Tender Cost Update
USA H1 2018

OPTIMISM IN THE MARKET BELIES SLOWING GROWTH, AS CONSTRUCTION PASSES ITS PEAK IN MANY SECTORS

While the sector remains optimistic, our view is that at least some of this optimism is misplaced, with many indications that construction in the US is now past its peak. We expect the market as a whole to begin to slow in 2018 as demand eases away from its post financial crash recovery driven peak.

With higher material prices likely due to the growing probability of new tariffs biting and an ongoing tight labor market, it is difficult to see how capacity can stretch much more to meet demand without seeing significant inflation. This will be exacerbated by any restriction to immigration, given the industry's reliance on (documented and undocumented) immigration. As such, in the markets where demand remains strong, we are likely to see inflation in tendering. In mature markets, increased competition amongst contractors for a diminishing pipeline together with material and labor cost growth could begin to erode profits. However, monetary and fiscal policy are already supporting growth, so any fall-back in construction growth will be gradual, especially if some infrastructure spending is passed. This mixed bag of drivers is consistent with a picture of slowing, but stable, growth in construction demand and consequently output.

"Despite optimism in the market, we anticipate a slowdown and stabilization in construction demand across the US to a lower level than recent years. With more competition for work in many areas alongside growing labor and materials costs, at least some erosion in margins is expected in 2018 in all but the hottest markets."

Brian Moran
Brian Moran, Associate Director for
Mace Cost Consultancy – North America

Total construction starts fell...

⬇ **2%**
year on year in
January 2018

Construction cost inflation shrank from...

MARCH 2017 **4.15%**
MARCH 2018 **2.7%**

Building cost inflation shrank from...

MARCH 2017 **3.18%**
MARCH 2018 **2.6%**

82%
of firms said they expect recruiting and hiring workers to be more difficult this year

CONSTRUCTION

The Association of General Contractors (AGC) anticipate ongoing market strength in 2018, with surveyed contractors expressing surprisingly optimistic views of industry prospects in a recent outlook survey. More than 44% of respondents said they expect demand for construction services to grow this year, the highest percentage expecting the highest increase ever recorded in this series, covering more than 1,000 firms across the nation. The strongest expectations for growth include markets such as offices and retail. Infrastructure is also expected to grow strongly, particularly in the transportation and water and sewer sectors, with strong investment in education as well. Multifamily housing, public buildings, power construction, higher education projects and federal projects are all anticipated to see decent growth levels as well.

We find this level of optimism surprising given where we are in the construction cycle: after seven years of recovery and growth, it is likely that the market has reached or passed its peak given past construction cycles. As such, it is possible that current workloads are driving the optimism, rather than a realistic forward view. Adding to optimism are the current positive economic conditions in the USA, the increasingly friendly business environment and continued expectations of an infrastructure spending boost under President Trump. These factors are however far from certain, with the infrastructure bill in particular seeming a bigger priority for the Administration than for Congress.

This peak is observable in some sectors in Figure 1. The large residential sector saw strong growth, but many infrastructure sectors fell back, including power, highway and streets, sewer and water after the strong result we had previously reported in H2 2017. Within the non-residential buildings categories, only manufacturing fell back in 2017. However these decreases, after a long period of growth, are likely to indicate the top of the market, supporting our prediction for slower growth in 2018.

This diversion between contractor optimism and the reality of the construction cycle can be seen in the most recent numbers for construction starts. Total starts fell 2% in January 2018 year on year and non-residential building was essentially flat, edging up only 1% in January.

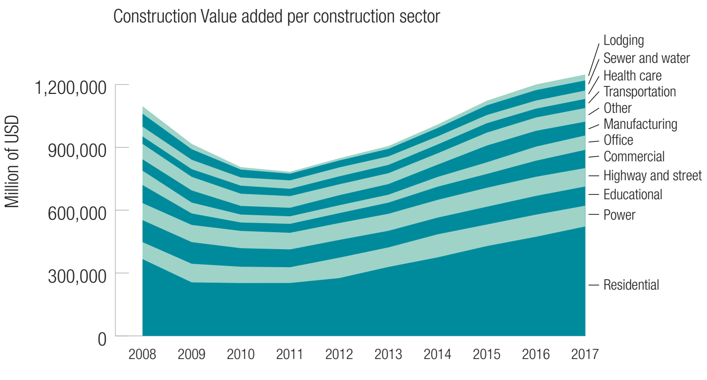

Figure 1 source: Census statistics US Gov

Residential building grew by a more respectable 7%, helped by a rebound in multifamily housing after three straight months of decline. However it is worth noting this follows a hike of 13% in December's reading, and so represents an easing back from the peak as opposed to a dip. While these results do not in any way represent a declining market, they do indicate deceleration in expansion, as we would expect given the construction cycle.

The factors affecting construction in 2018 will include some dampening from higher material prices and tight labor market. However, interest rates while anticipated to rise, are expected to stay moderate this year and are unlikely to create a drag. Tax reform will also benefit commercial building in particular. Any anticipated boost from infrastructure is unlikely to materialize this year, as Congress is yet to reconcile the Administration's desired infrastructure bill with the growing federal budget deficit. Overall we anticipate a mixed bag of drivers, consistent with a picture of slowing, but consistent growth. In areas where growth remains strong, this will translate into ongoing power to raise prices for construction work. However, across many areas we can expect to see slowing demand result in increased competition for work, and potentially higher costs cutting into margins.

INFRASTRUCTURE

Non-building construction comprising of public works, electric utilities and gas plants, pulled back 18% in the year to January 2018, after surging by 45% in December. Within this, public works starts fell 15%, with a substantial 34% drop for highway and bridge construction starts. Reduced activity was also observed in water and sewer construction starts, each with 26% declines. However, miscellaneous public work, which includes pipelines and mass transit, climbed 20% in January.

The Administration has now laid out a detailed outline of the infrastructure plan, which they say will produce at least $1.5tn for transportation, water and other sectors over 10 years. It is also planned to trim federal project permitting time to no more than two years. The plan seeks $200bn in direct federal funding, which they hope will leverage enough from state, local and private sector sources for $1.5tn total spend. However, the first injection of funding of $45bn would not be until 2019, and we are sceptical, with the potential loss of a majority in Congress in November, as to whether this will be passed in any meaningful form. Additionally, rural America especially is unlikely to benefit from any private-funding led initiative.

Institutional infrastructure is likely to see a boost in 2018, with extensive funding planned for K12 schools across different states. The AGC survey anticipates growth of 18% in K12 construction and the institutional side of non-residential building construction is anticipated to grow in line with 2017's elevated rate. In fact, the institutional category as a group rose 8% in January construction starts figures, led by a surge in amusement related projects.

As the industry waits for an infrastructure bill, there will be ongoing demand for repairs and maintenance to the nation's infrastructure, especially in light of the extreme weather experienced during 2017. For example, the failure of the Oroville dam in California's main spillway has led to a warning that hundreds of US dams more than 50 years old may need upgrading. The recent failure of a newly built bridge in Florida adds to the growing evidence that the US' infrastructure construction and maintenance is not fit for purpose. However, given big cuts to key infrastructure funding areas in recent proposals, a reversal of this looks unlikely in the near future.

COST

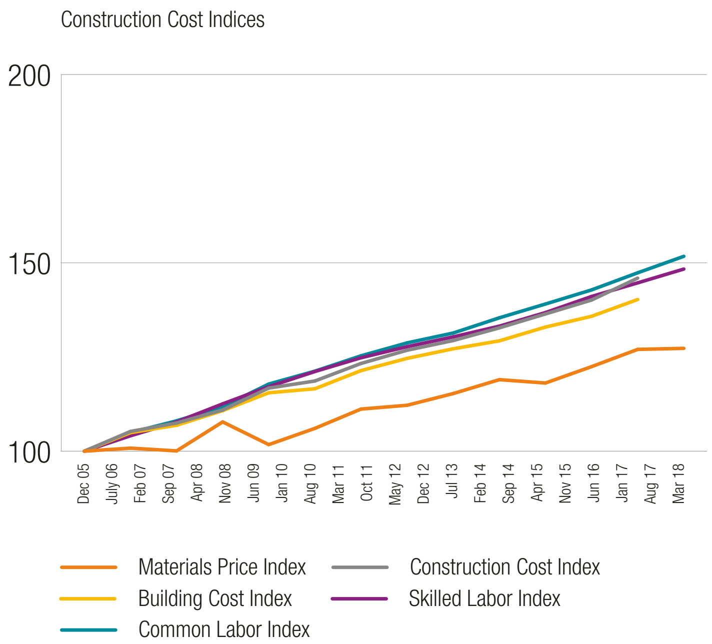

Figure 2 source: ENR. Note Construction Cost Index built using common labor index and considers mostly infrastructure construction. Building Cost Index built using skilled labor index and considers mostly buildings construction.

Construction cost inflation saw a significant correction in March 2018 as compared to the year earlier, dropping to 2.7% from 4.15%. This was likely driven in part by the slowdown in common labor wage inflation (from 3.18% to 2.8%). Building cost inflation also shrank in this time frame, from 3.28% to 2.6%. Given skilled labor inflation (2.6%) did not see significant change in inflation during this time, it is likely this is more driven by increased competition. The Construction Labor Research Council are forecasting an average increase of 2.7% in wages in 2018, following a 2.6% hike last year.

Materials inflation on the other hand has remained consistently high since December 2016, reaching 3.34% in March 2018. This higher materials inflation is due to volatility across some key materials, including some which are usually more stable. For example, the normally slow moving lumber costs saw strong price hikes as supply was impacted by both natural disasters and international tariffs. Prices jumped 13% in 2017, driven by fires in Canada, successive US hurricanes and an escalating trade war over Canadian softwood lumber imports to the US.

While materials inflation eased off into March 2018, this does not take into account the effects of the tariffs proposed by the Trump administration so far this year. These add to the 23.75% imposed on Canadian softwood lumber imports, a decision being appealed by Canada at the WTO under NAFTA. Softer material inflation was expected this year before plans for steel and aluminium tariffs were announced by the Administration of 25% and 10% respectively. If these measures are approved by Congress in anything close to their current form, we can expect a significant hike to the prices of these key building materials driving overall cost inflation higher. These will not feed through to materials prices until they are enacted, but we can expect to see significant material inflation later in the year.

CITY	CONSTRUCTION COST INFLATION	BUILDING COST INFLATION	COMMON LABOR INFLATION	SKILLED LABOR INFLATION	MATERIALS INFLATION
Atlanta	2.3%	3.5%	0%	0%	7.7%
Chicago	1.1%	4.9%	0%	3.3%	9%
Dallas	2.5%	3.4%	0%	0%	7.3%
Los Angeles	3.3%	3.4%	3.2%	3.1%	3.8%
New York City	7.8%	2.9%	8.2%	2.3%	5.1%
Philadelphia	3.4%	3.6%	3.3%	3.5%	4%
San Francisco	3.5%	3.6%	3.2%	3%	5%

Many in the industry hope that the Administration will recognize the huge negative impact they could have on construction, and particularly infrastructure construction. However given ongoing bellicose language around trade, our view is that the industry is unlikely to win a reprieve, especially with politicians ramping up protectionist talk in the run up to mid-term elections in November 2018.

In 2017 steel mill products prices climbed 7.8% and aluminium mill shapes prices by 9.4%: tariffs would add double digits to existing inflation of these key materials, driving stronger materials inflation and therefore construction and building costs.

Real Estate

There is ongoing optimism around many sectors, including offices, retail, warehouse and lodging and hospitality. With the corporate tax rate now fixed at 21% it is possible that real estate activity will increase as cash is freed for investment, benefiting contractors across the industry.

However this optimism was not borne out in the first results of 2018, with non-residential building starts edging up by only 1% in the year to January, supported by ground-breaking on the $1.3bn domed stadium in Las Vegas. Non-residential building starts in January were $240.8bn (annual rate) representing a 1% rise on top of December's 10% gain. Manufacturing plant starts saw gains, climbing significantly after a weak December, but commercial categories as a group fell 15%. Included in this were new office construction starts retreating 31% after a 44% jump in December. Hotel construction also dropped, by 13% after a 4% gain in December, although it did include the start of a $300m hotel in NYC.

Residential building on the other hand continues to see strong growth, growing 7% in January to an annualized rate of $333.1bn, helped by a rebound in multifamily housing. Multifamily housing jumped a whole 39%, showing a renewed strength after the loss of momentum in the last quarter of 2017. In January 11 multifamily projects valued at more than $100m reached ground-breaking, compared to only 4 in December. Geographically, the top 5 metro markets for value of multifamily starts were NYC, Miami, Boston, Houston and Washington DC, with San Jose and Philadelphia closely following.

Labor Market

The construction industry created 38,000 jobs in January, seeing a sharp drop in year on year unemployment to 7.3% (from 9.4%). These gains came across nearly all sectors, indicating industry-wide growth in demand for labor. The only weak spot was non-residential building, which lost 2,300 jobs, likely due to market saturation in some areas. The year as a whole saw the construction workforce expand by 226,000, or 3.3%, an increase more than double the average of all non-farm sectors. The outlook remains positive for future growth in the industry, but this growth may start to run into a wall as the pool of labor is increasingly depleted.

With unemployment so low, challenges in finding workers are anticipated to continue and even worsen this year. 75% of firms surveyed by the AGC are expecting to increase headcounts this year, up from 73%. However, 82% of firms said that they expect recruiting and hiring workers will be more difficult this year, up from the 76% reported for 2017. In fact, nearly 78% reported difficulty in finding qualified workers to hire in 2017, up from 73% the year before. It is clear that labor shortages remain a problem in the market, and will feed through to wage inflation, impacting costs as contractors chase demand with dwindling resources.

Labor challenges also risk being exacerbated by the approach to immigration (legal and illegal) of the Administration. The construction industry in many areas relies on undocumented workers to fill craft and other positions. In the face of ongoing shortages, any reduction in this supply is very likely to spike wage inflation.

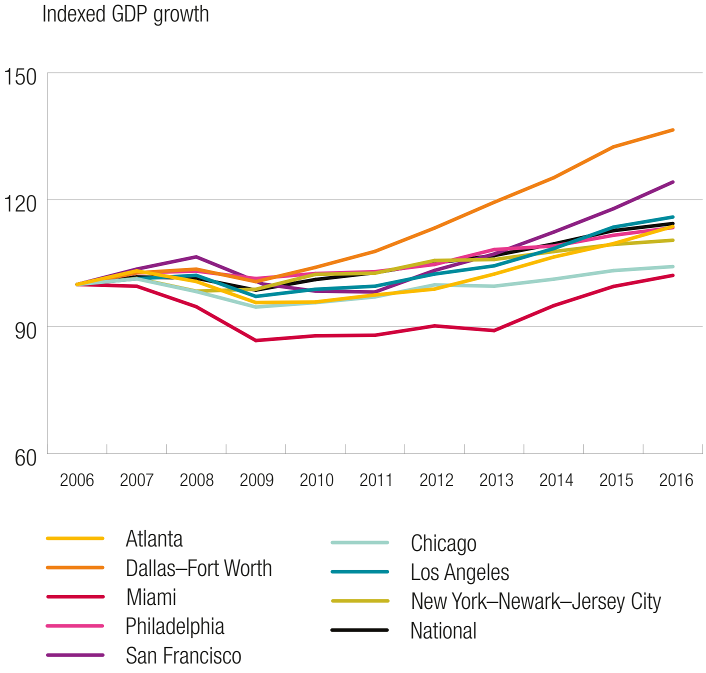

Figure 3 source: National IMF, Metro area GDP BEA Gov stats

ECONOMICS

The US economy is currently experiencing significant turbulence in the stock markets as well as currency volatility, as the markets struggle to price in the impacts of recently announced tariffs. At the time of writing, no final plan for these tariffs had been announced, and there had been a softening in the stance of the Administration towards exemptions for key suppliers of steel and aluminium such as Canada and Mexico. While the impact of these tariffs on the US economy would be significant enough alone, the risk of a wider trade war is an even bigger risk to the economy, as well as the construction industry's performance and costs.

Consumer price inflation – urban areas

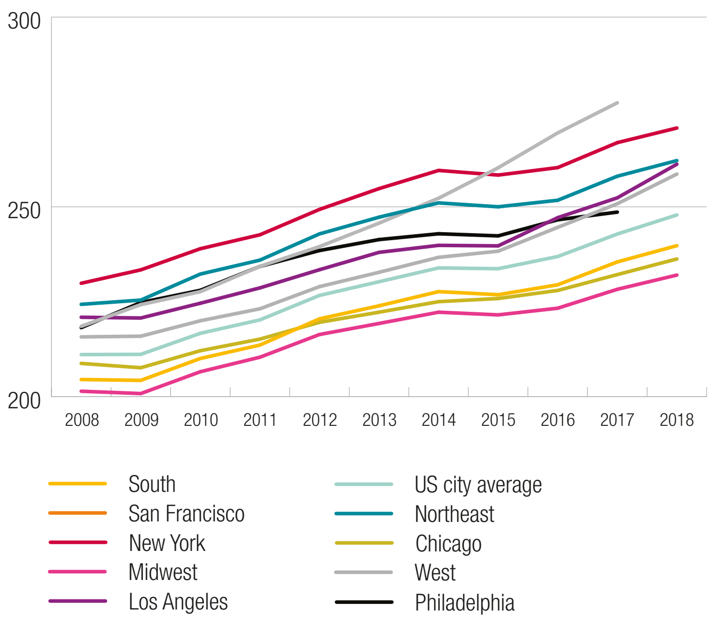

Figure 4 source: US gov statistics

INFLATION

The US city average inflation was just over the 2% line in January 2018, indicating a market heating up compared to the lower inflation regime since 2012. This is a level considered indicative of stable growth, and is only superseded by three of the regions considered. Los Angeles (3.51%), San Francisco (2.94%) and urban areas in the West in general (2.94%) are set to see high inflation. This is likely to impact the cost of materials, and ultimately wages as price expectations are built in. The remaining regions considered are all seeing inflation between 1–2%, and are not likely to see undue detriment from consumer price inflation.

Government Policy

After years of relatively loose monetary policy, the Federal Reserve is now indicating gradual rate increases, and plans to keep a close eye on inflation this year. It is essential that the new Chair of the Federal Reserve, Jerome Powell, strike the balance between risking an overheating economy and needing to keep growth on track, hence only gradual hikes despite significant stimulus from tax cuts. The benchmark interest rate was raised by 0.25% on 21 March to a target range of 1.5–1.75%, with two more hikes signalled for later in the year. This increase in rate is a process of normalizing back to standard conditions as opposed to tightening. It represents a reversal of exceptionally loose monetary policy, which would risk inflation given the fiscal stimulus to the economy coming from tax cuts in 2018.

The Tax Cuts and Jobs Act (TCJA) passed in late 2017 is encouraging activity across the spectrum of contractors, but will be particularly beneficial for small and medium enterprises (SMEs). Potential benefits range from the 20% reduction on qualified income to the more than doubling of estate tax exclusions. The headliner of the reduction of the corporate tax rate from 35% to a flat rate of 21% will make a big difference to larger corporations' bottom lines, and is already encouraging increased investment. However, the last minute changes to the bill to allow a 20% tax deduction to companies structured as 'pass-throughs' could prove significant to the wider industry. 75% of US builders are structured as pass-throughs, meaning they distribute profits, losses, deductions and credits to shareholders to itemize on individual income returns directly. While this will boost investment and profits in the short term, the pass-through reductions are not permanent, whereas the reduction in corporate tax rate is. This could lead to an increasing number of firms structuring themselves as C corporations to take advantage of more permanent tax cuts.

REGIONS

New York and Philadelphia

Across New York steady markets are rewarding contractors with a flow of pipeline activity. Ongoing strong metro area building activity is benefitting major speciality contracting firms, with revenues of the 10 largest firms in the region up almost 50% to $2.97bn year on year in 2017. Ongoing growth in the NYC market can be seen particularly in office construction, with 2.3m sq. ft. of new office space completed in Manhattan in 2017; Brooklyn and Queens saw 6.9m and 3.6m respectively. In fact, analysts highlight that not since the construction of the Citigroup Building in Long Island, and MetroTech in Brooklyn has so much office activity been outside of Manhattan. Office construction is also leading the way in northern New Jersey.

New York City is seeing high construction cost inflation of 7.8% driven by both common wage inflation of 8.2% and significant material price inflation of 5.1%. With building cost inflation lower at 2.9%, this likely reflects stronger demand for non-building construction and common labor. This high wage inflation could reflect turbulence over a shift in the industry away from union labor. The new construction safety law, requiring workers on many projects to have 40-55 hours safety training, well above federal minimums, has been chalked up as a win for the unions, ending months of conflict. Some argue this could add to existing high wage inflation.

Philadelphia saw construction and building costs increase in the year to February 2018 roughly in line with national averages. The city has recently been particularly active in the residential market, specifically multifamily starts. While NYC was the biggest market by dollar value for multifamily residential starts in the year to January 2018. Philadelphia also saw strong growth in multifamily housing starts, coming in at 7th for the top metro areas. In the year to November 2017, Philadelphia saw growth of 70% in the multifamily market.

California

California has seen some significant challenges in recent months. Between dramatic forest fires causing death and destruction, heavy rainfall causing infrastructure failure, and the ongoing challenge of a hot market and labor and materials shortages, there are many issues for the state to contend with.

The Oroville Dam spillway failure highlighted the deteriorating condition of infrastructure, both in California itself and across the country. The $500m Lake Oroville Spillways Emergency Recovery project, completed in just nine months, required an army of engineers and workers. The state is looking to avoid such a failure in future and is looking to change maintenance and inspection regimes according to lessons learned from this incident.

Despite these challenges, surveys of the local market reveal it remains hot, across almost every market sector. This is exacerbating labor shortages, and material price inflation is now starting to ramp up as well. This picture is not universal across the state however. Los Angeles reached the peak of the market in 2017, and total construction value is expected to fall back by more than 3% in 2018. Weakness in residential and non-building activity in this market will more than offset a rise in residential work in 2018. This is in contrast to San Jose, seeing strong growth in residential construction, with the sixth highest dollar value of multifamily construction starts nationally in the year to January 2018.

Opportunities can be identified in the institutional market, particularly in health care and K12, as LA in particular embarks on an ambitious school building program featuring both new construction and modernization. The Road Repair and Accountability Act of 2017 also provides nearly $55bn of additional funding over 10 years for infrastructure repairs, maintenance and upgrades, making infrastructure an ongoing area of opportunity.

Chicago and the Midwest

Overall construction spending is expected to grow by 2% in 2018 in Chicago, with growth in the non-building sector and residential activity offsetting weakness in non-residential work. After years of slow but steady growth in the multifamily and commercial sectors in the Midwest, the industry has been braced for a slowdown. Some companies are shifting resources away from these sectors towards those anticipated to be more profitable, such as infrastructure. The industry in the region is showing concern regarding overbuilding, particularly in the office sector.

The state is investing in infrastructure and creating plenty of opportunities for the construction sector, including the Illinois Tollway. Some concourse and terminal expansion is planned for O'Hare Airport as well, and the Chicago Transit Authority is looking to extend the red line. However, with uncertainty over how infrastructure is going to be funded going forward, this impetus could peter out leaving the construction industry with less momentum than anticipated.

Chicago saw significantly higher building cost inflation than construction cost in February 2018, at 4.9% vs 1.1%. This is driven by the differential between skilled labor inflation at 3.3% and common labor cost stagnation, as skilled labor forms a much larger percentage of building cost than construction cost. Materials inflation in the city is also spiking at 9%.

Southeast

Builders working across the Southeast continue to experience robust contracting opportunities in a broad range of markets, with most sectors showing steady growth. The market, which saw one of the largest downturns after the financial and housing crisis, had a lot of pent up demand. With the private sector now kicking into full gear, markets are robust and we can expect to see private demand increasingly driving the market. Particular areas of opportunity include health care projects (despite the uncertainty over ACA), while the previously booming multifamily sector does appear to be slowing somewhat.

The Southeast region took a battering from natural and man-made phenomenon in 2017, with flooding and extreme weather featuring prominently in the region's challenges. This has led to votes for a variety of infrastructure upgrades. The successful campaign for approval of a $400m bond program for stormwater infrastructure upgrades, for example, prominently featured climate change in its plea to Miami voters.

Miami has not seen the same slowdown in multifamily residential construction observed at the regional level and was second only to NYC in terms of dollar value of multifamily residential starts in the year to January 2018. The city faces challenges from rising sea levels, and outside of the growing activity around commercial construction, we can also expect to see ongoing significant infrastructure and resilience investments.

Atlanta construction spend is only anticipated to be marginally larger in 2018 than 2017, as the residential sector continues to grow strongly while other sectors weaken. Similarly to other cities across the region, infrastructure improvements and additions are still very much needed. As such infrastructure construction should remain robust throughout the next several years. This includes the $6bn program at Atlanta airport, and the largest program ever delivered by the Georgia transportation department. The city is also investing in resilience, with a $300m project to use an abandoned rock quarry a few miles from its metro area as a reservoir safeguarding against drought.

With no common and skilled labor inflation in the year to February 2018, Atlanta nonetheless saw 2.3% construction cost inflation, and 3.5% building cost inflation. This was driven by significant materials inflation of 7.7%.

Texas

Reconstruction after Hurricane Harvey has driven a strong surge in building in recent months, with Texas receiving $5bn from the department for Housing and Urban Development in rebuilding block grants. As part of this program, all residential housing and mixed use structures located in the 100 year flood one must be elevated to at least 2 ft. above the floodplain. Critical structures within the 500 year floodplain must be elevated by 3 ft. However, with $125bn in damage, primarily from flood impacts in Houston, there is still much work to be done.

Construction starts in the Dallas metro area are expected to increase 6.2% in 2018, off the back of continued strong demand. Non-residential construction is expected to grow by 5.1% due to a sharp increase in education construction, despite drops in retail, hotel and warehouse construction. Residential construction will be even stronger, expected to grow by 7%. This growth is anticipated to come against a backdrop of significant materials inflation (7.3% in February 2018), but low common and skilled labor inflation. These together are driving construction cost inflation of 2.5% and building cost inflation of 3.4%, roughly in line with national averages. However, there are challenges in the city to keeping up with construction demand, including the lack of affordable labor and dwindling availability of land.

Elsewhere in the state demand is equally strong. Houston saw the fourth biggest market for residential starts across metro areas in terms of dollar value in the year to January 2018. Growth is also anticipated in construction across all sectors, in part due to rebuilding from Hurricane Harvey damage.

Texas could see stronger labor challenges than other areas due to significant reliance on undocumented workers in the industry, representing about 30% of the state's labor force. With no replacements readily available, any government crackdown on illegal immigration could be a risk to post-Harvey reconstruction, and would certainly be a driver of costs. In response to this, many hurricane zone colleges, both in Texas and elsewhere, are accelerating worker training to push rebuilds. For example, the Lone Star College in Houston has designed 3-6 week courses to allow students to get into the industry and out onto site as quickly as possible.

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