MARKET INTELLIGENCE REPORT

2016

Infrastructure Investment to Strengthen Construction

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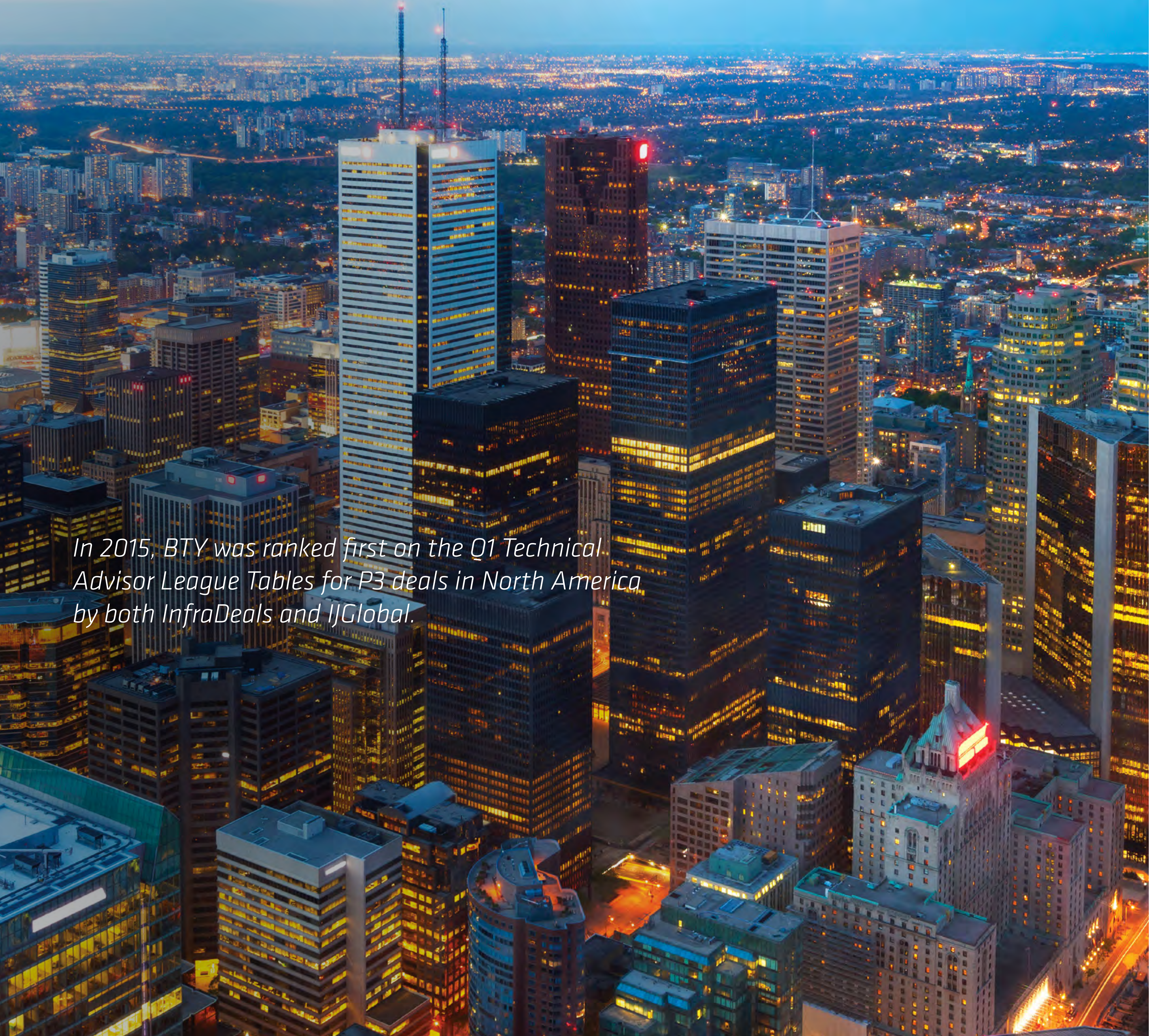

In 2015, BTY was ranked first on the Q1 Technical Advisor League Tables for P3 deals in North America by both InfraDeals and IJGlobal.

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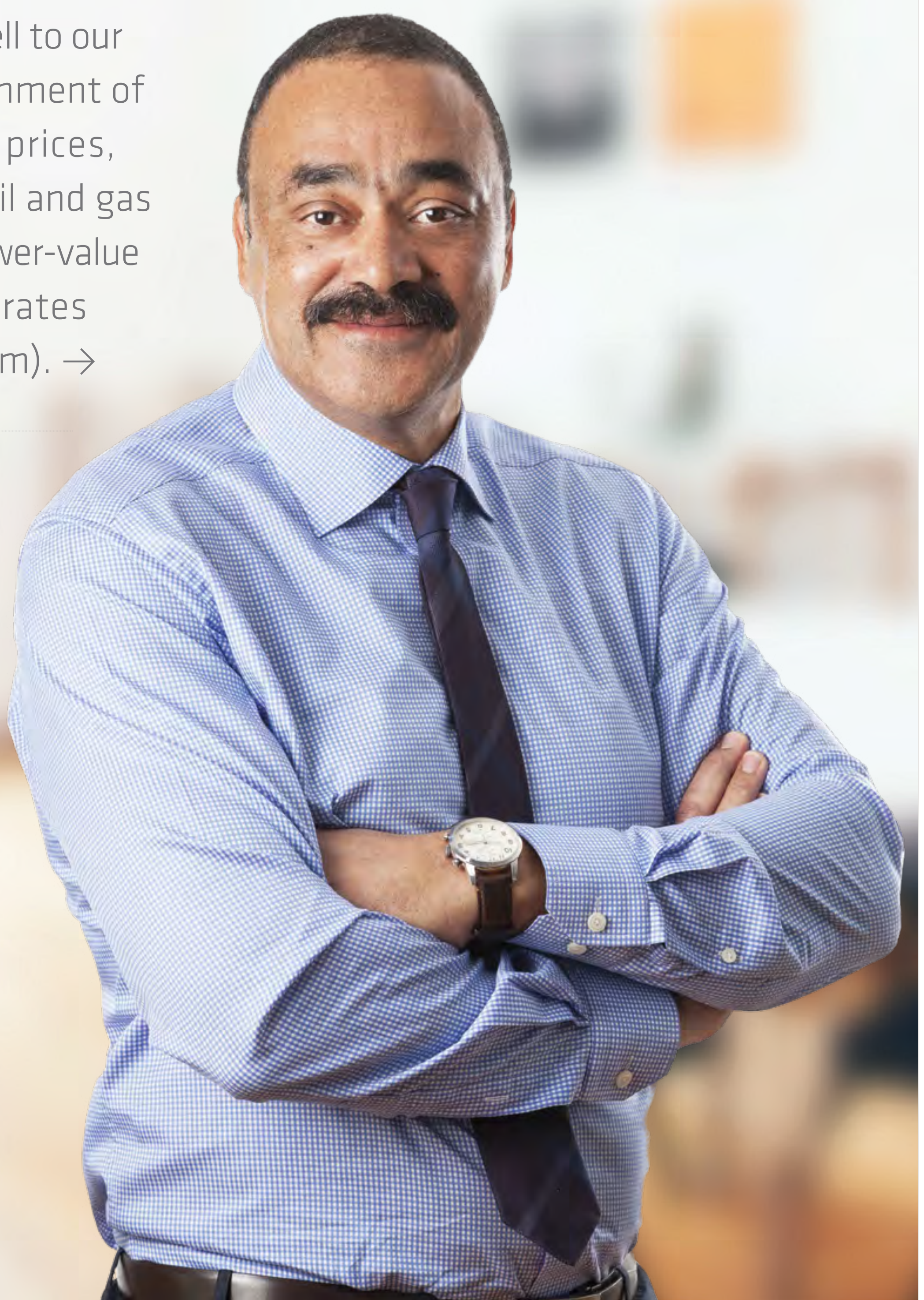
ADAPTING TO OUR NEW CONSTRUCTION ENVIRONMENT

There are two sayings about time that apply particularly well to our current economic environment of low oil and commodity prices, reduced investment in oil and gas and mining projects, a lower-value loonie and low interest rates (at least for the near term). →

Joe Rekab, *Managing Partner*



THE FIRST IS THAT EVERYTHING TAKES LONGER THAN USUAL. THE SECOND IS THAT TIMING IS EVERYTHING.

After a harsh winter and late spring, it took the better part of 2015 for many elements of the U.S. and Canadian economies to generate momentum. It has also taken longer than expected for lower oil prices to start invigorating business investment, and for the U.S. economy to finally hit its stride. And the long-projected pull-back of our residential sector has also taken time to materialize. (We believe it will be soft and short-lived when it does.)

$125b for Infrastructure Over the Next Decade

Then there is the longest election in modern Canadian history, which has borne some timely fruit for the construction industry: the commitment to double federal infrastructure spending over the next two years – and spend $125b on renewing transportation, housing and climate-resilient infrastructure over the next decade.

The timing couldn't be better to strengthen a construction industry – and an economy – still dealing with the fallout from the oil price drop and a generally uncertain global economy. To keep things in perspective, it's important to note that the projected decrease in private-sector construction investment is less than half of what it was during the 2009 financial crisis, when timely infrastructure investment also helped to bring stability to our industry – and the economy.

It's not only the federal government increasing its commitment to infrastructure. Alberta and Saskatchewan are making record infrastructure investments, and Ontario and Quebec are moving forward with their own substantial, on-going commitments.

A low oil price at a time of expanded spending on infrastructure could be serendipitous, since many of the typically large transit and transportation projects are highly energy intensive. The timing will deliver more bang for the buck. As well, the rebalancing of investment in construction promises to contribute to greater competition and lower labour costs.

The lower loonie, in conjunction with a U.S. economy moving into higher gear, also augurs well for increased exports as well as domestic business investment in capital projects. The value of our exports to the U.S. is 10 times greater than those to Europe, and 20 times greater than those to China. And Canada is the number one importer of U.S. exports.

Another reflection of this deeply rooted economic integration is the Royal Institution of Chartered Surveyors' (RICS) introduction in 2015 of guidelines for providing Lenders' Services for construction projects of all types in Canada as well as the U.S. While certain aspects of U.S. and Canadian lending practices differ, over the past five years BTY has been mastering these nuances to serve not only U.S. clients, but also to provide Canadian banks and developers greater clarity and certainty when investing in projects across the U.S. The guidelines arrive as lenders are increasing their due diligence and requiring more risk analysis and management on their investments in real estate projects.

We think the lesson to be taken from these multiple shifts in focus and practice is that the Canadian construction industry has time and again proven itself to be highly resilient and adaptable to a changing economic environment. The three pillars of our prosperity – immigration, investment and infrastructure – are still firmly in place. It's the emphasis that has shifted, again. And our industry is adapting, again. Which is why we expect the new year will show that growth, though slower than anticipated, is coming, and will be right on time.

P3s' Expanding Global Potential

Infrastructure investment worldwide is expanding as well, with an estimated increase of $4 trillion per year over the next decade. Wherever that investment is taking place, the use of P3 financing for infrastructure is expanding with it.

While growth in the number of P3 projects has slowed in mature markets such as the U.K. and most of Europe, other countries have embraced the public-private partnership model to help fulfill ambitious infrastructure programs. Each country adapts the P3 model to its own circumstances, just as Canada adapted the original model from the U.K.

That has worked so well that Canada has become one of the world's most successful markets, and other countries are increasingly adapting the Canadian model for their use. Just as BTY was instrumental in developing the P3 model in Canada, it is now taking a leading role in exporting the expertise needed for a P3 project to succeed, first to the U.S., and more recently, in Turkey.

KEYS TO RENEWING P3 GROWTH IN THE U.S.

Toby Mallinder, *Partner*

In 2014, the U.S. P3 market was moving forward quickly, cited by a Moody's Investor Report as having the potential to be one of the world's largest. Three-quarters of the states had passed enabling legislation for P3s, and a record number of P3 transportation projects were expected to achieve financial close in 2015.

More than 90 of the 130-plus active U.S. P3 projects are for transportation, but only five achieved financial close in 2015. By comparison, four of the 33 active social and health P3s achieved financial close in the same time span. We see three reasons for optimism.

First, the passage of the Fixing America's Surface Transportation (FAST) Act, a five-year, U.S. $281b transportation authorization and funding bill. The FAST Act also establishes a pilot program for communities to expand transit through the use of P3s as well as a National Surface Transportation and Innovative Finance Bureau, which will aid states, local governments and the private sector with project delivery. The funding sends a message that infrastructure is a government priority, and reliable longer-term funding is available.

Second, the establishment of the Build America Investment Initiative will also help support P3 growth. The new program is designed to engage state and local governments, as well as private sector investors, to encourage collaboration, expand the market for P3s and get more out of existing federal financing programs.

And third, the passage of the Water Infrastructure Finance and Innovation Act (WIFIA) makes available low-interest federal loans to partially fund vital water and wastewater infrastructure. A similar act for transportation infrastructure was key in accelerating the use of P3s in that sector. The FAST Act also removes a section of WIFIA that prohibited the use of tax-exempt debt with WIFIA loans. Tax-exempt bonds are one of the most cost-effective tools for communities that seek WIFIA loans.

Uncertainty over funding and/or political support, however, appears to have stalled multiple projects

These developments, in concert with a strengthening U.S. economy, augur well for getting P3s back up to speed. Over the past three years, BTY has been involved in 20 P3 projects in 14 states; nine are currently active and one achieved financial close in 2015.

P3s ON A ROLL IN TURKEY

Gord Smith, *Partner*

Few countries have embraced P3s as quickly and widely as Turkey. The country has targeted more than €94b worth of projects over the next 10 years. In the past three years alone, Turkey has launched 30 major P3 projects, mostly for transportation infrastructure such as bridges, tunnels, highways and airports.

Now the country is launching one of the most ambitious P3 healthcare programs in the global marketplace.

The Ministry of Health plan calls for creating high-quality hospitals with a capacity of 90,000 beds, 30,000 of which are to be procured using P3 financing. Of the 31 healthcare projects currently planned, four are under construction, nine are in contract negotiation and 18 are in procurement. Of Turkey's eight P3 projects that achieved financial close in the second half of 2015, seven were in healthcare.

BTY is playing an active role in Turkish P3 projects in this sector. We are providing Lenders Technical Advisory services for three of the integrated health-campus projects: the €674m Izmir-Bayrakli, €328m Kocaeli, and the €252m Konya Karatay. We also provided fire and life safety code consulting services for the €1.25b Ankara Etlik, one of the world's largest P3 healthcare projects.

Infrastructure Investment Is Integral To Growth

One constant emerges from our experience to inform our expectations for the new year. Investment in infrastructure stimulates economic growth at home and abroad. The Conference Board of Canada estimates that for every $1b in infrastructure spending, 16,700 jobs are created for one year and GDP is boosted by $1.14b.

P3s – and in particular the Canadian model – have proven themselves to be highly efficient in adapting to local conditions in delivering the infrastructure the world needs in a timely manner. And timely investment in infrastructure supports the Canadian construction industry's proven ability not only to adapt to a changing economic environment, but also change it for the better.

CANADA CONSTRUCTION OUTLOOK AND ESCALATION

Overview of Escalation Across Canada

INFRASTRUCTURE INVESTMENT TO STRENGTHEN CONSTRUCTION

Increased infrastructure spending will strengthen construction across Canada in 2016. Overall economic growth, however, is expected to remain slow but steady in the continuing low oil-and-commodity price, and lower-value dollar environment.

THE ADDED INFRASTRUCTURE SPENDING, led by the federal government and oil-producing provinces, will help offset a long-expected moderation in the still-booming residential sector, slight overall decline in private-sector investment in non-residential construction, and slight decline in immigration in 2015. Even with moderation, the residential sector remains a strong performer, and the small decreases in the other categories follow years of robust growth.

Low interest rates and low-cost oil make the timing for increased infrastructure spending opportune. Low rates make borrowing attractive, and low energy costs are especially beneficial for energy-intensive engineering projects such as roads, bridges, transit, and water and wastewater treatment facilities.

The Conference Board of Canada estimates that for every $1b in infrastructure spending, 16,700 jobs are created for one year and the GDP is boosted by $1.14b. The federal government has pledged to double existing infrastructure spending from $5b to $10b a year for the next two fiscal years. Over 10 years, its infrastructure spending would almost double, from $65b to $125b.

Such investment promises to further strengthen Canada's already sound long-term economic outlook. GDP growth statistics from the OECD place Canada at the top of the G-7 over the past 10 years. Canada's population growth also remains among the G-7's highest. Renewed infrastructure also makes the country more attractive to immigrants. Canada's continuing high immigration – in the range of 250,000 people annually – bolsters population growth, which drives both construction demand and economic growth.

Widely regarded as a safe haven for foreign funds, Canada also continues to attract increasing levels of foreign direct investment. It rose by 5.7 per cent in 2014, adding $40.3b, for a total of $732b. Almost half of the 2014 increase went to manufacturing and mining. Over the past 15 years, almost half of all foreign investment has gone to oil and gas and mining.

The increased foreign investment and sustained immigration augur well for stable near-term construction activity – and more robust levels in the longer-term.

The outlook for 2016 varies by province. BC will be one of the national leaders, with still-strong residential and commercial activity complemented by large energy projects ramping up. Alberta's commitment to major spending increases on infrastructure will cushion the impact of sharp declines in oil and gas investment. Saskatchewan will also increase infrastructure investment to counter softness in the oil and gas as well as mining sectors. Manitoba will surge on energy projects and Canada's second highest rate of population growth. Boosted by rising U.S. demand and a lower-value loonie, Ontario will also be a front-runner with stronger performance in almost all construction sectors. Quebec is expected to accelerate growth with improving exports and a new round of major transportation and social infrastructure projects. Atlantic Canada will see modest growth overall, with Nova Scotia leading and Newfoundland and Labrador lagging due to reduced oil and gas revenues.

Major banks forecast Canada's GDP growth will range from 1.8 to 2.2 per cent in 2016 and 2.0 per cent to 2.5 per cent for 2017. The Bank of Canada is expected to continue keeping interest rates at or near historic lows of the last decade, but may be forced to raise them if the U.S. announces a rate hike. A higher rate would help to dampen inflation, which would also help keep overall construction escalation low in 2016.

2016 Escalation Summary

Downward pressure is coming from:

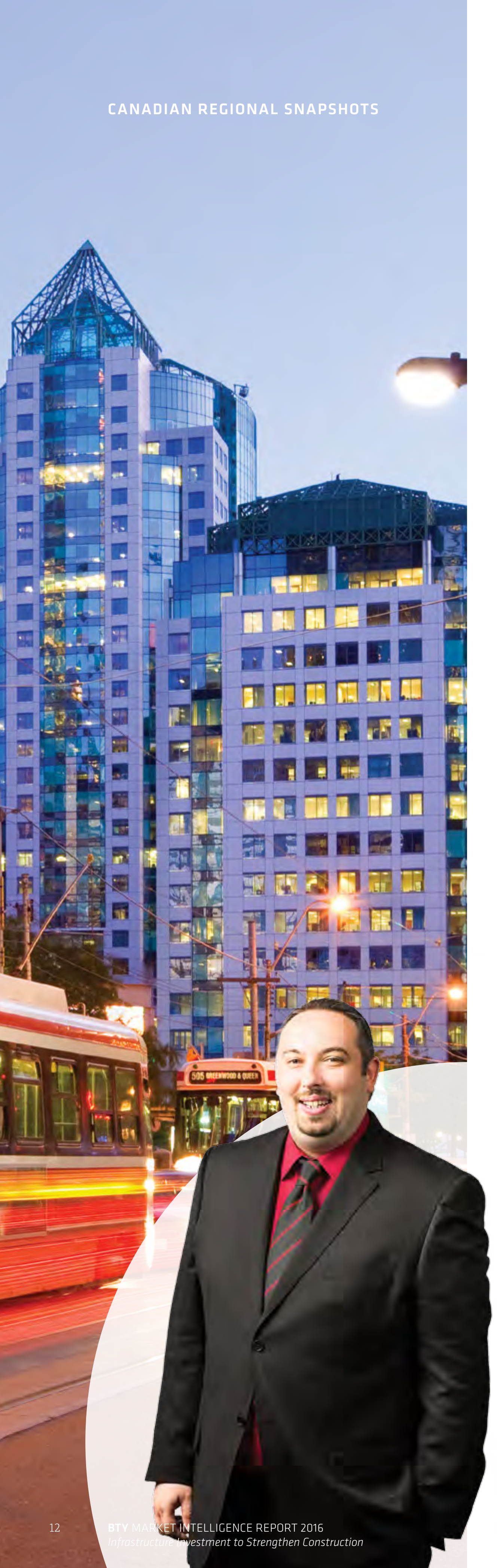
- Forecast for continued modest growth, domestically and globally
- Lower oil prices and investment
- Softer commodity prices

Upward pressure on pricing is coming from:

- A still weakening Canadian dollar
- Increased spending on infrastructure
- Continuing high immigration
- A still booming residential sector

Escalation Forecast 2016

Ontario 1% – 2%
British Columbia 1% – 2%
Alberta 0% – 1%
Saskatchewan 1% – 3%
Manitoba 1% – 3%
Quebec 0% – 1%
Atlantic Region 0% – 1%



ONTARIO

Residential, commercial and infrastructure lead as Ontario regains momentum

SUBSTANTIAL INFRASTRUCTURE INVESTMENT, improved manufacturing exports boosted by a low loonie and strong U.S. recovery, higher net in-migration, and a still-strong residential sector will combine to propel the most populous province to regain economic momentum in 2016 after 2015 failed to produce the robust lift-off most analysts had predicted. GDP is projected to grow at around 2.1 per cent in 2015, and near 2.3 per cent in both 2016 and 2017.

The provincial government's planned investment of $11.9b in 2015–16 on infrastructure such as roads, bridges, public transit, water systems, hospitals and schools creates a solid base of activity. It has also added $2.9b in funding to the $31.5b in the Moving Ontario Forward fund to be invested over 10 years – about $16b in transit projects in the Greater Toronto and Hamilton Area (GTHA) and about $15b available for transportation and other priority infrastructure projects outside the GTHA. That includes improving highways in Northern Ontario, in part for future mineral development, widening and improving Highway 417 in Eastern Ontario, and construction of the Waterloo Rapid Transit project, the Ottawa light rail transit line, and the $2.1b Gordie Howe International Bridge.

Some of the larger transportation projects in the GTHA include the $5.3b Eglinton Crosstown LRT, the $2.6b York Spadina subway extension and the $1.2b Highway 407 East Phase 2 project. Major social infrastructure includes the $301m St. Michael's Hospital, the $512 Milton District Hospital, the $250m Mackenzie Vaughn Hospital, and the Etobicoke General Hospital.

After several years of restrained in-migration due to high job growth in the West, net migration to Ontario will rise to 90,700 in 2016 and 97,000 in 2017. That will help housing to continue to be a strong performer, with starts of new units forecast at between 61,000 and 63,000. An expected cooling-off in 2017 will see a slight decrease to 60,000 starts. The biggest residential investment may come from renovation, which is valued at more than $20b a year in the province.

Ontario's still strong residential and commercial sectors, and substantial infrastructure spending will keep construction levels healthy in Canada's most populous province.

Jon Bawdon, Director

Look for Ontario to regain its traditional role as a national economic stalwart. The weak loonie and strong United States recovery augur well for exports, and increased business investment.

Darren Cash, Director

Commercial building is expected to remain strong, especially in the GTA. More than half of the 5.8-million sf of office space under construction in Toronto was expected to be delivered in 2015, with the balance to be completed by 2017. The sustained momentum is seen in a spate of new office and mixed used projects, including The One, the twin Mirvish+Gehry towers, and six proposed towers at 1-7 Yonge featuring hotel, office, condo and retail. One of the single largest commercial redevelopments is for the Honest Ed's site, a 1-million sf mixed-use project featuring 1,000 rental units and a public market. As well there are 2-million sf of office and commercial space under construction in suburban markets, including a $331m expansion at Yorkdale shopping centre.

Major institutional projects in Ottawa include the $190m Government Conference Centre, the $110m National Arts Centre renovation, and the $200m University of Ottawa Heart Institute expansion.

Industrial construction continues to grow as overall economic conditions improve and the manufacturing sector expands capacity. Prime examples include a $1b retooling at Chrysler in Windsor in preparation for the next-generation minivan, and an $857m investment by Honda to upgrade three plants north of Toronto, plus Toyota's $500m investment in its plant in Cambridge to boost production. Construction also started on the $877m Rainy River Gold Mine, scheduled to go into production in 2017.

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance	$10.8b
2.3% increase over 2015	
Residential/Renovation	$38.4b
3.2% increase over 2015	
Non-residential Building	$20.1b
2.9% increase over 2015	
Engineering/Infrastructure	$18.9b
4.3% increase over 2015	

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

BRITISH COLUMBIA

BC thrives with healthy workload balance

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance 2.8% increase over 2015	**$4.5b**
Residential/Renovation 0.4% increase over 2015	**$15.8b**
Non-residential Building 6.6% increase over 2015	**$6.4b**
Engineering/Infrastructure 40.7% increase over 2015	**$14.6b**

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

WITH EXPORTS EXPECTED to get a boost from stronger U.S. growth that will help offset weaker demand from Asia, the loonie still valued much lower than the greenback, strong consumer spending and increased tourism, BC's economy promises to continue to be one of Canada's best performing in 2016. GDP growth forecasts for 2015 hover at 2 per cent, with modest increases expected in 2016 and 2017.

This solid foundation will support a smooth transition in the construction industry as its current bumper crop of residential, office and commercial projects gives way to a new wave of proposed engineering projects expected to get underway over the next two years.

While BC is forecast to see a decline of 7.4 per cent in total non-residential construction in 2015, investment in engineering construction is expected to grow rapidly starting in 2016 and increasing by up to 70 per cent by 2017.

Upcoming engineering mega projects include the $8.8b Site C Clean-Energy project, a dam and hydroelectric generating station, the $2.5b Roberts Bank Terminal 2 Expansion, the Massey Tunnel Replacement Bridge, and Liquid Natural Gas (LNG) Projects and pipelines in the north.

Any projected cooling off in new residential building should also be cushioned by an anticipated 2.8 per cent growth in renovation spending as well as continued population growth. Job opportunities throughout the province will attract people to BC from other provinces. Net interprovincial migration is forecast to add about 23,000 people to total population between 2015 through 2017. Net Annual permanent resident inflows have generally hovered near 35,000 since 2011. Expect housing starts to remain stable at almost 31,000 units for 2016 and near 30,000 for 2017.

The Lower Mainland will attract most of the new residents from abroad, and it will also see the lion's share of the housing starts. Major residential projects include the $500m mixed-use One Burrard Place, $400m Vancouver House, $300m Rogers Arena towers, and the eight towers of Concord Pacific's $1b Central False Creek development. Other major residential projects include the $200m Skaha Hills residential development near Osoyoos.

The construction outlook is positive as the current bumper crop of residential, office and commercial projects gives way to a new wave of mega projects in energy, natural gas and port expansion.

Ian Wilkinson, Partner

The completion of the Canada Line rapid transit project in 2010 saw a sharp upswing in residential development along its path on Cambie St. The same expansion is already happening even before the completion of the Evergreen Rapid Transit Line in 2017 to and through the eastern suburbs. Total spending on transportation projects over the next three years will hold steady at $1b.

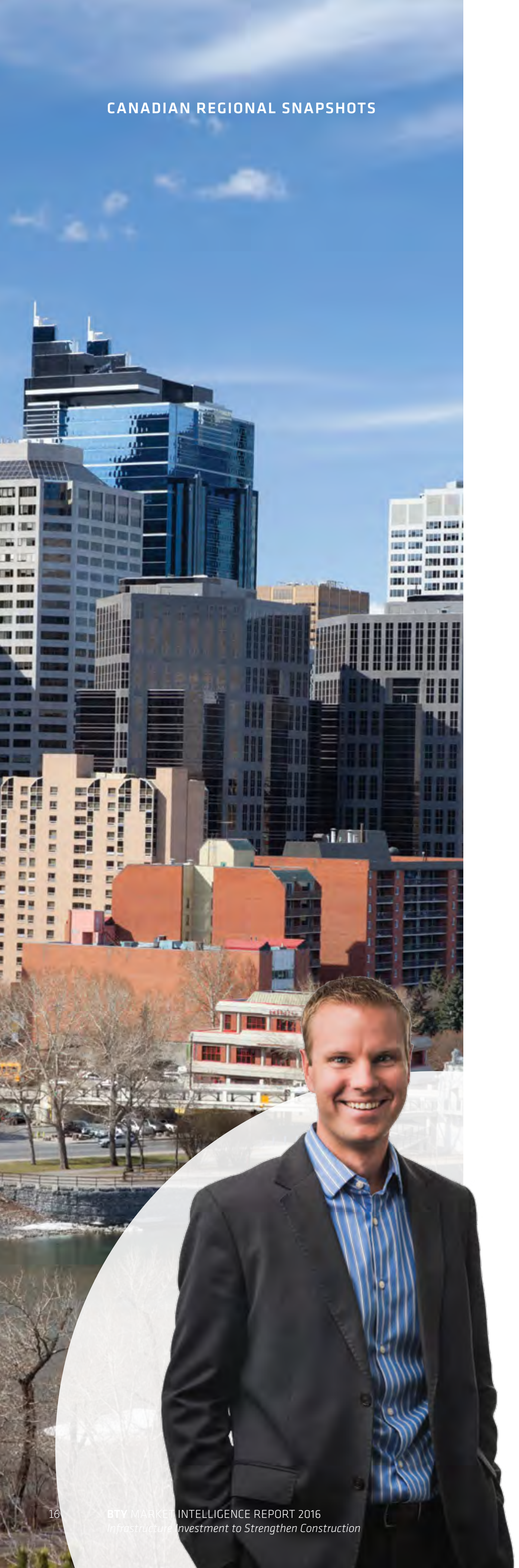
Major commercial developments nearing completion include the $1b Tsawwassen First Nation mixed-use development and the $100m expansion of the Manteo Resort in Kelowna. Fortis BC's $400m Tilbury LNG facility expansion in Delta is one of the largest resource projects now underway.

Many of the bigger projects in Metro Vancouver's multi-year office building boom will be completed in 2015 and 2016. Even so, there are several major projects to sustain the momentum over 2016 and 2017, such as Credit Suisse's $200m The Exchange tower and the proposed Cadillac Fairview Waterfront tower, and a number of smaller projects to appeal to the city's expanding technology industry.

Major social infrastructure projects include the ongoing $606m North Island Hospitals Project and the planned $1.2b St. Paul's Hospital relocation. Spending on primary and secondary school construction is projected to increase from $405m in fiscal 2014–15 to $550m per year over the next three years. Overall government capital spending is expected to remain close to the $6.2b planned for fiscal 2014–15.

With stronger United States demand offsetting weaker Asian demand, and good continued consumer confidence, British Columbia should have one of Canada's best performing economies – and construction industries – in 2016.

Connor Falls, Director



ALBERTA

Infrastructure spending helps to stabilize construction

THE PROVINCIAL GOVERNMENT'S BUDGET 2015 CAPITAL PLAN – with investments of $34b over the next five years – is welcome news for the construction industry.

With prices for its main revenue generators – oil and gas – expected to remain low for some time, Alberta's economic prospects are weak in the near-term. Most analysts are expecting provincial GDP to contract by close to 1.5 per cent in 2015, but rise to positive territory in 2016 and improve to more than 2 per cent by 2017.

Even with an estimated decline of between 5 and 10 per cent in engineering construction investment in 2015, as many oil and gas projects are put on hold or extended over longer periods, Alberta still accounts for 37 per cent of the national total, by far the largest share by province. By comparison to 2009, when investment fell by 34.2 per cent, the current dip is modest.

While the pull back in oil and gas will also pull down immigration, Alberta still has Canada's highest rate of population growth at 2.17 per cent thanks to several years of record in-migration. Net migration to Alberta, however, is expected to decline from 66,784 in 2014 to 39,200 in 2015. Low employment growth will further reduce migration to 37,200 in 2016 before edging back up in 2017. The lower in-migration growth will in turn reduce domestic demand and, in turn, housing demand. Housing starts are forecast to decline by more than 6,000 units to 29,800 for 2016 and 30,300 for 2017.

Facing lower revenues from the energy sector, decreasing private sector capital investment, and rising unemployment, as well as more cautious consumers, the provincial government is increasing capital spending as part of a stimulus plan that will help stabilize construction levels.

Ongoing residential and commercial development in Edmonton and Calgary will also help the province weather the impact of low oil and gas prices.

Nathan Gerbrecht, Associate Director

Alberta took it on the chin in 2015, but is fighting back with massive infrastructure investment that will help sustain construction levels hit by declining oil patch investment.

Alistair Dearie, Partner

The plan allocates $3.8b for building and modernizing schools, $2.2b for health facilities, $4.7b for roads and bridges, and $4.4b for new projects that have yet to be announced. Major projects scheduled include $2.9b on the Calgary/Edmonton Ring Roads and $526m for water and wastewater management projects. Other major transportation infrastructure projects include the $1.8b Valley LRT and the proposed $1.5b Green Line in Calgary.

The expanded capital spending could be a boon to both Edmonton and Calgary, which have capital plans calling for a total of $12b in new spending. A further $4b is needed to repair roads in rural areas. And there is still $1.1b worth of disaster and flood mitigation work needed in the aftermath of Calgary's 2013 flood.

The provincial government has already committed $297m in funding to help finance flood protection projects along the Bow and Elbow Rivers, as well as $150m over 10 years to the City of Calgary for local projects through the Alberta Community Resilience Program.

Workloads in 2016 will also be cushioned by ongoing commercial projects. Calgary has close to 5 million square feet of office space under construction, the largest amount of new commercial space being built in any city in Canada. Edmonton has nearly 2-million sf of space under construction as well as Arena district revitalization projects.

There are bright spots in the economy. Alberta is projected to see a 26.3 per cent jump in manufacturing construction investment in 2015, and the farm sector, especially livestock, has been a strong performer in 2015, with a promise of more of the same in 2016.

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance	**$5.9b**
6.1% increase over 2015	
Residential/Renovation	**$19.1b**
5.5% increase over 2015	
Non-residential Building	**$9.1b**
1.7% increase over 2015	
Engineering/Infrastructure	**$30.1b**
5.7% decrease from 2015	

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

SASKATCHEWAN

Record infrastructure investment supports rebound

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance **$1.5b**
4.1% increase over 2015

Residential/Renovation **$2.9b**
2.0% increase over 2015

Non-residential Building **$2.4b**
4.6% increase over 2015

Engineering/Infrastructure **$4.8b**
20.0% increase over 2015

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

AS AN OIL-AND-GAS PRODUCING PROVINCE, Saskatchewan faced a challenging year in 2015. There was a sharp decline in non-residential construction investment in the wake of sustained low oil and gas prices that put the brakes on economic growth. The forecast is for GDP growth of less than 1 per cent in 2015 with a rebound to growth of more than 1.5 per cent in 2016.

The low oil prices and weak growth also slowed net migration to Saskatchewan, with projections calling for declines in 2015 and 2016 after several years of robust growth. While diminished, net migration will still contribute to housing demand. Starts are projected at 5,800 for 2016 and 5,900 for 2017. A small decrease in employment is forecast, with the unemployment rate expected to rise close to 5 per cent in 2015, followed by a slight decline in 2016 as growth resumes.

The provincial government's four-year, $5.8b Saskatchewan Builds Capital Plan will help support construction levels and stimulate growth. The plan provides the largest infrastructure allocation in the province's history – an increase of almost 50 per cent over the previous year.

The well-timed infusion – plus expected expansion in the metals and potash sectors and a return to normal for agriculture – will help temper the sharp decline in non-residential construction investment and moderation in the residential sector as the province regains its footing in 2016.

The Capital Plan calls for spending increases in multiple infrastructure categories. Transportation spending will increase by $175m to $581m, a good portion of which will go for the next phase of the Regina Bypass (estimated at $221m) and the twinning of Highway 16 east of Saskatoon. K-12 schools will get $150m more to $248m; and there is $161m more for healthcare, which will raise spending to $256m.

Ongoing major projects include the $285m Children's Hospital of Saskatchewan and the $1.8b Regina Bypass, both scheduled for completion in 2019, and the $181m Regina Wastewater Treatment Plant, due for completion at the end of 2016. Major Crown capital projects for 2015–16 include $1.2b at SaskPower; SaskTel will invest $313m; and SaskEnergy will spend $257m.

The next two years are expected to bring strong growth prospects in metal mining and in potash. Increased global demand for uranium is expected to boost production as well as investment. Overall there are more than a dozen projects valued at some $30b underway in the mining sector, and another 20 projects valued at $5b in oil and gas development and pipeline expansion.

The provincial government's record investment in infrastructure – a 50 per cent increase over the previous year – will help ease the pain of lower oil prices. An expected rebound in potash prices and a return to normal in agriculture will also help keep the economy inching forward as the province regains its footing in 2016.

Michael Gabert, Director

MANITOBA

Engineering projects anchor stable construction levels

MANITOBA'S CONSTRUCTION ACTIVITY – as diversified as its economy – promises modest but stable growth for the industry over the next two years.

Major new industrial projects, including Bentall Kennedy's proposed 130-acre distribution and manufacturing facility, reflect the robust performance of the provincial economy, which is expected to be among Canada's strongest. GDP forecasts call for growth near 2 per cent in 2015 and 2.2 per cent in 2016, and 2.3 per cent in 2017. Manitoba is expected to benefit from stronger U.S. growth and a lower Canadian dollar that should increase demand for its manufacturing and agricultural exports.

Engineering construction investment accounts for the largest share of non-residential activity. Major ongoing projects include the $4.6b Keeyask Generating Station Phase 2, $4.6b Bipole III Transmission line, and a $3.7b, five-year transportation infrastructure program. Manitoba has 110 bridges on the national highway system, with 6 per cent of them over 40 years old and close to the end of their 50-year design life.

Another current, long-term infrastructure project is the $3b East Side Transportation Initiative that will see 1,028 km of all-season road connecting the east side of Lake Winnipeg and eastern Manitoba in general, with the wider road network.

There is also $300m worth of flood protection and water quality projects that will provide added support for healthy workloads. Upcoming projects such as the $590m Southwest Transitway extension, $150m CentrePort Canada Way extension, $400m North End Wastewater Treatment Plant and a Biosolids Heat Drying Plant will help maintain stable construction levels in the longer term.

On the commercial and institutional sides, the completion of the RBC Convention Centre and new Police Headquarters are leading a downtown Winnipeg revitalization that has seen a new condo development, Glasshouse Lofts, slated for spring 2016 completion, and a new mixed-used condo tower, the 47-storey SkyCity Centre.

Despite having Canada's second highest (after Alberta) population growth rate of 1.21 per cent, lower net migration in Manitoba of 8,200 in 2015 will serve to dampen housing demand. The number of newcomers, however, is expected to remain at or near that level through 2017, contributing to stable demand for residential building. Total housing starts are forecast at 5,600 for 2016 and 5,700 for 2017.

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance	**$1.1b**
3.2% increase over 2015	
Residential/Renovation	**$2.9b**
3.8% increase over 2015	
Non-residential Building	**$2.0b**
10.2% increase over 2015	
Engineering/Infrastructure	**$4.9b**
24.9% increase over 2015	

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

Huge hydro generation and transmission projects, significant investment in transportation infrastructure and one of the country's steadiest provincial economies – buoyed by rising United States demand coupled with a lower Canadian dollar – will help keep Manitoba's construction industries humming.

George Chen, Associate Director

QUEBEC

Mega-projects boost construction

Preliminary Construction Investment Projections for 2016
2007 dollars*

Maintenance $7.5b
1.9% increase over 2015

Residential/Renovation $20.5b
5.0% increase over 2015

Non-residential Building $9.9b
4.3% increase over 2015

Engineering/Infrastructure $15.3b
13.0% increase over 2015

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

SOME OF CANADA'S LARGEST TRANSPORTATION and mining projects will help keep overall construction levels healthy as major social infrastructure projects wind down. The mega-projects are in addition to expected modest increases in residential, commercial and industrial building, all of which reflect gradually accelerating economic growth.

Most analysts forecast GDP to rise steadily from about 1.5 per cent in 2015 to 1.9 per cent in 2016 and 2.1 per cent in 2017. Increases in immigration will support total net migration in 2016 of between 39,000 and 43,000, and between 41,000 and 45,000 in 2017. This growth will support demand for housing. Total housing starts are estimated at 34,400 for 2016 and 35,000 for 2017.

The provincial government is spending $3.5b in infrastructure investments in each of 2015 and 2016 as part of a three-year plan. There is $1b a year for public transit, as well as $1.1b a year for recreational facility upgrades and new facilities. There is also $1.5b allocated over the next five years for the development of port infrastructure and logistical hubs.

Montreal is increasing spending by $678m, for a total of $5.2b over three years. Half the funds will go towards road repairs, infrastructure, and replacement and upgrading of underground water networks.

The largest new projects are the federally funded $5b New Champlain Bridge replacement and the $3.7b Turcot interchange, both in Montreal. The Romaine 1 and Romaine 3 phases of the ongoing $6.5b Romaine hydro projects are scheduled for completion in 2016 and 2017, respectively. Upcoming projects include two proposed LRTs estimated at $5b in total; one would run from downtown Montreal to the airport and western suburbs, the other to the South Shore via the New Champlain Bridge

Major social infrastructure projects winding down include the completion in 2016 of Phase 1 of the $2.6b Centre Hospitalier de l'Université de Montréal (CHUM) and the $995 m Ste. Justine Hospital. CHUM Phase 2, a medical office tower and conference facility, is scheduled for completion in spring 2020. The lull between major projects could contribute to increased competition in the local market.

Commercial highlights include the fall 2016 groundbreaking of Le Phare du Quebec, a $600m project in Quebec City with commercial, residential, office, and hotel components and a 65-storey tower, and continuation of Cadillac-Fairview's $2b, 15-year redevelopment program for downtown Montreal. The program kicked off with the $200 m Deloitte Tower occupied in 2015, and the $165m Tour des Canadiens condo tower to be delivered in fall 2016.

Montreal's leading residential/mixed-use projects include the $147m Roccabella, $146m ICONE, $175m L'Avenue, The Yul, Phase 1, and 1420 Boul. Mont-Royal, a condo redevelopment of a former convent. Manulife is currently developing the long-awaited $114m Maison Manuvie office complex in Montreal's retail district.

The largest new resource project is the $3b Dumont mine in northwestern Quebec; it will be one of the world's largest nickel mines. The Quebec government's Plan du Nord for developing the north of the province started operations in 2015 and will spend $50m over the next five years.

Some of Canada's biggest ticket transportation and mining projects, combined with sustained strong infrastructure investment and ongoing commercial projects will keep Quebec's construction levels stable. The export focused provincial economy gets a boost from the strengthening United States recovery and lower loonie.

Antonio Niro, Director

ATLANTIC REGION

Atlantic Region growth ranges from robust to slow and steady

THE FOUR ATLANTIC PROVINCES are expected to see a mixed bag of performance in 2016. Nova Scotia is expected to lead the pack with robust activity, followed by slow but steadily-improving New Brunswick and Prince Edward Island, with Newfoundland and Labrador struggling from reduced revenue – and investment – due to lower oil prices.

Nova Scotia

Increased foreign investment in real estate is expected to support stronger residential and commercial construction. Major projects such as the $1.52b Maritime Link electric transmission project should help offset the end of the shipyard preparation for work on the first of the naval vessels to be built as part of a $25b federal contract. Other developments include the $500m Nova Centre office, condo and hotel complex and the multi-phase $500m Kings Wharf mixed use project. GDP growth is expected to be about 1.5 per cent in 2015 and rise to 1.7 per cent in 2016 and 2017. Housing starts are projected to be 3,100 for 2016 and 3,000 for 2017.

New Brunswick

New Brunswick can anticipate greater activity with new pipeline construction as well as associated storage and marine terminal facilities, expected as part of the Energy East project. Weak population growth and in-migration will see only a slight increase in residential investment, with housing starts rising to 1,675 for 2016 and 1,725 for 2017. GDP is projected to increase by 1.0 per cent to 1.2 per cent annually from 2015 to 2017.

Anchored by energy and commercial projects, Nova Scotia will lead the pack in the Atlantic region. Low in-migration continues to slow growth in all four provinces, with New Brunswick and Prince Edward Island slowly gaining ground in overall activity. As a major oil producer, Newfoundland and Labrador is struggling, but will gain from the continuing development of major energy projects such as Muskrat Falls and the Hebron oil field.

Emma Magee, Associate Director

Prince Edward Island

Tourism-dependent PEI can expect improving economic activity with more Canadians shifting travel budgets back to staying within Canada and U.S. travellers heading north for vacation. The weaker Canadian dollar should also support growth for exporters in the aerospace, biosciences and seafood processing sectors of the economy. Housing starts are projected at 460 for 2016 and 475 for 2017. GDP growth is expected to rise from 1.5 per cent in 2015 to 1.7 per cent in 2017.

Newfoundland and Labrador

Like Alberta, Newfoundland and Labrador will experience a decline in oil revenues that will ripple through its economy. On-going major projects, such as the $14b Hebron oil project and the $7b Muskrat Falls hydro project, will help the province's construction industry weather continuing low commodity prices that put proposed projects at risk of delay or to be extended over longer periods. Out-migration from NL to other parts of Canada continues to offset gains in international immigration, which is driving the need for workers with global expertise in resource- and energy-related project development. Housing starts are estimated at 1,600 in 2015 and 1,650 in 2016. GDP is expected to decrease by 2.0 per cent in 2015, and 0.6 per cent in 2016 before turning positive at 0.2 per cent in 2017.

Preliminary Construction Investment Projections for 2016

2007 dollars*

Maintenance **$2.2b**
2.2% increase over 2015

Residential/Renovation **$4.5b**
2.5% increase over 2015

Non-residential Building **$3.1b**
7.2% increase over 2015

Engineering/Infrastructure **$8.5b**
9.0% increase over 2015

* 2007 dollars indicates that the money values are in year 2007 dollars (base year), that is, adjusted by inflation. This is used to calculate the real physical change of the values, factoring out growth due to increases in prices.

Source: BuildForce Canada

COST DATA PARAMETERS COMPARISON

BTY has been publishing the annual Market Intelligence Report and a comparison of Cost Data Parameters since 2003. The Cost Data includes unit rates for selected project categories, based on in-house data surveyed on a provincial level, and tendered data where available. The comparison provides actual data for 2015 and forecast data for 2016, using escalation levels generated by BTY.

Expect escalation rates for non-residential construction to remain low, with the overall dampening effects of slower than expected economic growth tempering the anticipated increase in that sector. On the residential side, the growing strength of the United States recovery could well spur upward movement in material prices in Canada.

Eldon Lau, Partner

PROJECT CATEGORY	BRITISH COLUMBIA				ALBERTA			
	Actual 2015		Forecast 2016		Actual 2015		Forecast 2016	
	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²
Health Care								
Residential Care	2,330 - 2,570	216 - 239	2,360 - 2,610	219 - 242	2,550 - 3,080	237 - 286	2,580 - 3,110	240 - 289
Ambulatory Care	4,580 - 4,750	425 - 441	4,650 - 4,820	432 - 448	4,580 - 5,000	425 - 465	4,630 - 5,050	430 - 469
Acute Care	5,480 - 6,090	509 - 566	5,560 - 6,180	517 - 574	5,900 - 6,890	548 - 640	5,960 - 6,960	554 - 647
Laboratories								
Research Laboratories	5,770 - 6,400	536 - 595	5,860 - 6,500	544 - 604	6,150 - 6,810	571 - 633	6,210 - 6,880	577 - 639
Teaching Laboratories	4,490 - 4,970	417 - 462	4,560 - 5,040	424 - 468	5,020 - 5,840	466 - 543	5,070 - 5,900	471 - 548
Animal Research	7,310 - 8,120	679 - 754	7,420 - 8,240	689 - 766	7,310 - 8,000	679 - 743	7,380 - 8,080	686 - 751
High-rise Residential								
Rental Units	2,070 - 2,660	192 - 247	2,090 - 2,690	194 - 250	2,150 - 2,690	200 - 250	2,160 - 2,700	201 - 251
Market Units Mid End Specifications	2,390 - 3,040	222 - 282	2,410 - 3,070	224 - 285	2,450 - 3,150	228 - 293	2,460 - 3,170	229 - 295
Market Units High End Specifications	2,860 - 3,640	266 - 338	2,890 - 3,680	268 - 342	2,850 - 3,660	265 - 340	2,860 - 3,680	266 - 342
Low- & Mid-rise Residential								
Rental Units	1,500 - 1,800	139 - 167	1,520 - 1,820	141 - 169	1,470 - 1,780	137 - 165	1,480 - 1,790	137 - 166
Market Units Mid End Specifications	1,600 - 2,200	149 - 204	1,620 - 2,220	151 - 206	1,660 - 2,210	154 - 205	1,670 - 2,220	155 - 206
Market Units High End Specifications	2,200 - 2,800	204 - 260	2,220 - 2,830	206 - 263	2,090 - 2,530	194 - 235	2,100 - 2,540	195 - 236
Townhouses (Wood Frame)								
Rental Units	1,110 - 1,360	103 - 126	1,120 - 1,370	104 - 127	1,130 - 1,480	105 - 137	1,140 - 1,490	106 - 138
Market Units Mid End Specifications	1,310 - 1,630	122 - 151	1,320 - 1,650	123 - 153	1,450 - 1,720	135 - 160	1,460 - 1,730	136 - 161
Market Units High End Specifications	1,530 - 2,220	142 - 206	1,550 - 2,240	144 - 208	1,670 - 2,260	155 - 210	1,680 - 2,270	156 - 211
Shopping Centres								
Strip Plaza	960 - 2,410	89 - 224	970 - 2,450	90 - 228	1,290 - 2,110	120 - 196	1,300 - 2,120	121 - 197
Enclosed Mall	2,290 - 3,280	213 - 305	2,320 - 3,330	216 - 309	2,370 - 3,070	220 - 285	2,380 - 3,090	221 - 287
Anchor/Department Store	2,020 - 2,460	188 - 229	2,050 - 2,500	190 - 232	2,200 - 2,850	204 - 265	2,210 - 2,860	205 - 266
Supermarket	1,470 - 1,970	137 - 183	1,490 - 2,000	138 - 186	1,740 - 2,150	162 - 200	1,750 - 2,160	163 - 201
Discount Store	1,220 - 1,770	113 - 164	1,240 - 1,800	115 - 167	1,400 - 1,800	130 - 167	1,410 - 1,810	131 - 168
Office								
Under 5 Storeys	1,530 - 1,820	142 - 169	1,550 - 1,850	144 - 172	1,850 - 2,800	172 - 260	1,860 - 2,810	173 - 261
5 - 10 Storeys	1,870 - 2,430	174 - 226	1,900 - 2,470	177 - 229	2,210 - 2,780	205 - 258	2,220 - 2,790	206 - 259
10 - 20 Storeys	2,130 - 2,660	198 - 247	2,160 - 2,700	201 - 251	2,280 - 2,950	212 - 274	2,290 - 2,960	213 - 275
20 - 30 Storeys	2,460 - 3,230	229 - 300	2,500 - 3,280	232 - 305	2,590 - 3,560	241 - 331	2,600 - 3,580	242 - 333
Educational								
Elementary Schools	1,980 - 2,690	184 - 250	2,010 - 2,730	187 - 254	2,140 - 2,790	199 - 259	2,160 - 2,820	201 - 262
Secondary Schools	2,120 - 3,010	197 - 280	2,150 - 3,060	200 - 284	2,250 - 2,860	209 - 266	2,270 - 2,890	211 - 268
Higher Education	2,540 - 3,870	236 - 360	2,580 - 3,930	240 - 365	2,600 - 3,520	242 - 327	2,630 - 3,560	244 - 331
Light Industrial								
Warehouse	860 - 1,140	80 - 106	870 - 1,150	81 - 107	1,130 - 1,560	105 - 145	1,140 - 1,570	106 - 146
Hotels								
Low Rise	1,770 - 2,530	164 - 235	1,790 - 2,560	166 - 238	1,940 - 2,630	180 - 244	1,950 - 2,640	181 - 245
Roads - Paving	$/Lane km		$/Lane km		$/Lane km		$/Lane km	
Paved Highway - Linear Roadworks	913,000 - 1,158,000		931,300 - 1,181,200		969,000 - 1,200,000		978,700 - 1,212,000	
Road Overpass Bridge Structure	$/m²		$/m²		$/m2		$/m²	
Highway Overpass Structures	3,600 - 5,000		3,700 - 5,100		3,700 - 5,800		3,800 - 5,900	

PROJECT CATEGORY	SASKATCHEWAN				ONTARIO				QUEBEC			
	Actual 2015		Forecast 2016		Actual 2015		Forecast 2016		Actual 2015		Forecast 2016	
	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²	$/m²	$/ft²
Health Care												
Residential Care	2,660 - 3,070	247 - 285	2,740 - 3,160	255 - 294	2,450 - 2,790	226 - 256	2,470 - 2,820	232 - 264	2,500 - 2,840	232 - 264	2,500 - 2,840	232 - 264
Ambulatory Care	4,800 - 5,690	446 - 529	4,940 - 5,860	459 - 544	4,510 - 5,080	415 - 467	4,560 - 5,130	427 - 481	4,600 - 5,120	427 - 476	4,600 - 5,120	427 - 476
Acute Care	5,690 - 6,750	529 - 627	5,860 - 6,950	544 - 646	5,870 - 6,310	540 - 581	5,930 - 6,370	556 - 598	5,000 - 6,390	465 - 594	5,000 - 6,390	465 - 594
Laboratories												
Research Laboratories	6,540 - 7,570	608 - 703	6,740 - 7,800	626 - 725	6,100 - 6,890	561 - 634	6,160 - 6,960	578 - 652	6,090 - 6,990	566 - 649	6,090 - 6,990	566 - 649
Teaching Laboratories	5,320 - 5,910	494 - 549	5,480 - 6,090	509 - 566	5,150 - 5,920	474 - 544	5,200 - 5,980	488 - 561	5,050 - 6,010	469 - 558	5,050 - 6,010	469 - 558
Animal Research	8,490 - 8,900	789 - 827	8,740 - 9,170	812 - 852	6,080 - 7,950	559 - 731	6,140 - 8,030	576 - 753	6,190 - 8,110	575 - 753	6,190 - 8,110	575 - 753
High-rise Residential												
Rental Units	2,150 - 2,710	200 - 252	2,200 - 2,780	204 - 258	2,330 - 3,010	215 - 277	2,350 - 3,040	220 - 283	1,800 - 2,300	167 - 214	1,800 - 2,300	167 - 214
Market Units Mid End Specifications	2,470 - 3,170	229 - 295	2,530 - 3,250	235 - 302	2,680 - 3,460	246 - 319	2,710 - 3,490	253 - 327	2,200 - 2,800	204 - 260	2,200 - 2,800	204 - 260
Market Units High End Specifications	2,850 - 3,700	265 - 344	2,920 - 3,790	271 - 352	3,210 - 4,160	295 - 383	3,240 - 4,200	303 - 392	2,700 - 4,000	251 - 372	2,700 - 4,000	251 - 372
Low- & Mid-rise Residential												
Rental Units	1,320 - 1,670	123 - 155	1,350 - 1,700	125 - 158	1,210 - 1,430	111 - 132	1,220 - 1,440	113 - 135	1,200 - 1,420	111 - 132	1,200 - 1,420	111 - 132
Market Units Mid End Specifications	1,510 - 1,600	140 - 149	1,540 - 1,630	143 - 151	1,430 - 1,670	132 - 153	1,440 - 1,690	135 - 156	1,300 - 1,650	121 - 153	1,300 - 1,650	121 - 153
Market Units High End Specifications	2,230 - 2,500	207 - 232	2,270 - 2,550	211 - 237	1,780 - 2,120	164 - 195	1,800 - 2,140	167 - 199	1,700 - 2,100	158 - 195	1,700 - 2,100	158 - 195
Townhouses (Wood Frame)												
Rental Units	1,530 - 1,600	142 - 149	1,560 - 1,630	145 - 151	1,210 - 1,430	111 - 132	1,220 - 1,440	113 - 135	1,000 - 1,350	93 - 125	1,000 - 1,350	93 - 125
Market Units Mid End Specifications	750 - 910	70 - 85	770 - 930	72 - 86	1,330 - 1,550	123 - 142	1,340 - 1,570	125 - 145	1,300 - 1,610	121 - 150	1,300 - 1,610	121 - 150
Market Units High End Specifications	1,230 - 1,400	114 - 130	1,250 - 1,430	116 - 133	1,550 - 1,890	142 - 174	1,570 - 1,910	145 - 177	1,500 - 2,100	139 - 195	1,500 - 2,100	139 - 195
Shopping Centres												
Strip Plaza	1,430 - 2,080	133 - 193	1,460 - 2,120	136 - 197	1,330 - 1,670	123 - 153	1,340 - 1,690	125 - 156	900 - 1,500	84 - 139	900 - 1,500	84 - 139
Enclosed Mall	2,350 - 3,070	218 - 285	2,400 - 3,130	223 - 291	1,670 - 1,990	153 - 183	1,690 - 2,010	156 - 187	2,100 - 2,900	195 - 269	2,100 - 2,900	195 - 269
Anchor/Department Store	2,250 - 2,910	209 - 270	2,300 - 2,970	214 - 276	2,020 - 2,380	186 - 219	2,040 - 2,400	190 - 224	1,800 - 2,400	167 - 223	1,800 - 2,400	167 - 223
Supermarket	1,210 - 2,200	112 - 204	1,230 - 2,240	114 - 208	1,490 - 1,910	137 - 176	1,500 - 1,930	140 - 179	1,200 - 1,650	111 - 153	1,200 - 1,650	111 - 153
Discount Store	1,430 - 1,840	133 - 171	1,460 - 1,880	136 - 175	1,210 - 1,430	111 - 132	1,220 - 1,440	113 - 135	1,150 - 1,500	107 - 139	1,150 - 1,500	107 - 139
Office												
Under 5 Storeys	2,150 - 4,020	200 - 373	2,190 - 4,100	203 - 381	1,670 - 1,990	153 - 183	1,690 - 2,010	156 - 187	1,450 - 1,750	135 - 163	1,450 - 1,750	135 - 163
5 - 10 Storeys	2,310 - 3,530	215 - 328	2,360 - 3,600	219 - 334	1,780 - 2,220	164 - 204	1,800 - 2,240	167 - 208	1,750 - 2,200	163 - 204	1,750 - 2,200	163 - 204
10 - 20 Storeys	2,380 - 3,040	221 - 282	2,430 - 3,100	226 - 288	2,010 - 2,450	185 - 226	2,030 - 2,470	189 - 230	1,800 - 2,430	167 - 226	1,800 - 2,430	167 - 226
20 - 30 Storeys	2,740 - 3,450	255 - 321	2,790 - 3,520	259 - 327	2,260 - 2,820	208 - 259	2,280 - 2,850	212 - 265	2,280 - 2,930	212 - 272	2,280 - 2,930	212 - 272
Educational												
Elementary Schools	2,250 - 3,170	209 - 295	2,320 - 3,270	216 - 304	1,680 - 2,000	154 - 184	1,700 - 2,020	159 - 190	1,600 - 1,900	149 - 177	1,600 - 1,900	149 - 177
Secondary Schools	2,350 - 3,270	218 - 304	2,420 - 3,370	225 - 313	1,780 - 2,220	164 - 204	1,800 - 2,240	168 - 211	1,700 - 2,150	158 - 200	1,700 - 2,150	158 - 200
Higher Education	2,660 - 3,680	247 - 342	2,740 - 3,790	255 - 352	2,050 - 2,490	189 - 229	2,070 - 2,510	194 - 236	2,500 - 4,000	232 - 372	2,500 - 4,000	232 - 372
Light Industrial												
Warehouse	1,550 - 2,060	144 - 191	1,580 - 2,100	147 - 195	1,020 - 1,250	94 - 115	1,030 - 1,260	96 - 117	800 - 1,100	74 - 102	800 - 1,100	74 - 102
Hotels												
Low Rise	1,840 - 2,560	171 - 238	1,880 - 2,610	175 - 242	1,750 - 2,310	164 - 215	1,770 - 2,330	163 - 215	1,700 - 2,300	158 - 214	1,700 - 2,300	158 - 214
Roads - Paving	$/Lane km		$/Lane km		$/Lane km		$/Lane km		$/Lane km		$/Lane km	
Paved Highway - Linear Roadworks	1,106,000 - 1,254,000		1,150,200 - 1,304,200		850,000 - 1,050,000		867,000 - 1,071,000		1,154,000 - 1,302,000		1,154,000 - 1,302,000	
Road Overpass Bridge Structure	$/m²		$/m²		$/m²		$/m²		$/m²		$/m²	
Highway Overpass Structures	4,300 - 6,300		4,500 - 6,600		3,700 - 5,700		3,800 - 5,900		4,500 - 6,500		4,500 - 6,500	

Note: The unit rates reflect hard construction costs, including general requirements and fees, and excluding site works and tenant improvements. Variances in unit rates and escalation will occur due to the remoteness of some regions and prevailing local market conditions. Construction costs can also be affected by a multitude of factors that may not be limited to market conditions.

BTY strongly recommends that readers seek the advice of a Professional Quantity Surveyor (PQS) prior to establishing a budget for their specific projects.

INTERNATIONAL P3 MARKET OUTLOOK

Overview of International P3 Market

INTERNATIONAL P3 MARKETS

Infrastructure spending worldwide is projected to grow from $4 trillion per year in 2012 to more than $9 trillion per year by 2025. The forecast is for global spending of an estimated $78 trillion between 2014 and 2025. A major shift from west to east (and north to south) is already under way, with emerging markets already accounting for half of infrastructure spending.

WHEREVER THAT INVESTMENT is taking place, the use of P3 financing for infrastructure is expanding with it.

While the project pace has declined in mature markets such as the U.K. and Europe, there are pockets of growth, such as Belgium and Poland. In some newer markets, such as the U.S., initial rapid expansion has slowed, even as project flow is accelerating in other markets in the Middle East, central Asia and Africa. The variables affecting the adoption of the P3 model – and the pace of development – differ from country to country. In almost every case, countries experience a learning curve in adapting the model to their particular circumstances.

Canada has adapted the original P3 model developed in the U.K. to become one of the world's most successful P3 markets, with more than 75 operational P3s, another 35 in the construction phase and more than 25 in various stages of procurement. The success is due in part to the Canadian P3 model's transparency – and its highly efficient procurement process that features median procurement time over the whole program of 16 months and generally lower bid costs.

BTY has been instrumental in developing the Lenders' Technical Advisor and the Independent Certifier roles that are key to the success of the Canadian model. Now an established leader in P3 Advisory services with more than 140 mandates in markets across the world, BTY was ranked at the top in 2015 for Technical Advisory in North America by both InfraDeals and IJGlobal. The firm is now exporting its expertise to newer markets, including the U.S. and Turkey.

As global spending on infrastructure grows to more than $4 trillion a year, the use of the P3 model is expanding with it. Only now there is a major shift from mature markets such as the U.K. to countries in the Mid-east, Central Asia and Africa that are adapting the model to meet their own development needs.

Marie Foley,
Director of P3 Advisory Services

UNITED STATES

Outlook for P3s in the U.S.: new longer-term funding programs strengthen U.S. P3 prospects

THREE KEY DEVELOPMENTS AUGUR WELL FOR EXPANDING THE MARKET FOR P3s IN THE U.S.:

Fixing America's Surface Transportation

First, the passage of the Fixing America's Surface Transportation (FAST) Act, a five-year, U.S. $281b transportation authorization and funding bill. This funding would provide fresh fuel to accelerate progress in P3 road, bridge, tunnel and transit projects across the country over a longer term than previous patchwork funding.

The FAST Act also establishes a pilot program for communities to expand transit through the use of P3s as well as a National Surface Transportation and Innovative Finance Bureau, which will aid states, local governments and the private sector with project delivery.

The FAST Act sends a message that infrastructure is a government priority, and reliable longer-term funding is available. The legislation would be the first transportation bill with funding for longer than two years passed by Congress since 2005.

A record number of P3 transportation projects were expected to achieve financial close in 2015, but uncertainty over funding and/or political support appears to have stalled multiple projects. More than 90 of the 130-plus active U.S. P3 projects are for transportation, but only five achieved financial close in 2015. By comparison, four of the 33 active social and health P3s achieved financial close in the same time span.

The FAST Act exemplifies the political will that is vital for both types of P3 projects to continue to advance in the U.S., according to BTY Director, Ryan Brady, who leads BTY's U.S. Operations and its Phoenix, AZ office. Political will is driven by public support. The completion of George Deukmejian Courthouse P3 project in Long Beach, CA is a good example of that dynamic.

Following the successful delivery of the Courthouse, the City of Long Beach is now moving forward with the P3 development of the Long Beach Civic Center. Such repeat projects in the same municipality send a strong positive message about the attractiveness of social infrastructure P3s.

"Political will to advance social infrastructure P3s is driven by many factors, one of which is the public perception of P3s," says Brady. "The value of a government office, courtroom or water treatment plant may be difficult for the general public to see. It is much easier to support a P3 if it is a freeway expansion that makes rush hour more bearable, or a bridge that cuts 15 minutes off your drive from point A to B. If a politician's constituency supports a project, so will the politician."

Build America Transportation Investment Initiative

A second key to expanding P3s in the U.S. is the launch of the government-wide Build America Investment Initiative in late 2014. Build America addresses another obstacle seen to be holding back P3 projects – lack of understanding and resources among potential participants.

The initiative aims to increase infrastructure investment by engaging with state and local governments as well as private sector investors to encourage collaboration, expand the market for P3s and get more out of existing federal financing programs. The Build America Transportation Investment Center (BATIC) serves as a one-stop shop for state and local governments, public and private developers and investors seeking to use innovative financing strategies for transportation infrastructure projects.

It gives state and local governments hands-on support, advice and expertise to make U.S. Department of Transport credit programs more understandable and accessible. It also gives private sector developers and infrastructure investors tools and resources to identify and execute successful P3s.

The United States P3 market looks set to regain momentum lost in 2015 due to funding uncertainty and wavering political will. New legislation that secures transportation funding for five years and extends low-interest federal loans to partially fund vital water and wastewater treatment projects, and new programs that bolster the use of the P3 model, will combine to give P3s a continuing boost in 2016.

Ryan Brady, Director

Water Infrastructure Finance and Innovation Act (WIFIA)

A third key is the passage of the Water Infrastructure Finance and Innovation Act (WIFIA). The program, also launched in late 2014, has the potential to do for water and wastewater infrastructure what the highly successful Transportation Infrastructure Finance and Innovation Act (TIFIA) program did for accelerating transportation infrastructure development.

WIFIA makes low interest rate federal loans available to partially fund vital water and wastewater infrastructure. To date there are 12 active P3 waste and wastewater projects in the U.S. The FAST Act also removes a section of WIFIA that prohibited the use of tax-exempt debt with WIFIA loans. Tax-exempt bonds are one of the most cost-effective tools for communities that seek WIFIA loans.

The same conditions apply today as they did when a 2014 report from Moody's Investors Service stated that the U.S. had strong potential to become the world's largest market for P3 projects. The firm's Global P3 Landscape report noted that with the sheer size of the country's infrastructure and growing urban population – in conjunction with the increased willingness of state governments to use P3s – there is continued potential for strong momentum for P3s in the United States.

The new funding and programs to support P3 development in transportation and water and wastewater infrastructure should help realize that potential.

There are now 33 states that have passed enabling legislation for P3s. Colorado, Florida, Texas and Indiana have the most robust programs with multiple projects in each state. California. Pennsylvania, Kentucky, Maryland, Michigan, Nevada, Arizona and Oregon all have P3 programs at varying stages of procurement.

Over the past three years, BTY has been involved in more than 20 P3 projects in 14 states; nine are currently active and one achieved financial close in 2015. There are 17 projects in transportation, and three in social and health infrastructure.

TURKEY

Healthcare leads massive wave of P3 projects

THE GOVERNMENT OF TURKEY'S 10TH NATIONAL DEVELOPMENT PLAN launched in 2014 identifies the use of P3s as a critical tool for achieving the country's ambitious infrastructure expansion plan. The country has targeted more than €94b worth of projects over the next 10 years.

In the past three years alone, Turkey has launched 30 major P3 projects, including the €6.24b Istanbul Third Airport, €5.87b Gebze-Izmire Highway, and the €2.29b North Marmara Highway and Third Bosporus Bridge.

The country's P3 pipeline is expanding its sectoral reach. Of the eight P3 projects that achieved financial close in the second half of 2015, seven were in healthcare.

The Ministry of Health's Healthcare Transformation plan calls for creating high quality hospitals with a capacity of 90,000 beds, 30,000 of which are to be procured using P3 financing. Of the 31 healthcare projects currently planned, four are under construction, nine are in contract negotiation and 18 are in procurement.

BTY is playing an active role in Turkish P3 projects in this sector. We are providing Lenders Technical Advisory services for three of the integrated health-campus projects: the €674m Izmir-Bayrakli, €328m Kocaeli, and the €252m Konya Karatay. We also provided fire and life safety code consulting services for the €1.25b Ankara Etlik, one of the world's largest P3 healthcare projects.

BTY's Regional Director and Ankara practice lead, Tunca Ataoglu, sees the appointments as validation of the firm's growing prominence as a leader in P3 Advisory in emerging markets.

"We bring a strong understanding of the local P3 structures and construction practices," says Ataoglu. "And we leverage that with our best practices from North America to offer a highly effective and comprehensive due diligence reporting process. The nature of Turkey's P3 activity has attracted many international lenders, who expect their advisors to possess this multi-national experience."

The firm's Director of P3 Advisory Services and lead for international P3 markets, Marie Foley, believes that BTY's combination of taking best practices from mature P3 markets and distinctive insights into new markets, especially when considering risks, effectively meets the needs of project lenders and sponsors.

"The Turkish P3 hospital program is one of the most ambitious in the global P3 marketplace. Both the public sector and private sector entities in this market stand to benefit greatly from proven practices and region specific solutions."

Few countries have embraced the P3 model as energetically as Turkey. With ambitious plans for €94b worth of projects over the next 10 years, the country is now pursuing P3 healthcare projects in addition to P3 transportation projects. Of Turkey's eight P3 projects that achieved financial close in the second half of 2015, seven were in healthcare.

Tunca Ataoglu, Regional Director of Turkey and Middle East and North Africa

GREEN BUILDING UPDATE

Business environment changing rapidly for carbon reduction

IT'S TIME TO EXPAND Kermit the Frog's refrain, "It ain't easy being green," by adding this qualifier: "but it's worth it."

The business environment in Canada for reducing carbon is changing rapidly. New cap-and-trade and other carbon-pricing polices, more stringent energy-efficiency requirements in building codes, and new building technologies, materials and processes are promising to make it more financially rewarding to reduce green house gas (GHG) emissions from buildings.

There are two big questions. What are the most efficient ways for a particular business or building to reduce fossil-fuel energy consumption (and the emissions they cause)? And how much will that cost?

The answer to both will depend a lot on where your business or building is. The new federal government has promised to convene the provinces early in 2016 to support provincial efforts aimed at pricing carbon, whether through cap-and-trade or a carbon tax.

In late November 2015, Alberta introduced a climate change plan that features a carbon tax and sets a cap on GHGs from oil sands. The money from the tax will go back to Albertans through a rebate program and be used to build green infrastructure and transit.

Alberta's plan follows Ontario's introduction earlier in the year of a carbon cap-and-trade scheme in 2015 that places GHG emission limits – or caps – on businesses. Those coming in under theirs can sell or trade credits, creating an economic incentive to pollute less. In time, an industry's overall cap will be lowered in order to reduce pollution, and presumably promote the use of greener energy sources. Burning fossil fuels will cost more, but those higher costs could be offset by cost reductions from cleaner energy. The province has promised to reduce overall costs by investing in energy retrofits, but details are yet to come.

While Alberta has no specific percentage reduction targets with dates, it does put the province on track to reduce emissions by approximately 20 megatonnes compared to what would be the case with no changes made. Ontario's goal is to cut emissions to 15 per cent below 1990 levels by 2020, with the expectation of being 80 per cent below 1990 levels by 2050. British Columbia, another leader in ambitious reductions of GHG emissions, has legislated targets of 33 per cent below 2007 levels for the 2020 calendar year and 80 per cent below 2007 levels for the 2050 calendar year. It has already achieved its interim goal of a 6 per cent reduction by 2012, largely thanks to the introduction of a carbon tax that covers most types of fossil fuels.

Since it took effect in 2008, BC's total use of those fuels has dropped by 16.1 per cent (2008-13). By contrast, in the rest of Canada fossil fuel use went up by 3 per cent over that time. Revenue-neutral by law, the proceeds from the carbon tax are matched by cuts in other taxes such as income tax. The economic impact? BC's GDP has slightly outperformed the rest of Canada's since the carbon tax began. BC simply raised taxes on pollution and lowered them on income.

Both provinces' leading cities have introduced ambitious targets for energy efficiency for buildings, which are estimated to account for between 30 per cent and 50 per cent of Canada's GHG emissions.

Toronto has new Minimum-Energy Performance targets for Mid- to High-Rise Residential and Non-Residential development. The new Toronto Green Standard (TGS) Minimum-Energy Performance targets require that developments be designed and constructed to achieve energy-efficiency levels 15 per cent better than the current Ontario Building Code (OBC) for TGS Tier 1 and 25 per cent better than OBC for TGS Tier 2.

Vancouver's target is for all new construction to be carbon neutral by 2020. Carbon neutrality, or having a net-zero carbon footprint, refers to having no net carbon emissions by balancing a measured amount of carbon with an equivalent amount sequestered or offset, such as by planting trees, or acquiring enough carbon credits to make up the difference.

The best practice is to reduce and/or avoid carbon emissions first so that only unavoidable emissions are offset. Two basic ways to achieve this are by using only

Achieving the GHG goals set at the Paris Climate Summit will require leadership from all three levels of government.

Neill McGowan, Partner

renewable energy that doesn't produce any carbon dioxide, and balancing carbon dioxide released into the atmosphere from burning fossil fuels with renewable energy that creates a similar amount of useful energy. The less fossil fuel burned for heat and light, the easier it is to achieve a net-zero carbon footprint.

Just as BC's carbon tax has yielded environmental as well as economic benefits, improving energy efficiency in pursuit of lower GHG emissions in buildings does pay off financially, according to a 2014 report by the Canadian Green Building Council (CGBC). Their survey of building owners, contractors and architects showed there was a median reduction of 17 per cent in operating costs over five years for green buildings reported by the firms included in the research, with a median payback of eight years for the investment in a new green building.

Requirements for higher energy efficiency and lower GHG emissions have also led to a surge of interest in alternative rating and certification systems for green building, such as Passiv Haus and The Living Building Challenge. Unlike the pioneering LEED and BOMA Best rating standards, both of the newer – and tougher – processes focus on achieving "net-zero" carbon emissions.

The first Canadian building to be awarded Living Building Challenge certification in 2011 was the VanDusen Botanical Gardens' 19,000 sf, $22m visitors centre in Vancouver. The centre is entirely carbon- and energy-neutral and is able to generate its own energy, harvest and treat its own water and uses locally sourced, non-toxic materials. BTY oversaw the cost management mandate for this project.

The main takeaway was that determining the most efficient mix of technologies, processes, and materials to meet the highest green standards – and the project budget – can be a steep learning curve. Understanding how to model performance over the building life cycle is critical to achieving environmental – and financial – success in costing construction in the emerging carbon-pricing paradigm.

Since 1979, BTY has advised clients worldwide on risk and cost management for their real estate and infrastructure projects.

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