



USA REPORT

QUARTERLY CONSTRUCTION COST REPORT

FOURTH QUARTER 2016

FOURTH QUARTER 2016



USA REPORT

AT A GLANCE

2016 was another successful year for the US construction industry. Construction Put-in-Place increased (again), construction unemployment was down and the AIA's Architecture Billing Index clung to positive territory (in November).

As 2017 kicks off, the United States awaits the inauguration of Donald J. Trump as President. While one might speculate on what might happen under a Trump Administration, one can at least look at Trump's Contract with the American Voter for general direction.

On the plus side for construction are promises for less regulation, removing roadblocks from energy infrastructure projects, the introduction of the American Energy & Infrastructure Act and the end to the sequester on defense spending.

On the negative side for construction are the potential fall-outs from cracking down on immigration and suspending Federal funding for 'sanctuary cities'.

In the 'unknown' category are the medium term effects of the proposed Middle Class Tax Relief and Simplification Act (short term the proposed tax cuts will likely be good for construction), the repeal and replacement of the Affordable Healthcare Act, the labeling of China as a 'currency manipulator' and the renegotiation of NAFTA or withdrawal from it.

On balance, Rider Levett Bucknall expects that, barring some external shock to the economy, 2017 should be another positive year for construction generally.

NLAND SURF PARK AUSTIN, TX

NLand is North America's first surf park and resort featuring waves for pros and novices alike in a lagoon the size of nine football fields. With a deep commitment to sustainability, a state-of-the art water catchment system was designed to ensure guests only surf on raindrops. Rain is channeled through a system of pipes and trenches into a wet pond where it is bio-filtered before it moves to a deep reservoir for storage and eventually through a filtration system to replenish the lagoon. NLand partnered with Spanish engineering firm Wavegarden, widely considered the world leader in wave technology.

RLB acted as Owner's Representative and Project Manager in all stages of the project, leading the teams responsible for NLand's design and construction. Responsibilities included providing tailored and flexible strategic cost planning during pre-construction and project milestones, as well as project management throughout construction and close-out. RLB's role included advising on construction contracts, preparation of construction bid packages, analysis and recommendation of contractors and collaboration with the design team.

NATIONAL CONSTRUCTION COST INDEX

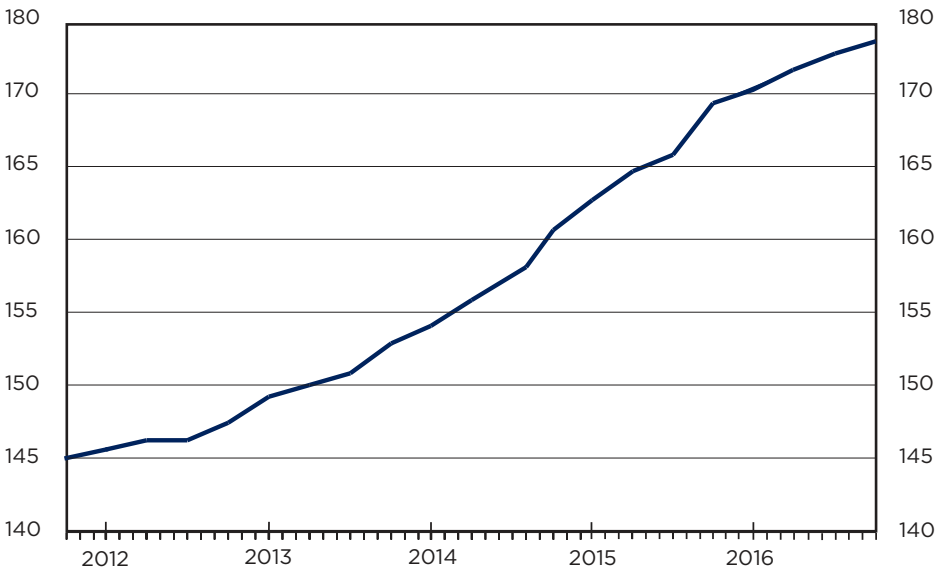
The National Construction Cost Index shows the changing cost of construction between October 2011 and October 2016, relative to a base of 100 in April 2001. Index recalibrated as of April 2011.

Date	Cost Index
October 2011	145.29
January 2012	145.73
April 2012	146.35
July 2012	146.67
October 2012	147.74
January 2013	149.19
April 2013	150.75
July 2013	151.89
October 2013	153.09
January 2014	154.56
April 2014	156.33
July 2014	158.48
October 2014	161.11
January 2015	162.98
April 2015	164.96
July 2015	166.85
October 2015	169.05
January 2016	171.38
April 2016	173.84
July 2016	176.48
October 2016	178.34

Welcome to the fourth quarter 2016 issue of Rider Levett Bucknall's Quarterly Cost Reports! This issue contains data current to October 1, 2016.

According to the U.S. Department of Commerce, construction put-in-place during October 2016 was estimated at a seasonally adjusted annual rate of \$1,150.0 billion, which is 0.4% below the revised August estimate of \$1,154.4 billion. The September 2016 figure is 0.2% below the September 2015 estimate of \$1,152.1 billion. The value of construction for the first nine months of this year was \$863.2 billion, 4.4% above the same period in 2015.

NATIONAL CONSTRUCTION COST INDEX



KEY UNITED STATES STATISTICS

	Q4 2015	Q1 2016	Q2 2016	Q3 2016
Gross Domestic Product (GDP)*	1.4%	0.8%	1.1%	3.2%
Consumer Price Index (CPI)	236.5	238.1	241.0	241.4
Inflation (Quarter)	-0.60%	0.68%	1.22%	0.16%
Architectural Billings Index (ABI)	50.9	51.9	52.6	48.4
Construction Put-in-Place (B)	\$1,116.6	\$1,133.9	\$1,133.5	\$1,150.0
Unemployment	5.0%	4.9%	4.9%	4.5%
Construction Unemployment	7.5%	8.7%	4.6%	5.2%

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.

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

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

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 represent hard construction costs based on U.S. dollars per square foot of gross floor area.

	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	
LOCATION	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
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	275	375	285	400	325	475
Chicago	230	360	165	240	135	225	115	165	290	485	190	240	360	595	100	140	70	110	90	140	130	320	150	325	220	360	220	380	250	385
Denver	160	255	115	175	90	145	70	135	200	310	150	185	370	455	90	150	50	70	90	120	85	190	90	400	245	300	260	310	285	400
Honolulu	285	530	245	400	210	495	175	435	515	745	325	545	475	760	145	225	100	145	140	265	195	445	280	760	340	475	405	610	445	720
Las Vegas	140	295	105	190	115	480	65	145	350	500	150	300	285	455	50	100	50	85	60	150	70	405	90	350	180	315	200	455	235	455
Los Angeles	210	315	145	220	130	295	105	170	315	470	210	290	420	630	100	170	100	120	115	165	160	260	160	325	325	430	340	470	360	515
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	290	400	300	450	325	475
Phoenix	160	275	110	175	110	170	80	140	300	475	150	250	300	450	55	100	45	70	60	110	90	185	100	400	170	250	200	300	250	400
Portland	180	250	130	180	140	240	120	180	190	275	150	190	380	525	90	150	85	105	110	150	150	240	125	280	235	295	250	310	280	400
San Francisco	200	350	180	275	195	325	225	325	300	500	250	350	400	525	140	190	100	130	165	190	280	425	200	400	320	400	300	375	250	375
Seattle	195	240	130	190	135	305	110	155	225	325	215	230	370	525	90	125	80	100	120	155	145	250	150	270	240	295	265	455	310	460
Washington, D.C.	275	425	200	300	150	275	125	175	350	525	250	350	400	650	90	150	70	125	80	125	175	300	250	350	275	350	275	375	325	475

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?

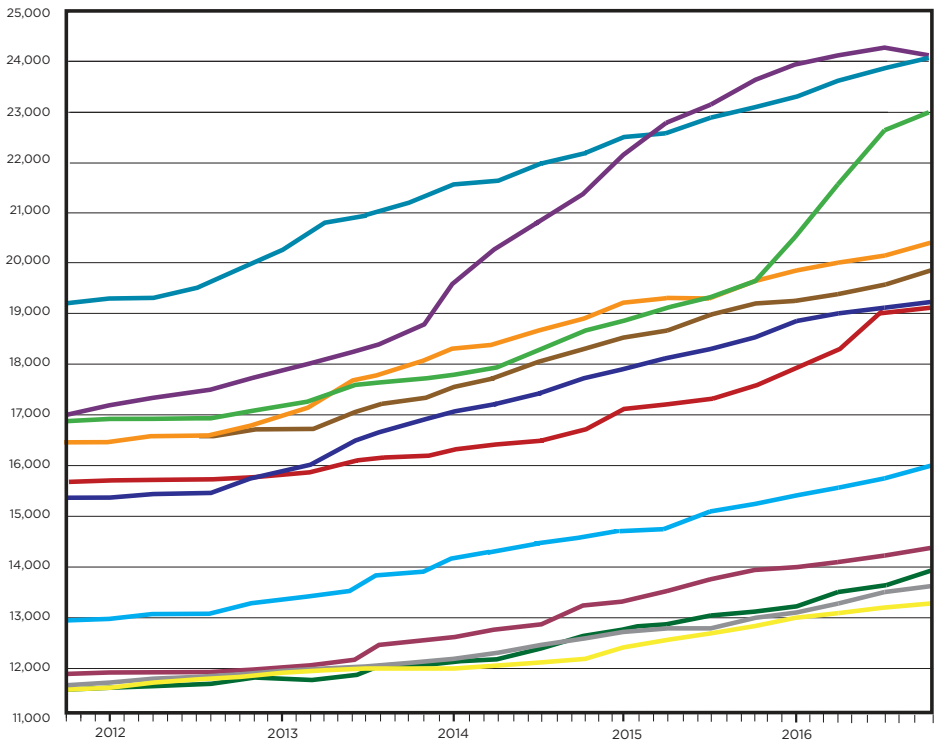
The BDI is seasonal and has well observed annual peaks and troughs so short term trends can be hard to interpret. Nevertheless, over the medium and longer term, BDI does provide a useful insight into global demand for commodities and it is fair to say that it continues to reflect the bull market for commodities without signs (yet) of an upturn.

BALTIC DRY INDEX 2009-2016



Source: Lloyd's List

COMPARATIVE COST INDEX



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).

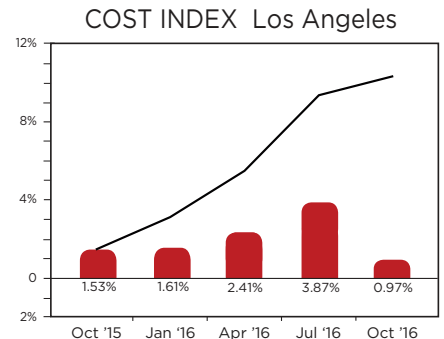
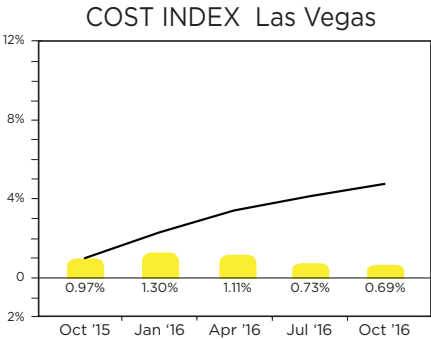
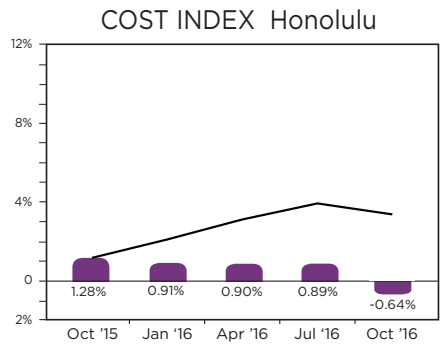
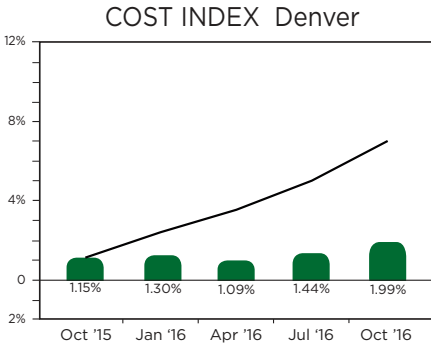
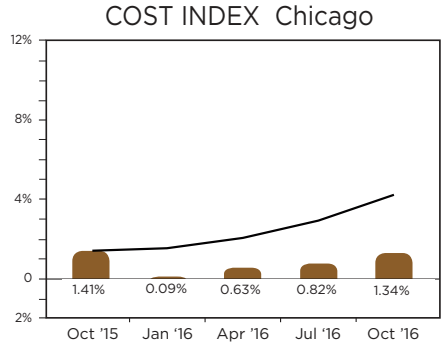
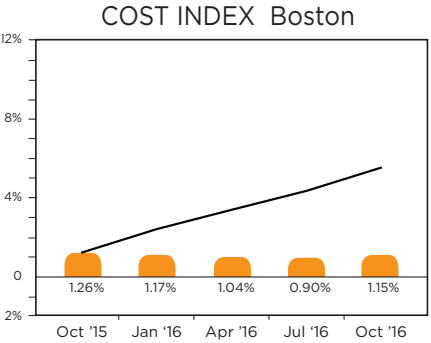
Our Comparative Cost Index tracks the 'true' bid cost of construction, which includes, in addition to costs of labor and materials, general contractor and sub-contractor overhead costs and fees (profit). The index also includes applicable sales/use taxes that 'standard' construction contracts attract. 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.

City	July 2016	October 2016	% Change
• Boston	20,257	20,489	1.15%
• Chicago	19,547	19,809	1.34%
• Denver	13,660	13,932	1.99%
• Honolulu	24,338	24,181	-0.64%
• Las Vegas	13,251	13,342	0.69%
• Los Angeles	19,041	19,225	0.97%
• New York	23,837	24,101	1.10%
• Phoenix	13,481	13,578	0.72%
• Portland	14,287	14,469	1.28%
• San Francisco	22,625	23,005	1.68%
• Seattle	15,774	15,972	1.26%
• Washington, DC	19,163	19,376	1.11%

Our research suggests that between July 1, 2016 and October 1, 2016 the national average increase in construction cost was approximately 1.0%. Several locations saw increases over 1% in the quarter however Las Vegas, Los Angeles and Phoenix all experienced increases below 1% and Honolulu, for the first time in over six years, saw a slight decrease.

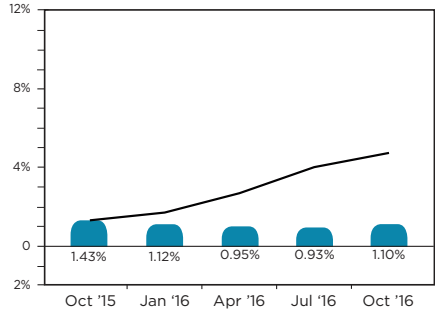
The following escalation charts track changes in the cost of construction each quarter in many of the cities where Rider Levett Bucknall offices are located. Each chart illustrates the percentage change per period and the cumulative percentage change throughout the charted timeline.

■ Percentage change per quarter — Cumulative percentage change for the period shown

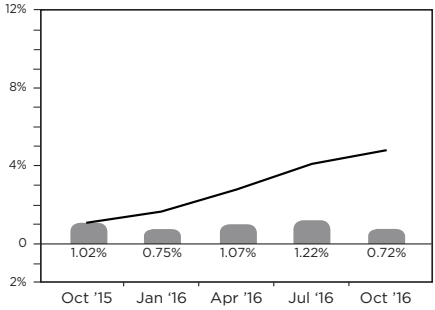


USA REPORT

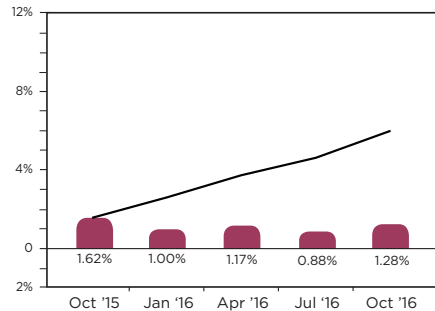
COST INDEX New York



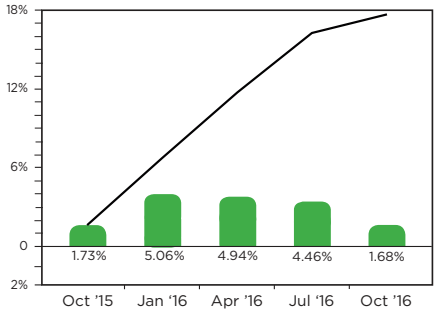
COST INDEX Phoenix



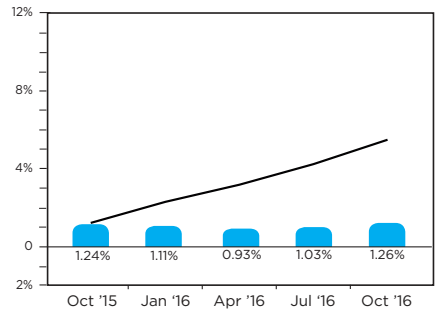
COST INDEX Portland



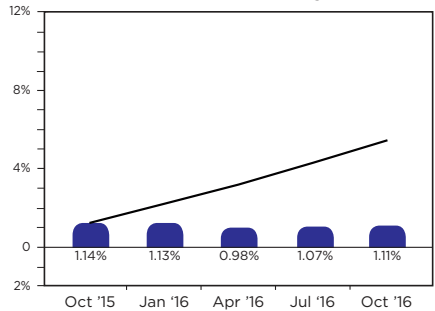
COST INDEX San Francisco



COST INDEX Seattle



COST INDEX Washington, DC



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, Jim Bergstrand, Edd Hamzanlui, Paul Brussow, Maelyn Uyehara, Cassie Idehara, Simon James, Philip Mathur, Scott Macpherson, Graham Roy, Daniel Junge, George Bergeron, Steve Kelly, and Catherine Stoupas.

© December 2016 by Rider Levett Bucknall Ltd.

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

AUSTIN

Phone: +1 512 704 3026
E-mail: AUS@us.rlb.com
Contact: Ruben Rodriguez

BARBADOS

Phone: +1 246 432 5795
E-mail: erwin.benjamin@bb.rlb.com
Contact: Erwin Benjamin

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

CAYMAN ISLANDS

Phone: +1 345 946 6063
E-mail: martyn.bould@ky.rlb.com
Contact: Martyn Bould

CHICAGO

Phone: +1 312 819 4250
E-mail: ORD@us.rlb.com
Contact: Montie Garrison

DENVER

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

GUAM

Phone: +1 671 473 9054
E-mail: GUM@us.rlb.com
Contact: Emile le Roux

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: Tony Smith
Paul Brussow
Maelyn Uyehara

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

MAUI

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

NEW YORK

Phone: +1 212 952 1300
E-mail: EWR@us.rlb.com
Contact: Grant Owen

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

SEATTLE

Phone: +1 206 223 2055
E-mail: SEA@us.rlb.com
Contact: Steve Kelly

ST. LUCIA

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

TORONTO

Phone: +1 905 631 8210
E-mail: YYZ@us.rlb.com
Contact: Joe Pendlebury

TUCSON

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

WAIKOLOA

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

WASHINGTON, DC

Phone: +1 202 457 1450
E-mail: DCA@us.rlb.com
Contact: Grant Owen

RLB | Rider Levett Bucknall



LOCATIONS

RIDER LEVETT BUCKNALL

Austin | Barbados | Boston | Calgary | Chicago
Cayman Islands | Denver | Guam | Hilo | Honolulu
Las Vegas | Los Angeles | Maui | New York | Phoenix
Portland | San Francisco | Seattle | St. Lucia |
Toronto | Tucson | Waikoloa | Washington, DC

www.rlb.com