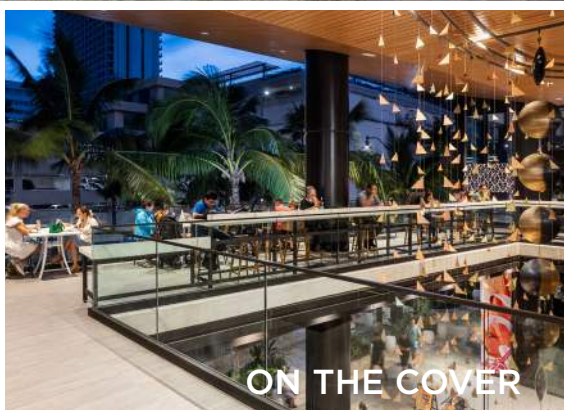


THIRD QUARTER 2023

NORTH AMERICA

QUARTERLY CONSTRUCTION COST REPORT





WAIKIKI MARKET ▲

WAIKIKI, HAWAII

Located in the heart of one of Hawaii's most iconic neighborhoods, Waikiki Market is a re-imagined grocery and food destination where visitors and residents can experience the flavors of Hawaii in an upscale, community-focused setting.

The 32,000 SF modern retail complex is the only full-service and locally owned grocery store in Waikiki, which features a variety of regional and international brands, food and beverage options, in addition to traditional market goods. The two-story super store anchors a brand-new residential high-rise tower and dawns generous open-air seating areas along with Hawaii-inspired interiors and art that catch the eye from the ground level.

The buildout encompasses live food preparation stations that celebrate Hawaii's rich culinary heritage, two full-service restaurants, and critical back-of-house spaces furnished with specialty equipment that link operations of the commercial kitchens, food counters and grocery store.

Engaged early on by the owner, Rider Levett Bucknall provided technical expertise and cost certainty during the design phase of the project. Throughout construction, Rider Levett Bucknall's on-site team was adaptable to dynamic project conditions and maintained strong lines of communication among the contractor, consultants and vendors to effectively deliver a new flagship grocery store for the Waikiki community.

NORTH AMERICA AT A GLANCE

Q3 2023

The current economic situation has many feeling like they are playing a chess match with no endgame. This seemingly endless match has kept construction firms and developers on their toes; watching the moves of every economic piece on the board, which include higher interest rates (and the resultant pressure on borrowing costs), the massive uptick in spending on mega-projects, labor challenges of many varieties, the revolving threat of Federal Government shutdown, ongoing war in Europe and speculation around whether the US economy will have a 'soft-landing' recession, a 'hard-landing' recession or no recession at all!

Despite these challenges, the construction industry has been remarkably resilient, with one key indicator being construction employment which is currently at a little over 8 million people, in comparison to only 5.4 million in January 2011 (and 6.5 million in April 2020!). In fact, many construction firms are reporting healthy backlogs to work through, and the Construction Backlog Indicator from the Associated Builders and Contractors is holding steady at around nine months in the latest report.

Further evidence for the current strength of construction activity is that construction costs continued to rise between April 1 and July 1, 2023, albeit more slowly, with the national average increase in construction cost hovering over 1.5 percent.

The growth in mega-projects and infrastructure is a bright spot for the industry right now, too. Those projects tend to be funded by government investment like the Infrastructure Investment and Jobs Act and may offer some relief as we see some develop-led projects like multifamily starts now declining 23%, since peaking in the fourth quarter of 2022.

And yet, with so many positive signs, a few clouds linger. The RLB Crane Index shows a slow-down in activity in the past quarter and the American Institute of Architects' 'Architectural Billings Index' is healthy but flat with architectural firms variously reporting softer public sector work, financing issues hurting projects and accounts receivable increasing.

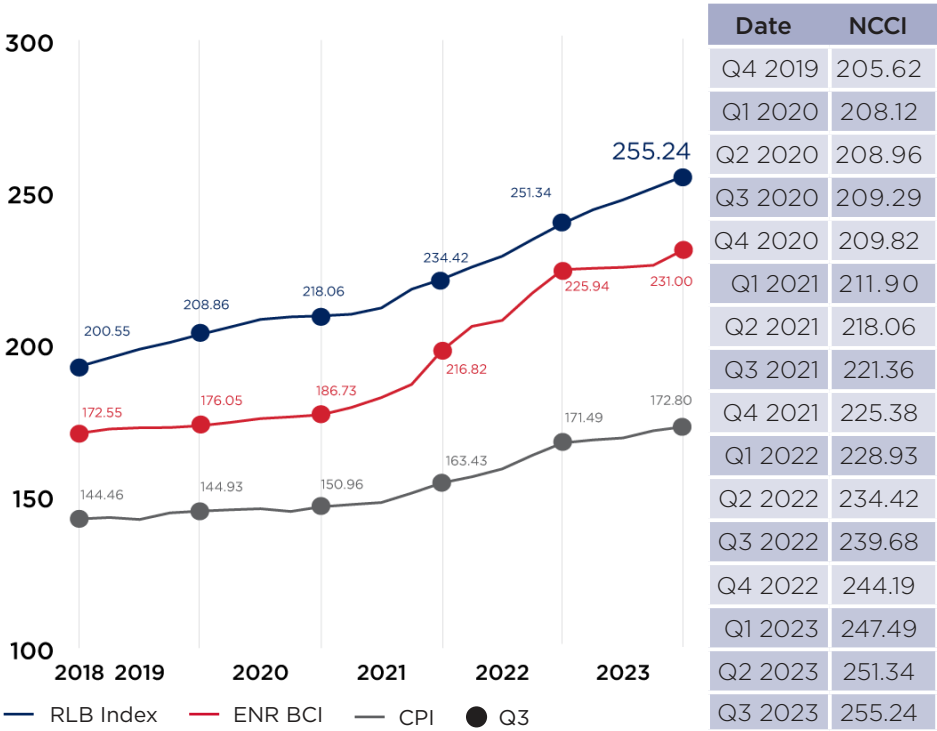
The pieces on the economic board may still be shifting, but forward looking enterprises still have an opportunity to position themselves for a stronger, more secure financial future.

Julian Anderson FRICS
President,
North America



UNITED STATES

NATIONAL CONSTRUCTION COST INDEX



Welcome to the third quarter 2023 issue of the RLB Quarterly Cost Report! This issue contains data current to mid-Q3 2023.

\$1,972.6 billion According to the U.S. Department of Commerce, construction-put-in-place during July 2023 was estimated at a seasonally adjusted annual rate of \$1,972.6 billion, which is

0.7% above the revised June 2023 estimate of \$1,958.9 billion, and

5.5% above the July 2022 estimate of \$1,869.3 billion.

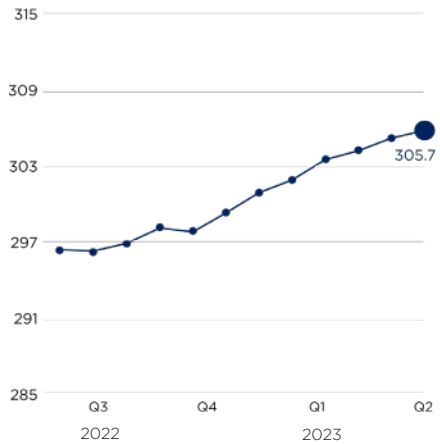
The National Construction Cost Index shows the changing cost of construction between July 2018 and April 2023, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.

KEY UNITED STATES STATISTICS

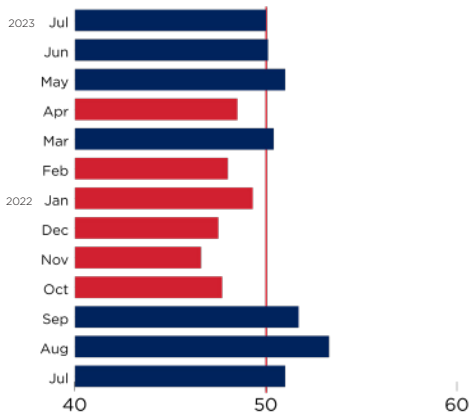
Gross Domestic Product* (GDP)



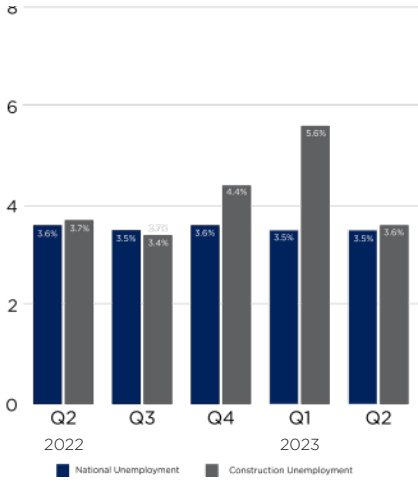
Consumer Price Index (CPI)



Architectural Billings



Unemployment Comparison



GDP represented in percent change from the preceding quarter, seasonally adjusted at annual rates. CPI quarterly figures represent the monthly value at the end of the quarter. Inflation rates represent the total price of inflation from the previous quarter, based on the change in the Consumer Price Index. ABI is derived from a monthly American Institute of Architects survey of architectural firms of their work on the boards, reported at the end of the period. Construction Put-in-Place figures represent total value of construction dollars in billions spent at a seasonally adjusted annual rate taken at the end of each quarter. General Unemployment rates are based on the total population 16 years and older. Construction Unemployment rates represent only the percent of experienced private wage and salary workers in the construction industry 16 years and older. National unemployment rates are seasonally adjusted, reflecting the average of a three-month period.

* Adjustments made to GDP based on amended changes from the Bureau of Economic Analysis.

Sources: U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, American Institute of Architects.

UNITED STATES

INDICATIVE CONSTRUCTION COSTS

LOCATION	OFFICES				RETAIL SHOPPING				HOTELS				HOSPITAL	
	PRIME		SECONDARY		CENTER		STRIP		5 STAR		3 STAR		GENERAL	
	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
USA														
Boston	400	650	245	355	220	325	165	260	435	635	300	425	500	1000
Chicago	315	525	190	315	190	420	155	260	470	735	345	470	400	840
Denver	350	500	250	350	200	350	160	230	425	625	285	425	600	800
Honolulu	350	585	220	340	270	565	250	425	665	810	385	610	515	870
Las Vegas	260	450	180	245	155	615	140	335	400	745	240	405	510	610
Los Angeles	250	375	190	280	170	365	145	210	400	620	290	380	640	970
New York	380	880	220	550	330	660	350	690	475	710	350	475	595	895
Phoenix	245	415	155	220	195	330	115	190	390	610	205	310	470	665
Portland	275	365	250	340	260	360	225	300	465	610	340	450	700	1000
San Francisco	430	740	330	530	315	520	240	410	550	820	390	650	600	950
Seattle	340	610	230	320	255	410	195	315	450	685	320	450	600	850
Washington	335	555	230	365	180	325	150	245	430	650	280	440	510	885
CANADA														
Calgary	275	415	235	280	230	310	140	195	300	465	225	255	670	910
Toronto	290	470	240	335	215	455	175	225	415	770	250	300	605	945

BALTIC DRY INDEX

The Baltic Dry Index (“BDI”) is a weighted index, calculated daily, measuring the supply of bulk dry carriers and considers shipping routes and volumes for four different categories of cargo ships. It does not consider ships carrying containers or ships carrying “energy liquids”.

BDI is considered to be a ‘leading’ economic indicator because it measures the transportation cost of materials used in finished goods and is therefore a gauge of short-term economic activity. It is based on current freight costs on several shipping routes.

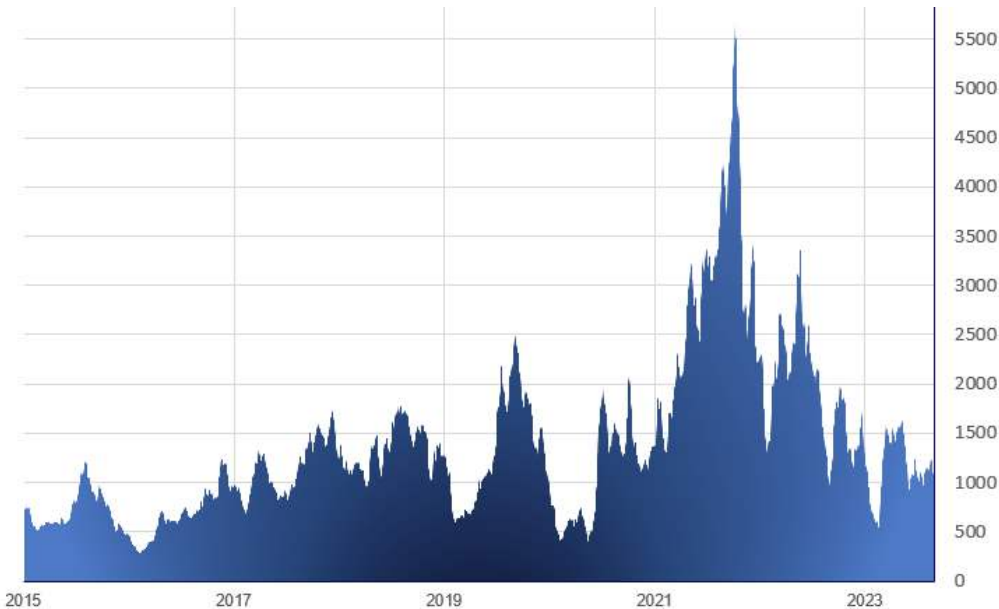
The BDI is seasonal and has well observed annual peaks and troughs so short that term trends can be challenging to interpret. Despite these short-term fluctuations, BDI does prove to be a key insight when measuring global demand for commodities. The Baltic Dry Index stood at 1,092 points as of end Q2 2023. This was lower than the same quarter the previous year, but still higher than the index in May 2020, just following the outbreak of COVID-19, when the index was at 504.

The BDI averaged 800 points in Q1 2023, and it is expected to average between 1,400 and 1,600 points in 2023-2024, according to S&P Global Freight Rate Forecast (FRF) models.

Also, the BDI index is starting to climb in Q3 2023. This could mean that infrastructure projects are starting to expand, which would lead to a rising global economy.

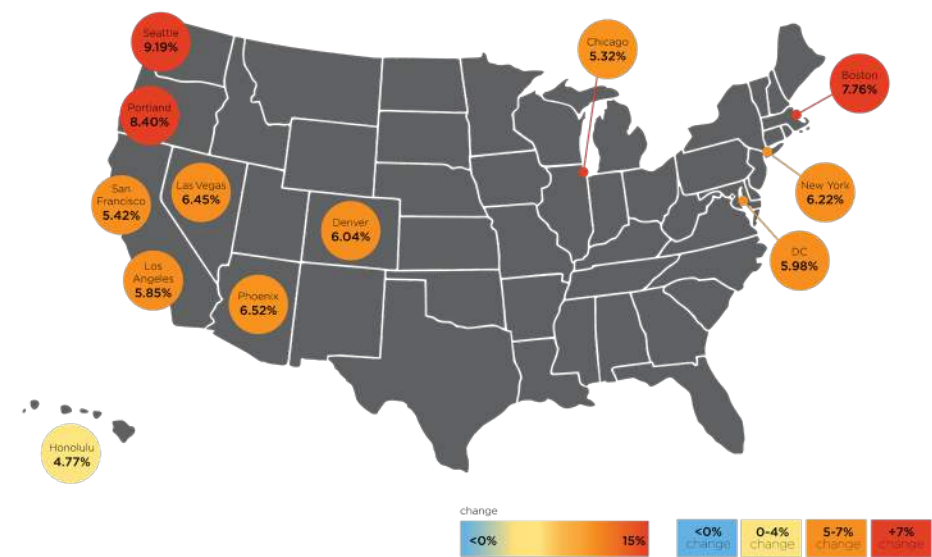
The data in the chart below represents estimates of current building costs in each respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions, etc. Values of U.S. locations represent hard construction costs based on U.S. dollars per square foot of gross floor area, while values of Canadian locations represent hard construction costs based on Canadian dollars per square foot.

INDUSTRIAL		PARKING				RESIDENTIAL				EDUCATION					
WAREHOUSE		GROUND		BASEMENT		MULTI-FAMILY		SINGLE-FAMILY		ELEMENTARY		HIGH SCHOOL		UNIVERSITY	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
120	205	95	155	125	175	250	350	285	395	400	550	450	700	500	750
130	215	90	135	145	260	190	440	265	525	295	440	335	470	415	840
125	195	125	200	165	250	185	355	230	465	310	475	400	575	550	800
125	260	150	200	170	280	270	460	300	565	515	850	530	725	660	975
80	150	80	105	100	180	190	455	225	450	415	520	495	675	640	850
130	200	110	135	150	205	245	400	215	380	380	500	325	575	480	650
130	220	110	190	150	230	230	450	330	660	505	640	550	700	540	775
80	140	55	105	85	150	175	270	185	505	275	390	305	470	415	640
200	285	200	240	220	295	275	385	250	395	440	550	475	610	525	675
150	255	130	205	250	350	400	625	310	520	390	570	440	750	570	1000
170	235	125	190	200	290	265	450	245	375	415	625	350	625	550	750
130	210	70	95	90	155	210	355	265	390	325	440	340	465	420	710
110	165	90	125	95	150	190	265	290	420	250	345	255	355	330	505
130	180	120	155	150	215	250	320	315	620	265	325	265	345	305	535



UNITED STATES

COMPARATIVE COST INDEX



City	July 2022	October 2022	January 2023	April 2023	July 2023	Annual % Change
• Boston	27,443	28,192	28,741	29,165	29,574	7.76%
• Chicago	28,583	28,718	28,947	29,595	30,103	5.32%
• Denver	17,821	18,004	18,236	18,632	18,898	6.04%
• Honolulu	28,533	28,802	29,106	29,402	29,895	4.77%
• Las Vegas	17,456	17,777	17,932	18,289	18,583	6.45%
• Los Angeles	25,756	26,238	26,585	26,929	27,263	5.85%
• New York	32,476	32,986	33,456	33,624	34,496	6.22%
• Phoenix	18,309	18,693	18,993	19,253	19,503	6.52%
• Portland	20,055	20,631	20,949	21,263	21,741	8.40%
• San Francisco	32,656	33,115	33,679	34,202	34,425	5.42%
• Seattle	22,575	23,239	23,641	23,991	24,651	9.19%
• Washington, DC	25,880	26,615	26,857	27,169	27,428	5.98%

Comparative Cost Map Indicates percentage change between July 2022 to July 2023.

INTRODUCING

SECTOR MARKET INSIGHTS

*A Companion to the QCR
Providing a Expert Insights and
Construction Cost Drivers
Impacting the Future of the Sector.*



WHAT IS A SECTOR MARKET INSIGHT?

A companion to the Quarterly Cost Report, our sector market insight offers clients the certainty they need to make critical, real-time decisions to ensure the commercial success of their aviation projects.

The sector market insight takes a deep dive into:

- state of the market,
- what cost drivers are likely to affect material prices,
- industry trends, and
- what information like this means for the future of the sector.

What sectors are included?

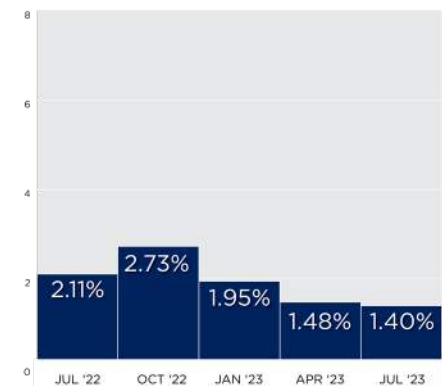
The Sector Market Insights will feature Aviation, Convention Centers, Data Centers, Healthcare, Hotels & Leisure, Infrastructure, Sports & Events, and Federal/Government. For Q3 2023, we'll be highlighting:



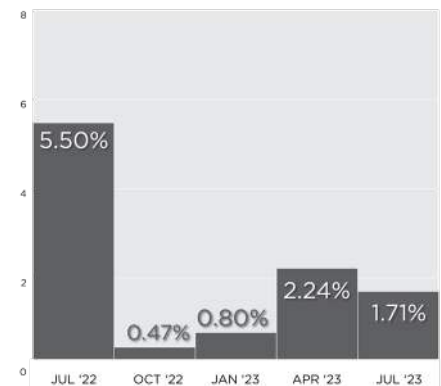
FEDERAL/
GOVERNMENT

UNITED STATES

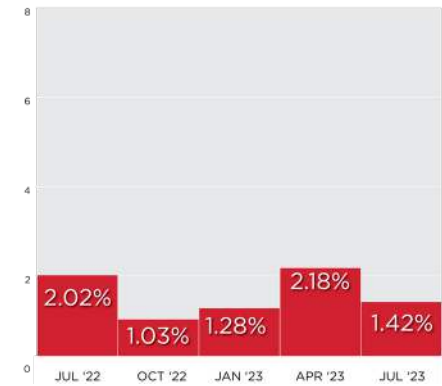
The following escalation charts track changes in the cost of construction each quarter in many of the cities where RLB offices are located. Each chart illustrates the percentage change per period.



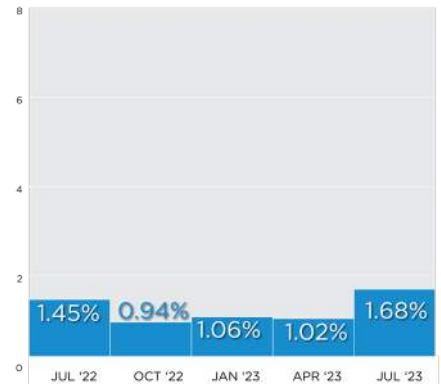
Boston Cost Index



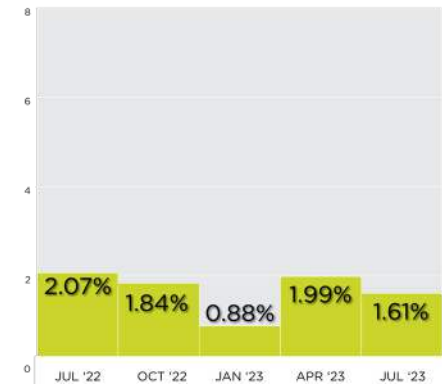
Chicago Cost Index



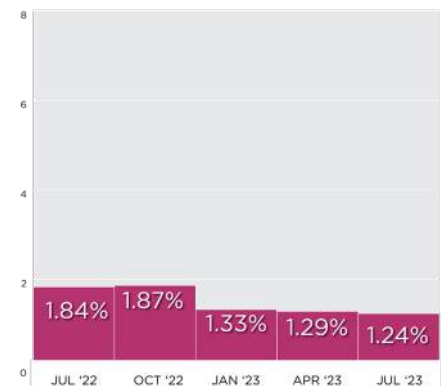
Denver Cost Index



Honolulu Cost Index



Las Vegas Cost Index

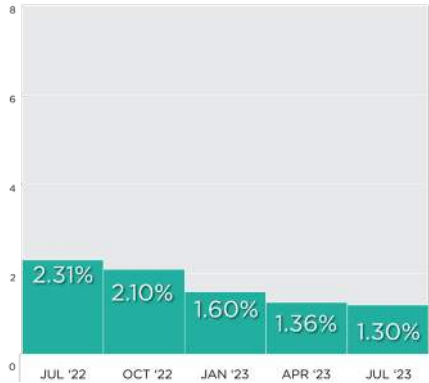


Los Angeles Cost Index

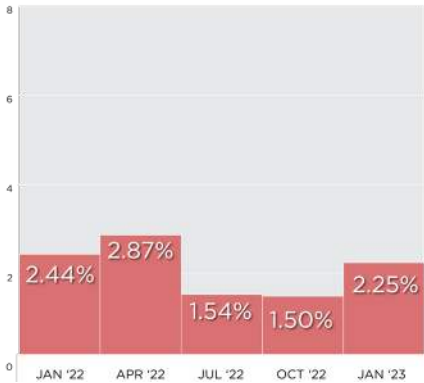
Our research suggests that between April 1, 2023 and July 1, 2023 the national average increase in construction cost was 1.55% (6.2% annualized). Chicago, Honolulu, Las Vegas, New York, Portland and Seattle all experienced increases above the quarterly national average during Q3 2023. Locations below the national average included Boston, Denver, Los Angeles, Phoenix, San Francisco, and Washington, D.C.



New York Cost Index



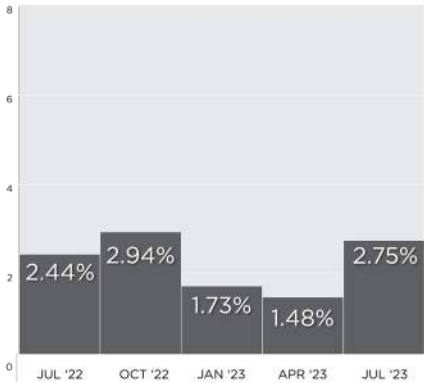
Phoenix Cost Index



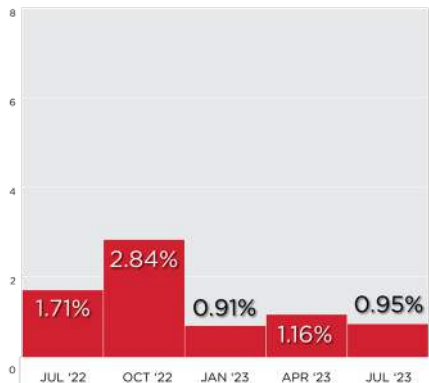
Portland Cost Index



San Francisco Cost Index



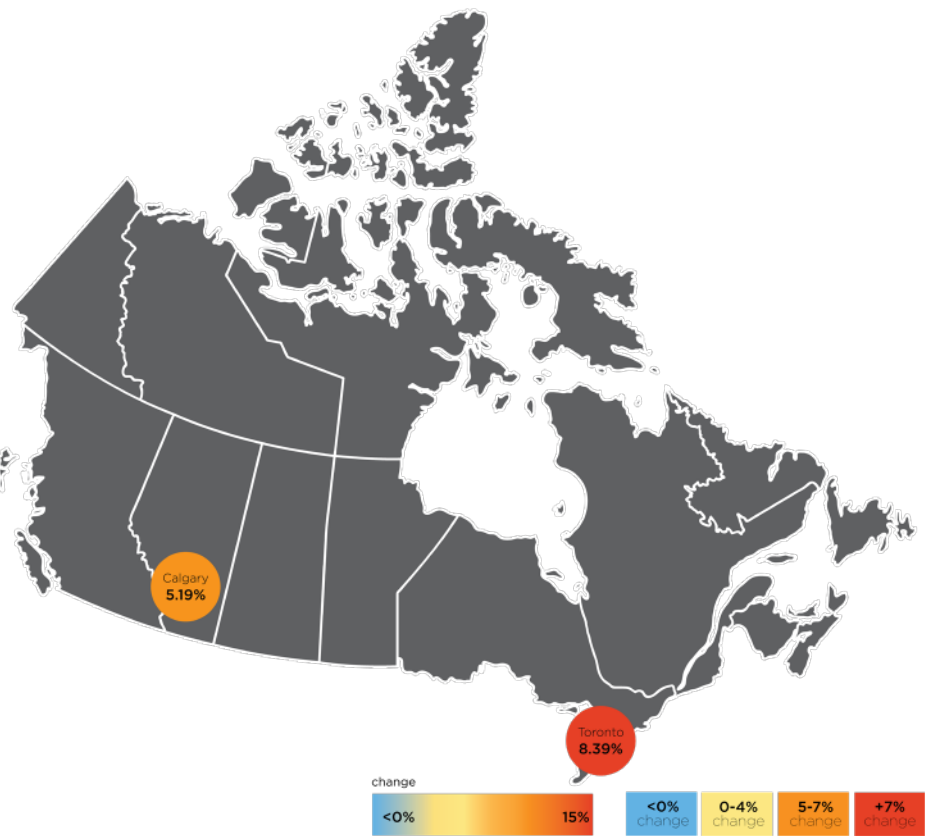
Seattle Cost Index



Washington DC Cost Index

CANADA

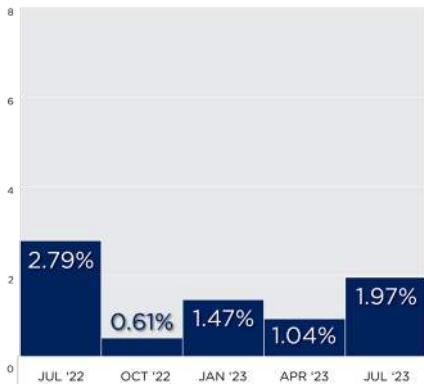
COMPARATIVE COST INDEX



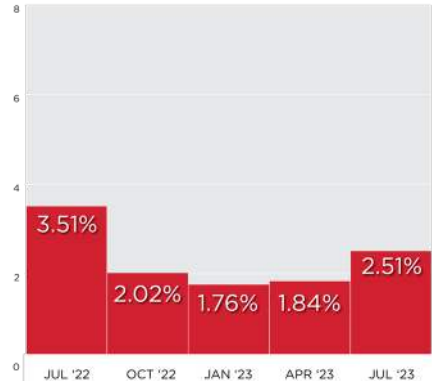
City	July 2022	October 2022	January 2023	April 2023	July 2023	Annual % Change
• Calgary	23,976	24,123	24,477	24,732	25,220	5.19%
• Toronto	30,849	31,473	32,028	32,619	33,437	8.39%

Calgary's construction value increased Alberta's permit value by 8%, according to Statistics Canada. Alberta now holds the top spot in Western Canada for the value of building permits, offsetting a fall in other major cities. Construction employed 97,800 people in the Calgary Census Metropolitan Area. This result marks a stunning year-over-year growth rate of 16% and is the highest recorded level since July 2014, prior to the oil collapse. The Calgary Construction Association estimates that there are now between 2,500 and 4,000 open positions in the workforce. The Association thinks that the lack of labor could delay projects, raise costs, and impede both the industry's overall expansion and Calgary's progress.

The construction industry in Ontario accounts for around 8% of the province's GDP. Ontario government is launching a new Building Faster Fund, which will provide communities with up to \$1.2 billion over 3 years to meet or surpass committed future housing targets. The provincial administration has prioritized housing construction, with a goal of constructing 1.5 million new dwellings over the next 10 years. It is also expanding Ontario's infrastructure, spending \$158 billion on new hospitals, long-term care homes, and major transit and highway projects. Moreover, the Toronto housing market is benefiting from the unexpectedly robust 2023 real estate recovery. Despite rising mortgage rates and the risks of an economic downturn, buyers surged back into the market.

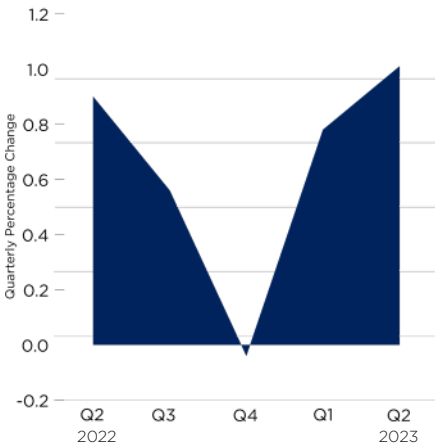


Calgary Cost Index

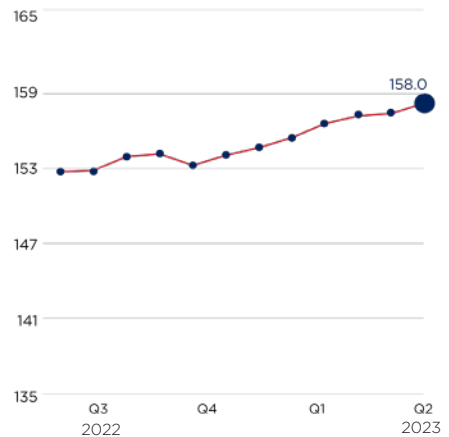


Toronto Cost Index

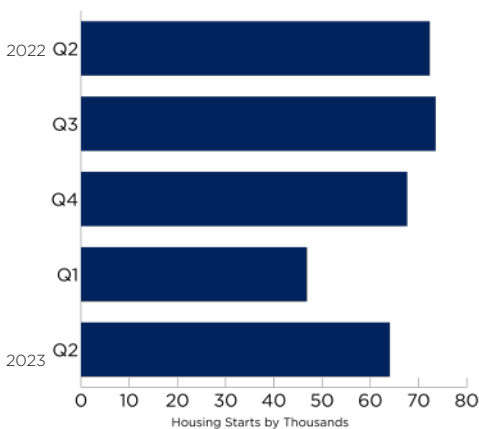
KEY CANADIAN STATISTICS



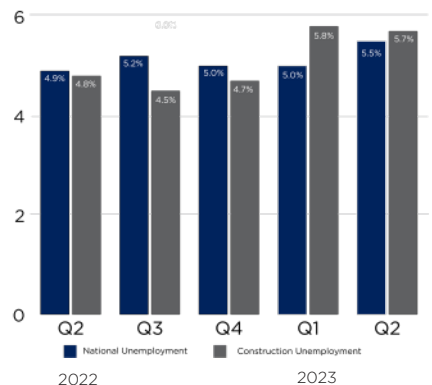
Gross Domestic Product* (GDP)



Consumer Price Index (CPI)



Housing Starts



Unemployment Comparison



ABOUT RIDER LEVETT BUCKNALL

Rider Levett Bucknall is an award-winning international firm known for providing project management, construction cost consulting, and related property and construction advisory services – at all stages of the design and construction process.

While the information in this publication is believed to be correct, no responsibility is accepted for its accuracy. Persons desiring to utilize any information appearing in this publication should verify its applicability to their specific circumstances.

This issue was compiled and designed by Taryn Harbert and Kaylie Lu with contributions from Antonio Gonzalez, Cassie Idehara, Charlie Andrews, Daniel Junge, Evans Pomegas, James Casey, Julia Flores, Kirk Miller, Lucy Liu, Maelyn Uyehara, Paul Brussow, Paraic Morrissey, Peter Knowles, Peter Vavaroutsos, and Scott Macpherson.

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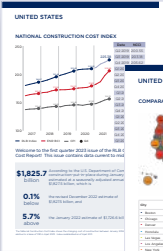
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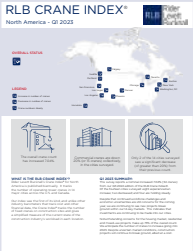
PERSPECTIVE



CONSTRUCTION COST REPORT



CRANE INDEX



SECTOR MARKET INSIGHTS



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