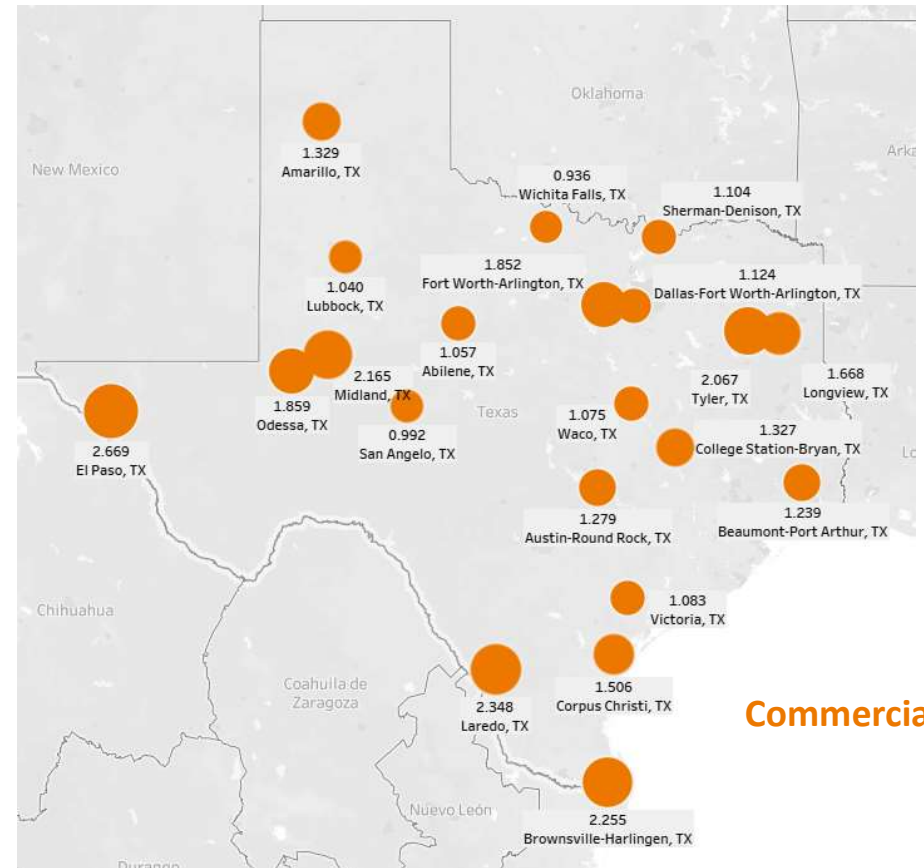
July 2023

Source: Expansion Index

Major Verticals Will Continue to Power Further State Growth



Industrial



Commercial

Source: Expansion Index, results as of July 2024

Texas Monthly Multifamily Starts: -36% YTD



Multifamily Actuals Highlights:

- YTD starts -36.9%
- YTD monthly starts averaged \$515M, down from \$819M 1-yr ago

| Starts Forecast 2024 – 2028 (Five largest of 24 shown)

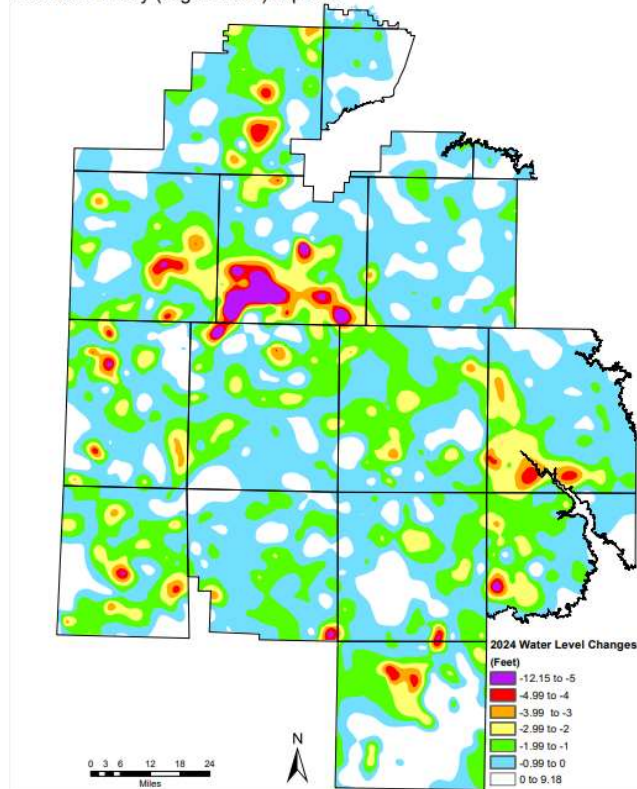
State	MSA	2024	2025	2026	2027	2028
Multi-Family	Texas	\$ 7,253,752,290	\$ 8,257,081,388	\$ 9,721,036,437	\$ 11,184,478,066	\$ 12,169,621,736
	Dallas-Plano-Irving, TX Metropolitan Division	\$ 2,341,869,454	\$ 2,499,908,559	\$ 2,946,353,699	\$ 3,394,621,784	\$ 3,698,754,789
	Austin-Round Rock TX	\$ 1,672,558,611	\$ 2,254,034,912	\$ 2,660,581,961	\$ 3,068,775,589	\$ 3,346,826,573
	Houston-Baytown-Sugar Land TX	\$ 1,363,034,192	\$ 1,646,370,579	\$ 1,936,496,663	\$ 2,225,591,084	\$ 2,419,336,472
	Fort Worth-Arlington, TX Metropolitan Division	\$ 885,426,052	\$ 780,685,213	\$ 916,846,267	\$ 1,051,477,204	\$ 1,140,521,869
	San Antonio TX	\$ 629,947,041	\$ 702,858,321	\$ 825,727,964	\$ 948,601,064	\$ 1,030,484,764

Multifamily Forecast Highlights:

- 2024 YE: -18% forecasted
- 2025 double-digit rebound: +14%
- 2026 peak expansion: +18%
- 2027 slowing expansion: +15%

Texas' Biggest Problems Are Not Necessarily Economic

Water Level Changes in the Ogallala & Edwards-Trinity (High Plains) Aquifers



- **7M people are added to Texas's 2020 population of 29.14M between 2020 and 2060.**
- **Falling aquifer levels will result in more active water management and restrictions.**
 - Agriculture and Municipal are the biggest consumers vying for water.
- **Also, the balance of supply and demand for electricity.**

Operational Considerations in the Construction Space

| The Remaining Actionable Pieces of the Puzzle:

Labor: How you find and build-up your labor resources?

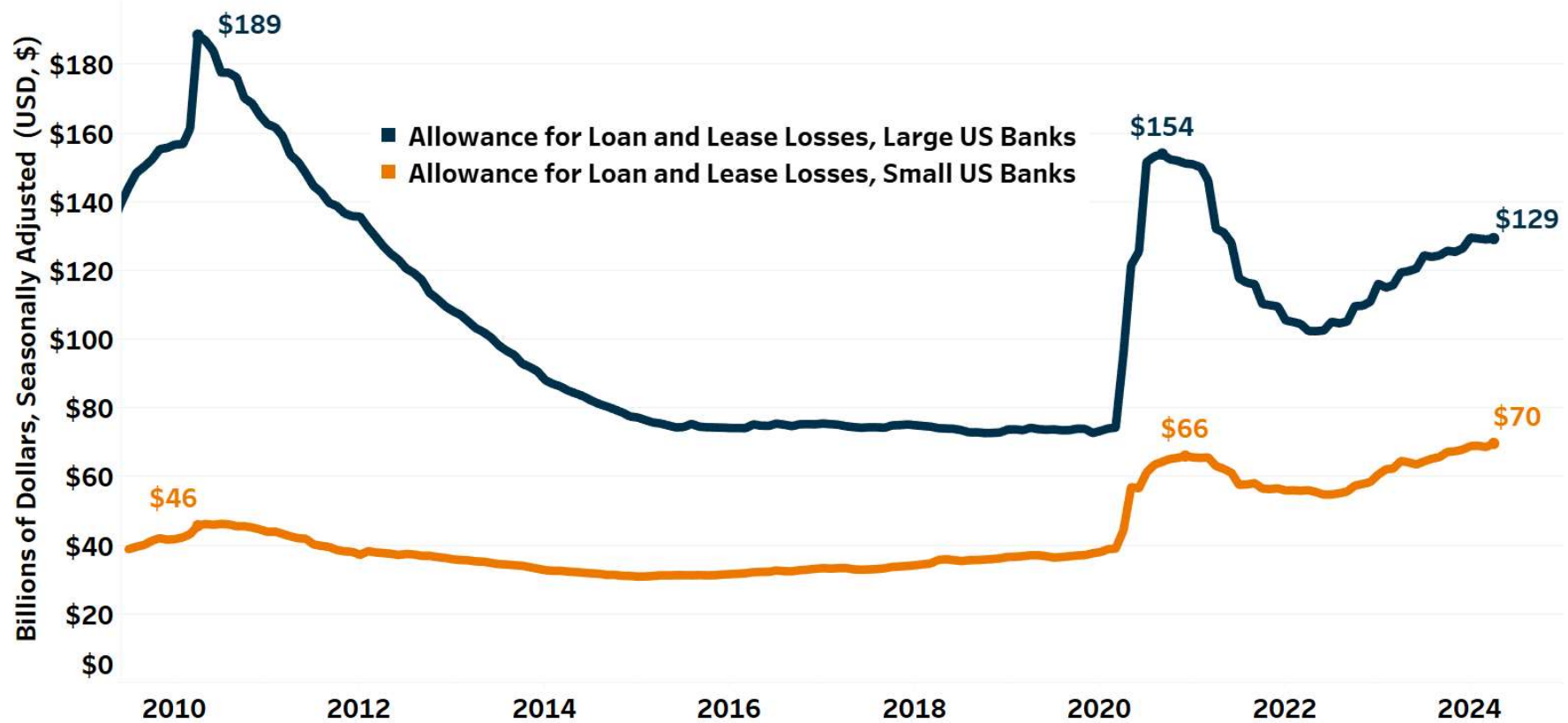
Finance: How will you use & access capital?

Strategy: How will use this knowledge to make smart and profitable decisions for your firm?



Banks Have Been Quietly Preparing a \$200B "Parachute" Against Bad Debts

Allowance for bad debts is up 76% since late-2019

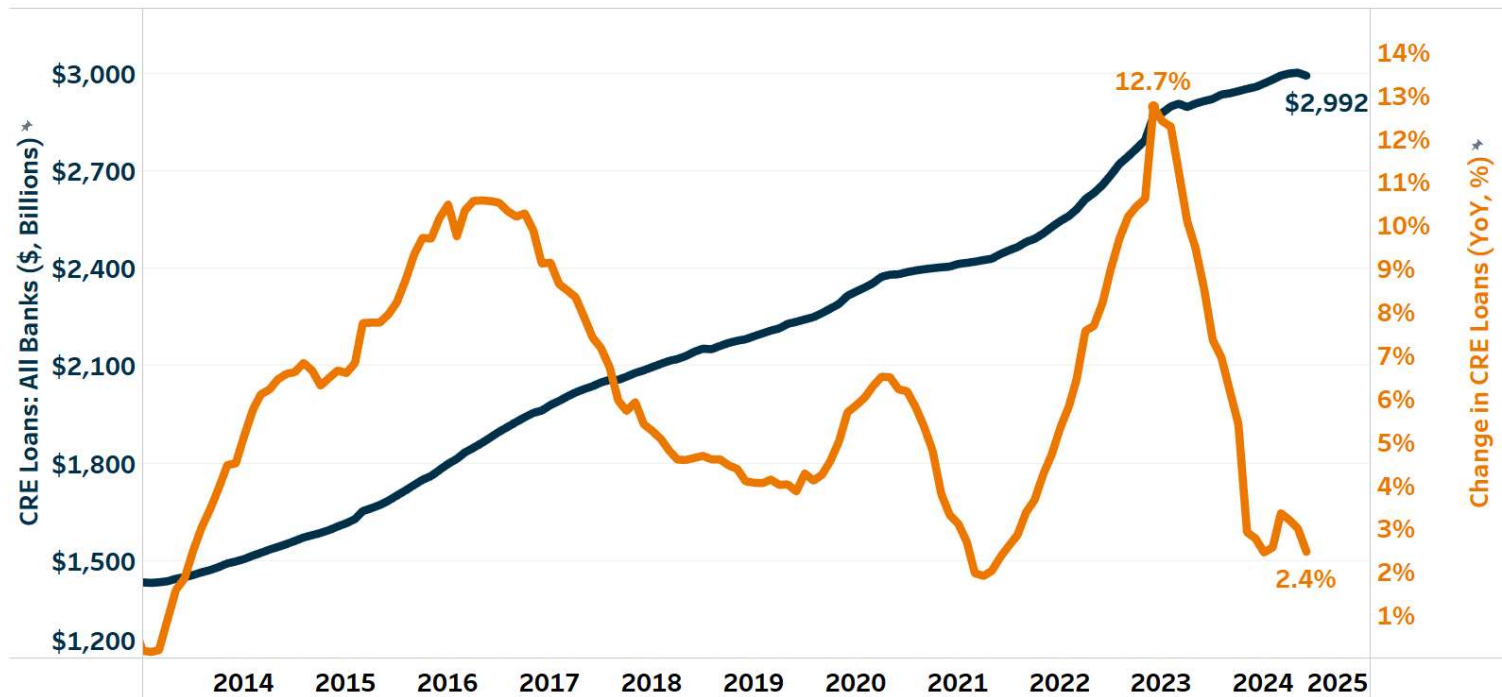


Source: Board of Governors of the Federal Reserve System, Release H.8

Banks Are Correcting As They Move Into Self-Preservation Mode

- Latest “boom” peaked at 12.7% YoY CRE loan growth for all banks & all CRE types.
- Recent CRE growth was the highest since 2006.

Banks Have Severely Throttled Back on CRE Lending
Banks have been quietly preparing for rough times ahead



Source: Board of Governors of the Federal Reserve System

Banks Have Over \$3T in CRE They Need to Refinance by 2029, yet nearly \$1T of that is due this year.

Commercial Mortgage Maturities by Lender Type (\$ Billion)

Year	Total Due	Banks	CMBS	Life Cos	GSE	Other
2024	\$602.6	\$277.6	\$138.3	\$48.2	\$68.9	\$69.5
2025	\$598.0	\$286.6	\$112.6	\$50.8	\$82.3	\$65.6
2026	\$599.2	\$304.5	\$69.6	\$54.4	\$102.3	\$68.3
2027	\$628.7	\$322.1	\$55.5	\$58.3	\$120.6	\$72.1
2028	\$620.8	\$320.0	\$56.7	\$60.9	\$114.7	\$68.6
2029	\$595.1	\$294.0	\$66.7	\$58.1	\$118.1	\$58.2
2025-2029	\$3,041.8	\$1,527.3	\$361.1	\$282.6	\$538.0	\$332.9

Source: Trepp Inc., based on Federal Reserve Flow of Funds Data

CRE Loans Coming Due in 2024 Balloon by 41%, to \$929 Billion, as Loans that Matured in 2023 Weren't Paid Off but Extended

by Wolf Richter • Feb 12, 2024 • 92 Comments

Eroding Existing Prices for Apartments May Temper New Build Demand

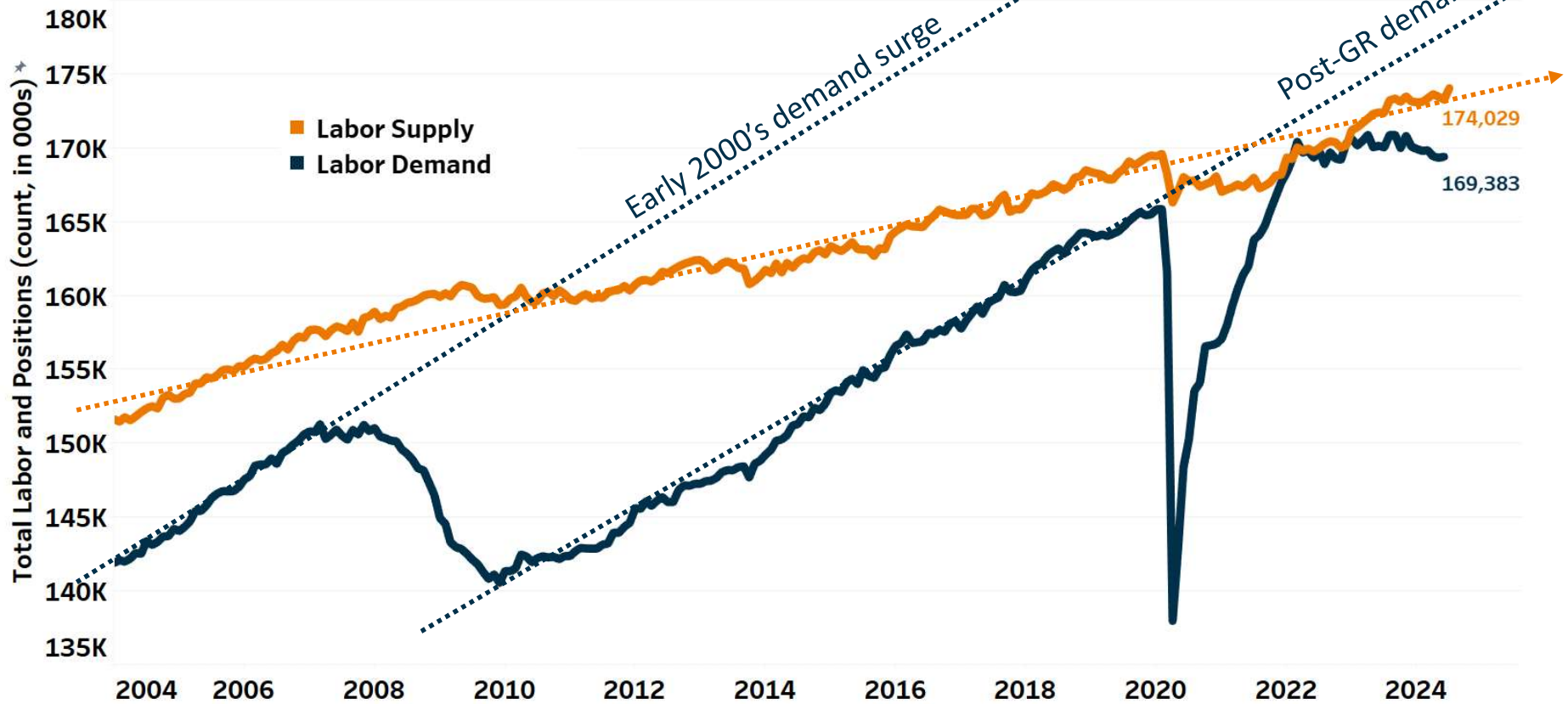
	Index Value	Change in Commercial Property Values		
		Past Month	Past 12 Mos	Recent Peak
All Property	123.6	0.0%	-5%	-20%
Core Sector	123.6	0.0%	-5%	-23%
Apartment	147.9	0.0%	-2%	-22%
Industrial	210.0	0.0%	-10%	-17%
Mall	84.3	0.0%	5%	-14%
Office	71.2	0.0%	-9%	-37%
Strip Retail	111.0	0.0%	-2%	-16%
Data Center	107.0	0.0%	-5%	-17%
Health Care	120.6	0.0%	-9%	-20%
Lodging	106.4	0.0%	-3%	-6%
Manufactured Home Park	269.4	0.0%	-5%	-17%
Net Lease	94.3	0.0%	-3%	-19%
Self-Storage	242.4	0.0%	-13%	-23%

Source: Green Street Commercial Property Price Index, used with permission

| Labor



The Forces of Supply and Demand Operate Very Differently, Leading to Wage Surges and Lulls



Source: Bureau of Labor Statistics

The Ratio of Construction Openings to Experienced Job Seekers Stuck Near Parity

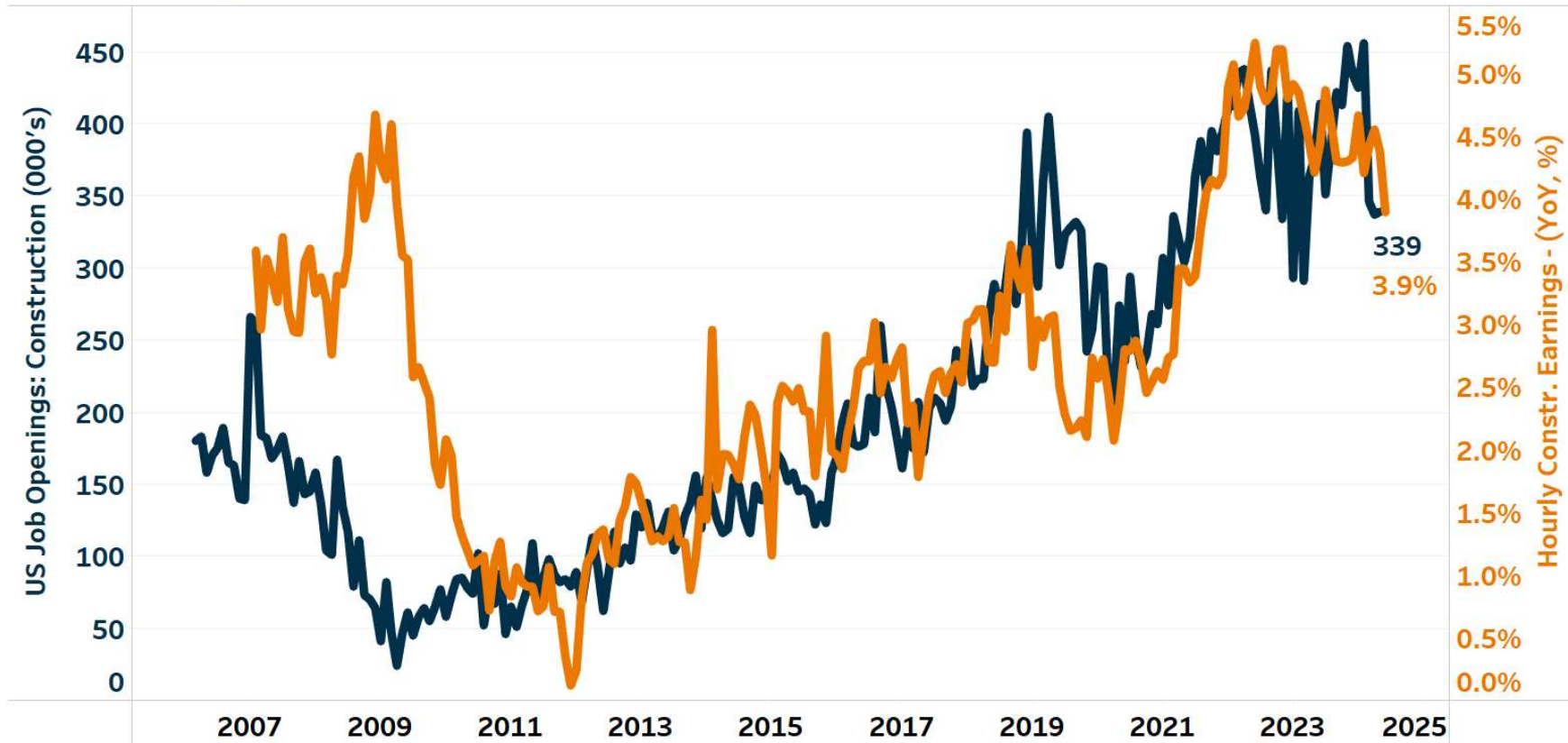
Since 2022 there have frequently been more construction openings than there are job-seeking laborers with construction experience.



Source: Bureau of Labor Statistics

Construction Wage Growth Outpaces the Broader Private Sector

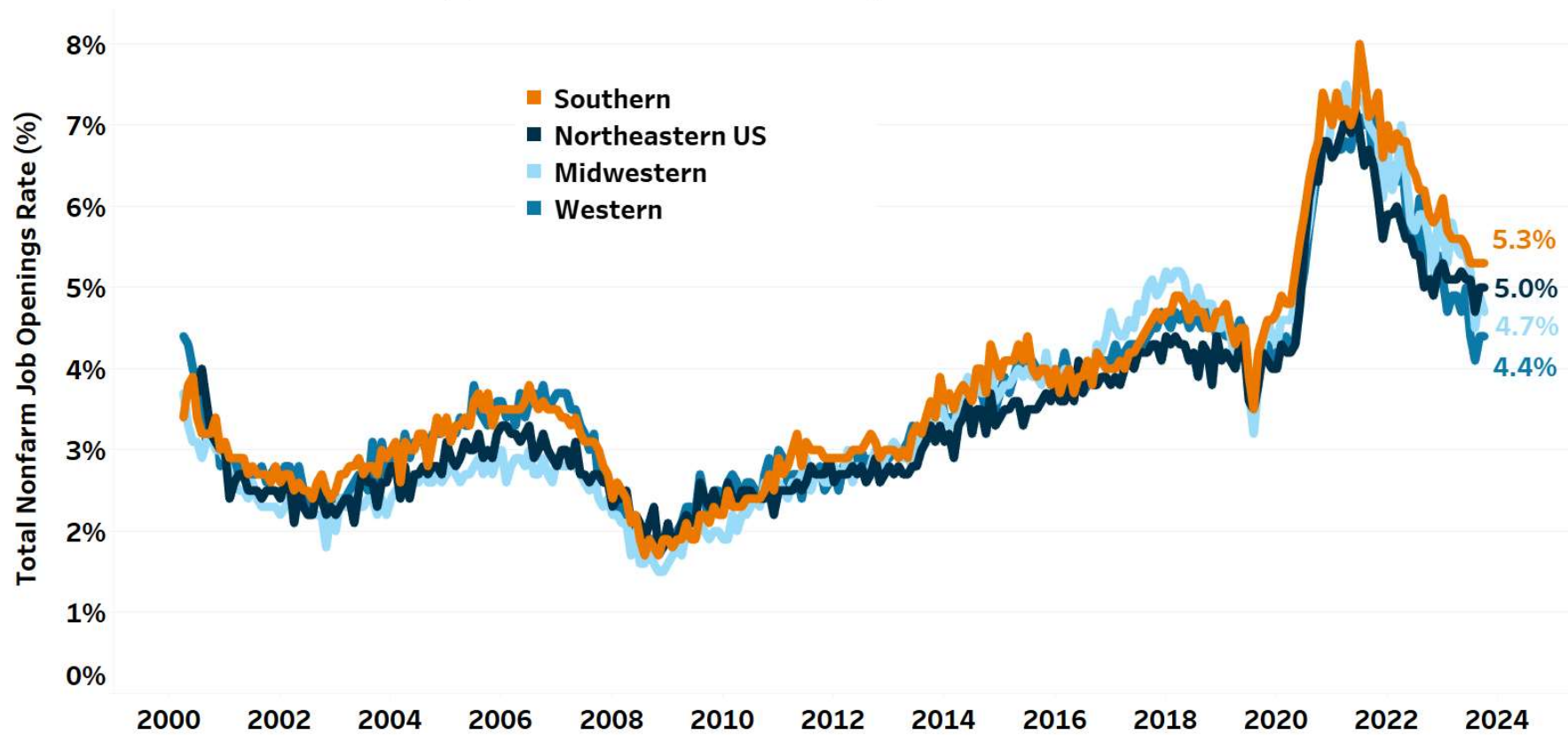
Construction wages growth has fallen below 4% for the first time since COVID rebound.



Source: U.S. Bureau of Labor Statistics

Southern Region Labor Demand Leads the Country

"Job Openings Rate" = # Openings / (# Openings + # Total Filled Jobs)

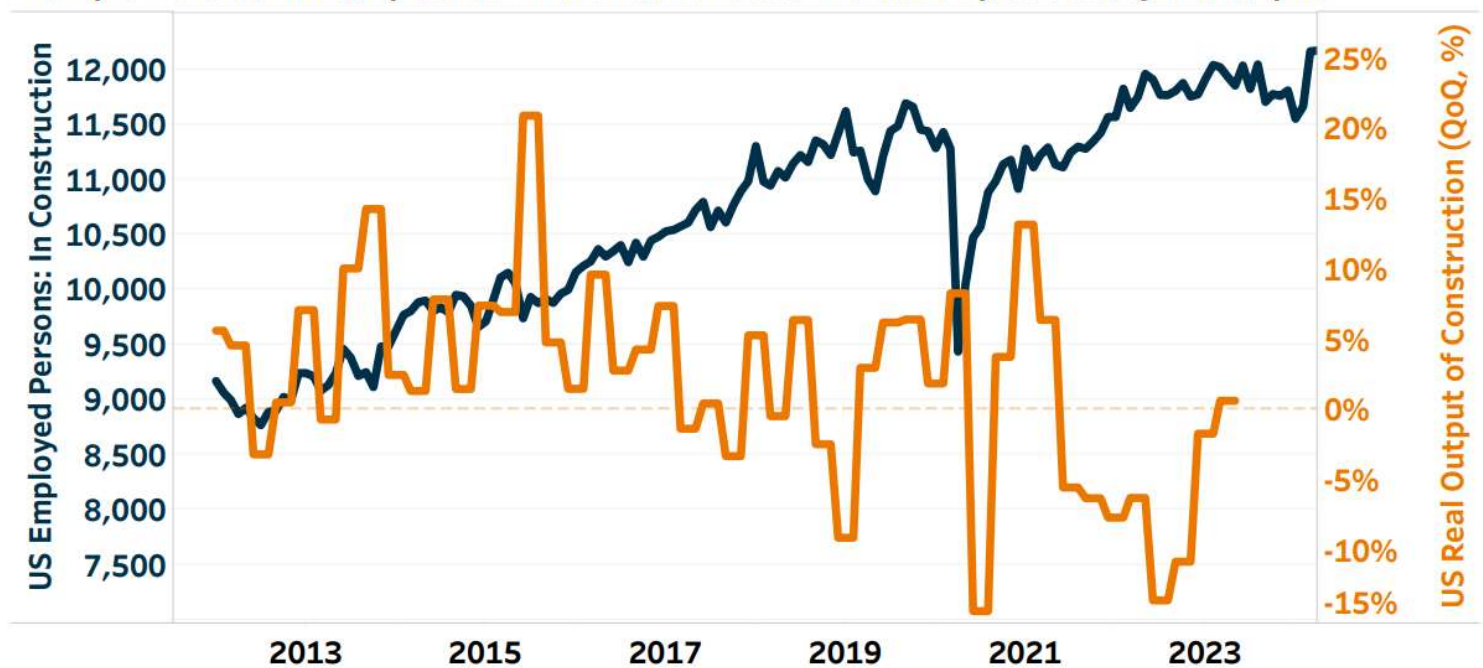


Source: U.S. Bureau of Labor Statistics

Labor Training is a MUST:

- How will you prepare for the future: “AI is not going to take your job, someone using AI is”.
- The desperation for labor diluted the productivity of the average laborer.

US Real Construction Output Trend Contrasts with Labor Levels
 A simple increase in labor post-COVID did not correlate with added productivity and output



Source: U.S. Bureau of Economic Analysis

Bringing It All Together: Strategy

Strategy: How you use your market knowledge (*macroeconomics*) along with the resources available to you (*Labor, Finance*) to create outsized returns for your business.



| Strategy: Macroeconomic Conditions

- 1) Firms need to fine tune their economic “sensors” to account for geographic differences.
 - National headlines and Texas’ economic conditions are quite different.
- 2) Strategically build a diversified Client/Project Portfolio
- 3) Diversifying your sources of funding:
 - Building relationships with multiple regional banks, also consider creating private equity/private capital relationships.

| Strategy: Finance

- Banks are highly aware of their precarious situation. They won't help the industry at their expense.
- The Federal Reserve has repeatedly called out the CRE situation as being dangerous to the industry.
- Banks really have no option but to “Pretend and Extend”
 - Banks will attempt to “hold on” long enough to refinance distressed debt at lower rates that allow a return of existing investments to profitability.
- Public funding will be a great source of opportunity... while it lasts.

| Strategy: Labor

- Accept that today's labor challenges are structural and require firms to take a refreshed, long-run approach to one's labor strategy.
 - The ability to rehire former labor is –and will remain- a greater challenge than in the past.
- You can't force people to stay, but you can work hard to **create steady paychecks, and training program that get them to stay.**
- *“The worst thing that can happen is NOT that you train someone and they leave, but that you DON'T train them and they stay.”*



Question & Answer

Michael Guckes

Chief Economist

Michael.Guckes@constructconnect.com

www.linkedin.com/in/michaelguckes/