DHARAM
CONSULTING

1Q2018 CONSTRUCTION NOTE
NEW YORK CITY

CONSTRUCTION COST
& RISK CONSULTANTS

SUMMARY

This Construction Note summarizes the recent market changes and provides a look ahead for cost trends in New. This will be followed up with a full Market Report in the next month or so.

DHARAM CONSULTING VIEW

- Average construction input cost in December 2017, as measured by the ENR's building cost index increased by 8% compared to 2015 average prices.
- Contractor bid submission prices increased by around 5% per annum in 2016 and 2017, on the back of an input cost pass-through and firm overheads & profits.
- We expect input cost pressures to persist in the near to medium term, as strong construction volumes increase competition for contracting and labor resources. Many material prices are also rising due to the impacts from changes in trade policies and natural disasters, i.e. post-hurricane reconstruction.

INPUT COSTS

Period	Building Cost Index*	Labor Cost Index*		Material Price Index*
		Common Labor	Skilled Labor	
2016-17	8.0%	15.1%	10.5	4.5%

* Source: ENR, New York City

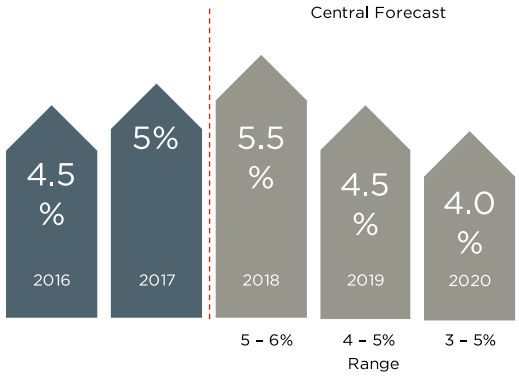
- Bid submission prices are expected to further increase over the next three years, though the pace of inflation is may slow after 2018. Whilst non-residential construction is expected to remain strong, residential work is forecast to slow. At the same time, the continued increase in competition from non-union contractors could put a lid on bid submission escalation.
- Bid submission prices are forecast to increase by 5-6% in 2018. After that, our central scenario foresees price escalation to slow to 4-5% in 2019.

CONTRACTOR BID PRICES

Period	Bid Submission Index**
2016-17	10%
2018	5 – 6%
2019	4 – 5%

** Source: Dharam Consulting

DHARAM CONSULTING BID SUBMISSION PRICE FORECAST



NEW YORK CITY CONSTRUCTION ACTIVITY

New York City has seen a robust rise in construction activity this decade, with spending driven by investment in non-residential work, in particularly commercial offices and education. Looking ahead, most forecasters expect strong activity levels to continue. The non-residential and institutional sectors, including infrastructure are expected to continue to expand, while residential development weakens.

Recent trends Q3 2016 – Q1 2018

- Nationally, construction spending expanded by 3.8% in 2017. The consensus forecast predicts an increase in construction spending in 2018 in the range of 4-5%. Similar growth is expected for 2019, before forecasters expect a slowdown in the expansion.
- Construction workload in New York in current US Dollar value terms has been at similar levels in 2016 and 2017. Construction starts were valued at $48.4bn in 2016 and $47bn in 2017 (Fig. 1).
- Residential and non-residential building starts increased by 6.4% year-on-year in 2017 to $43.4bn.
- Employment levels have risen consistently since 2012, mainly in the building construction and specialty trades sub-sectors (Fig. 2).

Activity Outlook 2018 – 2019

- Current market conditions continue to support construction activity in 2018.
- Dodge Data & Analytics predict a 1.7% decrease in the value of construction starts this year. In contrast, the New York Building Congress (NYBC) projects that spending will reach $52.5 billion in 2018 and $50.1 billion in 2019, levels last seen in 2015 (Fig. 1).
- Non-residential and government construction are expected to drive much of the future growth in the market, including office, hotel and institutional development.
- The NYBC forecasts construction spending in the non-residential sector to reach $22.1 billion in 2018 and $20.3 billion in 2019.
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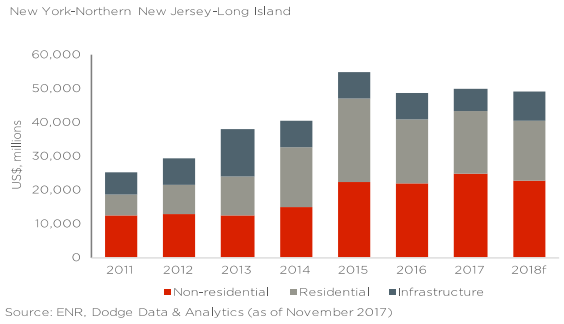
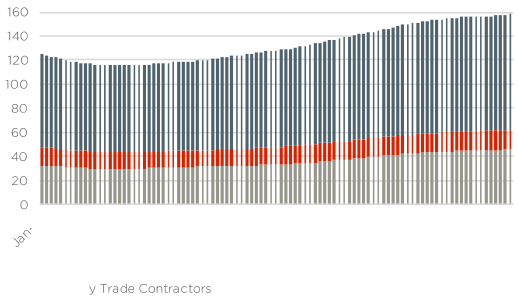
- The NYBC expects residential construction to decline in the next few years, with housing units delivered falling from 26,700 in 2017 to 24,000 units in 2018 and 22,000 in 2019.
- Government spending on public works is expected to increase to $18.8 billion in 2018 and $19.1 billion in 2019. City of New York spending is expected to rise to $9.6 billion in 2018 and $10.1 billion in 2019. Construction spending by the MTA is anticipated to decrease from $6.5 billion in 2017 to $6 billion in 2018 and $4.7 billion in 2019, as the MTA moves through its current five-year capital program, which is the largest on record. The Port Authority of New York & New Jersey is expected to fund $2.1 billion worth of projects in in 2018 and $3.1 billion in 2019. The remaining $1.2 billion in 2018 and 2019 of public works spending are undertaken by agencies on the State and Federal levels, including DASNY, the State Department of Transportation, and the U.S. Army Corps of Engineers.
- The NYBC forecasts construction employment to rise from 149,800 jobs in 2017 (up 7% on 2016) to 151,200 jobs in 2018, before dropping down to 144,100 jobs in 2019.

FIG. 1. CONSTRUCTION STARTS



Source: ENR, Dodge Data & Analytics (as of November 2017)

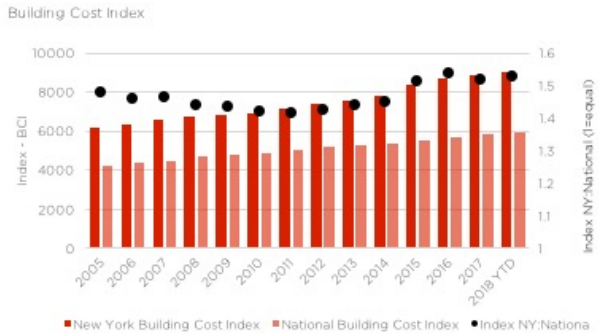
FIG. 2. CONSTRUCTION EMPLOYMENT



CONSTRUCTION COST

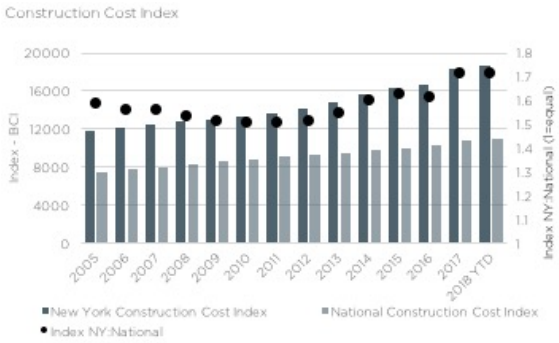
New York City remains the highest cost of construction market in the United States (Fig 3,4). Annual changes in building and construction costs are more volatile than the national average (Fig. 5,6).

FIG. 3: NEW YORK AND NATIONAL BUILDING COST



Source: ENR

FIG. 4: NEW YORK AND NATIONAL CONSTRUCTION COST



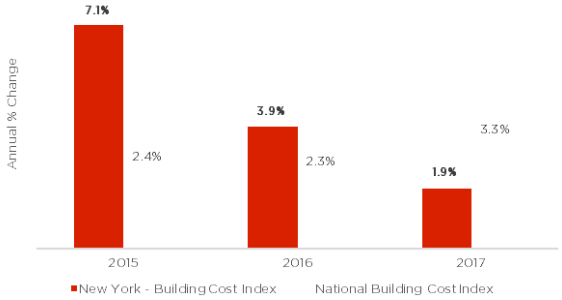
Source: ENR

Recent Trends

Strong construction pipeline work across non-residential and residential work has put considerable constraints on the local construction supply chain, in particular labor. The NYBC reports increased use of overtime, and an ability for contractors to pick and choose which projects to pursue, which in turn is pushing up prices.

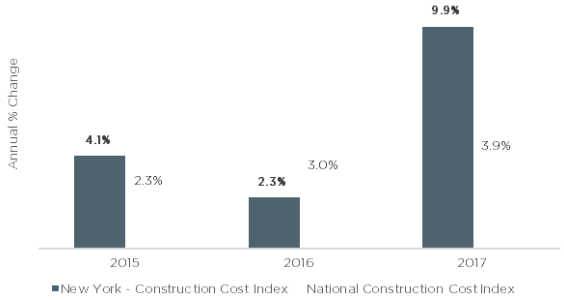
Cost acceleration is especially prevalent in the office sector, due in part to a substantial increase in the amount of work underway – including ground-up construction, alterations and renovation of existing office buildings, and production of prime, built-to-suit office spaces.

FIG. 5: ANNUAL CHANGES IN BUILDING COST



Source: ENR

FIG. 6 ANNUAL CHANGES IN CONSTRUCTION COST



Source: ENR

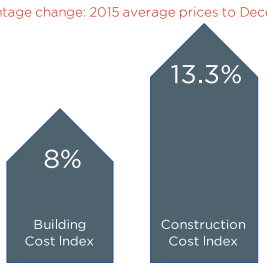
Building cost indices

In December 2017, building cost in New York were 8% higher than 2015 average prices, while construction cost were 13.3% higher (Fig. 7). In Q1 2018, building costs were 2.4% higher than in 2017, while construction costs rose 1.7% over the same period.

The building cost index (BCI) includes a higher proportion of skilled labor than the construction cost index (CCI), which includes a higher proportion of common labor.

FIG. 7 CONSTRUCTION COST INDICES

New York: Percentage change: 2015 average prices to December 2017



Source: ENR
Input based cost indices. CCI contains a higher labor component than the BCI

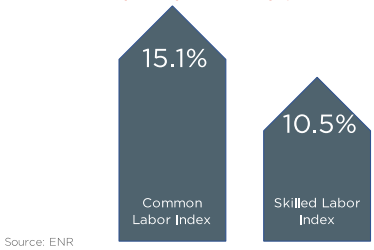
Labor cost

Construction employment has risen consistently since 2012, though the pace of annual growth has slowed from 7.5% in 2015 to 5.4% in 2016 and 2.4% in 2017. In December 2017, the skilled labor cost index for New York was up 10.5% on 2015 average prices (Fig. 8). Skilled labor rose by 2.5% in Q1 2018 compared to 2017. In December 2017, the common labor index was up 15.1% on 2015 prices. Common labor rose by 1.6% in Q1 2018 on 2017 average prices.

Wage escalation for specific union trades are shown in table 1. ENR shows that open-shop wages for the same trades are 30% that of union trades and depending on the project requirements for contractors/ sub-contractor deployment this will have a large impact on construction costs.

FIG. 8 LABOR COST INDEX

New York: Percentage change: 2015 average prices to December 2017



Source: ENR
Input based cost indices. CCI contains a higher labor component than the BCI

TABLE 1: PREVAILING WAGES: BASE + FRINGES FOR NEW YORK

	2016	2018		% change
Plumbers	95.0	96.5	▲	1.6%
Electricians	103.4	111.75	▲	8.0%
Carpenters	98.8	98.75		0.0%
Laborers	63.2	68.5	▲	8.5%

Source: Davis Bacon

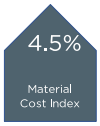
Material cost

Material prices have been relatively contained in New York until May 2017, but have since seen prices rise stronger.

On average, material prices increased by 4.5% in December 2017 compared to 2015 average prices (Fig. 9). Average material prices rose by 2.3% in Q1 2018 compared to 2017 average prices.

FIG. 9 MATERIAL COST INDEX

New York: Percentage change: 2015 average prices to December 2017

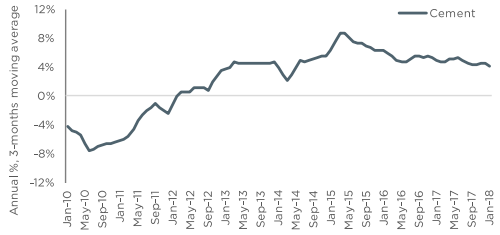


Source: ENR
Input based cost indices. CCI contains a higher labor component than the BCI

Selected Materials

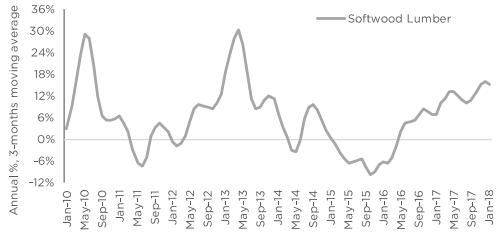
FIG 10: PRICE CHANGES OF SELECTED MATERIALS

Fabricated structural metal ▲3.0%



Source; ENR, BLS

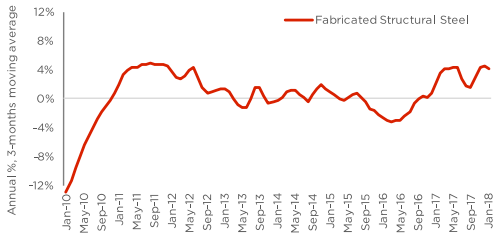
Softwood Lumber ▲19.8%



Source; ENR, BLS

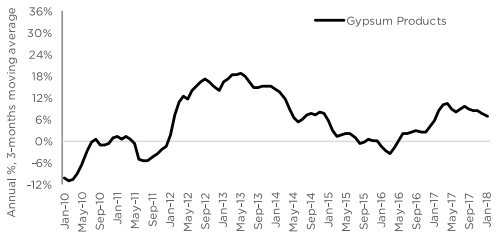
Average 2015 to December 2017 (2 years)

Cement ▲10.5%



Source; ENR, BLS

Gypsum Products ▲10.0%



Source; ENR, BLS

We expect input cost pressures to persist in the near to medium term, as strong construction volumes increase competition for contracting and labor resources. Many material prices are also rising due to the impacts from changes in trade policies and natural disasters, i.e. post-hurricane reconstruction.

The outlook for labour costs will have to be assessed considering heightened demand from strong construction volumes, but increased competition among contractors. Firm demand mean competition for labour and an ability of contractors to choose which projects they want to pursue. At the same time the increased number of non-union and open shop contractors means that project owners and developers have more choices and potentially a wider range of competitive bids.

We expect material prices to continue to fluctuate, depending on global demand and domestic policy changes with regards to the aluminum and steel tariffs and potential other import restrictions.

On March 8, the Trump administration signed off the implementation of tariffs of 25% on foreign raw steel and 10% on foreign aluminum products, under section 232 of the Trade Expansion Act. These tariffs will go into effect on March 23, 2018. Imports from Canada and Mexico are exempt. The full impact of these tariffs on the price of steel materials used in construction, such as fabricated steel, is yet to be assessed. As it currently stands these products are not addressed in the tariff action and will see their input costs rise. Depending on the quantitative changes to imports, the impact on steel prices is potentially sizeable. At the same time, US production is likely to be ramped up under any new policies, which should level out prices. The impact on cost of specific projects will need to be look at individually.

Cement prices have consistently increased in recent years, mirroring construction spending growth. The health of the industry will determine price levels in the years ahead. Should any national infrastructure package commence, prices of cement are likely to spike, until then, price increases are likely to remain steady.

Lumber costs jumped in 2017 due to an up to 24% new tariff on imported Canadian lumber, which in turn allowed US mills to raise quotes. This has caused the price of framing lumber to spike. Adding to price pressures are strong residential demand and the higher demand from hurricane damage.

The latest price announcements from the National Gypsum Price Bulletin indicated that gypsum is likely to see the most price increases in 2018 (table 2). The IHS forecast for key materials is shown in table 3.

TABLE 2: PRICE ANNOUNCEMENTS

Material/ Price change	January 2018	June 2018
Gypsum Wallboard	+15%	+15%
Interior Finishing	+7%	
Cement Board	+10%	
Plaster	+7%	

Source: National Gypsum Price Bulletin

TABLE 3: CONSTRUCTION MATERIAL PRICE FORECAST

Material	2017	2018f	2019f	2020f
Aggregates	3.5	4.0	3.0	2.7
Cement	4.7	4.3	3.6	2.2
Rebar	3.1	0.2	1.8	2.7
Structural steel	2.4	-0.1	-0.2	0.8
Sheet-metal work	1.3	0.6	0.1	0.9
Gypsum products	7.4	5.9	1.9	-2.1
Lumber softwood	13.1	-1.8	-3.7	0.1

Source: IHS, ENR

Bid submission prices in New York rose by around 5% p.a. between 2015 and 2017 (Fig. 11). Within sectors and among projects, cost escalation can vary significantly, depending on the type of labor agreement and sector specific demand levels. For example, commercial offices have seen higher bid submission escalation in recent years, due to a substantial increase in the amount of work underway, as well as the development of prime, built-to-suit office spaces.

Bid submission prices are expected to further increase over the next two years. Whilst non-residential construction is expected to remain strong, residential work is forecast to slow. At the same time, the continued increase in competition from non-union contractors could put a lid on bud submission escalation.

Bid submission prices are forecast to increase by 5-6% in 2018. After that, our central scenario foresees price escalation to moderate to 4-5% in 2019 (Fig 12). If a large national infrastructure package would be announced that would benefit the city, demand could increase beyond levels currently foreseen, which in turn could push construction price inflation back up to recent levels. Similarly, should the cost of key materials increase significantly due to further changes in trade policies, this could push up prices stronger than forecast. On the downside, should work levels in the current pipeline not be replaced with sufficient projects due to a decrease in demand, pricing levels could stabilize a lot quicker than currently envisaged.

FIG. 11: NEW YORK CITY CONSTRUCTION BID SUBMISSION PRICE ESCALATION

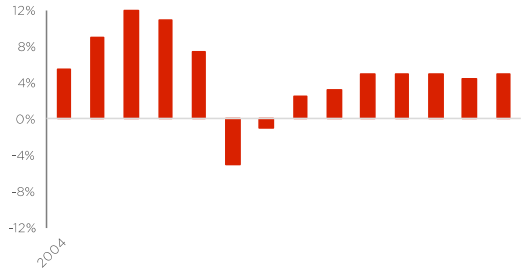
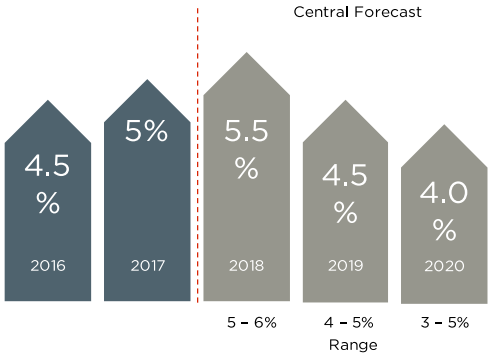



FIG. 12: DHARAM NEW YORK CITY AREA CONSTRUCTION BID SUBMISSION PRICE FORECAST