

A photograph of a modern, multi-story building at night. The building features large glass windows and balconies with glass railings. The interior lights are on, and the balconies are illuminated. The building is surrounded by palm trees and other tropical plants. The sky is dark blue.

THIRD QUARTER 2018

# NORTH AMERICA

QUARTERLY CONSTRUCTION COST REPORT



**ON THE COVER**

## **PARK LANE ALA MOANA ▲**

### **HONOLULU, HAWAII**

Located steps away from world-class beaches and the cosmopolitan city center of Honolulu, Park Lane Ala Moana offers its residents luxurious, private estate homes with resort-like living.

Built over an expanse of more than seven acres with eight separate buildings, Park Lane consists of 217 ultra-luxury condominium units, ranging from 800 to 6,000 square feet of indoor/outdoor living. The one-of-a-kind project includes private barbecues on its lanais and private pools and spas on the ground floor units. The project is adorned with amenities that include a stunning pool deck, playground structure, a dog park, spa level equipped with treatment rooms, sauna, steam and cold plunge pools, fitness center, club lounge, private dining room, a movie theatre and generous open spaces, furnishing a resort-like setting for this private residential community.

Rider Levett Bucknall provided project management and cost consultancy services for construction of the new landmark project, which was delivered on time and within budget.

# NORTH AMERICA

With the shortage of housing—and in particular, affordable housing—much in the news, there has been increasing attention on the concept of “inclusive design.” In a nutshell, this practice emphasizes the value of designing buildings and places that provide long-lasting, positive effects not only for clients but for the community, as well.

In addition to the public, there’s a full gamut of stakeholders involved in this issue, from government policymakers and agencies to developers, architects, and urban planners. Each is addressing the problem from their own perspective, and proposing solutions that seek to share responsible action, in an act of inclusive design. An interesting question is how technology might play a role in the equation.

In September, Amazon (through its Alexa Fund) made a multi-million-dollar investment in Plant Prefab, a Rialto, California-based company that builds prefabricated, custom single-family and multifamily residences using sustainable materials and processes. For its modular homes, Plant Prefab has developed a proprietary technology which the company claims can reduce construction time by 50 percent, while also achieving a savings in overall costs of between 10 and 25 percent, depending on the geographic market.

It’s not Amazon’s first venture into the construction industry. In May, the company struck a deal with Lennar, one of the country’s largest homebuilders, to equip its new housing stock with an array of Alexa-controlled products, including built-in WiFi, smart locks and doorbells, thermostats, and lights. This emphasis on voice-controlled connectivity squarely targets homebuyers who are digital natives.

Another tech-enabled construction enterprise comes from New Story Charity, which is exploring the potential of using 3D printing to “build” houses. While these are often small shelters that are used as part of disaster-relief efforts, it’s not hard to imagine the process being applied to more conventional housing.

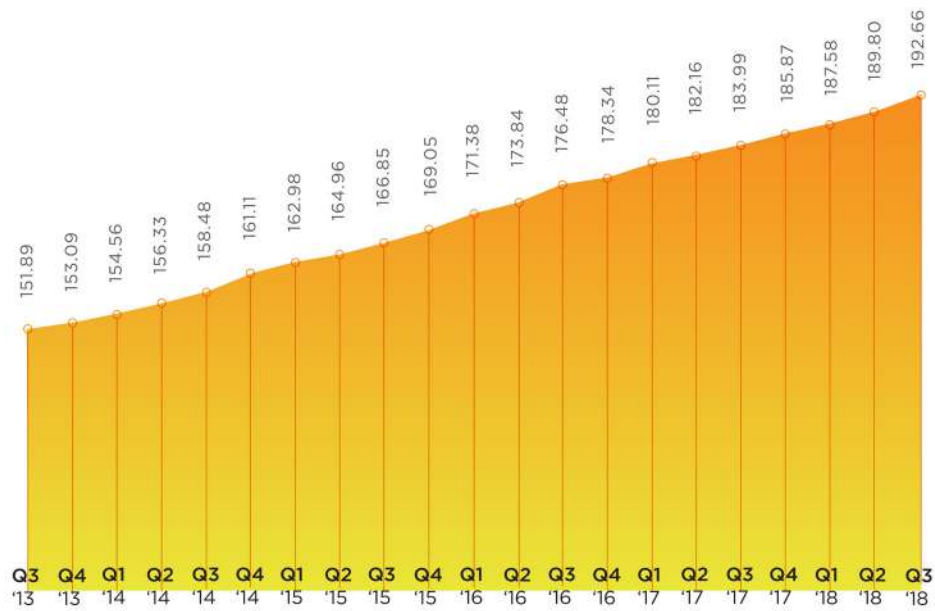
Change does not come easily to the construction industry, but that doesn’t mean we shouldn’t challenge our thinking about the best way to do business. The needs of the present—not to mention the future—are different than any we have previously faced. As we evaluate and analyze the ever-changing conditions of the marketplace, Rider Levett Bucknall remains a trusted partner, providing a fresh perspective and independent advice across the construction industry.



**Julian Anderson** FRICS  
**President,**  
**North America**

# UNITED STATES

## NATIONAL CONSTRUCTION COST INDEX



Welcome to the third quarter 2018 issue of the Rider Levett Bucknall Quarterly Cost Report! This issue contains data current to July 1, 2018.

**\$1,317.2  
Billion**

According to the U.S. Department of Commerce, construction-put-in-place during June 2018 was estimated at a seasonally adjusted annual rate of \$1,317.2 billion, which is

**1.1%  
below**

the revised May 2017 estimate of \$1,332.2 billion, and

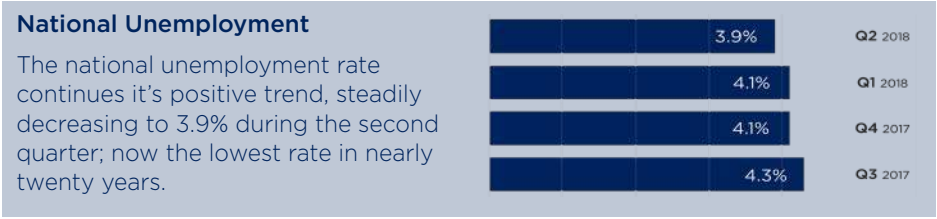
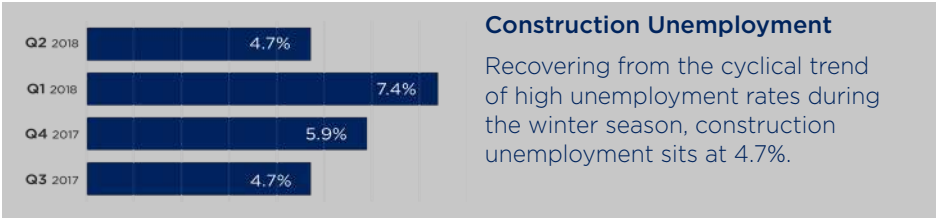
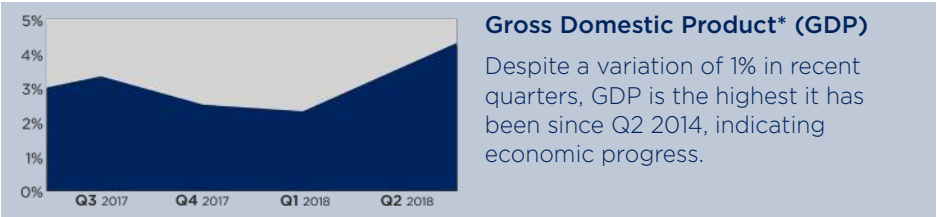
**6.1%  
above**

the June 2017 estimate of \$1,241.3 billion.

The National Construction Cost Index shows the changing cost of construction between July 2013 and July 2018, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.



# KEY UNITED STATES STATISTICS



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. Unemployment rates are seasonally adjusted, reported at the end of the 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

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.

LOCATION	OFFICES				RETAIL SHOPPING				HOTELS				HOSPITAL		INDUSTRIAL		PARKING				RESIDENTIAL				EDUCATION					
	PRIME		SECONDARY		CENTER		STRIP		5 STAR		3 STAR		GENERAL		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	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
<b>USA</b>																														
Boston	300	475	200	300	175	275	125	200	375	550	250	375	400	650	100	175	75	125	90	150	175	300	250	350	280	380	290	405	330	480
Chicago	280	450	175	280	185	290	135	220	400	660	290	410	380	720	110	185	80	125	125	170	165	400	220	420	265	380	300	405	350	600
Denver	165	255	120	185	90	145	80	175	275	360	160	240	380	470	90	150	55	75	90	120	90	200	90	410	250	300	260	315	305	415
Honolulu	280	520	240	395	205	485	175	425	505	730	320	535	465	745	140	225	100	140	140	260	195	435	280	745	330	465	400	600	435	705
Las Vegas	140	295	105	190	115	480	65	145	350	500	150	300	285	455	50	100	50	85	60	150	90	405	90	350	180	315	200	455	235	455
Los Angeles	230	350	170	255	155	340	125	185	365	530	275	355	520	780	115	180	105	125	130	175	200	315	190	335	360	470	380	495	410	575
New York	375	575	300	400	275	425	175	300	400	600	300	400	475	700	115	200	95	175	125	200	200	375	275	400	295	405	305	455	330	480
Phoenix	170	275	120	175	120	200	80	150	300	520	150	250	375	500	55	100	45	70	60	110	90	210	100	450	170	250	220	340	300	420
Portland	180	250	130	180	140	240	120	180	230	330	150	190	380	525	90	150	85	105	110	150	150	240	125	280	270	335	285	350	310	440
San Francisco	210	330	190	300	225	350	225	325	400	600	350	500	450	650	140	190	110	145	175	215	340	450	200	400	320	400	315	400	250	375
Seattle	215	260	140	200	135	305	110	155	245	360	225	240	380	530	95	125	90	105	135	160	160	270	170	290	250	305	275	465	320	465
Washington	275	425	200	300	150	275	125	175	350	525	250	350	400	650	90	150	70	125	80	125	175	300	250	350	280	355	280	380	330	480
<b>CANADA</b>																														
Calgary	235	295	190	285	220	310	110	160	300	450	190	245	550	720	85	145	75	90	75	120	140	215	125	315	185	260	220	310	300	450
Toronto	195	260	175	250	200	250	105	160	300	355	195	260	500	645	115	150	70	90	115	150	130	205	190	330	170	195	200	230	200	295

## ECONOMIC INDICATOR - BALTIC DRY INDEX

### WHAT IS THE 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.

### WHAT DOES BDI TELL US?

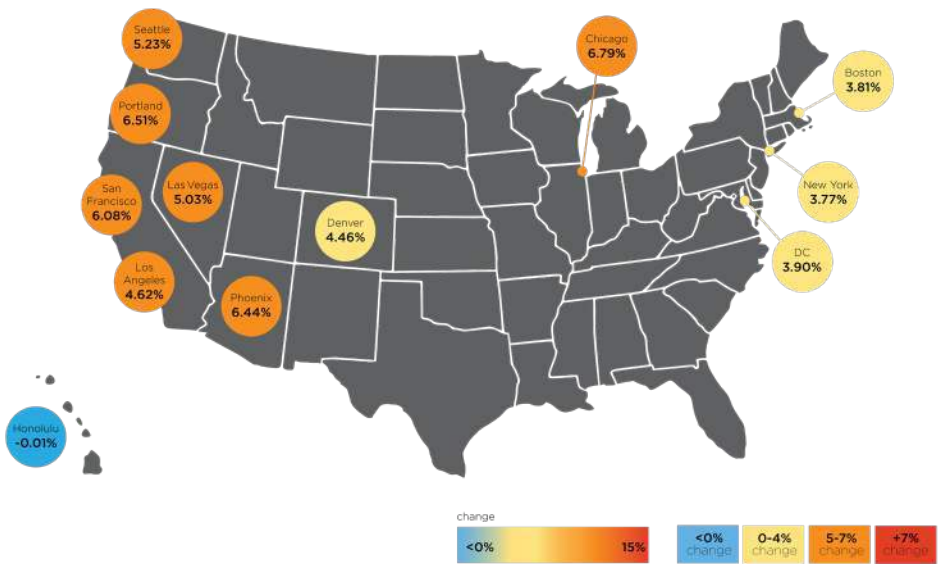
The BDI is seasonal and has well observed annual peaks and troughs so short term trends can be challenging to interpret. Despite these short-term fluctuations, BDI does prove to be a key insight when measuring global demand for commodities. Significant increases in the BDI since early 2016 (circa 250) to mid-2018 (over 1500) indicate significant improvement in global manufacturing and construction over the last 30-months.

## BALTIC DRY INDEX 2012-2018



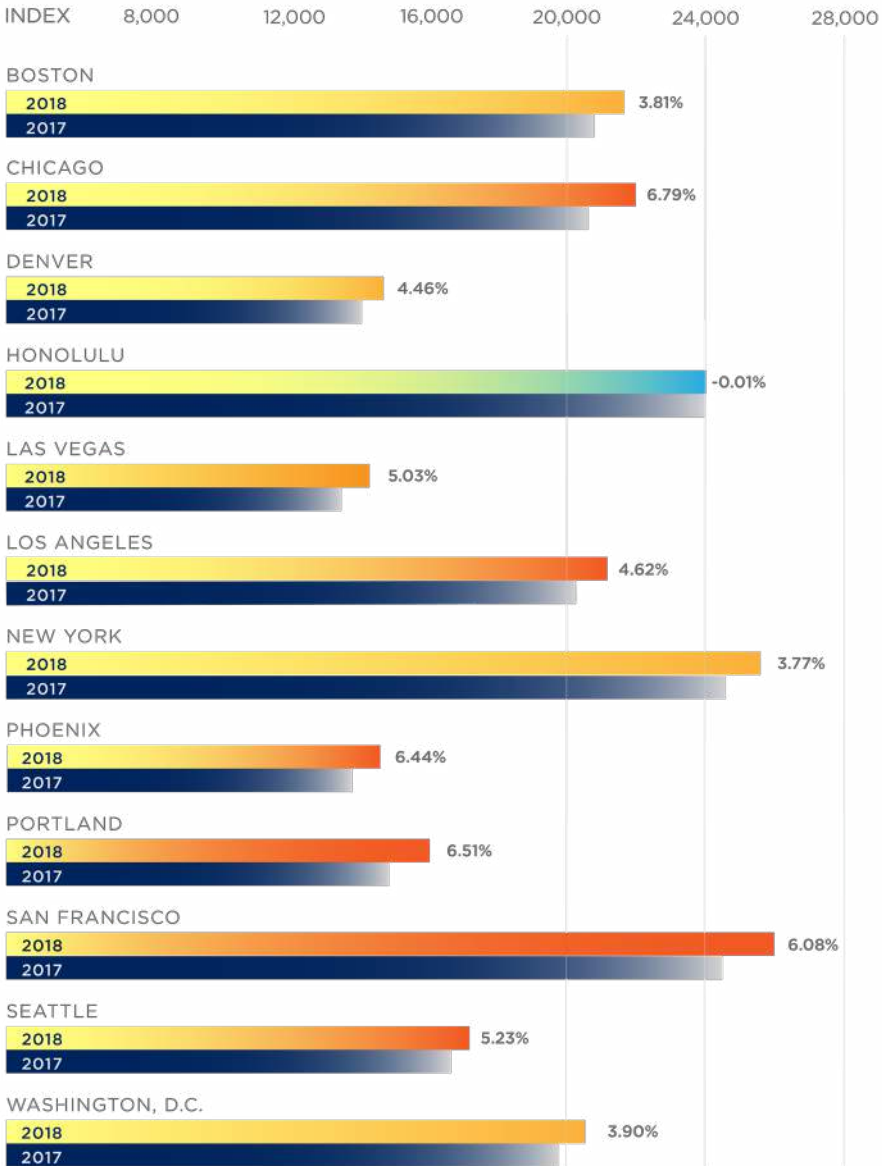
# UNITED STATES

## COMPARATIVE COST INDEX



City	July 2017	October 2017	January 2018	April 2018	July 2018	Annual % Change
<span></span> Boston	20,989	21,176	21,325	21,563	21,789	3.81%
<span></span> Chicago	20,652	20,905	21,177	21,394	22,055	6.79%
<span></span> Denver	14,187	14,337	14,513	14,649	14,819	4.46%
<span></span> Honolulu	24,050	24,058	23,663	23,804	24,048	-0.01%
<span></span> Las Vegas	13,614	13,777	13,922	14,081	14,299	5.03%
<span></span> Los Angeles	20,326	20,586	20,874	21,010	21,266	4.62%
<span></span> New York	24,698	24,927	25,104	25,387	25,628	3.77%
<span></span> Phoenix	13,900	14,080	14,248	14,442	14,795	6.44%
<span></span> Portland	15,044	15,302	15,524	15,768	16,023	6.51%
<span></span> San Francisco	24,546	24,760	25,151	25,704	26,038	6.08%
<span></span> Seattle	16,654	16,804	17,017	17,250	17,525	5.23%
<span></span> Washington, D.C.	19,884	20,054	20,212	20,437	20,660	3.90%

Comparative Cost Map and Bar Graph Indicate percentage change between July 2017 and July 2018.



Each quarter we look at the comparative cost of construction in 12 US cities, indexing them to show how costs are changing in each city in particular, and against the costs in the other 11 locations. You will be able to find this information in the graph titled Comparative Cost Index (above) and in the Cost and Change Summary (right).

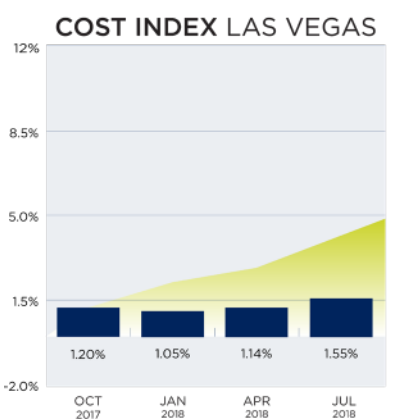
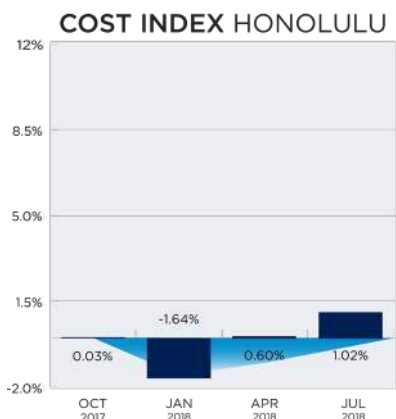
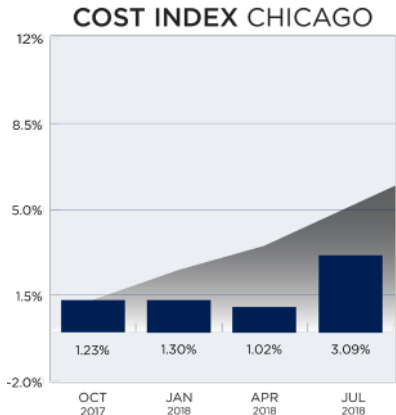
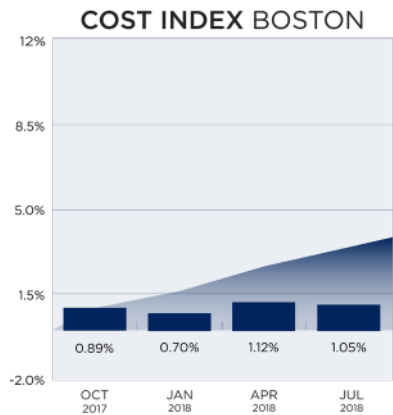
Our Comparative Cost Index tracks the 'true' bid cost of construction, which includes, in addition to costs of labor and materials, general contractor and sub-contractor overhead costs and fees (profit). The index also includes applicable sales/use taxes that 'standard' construction contracts attract. In a 'boom,' construction costs typically increase more rapidly than the net cost of labor and materials. This happens as the overhead levels and profit margins are increased in response to the increasing demand. Similarly, in a 'bust', construction cost increases are dampened (or may even be reversed) due to reductions in overheads and profit margins.



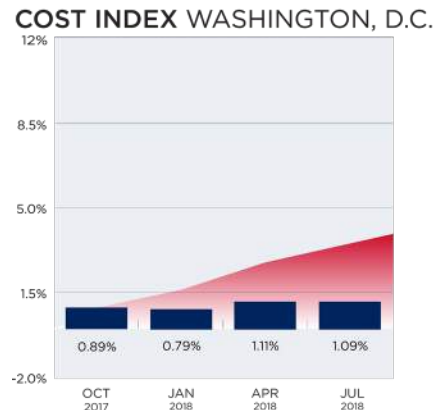
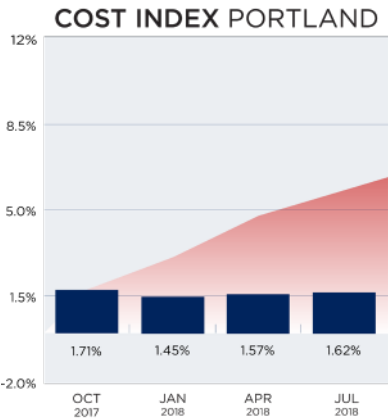
# UNITED STATES

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 and the cumulative percentage change throughout the charted timeline.

 Percentage change per quarter     Cumulative percentage change for the period shown

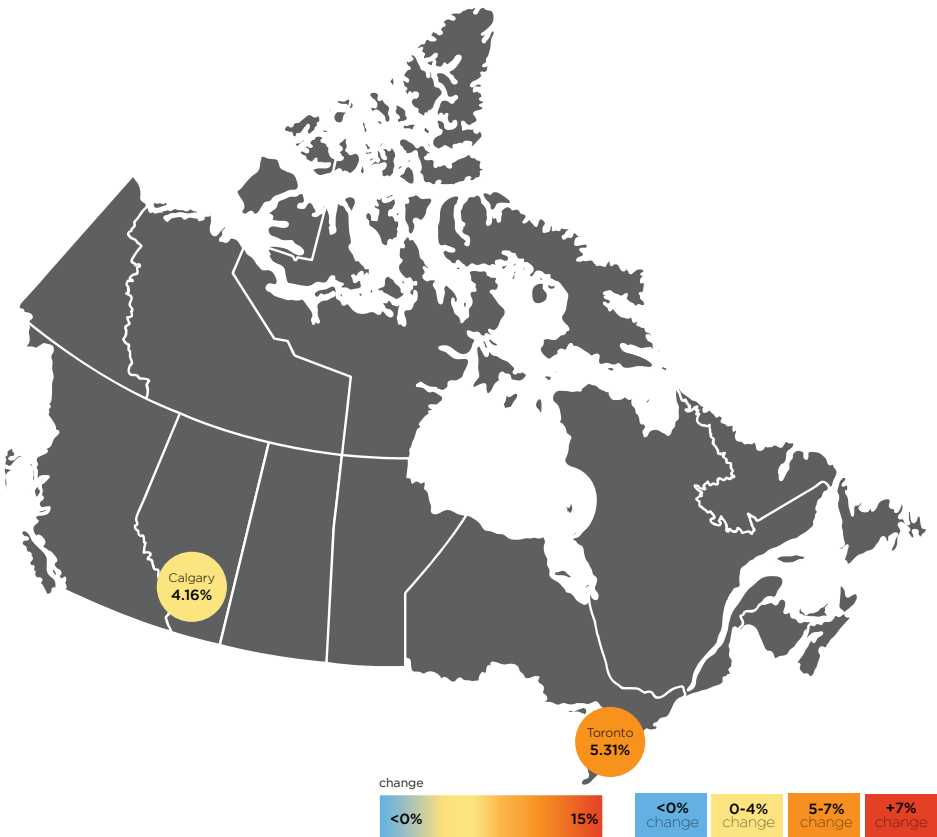


Our research suggests that between April 1, 2018 and July 1, 2018 the national average increase in construction was approximately 1.51%. Chicago, Las Vegas, Phoenix, Portland, and Seattle all experienced increases over 1.5% in the quarter. Boston, Denver, Honolulu, Los Angeles, New York, San Francisco, and Washington, D.C. all, experienced modest gains of less than 1.5%.



# CANADA

## COMPARATIVE COST INDEX



City	July 2017	October 2017	January 2018	April 2018	July 2018	Annual % Change
• Calgary	18,080	18,279	18,252	18,292	18,833	4.16%
• Toronto	18,569	18,956	18,999	18,978	19,555	5.31%

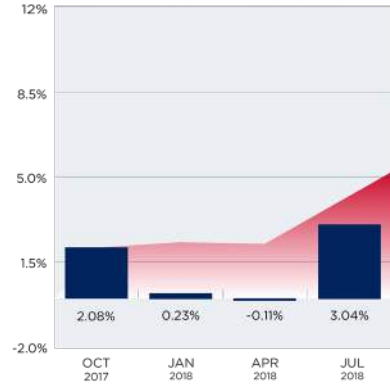
Canada's economy, generally, is growing as expected in 2018, with the provinces of Alberta, British Columbia, Saskatchewan, and Ontario projected to be above the 2% growth for 2018.

Toronto is experiencing a very strong peak in the construction of small- to mid-size projects, especially for agencies such as school boards where projects are receiving minimal bids, and some receiving no bids, pushing pricing on some projects up 30% over bids received less than a year ago. Larger projects have also experienced sharp increases in pricing in the last quarter, due in part to USA Tariffs, but also due to lack of tradespeople and the number of large projects on the market.

### COST INDEX CALGARY



### COST INDEX TORONTO



## KEY CANADIAN STATISTICS

### Gross Domestic Product (GDP)

GDP continues to increase steadily, reporting an increase of 0.73% from the previous quarter and 1.9% from this time last year.



### Consumer Price Index (CPI)

Canada's CPI grows steadily into 2018, with a variance of 2.45% over the past four quarters.



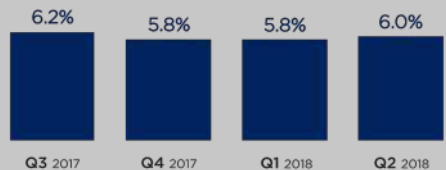
### Housing Starts

Housing starts are up 30.68% from the previous quarter, recovering at a rate of 4.79% higher than this time last year.



### Unemployment

Canada's unemployment remains relatively steady at 6.0% for the second quarter.



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. 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 15 years and older. Unemployment rates are seasonally adjusted, reported at the end of the period.

Sources: Statistics Canada



## 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.

**VOTED #1  
COST CONSULTANT**  
WORLD ARCHITECTURE  
MAGAZINE 2016 2017 2018

WA  
100  
2018 **bd**

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 by Taryn Harbert with contributions from Evans Pomegas, Grant Owen, Edd Hamzanlui, Peter Knowles, Paul Brussow, Maelyn Uyehara, Cassie Idehara, Simon James, Philip Mathur, Michael Moynihan, Scott Macpherson, Graham Roy, Daniel Junge, George Bergeron, Catherine Stoupas, Joe Pendlebury, and Robin Kankerwal.

© September 2018 by Rider Levett Bucknall Ltd.



If you have questions or for more information, please contact us.

#### **AUSTIN**

Phone: +1 512 704 3026  
E-mail: ward.simpson@us.rlb.com  
Contact: Ward Simpson

#### **BOSTON**

Phone: +1 617 737 9339  
E-mail: BOS@us.rlb.com  
Contact: Grant Owen

#### **CALGARY**

Phone: +1 403 571 0505  
E-mail: YYC@ca.rlb.com  
Contact: Joe Pendlebury

#### **CHICAGO**

Phone: +1 312 819 4250  
E-mail: chris.harris@us.rlb.com  
Contact: Chris Harris

#### **DENVER**

Phone: +1 720 904 1480  
E-mail: DEN@us.rlb.com  
Contact: Peter Knowles

#### **HILO**

Phone: +1 808 934 7953  
E-mail: ITO@us.rlb.com  
Contact: Kevin Mitchell

#### **HONOLULU**

Phone: +1 808 521 2641  
E-mail: HNL@us.rlb.com  
Contact: Paul Brussow  
Maelyn Uyehara  
Erin Kiriara

#### **LAS VEGAS**

Phone: +1 702 227 8818  
E-mail: LAS@us.rlb.com  
Contact: Simon James

#### **LOS ANGELES**

Phone: +1 213 689 1103  
E-mail: LAX@us.rlb.com  
Contact: Philip Mathur  
Brian Lowder

#### **MAUI**

Phone: +1 808 875 1945  
E-mail: OGG@us.rlb.com  
Contact: Kevin Mitchell

#### **NEW YORK**

Phone: +1 646 821 4788  
E-mail: NYC@us.rlb.com  
Contact: Michael Moynihan

#### **PHOENIX**

Phone: +1 602 443 4848  
E-mail: PHX@us.rlb.com  
Contact: Julian Anderson  
Scott Macpherson  
John Jozwick

#### **PORTLAND**

Phone: +1 503 226 2730  
E-mail: PDX@us.rlb.com  
Contact: Graham Roy

#### **SAN FRANCISCO**

Phone: +1 415 362 2613  
E-mail: SFO@us.rlb.com  
Contact: Catherine Stoupas

#### **SAN JOSE**

Phone: +1 650 943 2317  
E-mail: joel.brown@us.rlb.com  
Contact: Joel Brown

#### **SEATTLE**

Phone: +1 206 223 2055  
E-mail: emile.leroux@us.rlb.com  
Contact: Emile Le Roux

#### **ST. LUCIA**

Phone: +1 758 452 2125  
E-mail: mark.williamson@lc.rlb.com  
Contact: Mark Williamson

#### **TORONTO**

Phone: +1 905 827 8218  
E-mail: YYZ@us.rlb.com  
Contact: Joe Pendlebury

#### **TUCSON**

Phone: +1 520 777 7581  
E-mail: TUS@us.rlb.com  
Contact: Josh Marks

#### **WAIKOLOA**

Phone: +1 808 883 3379  
E-mail: KOA@us.rlb.com  
Contact: Kevin Mitchell

#### **WASHINGTON, DC**

Phone: +1 240 599 8176  
E-mail: DCA@us.rlb.com  
Contact: Neil Sinclair

[rlb.com](http://rlb.com)

