

# CONSTRUCTION MARKET OUTLOOK CLEVELAND, OHIO


October 2019





This report provides an overview of the Cleveland construction market in 2Q3 019, assessing current building costs and providing Dharam Consulting's view on the outlook for construction costs and contractor bid submission pricing.

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## DHARAM CONSULTING VIEW

The local construction project pipeline is expected to increase significantly next year, with the start of major projects over the course of 2019.

Construction activity is being driven by redevelopments in the Cleveland downtown area, as well as large healthcare providers and educational institutions seeking to expand or enhance their real estate footprint in the area.

Based on the latest data and a review of the current project pipeline, we forecast bid submission price inflation in Cleveland of 5.2% in 2019, in line with the US average. We expect bid submission prices to increase by 4% in 2020, due to lower material price inflation.

Our bid submission price forecast is based on the following assumptions:

- Contractor bid submission price escalation has increased this year, as strong demand levels allow for an input cost pass-through and firm overheads & profits.
- Significant projects are underway and / or are in the pipeline and the level of work is increasing in 2020.
- Input cost pressures are expected to persist in the near term and competition for contracting and labor resources will be maintained in an already tight market.
- Large, complicated schemes, demanding specialist labor and experienced contractors, such as large healthcare projects are likely to command higher prices. At the same time, smaller projects may face difficulties to attract sufficiently competitive resources, which may lead to higher average cost.



# CONSTRUCTION COST DRIVERS

## Economic outlook

The current US economic expansion, coupled with record employment levels, became the longest in history in July 2019. However, the pace of growth has slowed over the course of this year, as underlying demand is ebbing and the impact of the fiscal stimulus is wearing off.

Concerns over rising risks of a downturn after 2019, stoked by domestic policies and developments elsewhere in the global economy, has resulted in worsening financial conditions, which prompted the US Fed to lower the target range for its key interest rate for a second time in September 2019.

On the back of a further slowdown in the current business cycle, US economic growth is forecast to slow to below trend over the next years. There are a number of risks impacting businesses and consumers alike.

This includes the future path of federal fiscal and monetary policy, the outlook for global growth, uncertainty over national trade policy, including ongoing US-China tariffs developments with US tariffs set to rise further pending the outcome of talks, as well as EU-UK Brexit deadlines.

Cleveland's economy has continually lagged US average growth rates, but nevertheless business conditions have improved over this business cycle. Employment growth averaged just 0.7% per annum between 2015 and 2018, compared to 1.8% nationally (figure 1, 2).

More positively, in 2019 to date, employment growth in the Cleveland area rose to 1.2%, driven by the professional and business services sector, education and healthcare, as well as construction. Unemployment rates in the area remain above the national average, but are relatively low historically, and stability indicates a relatively healthy labor market.

Looking ahead, jobs growth is forecast to slow over the next years, in line with wider trends across the US. The local economy will remain dependent on the outlook for wider U.S. growth in particular for the manufacturing sector, which is reliant on the health of consumer and international trade demand.

FIG. 1: CLEVELAND EMPLOYMENT TRENDS

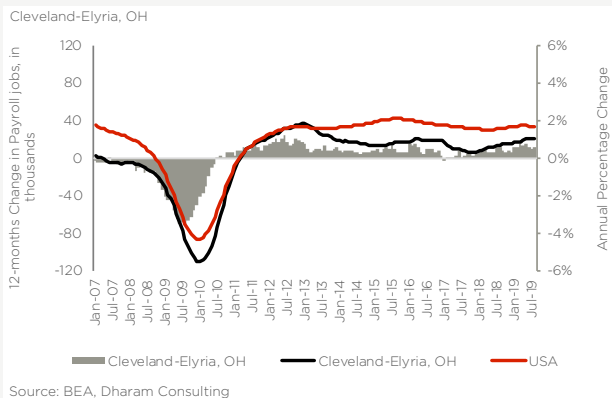
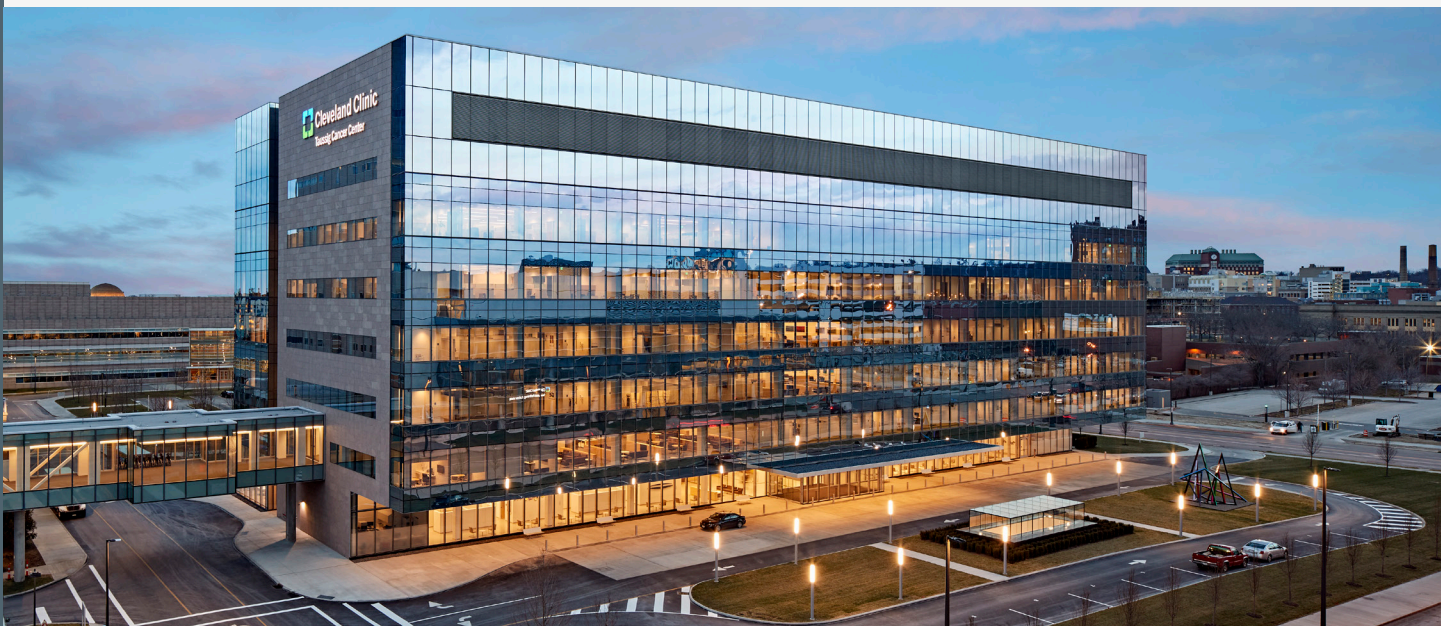
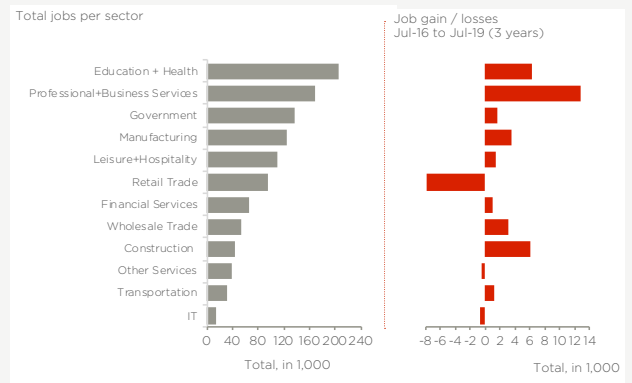


FIG. 2: CLEVELAND EMPLOYMENT BY SECTOR





## Construction activity

Construction spending nationally has been fairly steady over the past 18 months. The value of US construction spending is forecast to increase by 3% this year, according to the FMI, led by transportation, public and education-related work. With construction inflation still running above 3%, this increase in Dollar value terms, translates into a modest decline in construction volumes.

## Construction starts

The Cleveland area is a mid-sized construction market. Local construction activity has increased over the past years, led by capital investment programs of large healthcare providers, most notably Cleveland Clinic, MetroHealth System, and University Hospitals, all of which expanding their services to gain market share.

Other institutional investors, such as higher education providers are also investing to expand not only their educational space but also student housing provision (see page 11 for our cost model).

Residential and mixed-use commercial developments have increased over the past years with the ongoing transformation of Downtown Cleveland. This has been fostered by a mix of private public partnerships to increase urban redevelopment to retain and attract residents, as well as fiscal incentives to encourage businesses to relocate and provide an attractive employment environment.

FIG. 3: CLEVELAND CONSTRUCTION STARTS

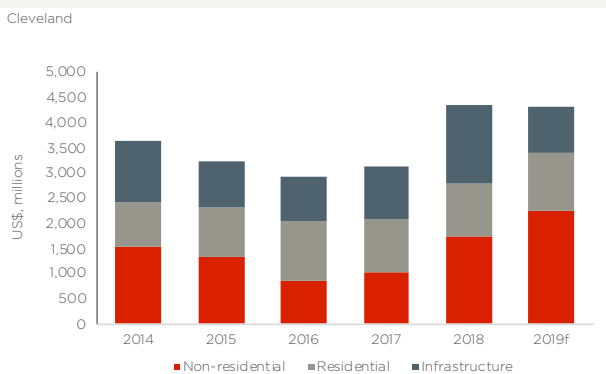


FIG. 5: NON-RESIDENTIAL CONSTRUCTION STARTS



Construction starts in the Cleveland area totaled \$4.1 billion in 2017 and \$4.4 billion in 2018 (figure 3).

The share non-residential building has increased significantly, from 29% in 2016 to 40% in 2018. The share of non-residential construction start is forecast to rise to 40% this year. Education and commercial projects had the largest share within the non-residential sector between 2016 and 2018, averaging 38% and 26% respectively, while healthcare projects accounted for 10% of the sector. Due to significant project starts this year, the share of the health care sector is estimated to increase to 28% this year. Healthcare accounts for the largest projects currently underway in Cleveland, namely, the \$950 million MetroHealth Hospital + Campus and the \$515 million Health Education Campus of Case Western Reserve University and Cleveland Clinic, which is completing this year.

Residential construction projects account for 25-40% of the market, with the vast majority single-residential projects. Infrastructure projects accounted for between 30-36% of the Cleveland construction market between 2016 and 2018 (figure 4).

Construction starts in the area are forecast to total \$4.3 billion in 2019, a 1.2% decrease on 2018. The modest overall decrease is due to the infrastructure sector, which is estimated to see a 42% drop in the value of construction starts to \$913 million.

Non-residential project starts are forecast to total \$2.3 billion this year, up 30% year-on-year, while residential project starts are forecast to increase by 9% to \$1.1 billion this year (figure 5,6).

FIG. 4: STARTS BY SECTOR

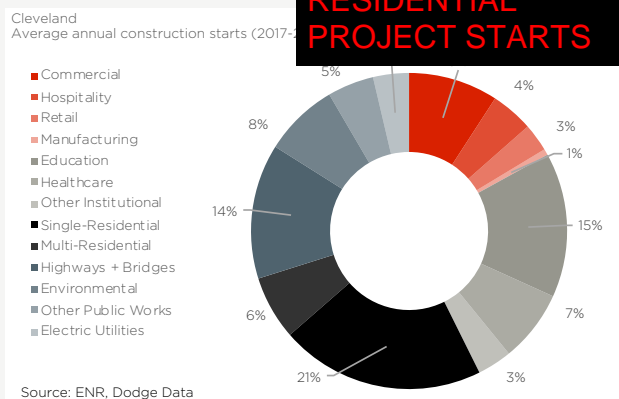
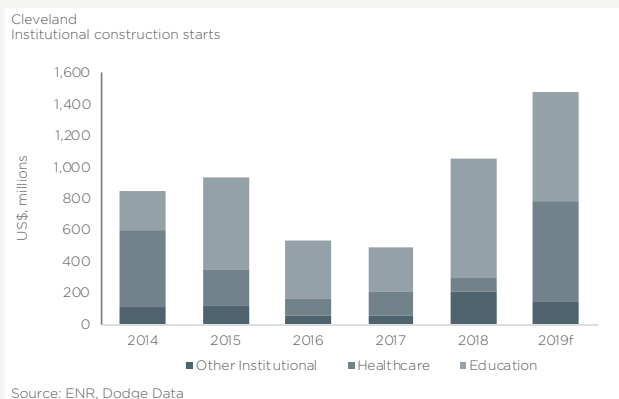


FIG. 6: INSTITUTIONAL CONSTRUCTION STARTS



OF

EDIT

5,6 DO NOT  
INCLUDE  
RESIDENTIAL  
PROJECT STARTS

Overall, construction costs in the Cleveland area are in line with the national average, though this marks significant differences amongst sectors (figure 7). In particular, the cost of building mixed-use mid- to high-rise buildings tends to be significantly higher than infrastructure related projects, due to a higher share of skilled labor and specialist trades involved.

The index for common labor in Cleveland is lower than the US average, but higher for skilled labor. Material costs are in line with the US average, according to the ENR.

Building input cost inflation in Cleveland has diverged from the wider US average over the past three years. The ENR Building Cost Index for Cleveland was up 0.7% and 3% in 2017 and 2018, respectively, compared to a national average of 3.3% in 2017 and 2.3% in 2018. In the first ten months of this year, building cost inflation stood at 0% in the Cleveland area, compared to 2.6% nationally (figure 8).

Resource availability is generally tight, according to the industry, as the labor pool has not expanded in line with relatively high demand in the regional market. Construction activity over the past years has been accompanied by rising capacity constraints, in particular skilled labor and contractors experienced to work on large-scale construction projects and specialist work.

Given the current projects backlog, we expect labor capacity to remain tight near term, as a number of major projects proceed and more are planned to start on site.

FIG. 7: COMPARABLE CONSTRUCTION COST

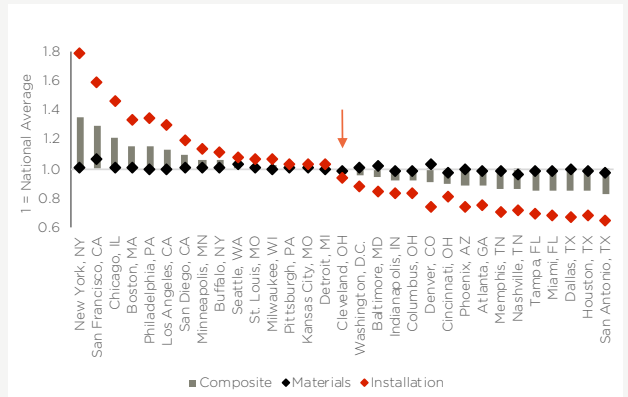
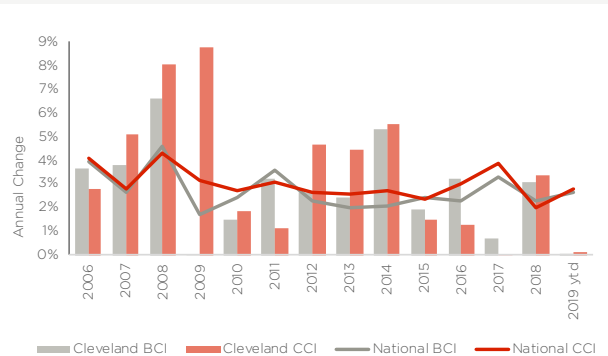


FIG. 8: CLEVELAND CONSTRUCTION COST



Source: ENR



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**Construction employment:** Construction employment in Cleveland expanded significantly in recent years, outpacing wider jobs growth in the city (figure 9). Construction employment rose by 2% in 2017 and 5.5% in 2018. employment is up 10.3% in the year to date growth rates in the country.

**Construction labor costs:** Strong demand has put significant constraints on the construction supply chain and skilled labor shortage is a pressing concern to the local industry. Competition is particularly strong for sub-contractor resources across the majority of trades.

Consequently, construction wages have risen faster than average salaries over the past years, adding to local cost escalation.

Despite reports of wage escalation in the local market, the ENR reports moderate local labor cost inflation in recent years. The Cleveland common labor index was up 1.7% in 2018 and unchanged in the first ten months of this year. The skilled labor index rose 1% in 2018 and was also unchanged in the year to October 2019 (figure 10). Current prevailing wages in Cleveland (Cuyahoga County) are shown in figure 11.

Given the tight labor market and recent labor cost trends, we expect the pressure on bid submission prices from contractors and trades to persist in the near to medium term.

FIG. 9: CONSTRUCTION EMPLOYMENT

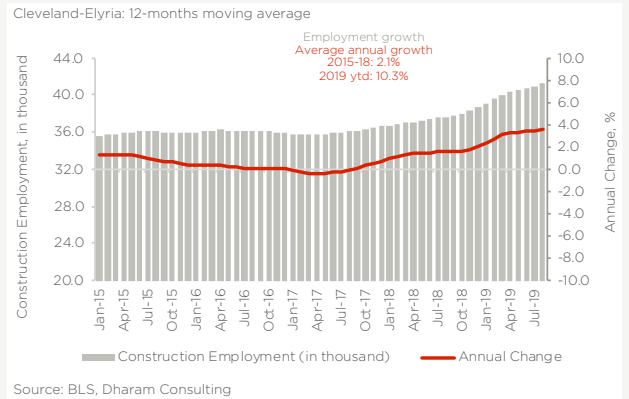


FIG. 10: LABOR COST INDEX

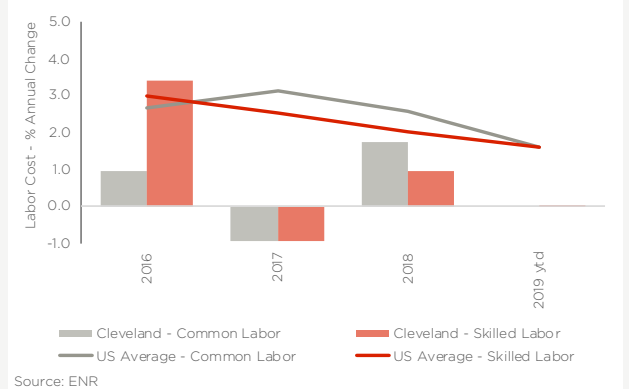
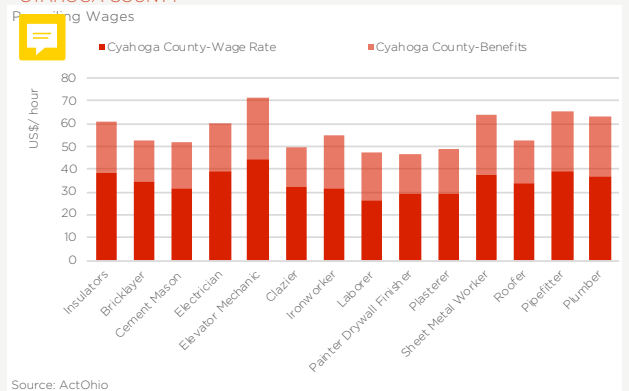


FIG. 11: CLEVELAND PREVAILING WAGES  
CUYAHOGA COUNTY



Project: 1314 Franklin  
Source: Langan



Global commodities prices continue to mostly trend sideways. Price risks are still judged to be on the downside, with factors such as slower growth in China and Europe, a stronger US Dollar, and policy uncertainty over US import tariffs weigh on commodity demand.

Domestically, construction material price inflation slowed significantly this year. In the third quarter of this year the index for material inputs to construction industries showed a 1.1% year-on-year decrease.

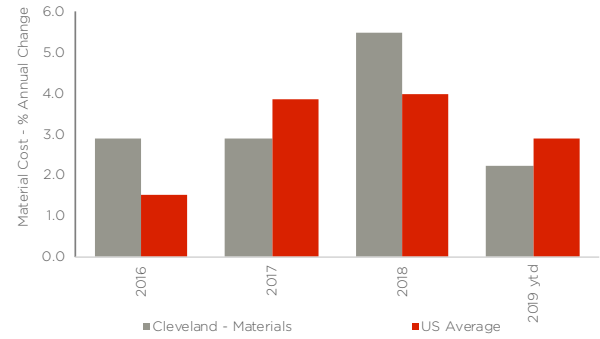
The ENR reports a higher rate of material price inflation, with the index up 2.9% in the first ten months of this year compared to the same period in 2018. ENR figures for Cleveland show similar material price inflation locally, with the index up 2.2% year-on-year.

Softwood lumber prices decreased most this year, followed by average gypsum prices. Steel prices have also decreased significantly over the course of this year, trailing below the 25% tariff-induced premium from 2018, as weaker global demand weighs on price levels.

Material prices are expected to continue to moderate, but uncertainty over shifts in US tariffs and trade policies leaves the construction supply chain and project procurement vulnerable to sudden price movements.

Recent trends in commodities and material prices are shown in figures 13-16 and tables 1-2.

FIG. 12: MATERIAL PRICE INDEX



Source: ENR



FIG. 13 COMMODITIES PRICES

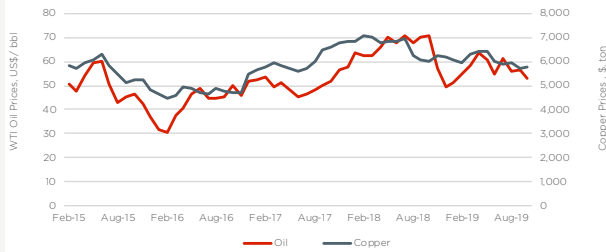
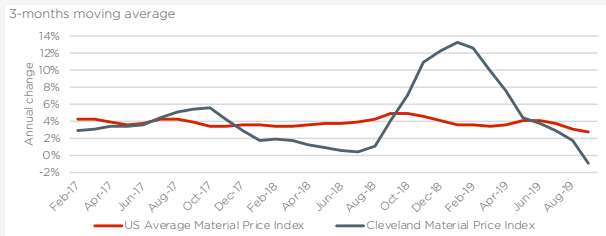


FIG. 14: ENR MATERIAL PRICE INDEX



ENR Material Price Index	Cleveland Annual %	US average Annual %
2017	2.9%	3.8%
2018	5.5%	4.0%
2019 YTD	2.2%	2.9%

FIG. 15: MATERIALS INPUT TO CONSTRUCTION

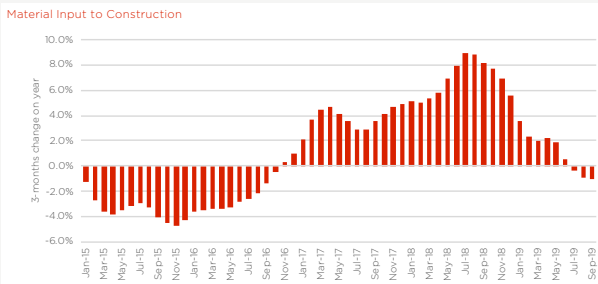


FIG. 16: DOMESTIC BUILDING MATERIALS

Domestic Construction Material Prices Jul-Sep 2019 vs Jul-Sep 2018

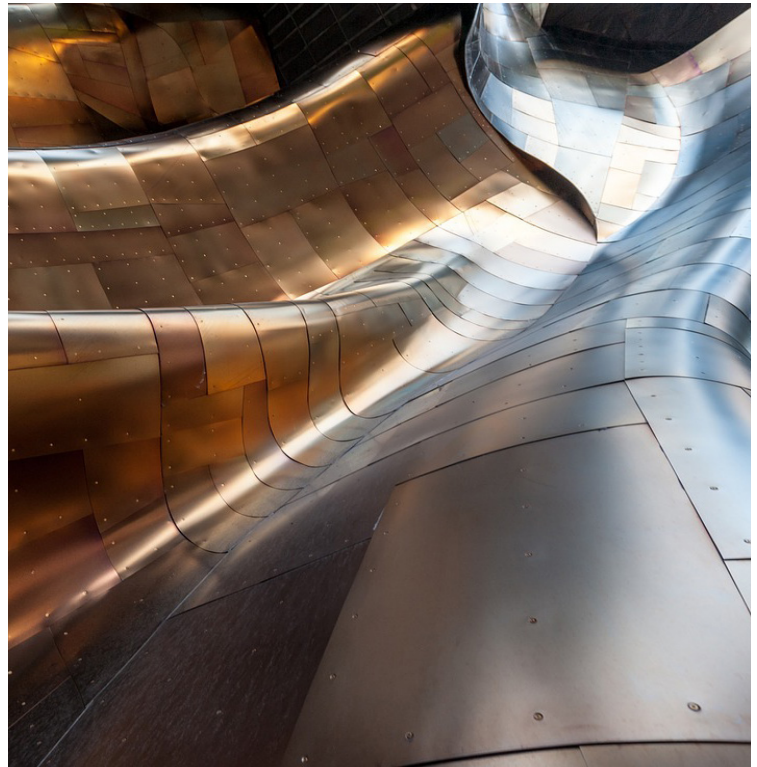
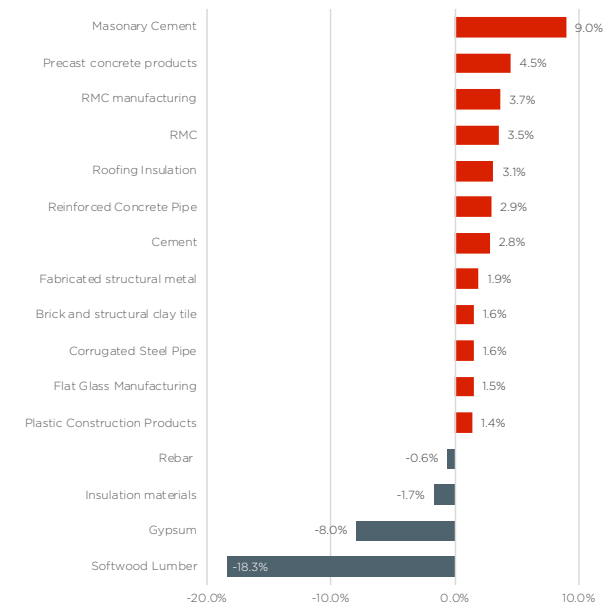


TABLE 1: MATERIAL PRICES

Material	Unit	Date	Price	3 months annual Change %
Reinforced Concrete Pipe	"24, \$/ft	Oct-19	34.41	▲ 2.3%
Corrugated Steel Pipe	"36, \$/ft	Oct-19	34.66	▲ 1.8%
Roofing Insulation	Unfaced, \$/sf	Oct-19	8.33	▲ 2.3%
Masonry Cement	70-lb bag, \$/ton	Oct-19	10.64	▲ 7.9%
RMC	4,000psi, \$/CY	Oct-19	137.5	▲ -0.9%
Rebar	Grade 60, \$/CWT	Oct-19	54.64	▲ -0.6%
Steel Plate	ton	Aug-19	732.0	▼ -20.5%
HRC	ton	Aug-19	596.3	▼ -37.7%

TABLE 2: GYPSUM PRICE ANNOUNCEMENTS

Latest Material Price change				
Gypsum Wallboard	Jul-18	15%	Feb-19	15%*
Interior Finishing	Jul-18	3%	Jan-19	5%
Cement Board	Jul-18	4%		
Plaster				

\* a 30-day notice will be provided in advance of a second increase date



Sources: ENR, LME, BLS, National Gypsum Price Bulletin, EIA



# CURRENT CONSTRUCTION PIPELINE

The major projects (project value >\$20 million) in the currently known construction pipeline are listed in Table 3. The list takes only those projects into consideration for which the construction cost and timeframes have been announced.

Our major projects pipeline in 2019 contains 35 active projects with an estimated project value of \$4.5 billion. A number of significant projects are in planning stage, as despite rising construction costs and a skilled labor shortage, developers appear keen to continue to invest in Cleveland.

Figure 17 (overleaf) shows our estimation of cash flow over the next years. Quarterly construction cashflow has been steady in 2018 and 2019, but is estimated to increase significantly

over the next 18 months as major projects commence on site. Healthcare providers are among the most active investors in the local market and the largest project currently underway is the \$946 million MetroHealth Hospital and Campus.

This project is seen as having a significant impact on the capacity of the local supply chain. Cleveland Clinic's Health Education Campus of Case Western Reserve University and Cleveland Clinic is nearly completed, which should free up some specialist resources in a tight labor market.

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TABLE 3: CLEVELAND LARGE PROJECTS PIPELINE

LARGE-SCALE PROJECTS UNDERWAY (PROJECT COST >\$20m)						
PROJECT	Sector	Project Cost US\$, million	Start	Completion	Developer/ Owner	
MetroHealth Hospital + Campus	Healthcare	946	Q2 2019	Q4 2022	MetroHealth System	
Health Education Campus of Case Western Reserve University and Cleveland Clinic	Healthcare	515	Q4 2015	Q3 2019	Cleveland Clinic	
NuCLEus Project	Mixed-use	327	Q3 2019	Q4 2021	Stark Enterprises	
Cuyahoga Community College Program	Education	227.5	2018	2022	Cuyahoga Community College	
Building at Westshore Campus, Westlake	Education	N/A	2018	2020	Cuyahoga Community College	
Advanced Technology Training Center Expansion	Education	N/A	2018	2020	Cuyahoga Community College	
Public Safety Training Center Building	Education	N/A	Q3 2018	Q1 2020	Cuyahoga Community College	
Automotive Technology Center Expansion	Education	N/A	2018	2020	Cuyahoga Community College	
STEM Center Western Campus	Education	34	Q1 2018	Q4 2019	Cuyahoga Community College	
One Lakewood Place	Mixed-use	130	Q1 2020	Q4 2021	Carnegie Management, Development Corp.	
UH Ahuja Medical Center Expansion	Healthcare	200	Q4 2019	2022	University Hospitals	
Cleveland Museum of Natural History Centennial Campaign	Leisure+Entertainment	150	2021	2025	Cleveland Museum of Natural History	
Kenect Cleveland (Flats at East Bank Phase II)	Residential	150	Q1 2019	Q4 2020	Scott Wolstein, Akara Partners	
Opportunity Corridor	Infrastructure	150	Q2 2015	Q2 2021	Ohio Department of Transportation	
Quicken Loans Arena (The Q Transformation)	Leisure+Entertainment	140	Q1 2018	Q3 2019	The Cavaliers	
May Co. building	Residential MU	140	Q3 2018	Q2 2020	Bedrock	
The Lumen	Residential	135	Q3 2018	Q3 2020	Playhouse Square Foundation, Hines Interests Ltd.	
Market Square	Mixed-use	130	Q1 2020	2021	Harbor Bay Real Estate Advisors	
Lake Erie Turbine Project	Infrastructure	125	2021	2022	Lake Erie Energy Development Corporation	
Terminal Tower Redevelopment	Residential MU	112	Q2 2018	Q1 2020	K&D Group	
West Shoreway	Infrastructure	100	Q1 2015	Q4 2018	Ohio Department of Transportation	
Top of The Hill	Mixed-use	84	Q1 2020	Q1 2022	Flaherty & Collins	
Euclid Grand Renovation (1001-1101 Euclid Ave)	Residential MU	76.3	Q2 2018	Q2 2020	Alto Partners	
Church + State	Mixed-use	57	Q1 2019	Q2 2020	Hemingway Development	
Law Building Redevelopment	Residential MU	54	2022	2025		
Ohio Bell Building (Canopy by Hilton)	Hospitality+Leisure	42.4	Q1 2019	Q3 2020	Todd Interests	
The Bowery Project	Residential MU	42	Q3 2018	Q4 2019	Akron	
Dexter Place	Residential MU	29	2018	2019	Casto	
UH Parma Medical Center Expansion	Healthcare	27.5	Q1 2019	2021	University Hospitals	
UH Rainbow Babies and Children's Angie Fowler Adolescent & Young Adult Cancer Institute	Healthcare	23.6	2017	Q4 2019	University Hospitals	
Neurological Institute Building	Healthcare	N/A	2020	2022	Cleveland Clinic	
Cole Eye Center expansion	Healthcare	N/A	2021	2023	Cleveland Clinic	
Richmond Town Square	Residential MU	N/A	Q3 2020	Q3 2021	DealPoint Merrill	
Residence Hall - Lakeland Community College	Residential MU	N/A	2020	2021	Lakeland Community College	
The One Twenty	Residential MU	N/A	2020	2021	Tober	
Weston Superblock (4 towers)	Mixed-use	1,000		Planned	Weston, Citymark Capital	
Nautica Waterfront District (7 towers)	Mixed-use	405		Planned	Jacobs Investments, Inc.	
Circle Square (4 blocks)	Mixed-use	300		Planned	Midwest Development Partners, Orlean Co.	
925 Building Redevelopment (The Centennial)	Residential MU	270		Planned	Millenia Cos	
One West Twenty/ Duck Island	Residential	100		Planned		
Tower at Erieview Remodeling	Residential MU	54		Planned	James Kassouf	
55 Public Square Redevelopment	Residential MU	N/A		Planned	K&D Group	
North Coast Harbor Phase I - III	Residential MU	N/A		Planned	Cumberland Development, Trammel Crow	
2861 Detroit Avenue	Residential MU	N/A		Planned		
Enclave Place	Residential MU	N/A		Planned		
RECENT COMPLETIONS						
Summa Health Tower	Healthcare	223	2016	Q2 2019	Summa Health	
One University Circle Tower	Residential	116	Q2 2016	Q2 2019	Petros Homes, First Interstate Properties Ltd.	
The Beacon	Residential	94	Q1 2017	Q2 2019	Stark Enterprises	
Centric Apartments University Circle	Residential MU	70	Q4 2016	Q2 2018	Midwest Development Partners	
The Athlon	Residential MU	61	2017	Q2 2019	J&S Management	
Akron General Emergency Department	Healthcare	49.3	Q2 2016	Q3 2018	Cleveland Clinic	
Cleveland Clinic Lakewood Family Health Center	Healthcare	34	Q2 2017	Q2 2018	Cleveland Clinic	
UH North Ridgeville Health Center	Healthcare	32	Q3 2016	Q2 2018	University Hospitals	
Copper Creek Lodge	Residential MU	30	Q4 2016	Q2 2019	Omni Property Cos	
Cleveland Clinic Children's Outpatient Center	Healthcare	28	Q4 2017	Q3 2018	Cleveland Clinic	
MetroHealth Cleveland Heights Medical Center	Healthcare	25	2016	Q1 2018	MetroHealth System	
MetroHealth Parma Medical Center	Healthcare	25	Q2 2017	Q1 2018	MetroHealth System	
MasonicLive	Event/Conference Center	N/A	Q1 2018	Q1 2019	Beaty Capital	
Source: BLDUP, Bizjournal, Dharam Consulting						

One of the increasing challenges to real estate development, especially (mixed-use) commercial projects is the difficulty of balancing budgets in a sector where construction costs are generally high. Many projects rely on tax exemptions and or public subsidies and where these are not available, projects are either being scaled back or can be slow to get off the ground.

We expect this, together with a more cautious outlook for the general market, to slow the flow of non-residential commercial and residential projects work in the near to medium term. However, there are still significant projects in the pipeline, which, if demand holds up, will continue to provide significant work for contractors in the Cleveland area going forward.

Our detailed analysis of the flow of trade resources within the current pipeline is summarized in figure 18 and table 4. The analysis shows that demand for resources started to increase in 2018. An increasing number of major projects are currently being delivered simultaneously, putting significant pressure on resources and on construction prices.

As projects proceed through development stages, we expect the current demand for concrete and steel trades to increase significantly in the final quarter of 2019 and the first quarter of 2020, respectively. If all projects proceed as planned, demand for fit-out resources is expected to peak in early 2021.

The 5 largest contractors in the Cleveland area delivering the majority of local projects, in particular large, high-rise and specialist construction such as healthcare projects, are Gilbane Building Co., Kokosing, Turner Construction, The Albert M. Higley Co. and Donley's Inc.

Regionally, in the Mid-West states, the top 90 contractors delivered \$38.8 billion worth of construction work in 2018. The top 10 regional contractors accounted for 40%. Given the size of the regional market, all major national contractors are active in Ohio (figure 19).

FIG. 17: PROJECT CASHFLOW FORECAST

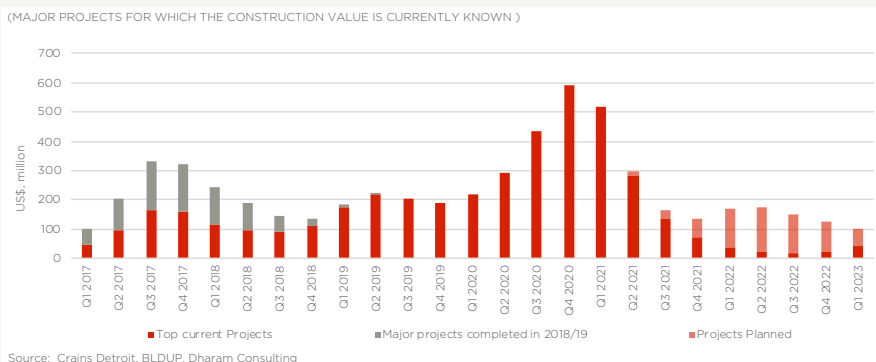


FIG. 18: TRADE RESOURCE OUTLOOK - MAJOR PROJECTS UNDERWAY

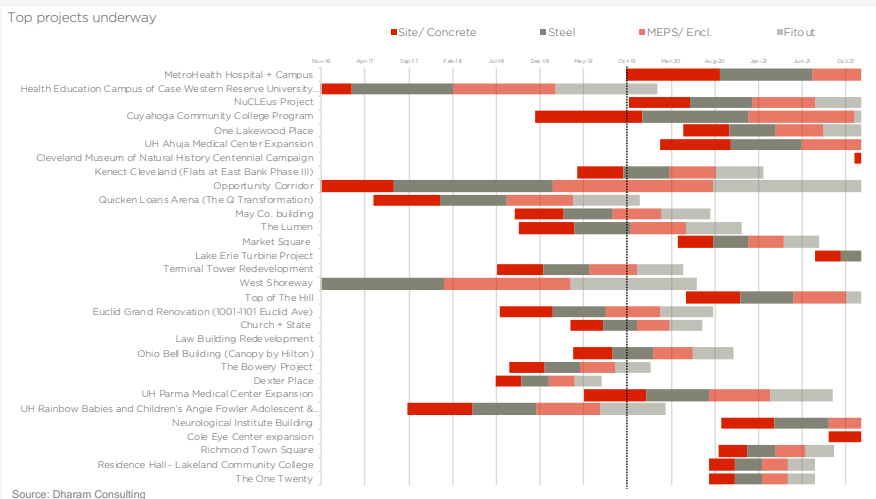
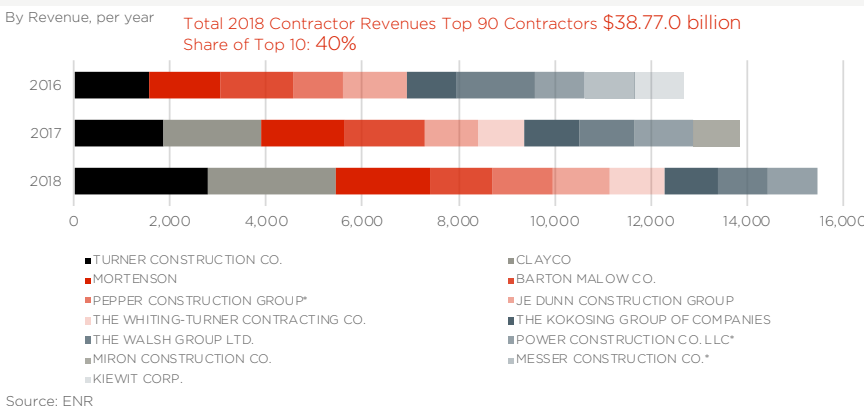


TABLE 4: ESTIMATION OF TRADE RESOURCE DEMAND

Trade	Peak Demand current active Projects	Peak Demand current active and recently completed Projects
Peak Site Concrete	Q3 2019	Q4 2018
Peak Steel	Q1 2020	Q2 2019
Peak MEPS/Enclosure	Q3 2020	Q1 2020
Peak FITOUT	Q1 2021	Q3 2020

Source: Dharam Consulting

FIG. 19: TOP 10 CONTRACTORS IN THE MIDWEST (PER ANNUM)





## BID SUBMISSION PRICES

Nationally bid submission prices rose by 5.6% in 2018 on average, according to Turner Construction. Price inflation peaked in Q1 2019 at an annual 6%. Since then the rate of bid submission price inflation has started to moderate slowly. Prices are forecast to increase by 5.2% nationally this year.

Average bid submission price inflation in Cleveland is estimated to have lagged the national average up until 2018. We estimate that average contractor bid prices picked up over the course of this year, to increase in line with the national average, on the back of an input cost pass-through and firm overheads & profits (figure 20).

More specifically, firm demand levels, the start of major projects and sub-contractor capacity constraints for specialist trades pushed up prices. We expect input cost pressures to persist in

the near term, as an increase in construction volumes in 2020 will maintain and even increase competition for contracting and labor resources in an already tight market. Price pressures may be moderately offset by slower material price inflation.

We expect bid submission prices to increase by 5.2% in 2019, in line with the forecast US average. Price inflation is forecast to reach 5% in 2020 (figure 21). Large, complicated schemes, such as the healthcare projects being delivered in the Cleveland market, are demanding specialist labor and experienced contractors are likely to command higher prices.



FIG. 20: AVERAGE BID SUBMISSION PRICES

Cleveland vs US national average

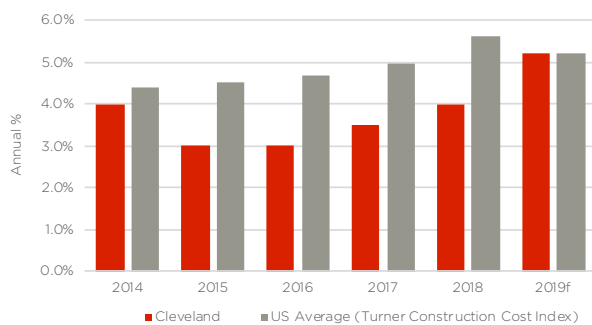
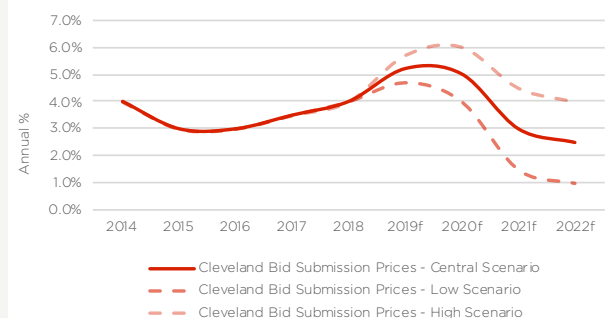


FIG. 21: BID SUBMISSION PRICE FORECAST

Bid Submission Price Forecast



# STUDENT RESIDENTIAL UNIT BREAKDOWN

- XXXX

DELETE  
THIS PAGE  
- WE WANT  
TO KEEP IT  
GENERAL  
RATHER  
THAN  
EDUCATION  
FOCUSED

Proportional benchmarks represent the cost per square foot for Educational Buildings from a variety of sources across the USA.

Costs have been adjusted for time and location to US Eastern NY used as example).

Factor Index based on RSMeans where US

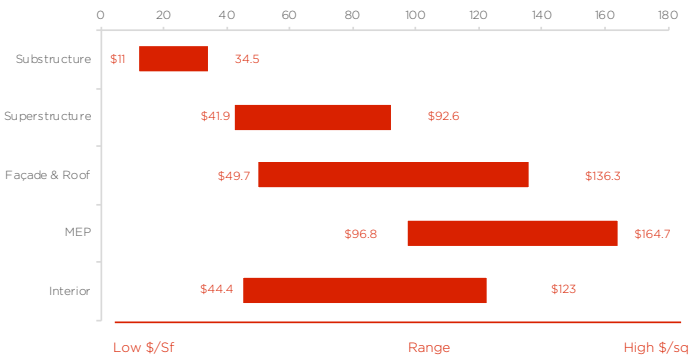
Average = 100.

## COST BENCHMARKS

### ANALYSIS OF TRADE COSTS

## COST RANGES OF TRADES

Average \$/GSF per Element





Dharam Consulting is an Independent  
Construction Consultant specializing in providing proactive  
and value adding Cost and Risk Services that contribute towards  
successful outcomes for our clients and their projects.  
(A registered MBE company)

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