ConstructConnect's Q3 2017 Construction Starts Forecast Report

July 2017

Contents

The total increase **in** U.S. employment **over the** past 12 months **has been** +2.24 million. **The** monthly average gain **in** 'hard hat' jobs **so far this year has been** +19,000, **which has almost** doubled **last year's first-half** pace of **+10,000.**

Highlights

- US construction starts slipped by 2.5% year-on-year in Q2, with significant divergence amongst subsectors. Non-residential building activity contracted most sharply, falling by 17.9% year-on-year, with steep declines across numerous sub-segments. In contrast, construction starts in the residential sector were far more positive, expanding by 6.1% on-the-year. Civil engineering was the standout subsector, growing by 19.4% year-on-year in Q2.

- US GDP growth slowed in Q1 to an annualized rate of 1.4% as higher inflation hit consumer spending growth—though we think this will be a temporary phenomenon and expect activity to rebound in Q2. The GDP growth forecast for 2017 as a whole is 2.2%, driven by firm trade and investment. Jobs growth continues at a robust pace, averaging 180,000 new jobs per month so far this year, while ongoing wage growth will underpin consumer spending.

- Headline US construction starts growth for 2017 has been lowered slightly to 4.5% (from 4.8%). This has been driven by slower-than-expected activity in non-residential starts. Looking ahead, the residential sector will remain the major driver of US construction. The civil engineering sector will also see robust growth going forward as much-needed investments in the US infrastructure stock are made.

- Canadian starts fell by 39.1% year-on-year in Q2, with the declines shared across the residential, non-residential and civil engineering subsectors. Residential starts fell by 8.4%, non-residential starts fell by 13.9% and civil engineering fell by 62.5% year-on-year.

- Canadian headline construction starts are set for another year of decline in 2017. From 2018 onwards, total starts will grow at a relatively healthy pace but this will still not be enough for 2021 starts to exceed 2014 levels. Much of the Canadian construction sector's performance will revolve around the large civil engineering sub-sector which is currently witnessing severe contractions amid falling investments in the extraction sector.

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Sources: ConstructConnect™/Oxford Economics. Forecast reflects actual starts through Q2 2017.

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Overview

US non-residential building starts decline, civil engineering is resilient

Total construction starts declined by 2.5% year-on-year in Q2, with a divergence in performance continuing between the construction subsectors. Total non-residential building starts declined by 17.9% from a year earlier, with several sub-segments experiencing steep drops. Construction of retail, manufacturing and parking garages all experienced year-on-year declines exceeding 50%. Construction of retail stores and parking garages look especially weak, with year-to-date declines of 57.2% and 47.2% respectively. The steep decline in manufacturing, by contrast, was likely due to base effects from a strong rise a year earlier; the year-to-date decline is more modest at 29.1%. Construction of courthouses, military and sports arenas bucked the negative trend posting year-on-year growth rates above 80%. Ground-breaking on a new football stadium in Los Angeles was a major contributor to the strength in the latter.

New residential construction projects increased by 6.1% year-on-year in Q2, with similar increases seen in both the single-family and multi-family segments. Starts of civil engineering projects saw the largest annual gain in Q2, growing by 19.4% from the same period a year earlier. Strong growth was seen across most sub-segments of engineering with the construction of airports and power infrastructure particularly robust. Only starts of water and sewage treatment facilities contracted on the year.

Alternative indicators of construction have shown signs of slowing. Put-in-place construction spending from the Census Bureau has been broadly flat in recent months with stronger growth in the residential sector than in the non-residential sector. Since starts are a forward indicator for put-in-place construction spending, this is broadly consistent with the relative performance between residential and non-residential construction starts seen since the beginning of 2017. Construction employment growth slowed to 29,000 in Q2, down from 87,000 new jobs in Q1.

Table 1: Summary forecasts (Annual percentage changes unless specified otherwise)							
	2015	2016	2017	2018	2019	2020	2021
US							
Macro variables							
GDP	2.6	1.6	2.2	2.4	1.9	1.6	1.6
Population growth	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Unemployment rate (%)	5.3	4.8	4.4	4.4	4.4	4.4	4.5
Real disposable income	3.5	2.6	2.0	2.9	1.7	1.5	1.5
Central bank rate (%)	0.1	0.4	1.0	1.5	2.1	2.6	2.8
10-year government yield (%)	2.1	1.8	2.3	2.4	2.7	3.1	3.4
Construction starts (y/y % change of $ volumes)							
Total starts	13.5	13.2	4.5	5.9	5.1	4.0	3.4
Residential	17.5	14.5	4.8	7.7	7.1	5.9	5.4
Non-res bldg	13.2	20.8	-0.8	3.3	2.4	1.1	0.7
Civil engineering	6.9	-3.9	16.5	7.4	6.5	5.6	3.9
Canada							
Macro variables							
GDP	0.9	1.5	2.6	2.0	1.9	1.7	1.7
Population growth	0.9	1.1	1.1	1.0	1.0	0.9	0.9
Unemployment rate (%)	6.9	7.0	6.7	6.6	6.6	6.6	6.5
Real disposable income	3.3	2.8	2.2	1.9	1.7	1.6	1.8
Central bank rate (%)	0.6	0.5	0.6	1.0	1.3	1.6	1.9
10-year government yield (%)	1.5	1.3	1.7	2.0	2.2	2.4	2.7
Exchange rate C$ per US$	1.28	1.33	1.32	1.30	1.29	1.28	1.27
Construction starts (y/y % change of $ volumes)							
Total starts	-10.1	-23.7	-10.6	11.7	11.5	9.4	8.4
Residential	0.4	1.0	0.2	6.1	6.0	5.6	5.0
Non-res bldg	23.7	-36.3	2.8	14.1	10.1	7.6	6.4
Civil engineering	-25.5	-34.4	-28.5	18.3	19.6	15.1	13.2

GDP growth prospects improving…

US GDP growth slowed to an annual rate of just 1.4% in 2017's Q1 as consumer spending growth was restrained by higher inflation, unusually warm weather and slower tax refunds. These factors are not expected to be repeated in Q2, so we thus forecast a rebound in GDP growth.

We expect that the economy will grow by 2.2% in 2017 overall, with consumer spending moderating somewhat from its pace of 2016, but business investment and trade firming. Recent gains in wages have been only modest (up 2.5% year-on-year in June), despite an unemployment rate of just 4.4% in June and anecdotal evidence of labor shortages. The economy has been creating jobs at a reasonable pace – 220,000 jobs were added in June and an average of 180,000 jobs per month have been added so far this year. Modest wage growth and rising employment should support income growth, underpinning household spending growth of 2.6% and 2.5% in 2017 and 2018 respectively. Rising incomes should also support growth in housing activity.

Business investment has improved from 2016, thanks to a stronger global backdrop and rebounding energy sector activity. However, ongoing political uncertainty poses a downside risk to the business outlook. Stronger global economic activity should also underpin a rebound in exports over the next two years.

We have pared back our expectations for a fiscal stimulus relative to last quarter. We now expect a package worth $500 billion

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(down from $1.2 trillion previously) over the next decade, including tax cuts for businesses and households and a modest infrastructure program. With less fiscal stimulus, the economy is now seen growing 2.4% in 2018 (compared to our expectation of 2.6% three months ago).

Inflation has moderated in recent months, to 1.6% in June (down from 2.7% in February). The Federal Reserve increased its benchmark interest rate by 25bp at its meeting in June, the third rate rise since late-2016. But with inflation moderating, we do not foresee any additional interest rate hikes for the remainder of 2017, and we expect that the Fed will raise rates twice in 2018.

....but construction starts are expected to moderate

Headline construction starts have been downgraded slightly in light of slower-than-expected non-residential starts growth so far this year. Residential construction is set to remain the major driver of US construction going forward, though a positive outlook within civil engineering will also contribute to headline growth. Non-residential building starts are comparatively more tepid with growth averaging just below 2% through to 2021.

The driving force of US construction continues to draw from the residential sector. Catch-up dynamics continue to propel residential construction in the US following on from several years of stagnation in homebuilding in the wake of the financial crisis. As of Q2 2017, residential construction remains 21% below its 2005 peak, and as such, we expect to see continued growth in residential construction.

Within residential construction, the single-family segment is set to experience the strongest growth going forward. The single-family segment fell furthest during the housing downturn following the subprime crisis amid foreclosures and increased demand for urban living, which tends to be dominated by multi-family accommodations. As such, the single-family sector has the most potential for fast catch-up growth. In addition, the rising prominence of the millennial generation as the major homebuying demographic is feeding into

Table 2: Drivers of headline sectors		
Sector	**Short-term drivers**	**Long-term drivers**
Residential	Unemployment rate; Household liabilities; Mortgage interest rates; House prices; Population trends	House prices; Incomes
Non-residential building	Output trends in relevant sector; Population trends; Capacity utilization; Borrowing costs; Employment in relevant sector; Disposable income	Output trends in relevant sector; Employment in relevant sector
Civil engineering	Federal/State/Provincial spending; Government borrowing costs; Employment in government sector; Output trends in relevant sector	Federal/State/Provincial spending; Output trends in relevant sector

increased demand for single-family housing. The millennial generation had previously driven the move into urban living, but as they reach family-rearing age, we expect this trend will progressively decline driven by the desire for more family-friendly living spaces.

Total non-residential starts are forecast to fall this year in the wake of weak starts growth in the year-to-date. Over the medium term, we forecast non-residential starts to grow by less than 2% per year on average, by far the slowest growth of the three major construction subsectors. Within non-residential construction, manufacturing starts will outperform headline non-residential construction starts. There remains some cause for optimism within the US manufacturing subsegment. The US maintains a competitive advantage within high value-added manufacturing, such as precision engineering and aerospace, reflecting the US stock in highly engineered products that require technical "know-how" and skilled labor. In addition, cheap energy prices keep input costs for US manufacturing competitive relative to other countries, particularly in energy-intensive industries like chemicals. Furthermore, the Trump administration has placed much political stock into rebuilding America's manufacturing base. Efforts to prevent further offshoring of American manufacturing, either by imposing tariffs, or by the threat of imposing tariffs, could raise the likelihood of US companies maintaining their manufacturing operations in the US.

The outlook for the medical-related sector has been lowered slightly amid increased uncertainty relating to healthcare reform. Republican efforts to repeal the past administration's legislation have so far fallen flat, but the spectre of the Affordable Care Act possibly coming to an end will likely diminish demand for new medical sector construction.

The outlook for civil engineering starts remains supportive. A strong uptake in new projects in the year-to-date have put civil engineering starts on course for double digit growth this year. Over the medium-term, starts will average in excess of 5% growth per year

The All Other Civil category, which includes oil and gas related infrastructure projects is set to grow at a near double-digit pace over the forecast period. The Trump administration's plans to expand US energy will underscore significant growth within oil and gas infrastructure. Key examples of projects already underway are the Dakota Access Pipeline and the Keystone XL, which were both approved by executive order in the first few days of the Trump presidency, underlining the importance the administration places on this sector.

Elsewhere, the Trump administration's general infrastructure plan has the potential to generate significant starts growth across the civil engineering sector. The plan has stressed the importance of incentivising private capital to make investments in

infrastructure with a view to reaping long-run cash returns via tolls and charges for its eventual use. Roads and bridges are both types of infrastructure that can be easily monetised via charges, and hence are more likely to benefit from this private financing model. Beyond this, the current poor state of the US infrastructure stock only serves to increase the need for new investments across the civil engineering subsector.

Second consecutive year of decline in Canada in 2017

Canadian construction starts fell by 39.1% year-on-year in Q2 2017, with steep declines posted in all three segments of residential building, non-residential building and especially civil engineering. Construction of residential buildings fell by 8.4% from a year earlier, resulting from a 26% decrease in multi-family starts that more than offset an 8.1% increase in new single-family home-building. New non-residential building contracted by 13.9% year-on-year with particularly steep annual declines posted in construction of hotels, miscellaneous retail and transportation terminals. Civil engineering construction starts declined by 62.5% year-on-year, with annual declines exceeding 60% in the construction of bridges, dams, power infrastructure and other civil (which fell by 97% year-on-year). Only construction of water and sewage treatment facilities increased from a year earlier.

The Canadian economy grew at an annual rate of 3.7% in the first quarter of 2017, and although GDP likely slowed in Q2, we estimate that it still grew by a healthy 2.2%. Total business investment fell steeply in 2015-16, driven by a sharp decline in oil prices. The low oil price undermined profitability in the oil and gas sector, leading to

a sharp retrenchment in capital spending by oil and gas companies. This drag should fade in 2017 – the energy sector has undergone a structural adjustment to lower oil prices, although softer oil prices since the end of May pose a downside risk. In addition, stronger external demand and a still-competitive currency, will provide a mild boost to exports in the coming quarters. Household spending is also expected to strengthen in 2017, but we expect it will moderate again in 2018. Recent job growth has been solid, but it is expected to slow in the coming quarters as the labor market tightens. Nominal wages have increased at a moderate pace, but inflation is also expected to pick up this year, eroding real incomes. The Bank of Canada raised its overnight lending rate by 25 basis point in July and signalled that additional rate hikes could be in the pipeline. A higher path for interest rates poses a downside risk to highly-indebted Canadian households. Overall, we expect that GDP growth will accelerate to 2.6% in 2017 before slowing to 2% in 2018, up from 1.5% growth last year.

Despite an improvement in the macro-economy, construction starts in Canada are expected to see another year of decline in 2017, largely resulting from their dismal performance in the first half of the year. Total construction starts are expected to shrink by 10.6% in 2017 overall, before returning to growth of 11.7% next year. A relatively healthy growth outlook in construction starts from 2018 should be seen in the context of three years of decline – even by 2021, Canadian total construction starts are still expected to be lower than at their 2014 peak.

New civil engineering projects are expected to lead the downturn in 2017. In particular, miscellaneous civil construction, which includes the oil and gas sector, is expected to decline by 60.2% this year fol-

lowing contractions of 73.8% and 29.7% in 2015 and 2016 respectively. The low oil price since late-2014 resulted in a steep reduction in oil sector capex in Canada. The oil price has stabilized somewhat this year, but that has yet to translate into a rebound of new projects. Oilfield construction should eventually bounce back from its current lows, but even by 2021, ground-breaking on other civil projects will be more than 65% below its 2014 peak.

Outside of civil engineering, construction is more robust. Non-residential building starts are expected to rise by 2.8% in 2017, improving to 14.1% growth in 2018. Particular strength is expected in the hospitals segment, an area that should benefit from strong government support as well as an aging population. The Trudeau government's fiscal spending plan is targeting investment in transport and water systems, which should see growth in most civil engineering categories as well as in transportation terminals (although all will decline in 2017 due to the weak start to the year). The outlook for the retail sector in Canada is more resilient than that in the US – retail vacancy rates are lower than in the US and are closer to their longer-term average based on data from CBRE.

Residential construction starts are expected to rise by 0.2% in 2017, accelerating to 6.1% growth in 2018. The scope for catch-up growth in Canada is smaller than in the US, particularly in the multi-family segment which is currently near historic highs. Moreover, apartment construction could be further restricted by macro-prudential policies aimed at moderating house price growth in overheating markets such as Toronto and Vancouver, although supply constraints means that new construction in these markets is probably necessary.

Table 3: U.S. Type-of-Structure Forecasts						
($ Billions USD)						
	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Single-family	173.165	186.757	198.985	218.193	237.523	254.383	270.663
Multi-family	65.866	86.923	87.793	90.718	93.393	95.901	98.625
TOTAL RESIDENTIAL	239.031	273.680	286.778	308.911	330.916	350.284	369.288
(Yr/yr % change)	17.5%	14.5%	4.8%	7.7%	7.1%	5.9%	5.4%
Hotels/Motels	14.907	20.239	27.962	27.195	26.116	23.857	21.551
Shopping/Retail	24.295	35.308	21.513	20.549	20.313	20.578	21.096
Parking Garages	3.252	4.549	3.471	3.818	4.039	4.109	4.175
Amusement	12.804	6.467	6.843	7.267	7.609	7.946	8.165
Private Offices	19.370	26.052	25.864	28.659	29.827	28.693	27.373
Govenmental Offices	10.516	13.102	12.695	13.251	13.645	13.976	14.273
Laboratories (Schools & Industrial)	2.332	3.918	2.696	2.897	3.031	3.171	3.270
Warehouses	15.229	14.785	17.188	18.122	19.004	19.595	20.187
Sports Stadium/Convention Center	9.265	8.022	11.816	11.470	11.633	11.948	12.278
Transportation Terminals	7.091	4.608	4.604	5.161	5.752	6.404	6.723
TOTAL COMMERCIAL	119.061	137.050	134.653	138.390	140.969	140.276	139.091
(Yr/yr % change)	21.6%	15.1%	-1.7%	2.8%	1.9%	-0.5%	-0.8%
TOTAL INDUSTRIAL (manufacturing)	15.048	20.204	17.930	19.611	20.216	20.807	21.392
(Yr/yr % change)	7.2%	34.3%	-11.3%	9.4%	3.1%	2.9%	2.8%
Religious	1.697	1.738	1.984	1.991	2.015	2.032	2.040
Hospitals/Clinics	14.409	21.431	18.934	19.177	19.956	20.640	21.101
Nursing Homes/Assisted Living	5.665	9.731	8.886	9.650	10.115	10.691	11.055
Libraries/Museums	3.006	3.213	2.985	3.126	3.195	3.252	3.292
Courthouse	1.183	1.276	2.679	2.952	3.132	3.345	3.548
Police/Fire	1.983	2.864	2.880	3.044	3.188	3.310	3.419
Prisons	2.910	1.858	2.323	2.499	2.679	2.843	2.996
Military	5.813	4.679	5.590	6.214	6.738	7.183	7.541
Educational Facilities	61.053	70.112	72.573	74.605	75.839	76.856	77.775
MED misc	3.897	7.820	8.934	8.967	9.154	9.283	9.365
TOTAL INSTITUTIONAL	101.616	124.721	127.769	132.225	136.012	139.434	142.133
(Yr/yr % change)	5.3%	22.7%	2.4%	3.5%	2.9%	2.5%	1.9%
Miscellaneous Non-Res Building	4.884	8.654	7.845	7.621	7.664	7.796	7.960
TOTAL NON-RES BLDG	240.609	290.630	288.196	297.847	304.861	308.314	310.577
(Yr/yr % change)	13.2%	20.8%	-0.8%	3.3%	2.4%	1.1%	0.7%
Airport	4.508	6.659	9.188	9.378	9.638	9.871	10.026
Roads	51.611	51.114	58.264	61.755	65.421	68.581	71.004
Bridges	13.084	14.504	18.993	20.673	22.113	23.547	24.521
Dams/Canal/Marine	6.265	3.740	4.289	4.665	4.777	4.879	4.995
Water & Sewage Treatment	28.816	30.466	31.463	34.248	36.639	38.949	40.258
Misc Civil (Power, etc.)	20.253	13.171	17.234	19.047	20.929	22.599	24.156
TOTAL ENGINEERING	124.538	119.654	139.430	149.766	159.518	168.425	174.961
(Yr/yr % change)	6.9%	-3.9%	16.5%	7.4%	6.5%	5.6%	3.9%
TOTAL NON-RESIDENTIAL	365.147	410.283	427.627	447.614	464.379	476.738	485.537
(Yr/yr % change)	11.0%	12.4%	4.2%	4.7%	3.7%	2.7%	1.8%
GRAND TOTAL	604.178	683.963	714.405	756.525	795.295	827.022	854.826
(Yr/yr % change)	13.5%	13.2%	4.5%	5.9%	5.1%	4.0%	3.4%

EXPLANATION: Table 3 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 4 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Table 4: U.S. Type-of-Structure Forecasts						
Arranged to match the alphabetical category drop-down menus in INSIGHT ($ Billions USD)						
	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Summary							
CIVIL	124.538	119.654	139.430	149.766	159.518	168.425	174.961
NON-RESIDENTIAL BUILDING	240.609	290.630	288.196	297.847	304.861	308.314	310.577
RESIDENTIAL	239.031	273.680	286.778	308.911	330.916	350.284	369.288
GRAND TOTAL	604.178	683.963	714.405	756.525	795.295	827.022	854.826
Verticals							
Airport	4.508	6.659	9.188	9.378	9.638	9.871	10.026
All Other Civil	18.774	11.528	12.619	14.662	16.108	17.398	18.606
Bridges	13.084	14.504	18.993	20.673	22.113	23.547	24.521
Dams / Canals / Marine Work	6.265	3.740	4.289	4.665	4.777	4.879	4.995
Power Infrastructure	1.478	1.644	4.614	4.385	4.821	5.201	5.550
Roads	51.611	51.114	58.264	61.755	65.421	68.581	71.004
Water and Sewage Treatment	28.816	30.466	31.463	34.248	36.639	38.949	40.258
CIVIL	124.538	119.654	139.430	149.766	159.518	168.425	174.961
(Yr/yr % change)	*6.9%*	*-3.9%*	*16.5%*	*7.4%*	*6.5%*	*5.6%*	*3.9%*
Offices (private)	19.370	26.052	25.864	28.659	29.827	28.693	27.373
Parking Garages	3.252	4.549	3.471	3.818	4.039	4.109	4.175
Transportation Terminals	7.091	4.608	4.604	5.161	5.752	6.404	6.723
Commercial	29.713	35.208	33.939	37.638	39.618	39.206	38.272
(Yr/yr % change)	*-8.6%*	*18.5%*	*-3.6%*	*10.9%*	*5.3%*	*-1.0%*	*-2.4%*
Amusement	12.804	6.467	6.843	7.267	7.609	7.946	8.165
Libraries / Museums	3.006	3.213	2.985	3.126	3.195	3.252	3.292
Religious	1.697	1.738	1.984	1.991	2.015	2.032	2.040
Sports Arenas / Convention Centers	9.265	8.022	11.816	11.470	11.633	11.948	12.278
Community	26.771	19.441	23.629	23.855	24.452	25.178	25.775
(Yr/yr % change)	*44.7%*	*-27.4%*	*21.5%*	*1.0%*	*2.5%*	*3.0%*	*2.4%*
College / University	21.137	24.668	24.359	25.130	25.515	25.849	26.141
Elementary / Pre School	18.901	20.326	21.504	22.369	22.801	22.997	23.119
Jr / Sr High School	19.579	23.468	25.112	25.443	25.798	26.222	26.668
Special / Vocational	1.436	1.650	1.598	1.663	1.726	1.788	1.847
Educational	61.053	70.112	72.573	74.605	75.839	76.856	77.775
(Yr/yr % change)	*7.9%*	*14.8%*	*3.5%*	*2.8%*	*1.7%*	*1.3%*	*1.2%*
Courthouses	1.183	1.276	2.679	2.952	3.132	3.345	3.548
Fire and Police Stations	1.983	2.864	2.880	3.044	3.188	3.310	3.419
Government Offices	10.516	13.102	12.695	13.251	13.645	13.976	14.273
Prisons	2.910	1.858	2.323	2.499	2.679	2.843	2.996
Government	16.593	19.099	20.576	21.746	22.643	23.473	24.236
(Yr/yr % change)	*8.3%*	*15.1%*	*7.7%*	*5.7%*	*4.1%*	*3.7%*	*3.2%*
Industrial Labs / Labs / School Labs	2.332	3.918	2.696	2.897	3.031	3.171	3.270
Manufacturing	15.048	20.204	17.930	19.611	20.216	20.807	21.392
Warehouses	15.229	14.785	17.188	18.122	19.004	19.595	20.187
Industrial	32.609	38.907	37.814	40.630	42.251	43.573	44.849
(Yr/yr % change)	*36.3%*	*19.3%*	*-2.8%*	*7.4%*	*4.0%*	*3.1%*	*2.9%*
Hospitals / Clinics	14.409	21.431	18.934	19.177	19.956	20.640	21.101
Medical Misc.	3.897	7.820	8.934	8.967	9.154	9.283	9.365
Nursing Homes	5.665	9.731	8.886	9.650	10.115	10.691	11.055
Medical	23.970	38.981	36.754	37.794	39.226	40.614	41.522
(Yr/yr % change)	*12.1%*	*62.6%*	*-5.7%*	*2.8%*	*3.8%*	*3.5%*	*2.2%*
Military	5.813	4.679	5.590	6.214	6.738	7.183	7.541
(Yr/yr % change)	*-46.1%*	*-19.5%*	*19.5%*	*11.2%*	*8.4%*	*6.6%*	*5.0%*
Hotels	14.907	20.239	27.962	27.195	26.116	23.857	21.551
Retail Misc.	4.884	8.654	7.845	7.621	7.664	7.796	7.960
Shopping	24.295	35.308	21.513	20.549	20.313	20.578	21.096
Retail	44.086	64.202	57.320	55.365	54.093	52.230	50.607
(Yr/yr % change)	*31.7%*	*45.6%*	*-10.7%*	*-3.4%*	*-2.3%*	*-3.4%*	*-3.1%*
NON-RESIDENTIAL BUILDING	240.609	290.630	288.196	297.847	304.861	308.314	310.577
(Yr/yr % change)	*13.2%*	*20.8%*	*-0.8%*	*3.3%*	*2.4%*	*1.1%*	*0.7%*
Multi-Family	65.866	86.923	87.793	90.718	93.393	95.901	98.625
Single-Family	173.165	186.757	198.985	218.193	237.523	254.383	270.663
RESIDENTIAL	239.031	273.680	286.778	308.911	330.916	350.284	369.288
(Yr/yr % change)	*17.5%*	*14.5%*	*4.8%*	*7.7%*	*7.1%*	*5.9%*	*5.4%*
GRAND TOTAL	604.178	683.963	714.405	756.525	795.295	827.022	854.826
(Yr/yr % change)	*13.5%*	*13.2%*	*4.5%*	*5.9%*	*5.1%*	*4.0%*	*3.4%*

EXPLANATION: Table 3 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 4 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Table 5: U.S. States, Total Construction Starts — ConstructConnect

States (alphabetical by 2-letter code)	Actuals (Level in $ Millions USD)	Forecasts (Year versus previous year % change)				
	2016	2017	2018	2019	2020	2021
Alaska	$2,000	4.9%	-19.7%	5.6%	3.8%	3.0%
Alabama	$8,721	7.9%	14.6%	6.1%	4.9%	3.9%
Arkansas	$6,268	-16.1%	19.1%	6.9%	5.2%	4.1%
Arizona	$15,018	4.1%	6.1%	6.7%	4.1%	4.0%
California*	$59,655	31.2%	-1.5%	5.6%	4.6%	3.3%
Colorado	$14,718	-1.9%	2.7%	4.6%	3.8%	3.7%
Connecticut	$4,776	37.6%	6.5%	4.0%	2.4%	1.9%
District Of Columbia	$3,709	4.0%	6.7%	3.6%	4.6%	3.6%
Delaware	$2,121	28.9%	-6.2%	5.3%	4.8%	3.6%
Florida*	$47,068	12.4%	-3.6%	5.1%	3.4%	3.5%
Georgia	$26,614	-9.7%	13.9%	4.9%	3.7%	3.5%
Hawaii	$4,250	-48.4%	82.5%	5.8%	2.2%	1.5%
Iowa	$7,487	-12.4%	-0.2%	4.4%	3.4%	2.8%
Idaho	$4,069	-6.2%	11.9%	4.5%	3.8%	3.4%
Illinois	$18,765	42.9%	-0.7%	4.3%	5.3%	4.7%
Indiana	$12,047	4.9%	14.4%	4.4%	4.1%	2.9%
Kansas	$5,947	-14.7%	15.2%	4.8%	3.4%	2.8%
Kentucky	$9,573	-30.6%	29.8%	4.6%	3.9%	2.9%
Louisiana	$10,795	-6.6%	0.9%	5.8%	4.2%	3.5%
Massachusetts	$14,531	19.8%	3.2%	3.1%	1.9%	1.9%
Maryland	$14,013	-18.7%	5.8%	3.8%	2.7%	2.6%
Maine	$1,930	-2.2%	14.8%	3.2%	2.9%	2.4%
Michigan	$14,601	7.2%	-1.1%	3.8%	6.5%	5.2%
Minnesota	$13,263	-1.4%	-0.7%	3.9%	3.4%	3.0%
Missouri	$11,644	-6.8%	2.0%	3.3%	3.3%	2.7%
Mississippi	$4,975	1.8%	15.4%	6.0%	4.8%	3.8%
Montana	$1,957	-15.2%	31.4%	4.7%	3.9%	3.2%
North Carolina	$27,485	-8.1%	13.4%	6.3%	5.0%	4.5%
North Dakota	$2,917	-23.8%	6.5%	8.3%	5.4%	4.4%
Nebraska	$4,273	11.9%	-0.5%	5.0%	3.7%	3.0%
New Hampshire	$2,666	-19.8%	40.6%	4.6%	2.3%	2.5%
New Jersey	$13,372	5.7%	2.6%	4.9%	3.7%	2.9%
New Mexico	$3,099	2.4%	23.0%	5.3%	3.8%	3.4%
Nevada	$7,378	-9.4%	24.3%	8.3%	2.9%	2.6%
New York*	$41,443	6.7%	-1.8%	4.1%	2.5%	2.0%
Ohio	$18,376	0.4%	5.8%	4.4%	3.8%	2.4%
Oklahoma	$8,572	11.5%	3.5%	6.6%	4.9%	4.0%
Oregon	$8,699	10.0%	16.6%	5.0%	3.4%	3.4%
Pennsylvania	$18,971	9.3%	8.5%	4.3%	3.0%	2.4%
Rhode Island	$1,127	47.9%	10.3%	3.6%	2.2%	2.0%
South Carolina	$13,925	-1.7%	0.4%	5.7%	4.8%	3.7%
South Dakota	$2,126	-0.8%	-11.3%	4.7%	4.5%	3.7%
Tennessee	$16,480	0.2%	3.0%	5.1%	4.4%	3.6%
Texas*	$89,270	-0.9%	15.4%	6.3%	4.9%	4.0%
Utah	$9,643	-0.6%	-4.3%	4.0%	4.2%	3.7%
Virginia	$18,785	4.2%	17.2%	4.4%	2.5%	2.4%
Vermont	$1,243	-9.4%	13.4%	5.6%	4.7%	3.4%
Washington	$18,776	6.7%	3.9%	5.5%	3.8%	3.6%
Wisconsin	$11,206	0.1%	-13.7%	3.7%	3.0%	2.4%
West Virginia	$1,652	20.3%	46.8%	5.9%	3.9%	2.9%
Wyoming	$1,965	-22.6%	7.5%	6.1%	4.5%	3.1%
United States	$683,963	4.5%	5.9%	5.1%	4.0%	3.4%

*One in three Americans lives in one of the four shaded states, New York, Florida, Texas or California.

Sum of first column may not exactly equal total due to rounding.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

| Table 6: U.S. Four Largest States: Type-of-Structure Forecasts ($ Billions USD)							
		Actuals		Forecasts				
		2015	2016	2017	2018	2019	2020	2021
New York	Residential	17.110	17.446	11.694	14.498	15.239	15.814	16.357
	Non-res Building	15.978	17.942	24.221	20.094	20.536	20.555	20.558
	Engineering/Civil	7.935	6.054	8.286	8.798	9.404	9.923	10.304
	Total	41.022	41.443	44.201	43.390	45.179	46.292	47.218
(Yr vs previous yr % Change)		*-8.9%*	*1.0%*	*6.7%*	*-1.8%*	*4.1%*	*2.5%*	*2.0%*
Florida	Residential	20.420	22.178	25.595	25.905	27.892	29.253	30.836
	Non-res Building	12.384	17.726	18.272	17.043	17.127	17.152	17.177
	Engineering/Civil	6.545	7.164	9.022	8.039	8.551	8.982	9.291
	Total	39.350	47.068	52.889	50.987	53.570	55.387	57.305
(Yr vs previous yr % Change)		*41.9%*	*19.6%*	*12.4%*	*-3.6%*	*5.1%*	*3.4%*	*3.5%*
Texas	Residential	38.988	38.329	41.362	49.991	54.717	59.003	62.815
	Non-res Building	33.767	38.165	32.668	36.935	37.632	37.806	37.991
	Engineering/Civil	12.515	12.777	14.470	15.207	16.226	17.068	17.668
	Total	85.270	89.270	88.501	102.132	108.575	113.878	118.474
(Yr vs previous yr % Change)		*35.4%*	*4.7%*	*-0.9%*	*15.4%*	*6.3%*	*4.9%*	*4.0%*
California	Residential	19.197	21.915	26.192	27.649	28.947	29.920	31.215
	Non-res Building	22.215	27.414	33.892	32.080	33.969	35.461	36.007
	Engineering/Civil	11.075	10.326	18.158	17.324	18.418	19.712	20.720
	Total	52.487	59.655	78.243	77.053	81.334	85.093	87.943
(Yr vs previous yr % Change)		*-5.6%*	*13.7%*	*31.2%*	*-1.5%*	*5.6%*	*4.6%*	*3.3%*

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Tweeted by ConstructConnect:

@ConstructConnx

The percentage shares of the U.S. goods trade deficit with some of its major trading partners currently stand at: 44%, China; 10%, Mexico; 8%, Japan; 7%, Germany; 16% with the entire Euro area; less than 1% with Saudi Arabia; and 2% with Canada.
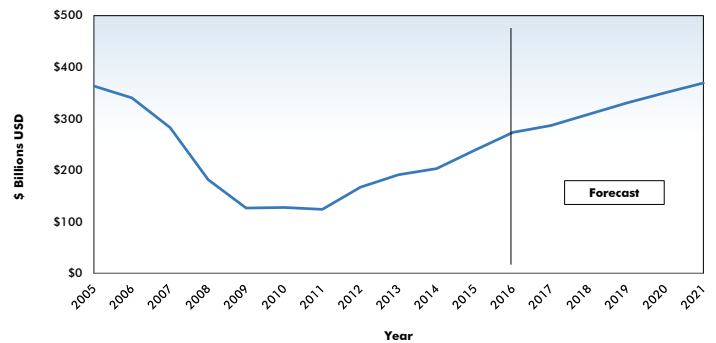
ConstructConnect's Q3 2017 Construction Starts Forecast Report

Graph 1: U.S. Grand Total Construction Starts — ConstructConnect
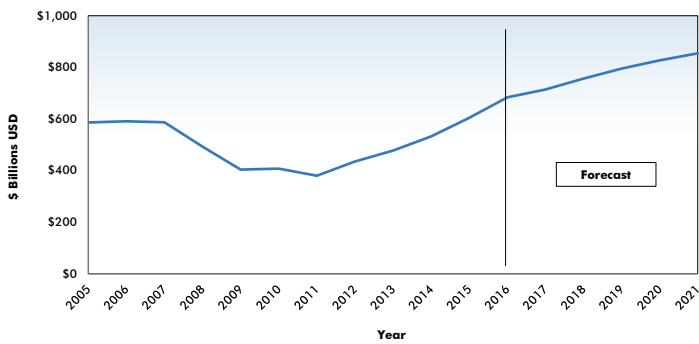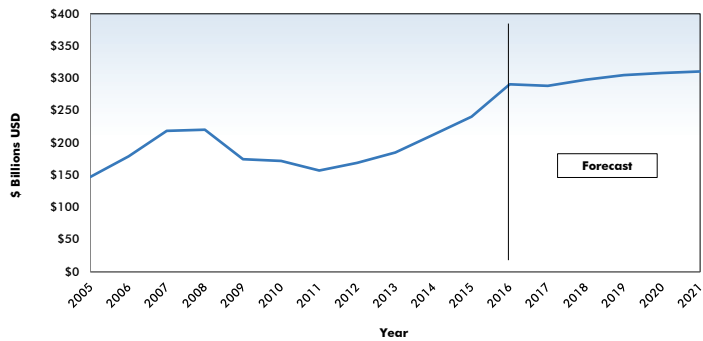

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

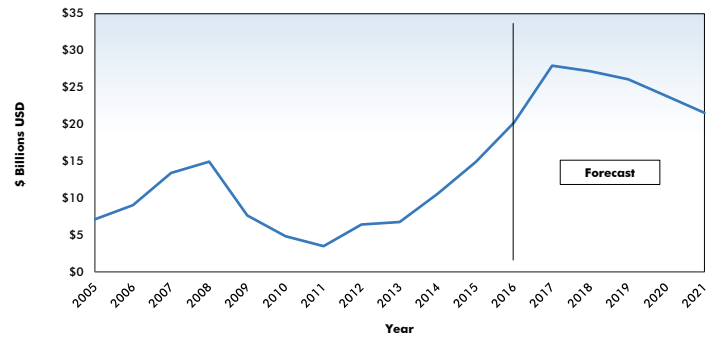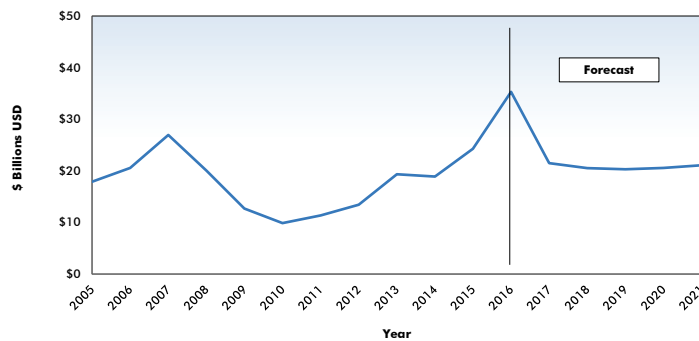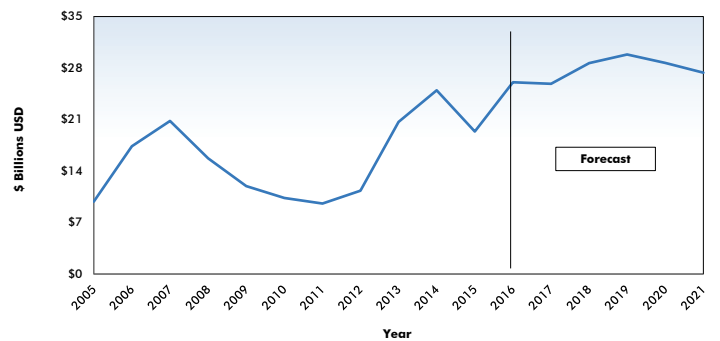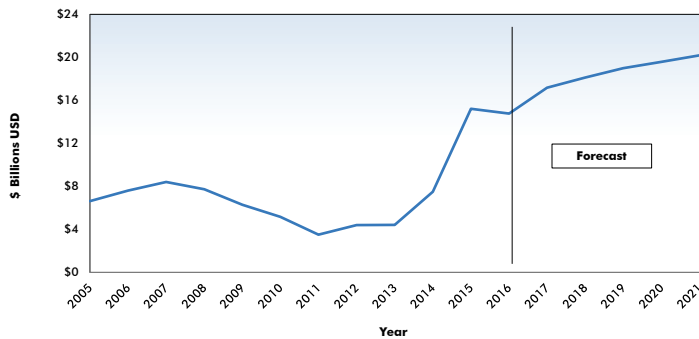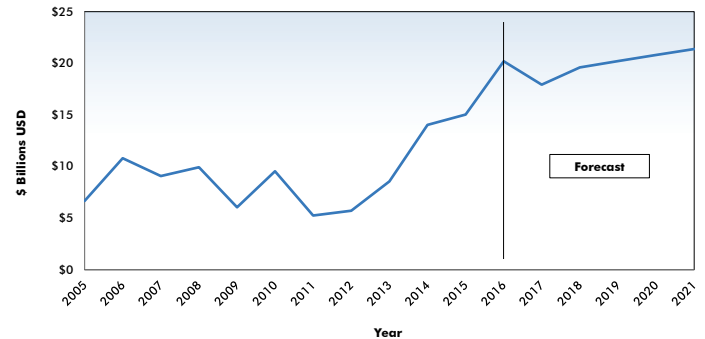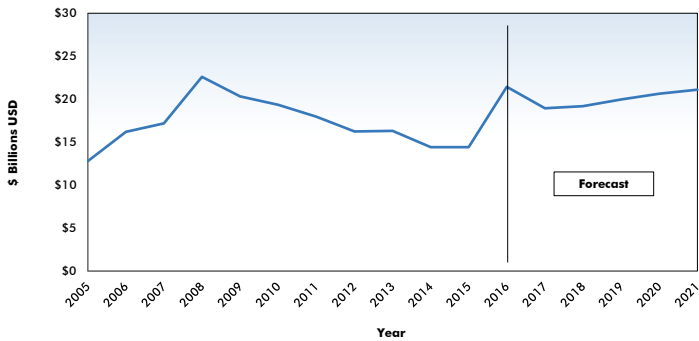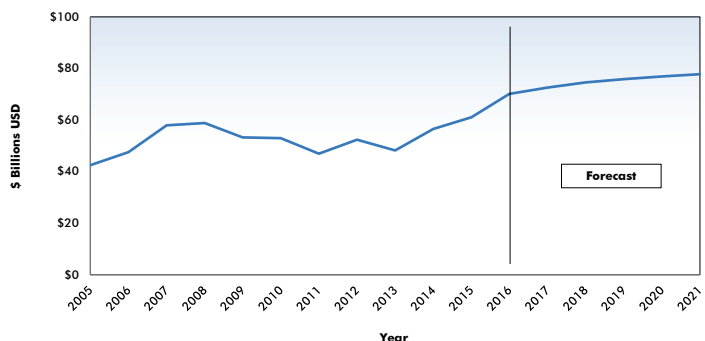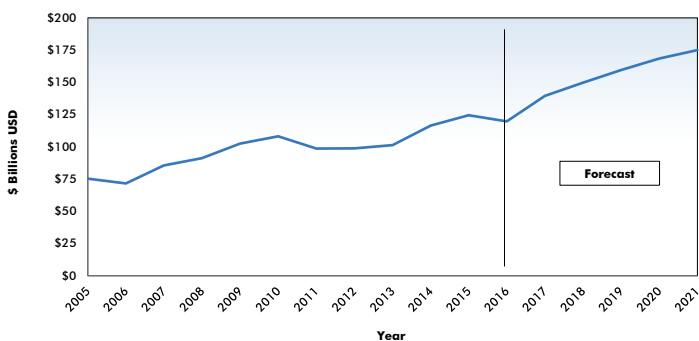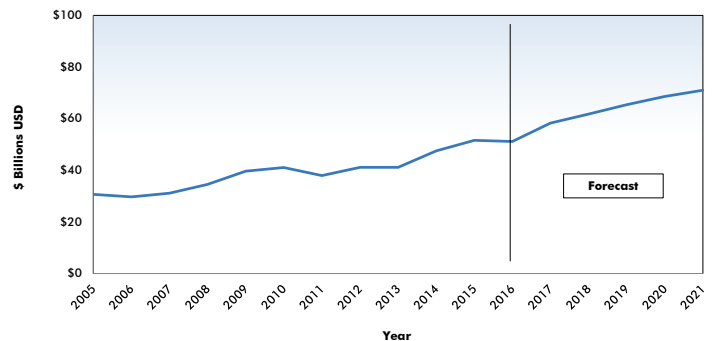## Graph 2: U.S. Total Residential Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

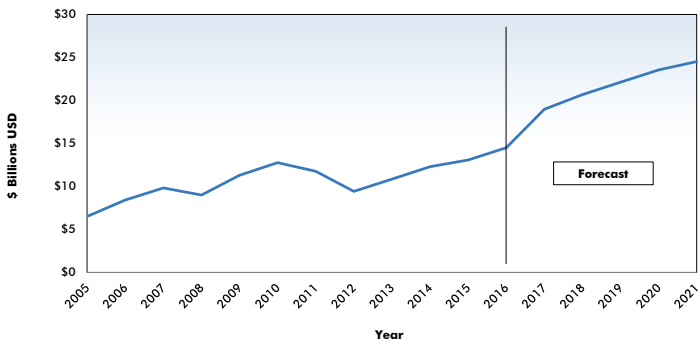## Graph 3: U.S. Total Non-Residential Building Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 4: U.S. Hotel/Motel Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

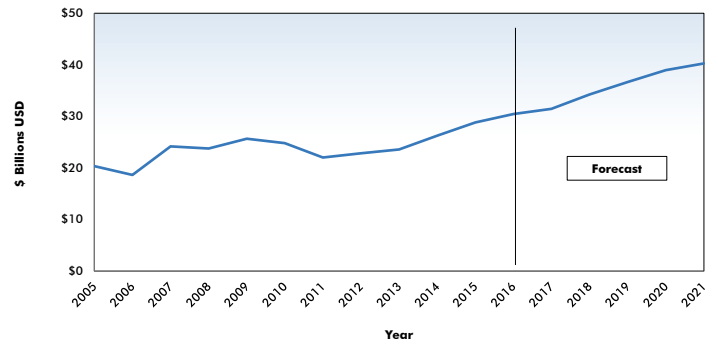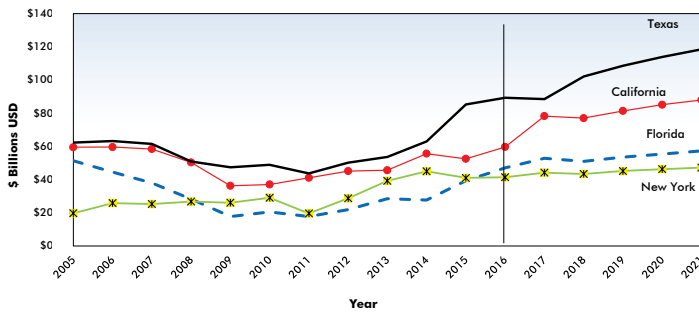## Graph 5: U.S. Shopping/Retail Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 6: U.S. Private Office Building Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

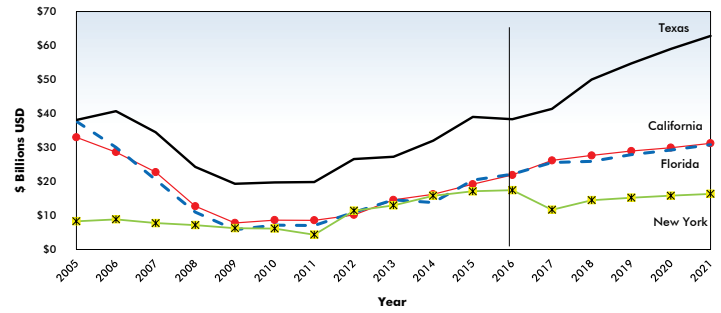## Graph 7: U.S. Warehouse Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

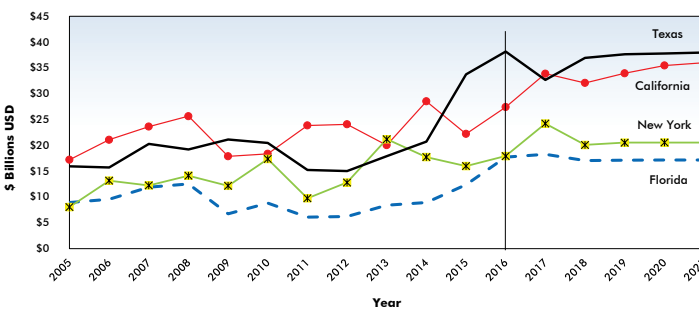## Graph 8: U.S. Manufacturing Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 9: U.S. Hospital and Clinic Construction Starts — ConstructConnect
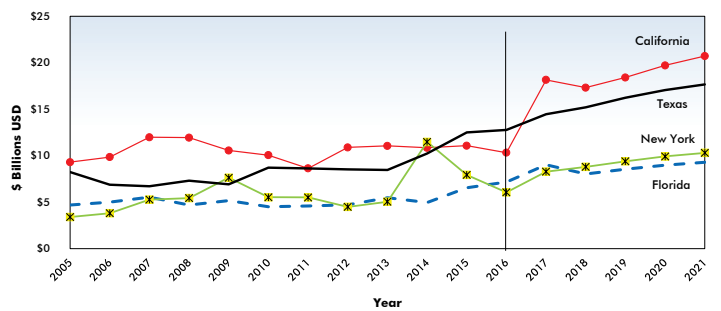

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 10: U.S. Total Educational Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 11: U.S. Total Heavy Engineering/Civil Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 12: U.S. Roadwork Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 13: U.S. Bridge Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 14: U.S. Water and Sewage Treatment Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 15: U.S. Four Largest States (by Population): Total Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 16: U.S. Four Largest States: Total Residential Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 17: U.S. Four Largest States: Total Non-residential Building Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 18: U.S. Four Largest States: Total Engineering/ Civil Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

ConstructConnect's Q3 2017 Construction Starts Forecast Report

Table 7: Canada Type-of-Structure Forecasts						
($ Billions CAD)						
	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Single-family	14.920	16.052	16.698	17.679	18.735	19.809	20.793
Multi-family	13.957	13.114	12.519	13.325	14.120	14.873	15.618
TOTAL RESIDENTIAL	28.876	29.166	29.218	31.004	32.854	34.681	36.412
(Yr/yr % change)	0.4%	1.0%	0.2%	6.1%	6.0%	5.6%	5.0%
Hotels/Motels	1.077	0.592	0.508	0.710	0.783	0.732	0.646
Private Offices	2.743	0.657	0.620	0.949	1.188	1.414	1.618
Govenmental Offices	0.834	1.450	1.404	1.440	1.483	1.526	1.557
Shopping/Retail	1.246	1.073	0.701	0.725	0.724	0.725	0.740
Retail Miscellaneous	0.722	0.450	0.387	0.379	0.381	0.395	0.405
Parking Garages	0.166	0.108	0.153	0.154	0.164	0.171	0.175
Amusement	2.383	1.819	1.650	1.874	1.985	2.079	2.149
Warehouses	0.977	0.868	0.780	0.847	0.902	0.954	0.998
TOTAL COMMERCIAL	10.149	7.018	6.205	7.079	7.611	7.996	8.289
(Yr/yr % change)	11.6%	-30.8%	-11.6%	14.1%	7.5%	5.1%	3.7%
TOTAL INDUSTRIAL (manufacturing)	1.014	0.667	1.097	1.338	1.638	1.882	2.055
(Yr/yr % change)	-34.4%	-34.3%	64.5%	22.0%	22.4%	14.9%	9.2%
Religious	0.169	0.131	0.114	0.128	0.132	0.136	0.139
Hospitals/Clinics	2.335	1.058	1.657	2.093	2.523	2.936	3.402
MED misc	0.893	0.533	0.542	0.577	0.602	0.624	0.644
Transportation Terminals*	0.807	0.190	0.081	0.164	0.222	0.267	0.318
Police/Fire	0.613	0.366	0.431	0.467	0.488	0.505	0.518
Educational Facilities	5.169	3.515	3.734	3.965	4.191	4.384	4.564
TOTAL INSTITUTIONAL	9.986	5.794	6.558	7.394	8.157	8.851	9.586
(Yr/yr % change)	54.6%	-42.0%	13.2%	12.8%	10.3%	8.5%	8.3%
TOTAL NON-RES BUILDING	21.149	13.479	13.860	15.812	17.406	18.729	19.930
(Yr/yr % change)	23.7%	-36.3%	2.8%	14.1%	10.1%	7.6%	6.4%
Bridges	6.413	1.869	1.445	1.860	2.070	2.236	2.403
Dams/Canal/Marine	0.686	0.620	0.398	0.473	0.507	0.529	0.541
Water & Sewage Treatment	3.866	2.651	5.626	4.288	4.612	4.802	4.986
Roads	7.860	5.823	5.702	6.376	6.978	7.335	7.601
Power Infrastructure	13.294	9.641	3.815	5.007	6.204	7.079	7.800
All Other Civil (Oil & Gas etc.)	10.106	7.102	2.823	5.439	7.674	10.292	13.188
TOTAL ENGINEERING	42.226	27.705	19.809	23.443	28.046	32.273	36.520
(Yr/yr % change)	-25.5%	-34.4%	-28.5%	18.3%	19.6%	15.1%	13.2%
TOTAL NON-RESIDENTIAL	63.375	41.184	33.669	39.254	45.452	51.003	56.450
(Yr/yr % change)	-14.1%	-35.0%	-18.2%	16.6%	15.8%	12.2%	10.7%
GRAND TOTAL	92.252	70.350	62.886	70.258	78.307	85.684	92.861
(Yr/yr % change)	-10.1%	-23.7%	-10.6%	11.7%	11.5%	9.4%	8.4%

* With respect to Tables 3 and 7, 'transportation terminals' is the one type-of-structure that is categorized differently in Canada (institutional) than in the U.S. (commercial), for reasons having to do with government statistics.

EXPLANATION: Table 7 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 8 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

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Table: ConstructConnect.

Table 8: Canada Type-of-Structure Forecasts						
Arranged to match the alphabetical category drop-down menus in INSIGHT ($ Billions CAD)						
	Actuals		**Forecasts**				
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Summary						
CIVIL	42.226	27.705	19.809	23.443	28.046	32.273	36.520
NON-RESIDENTIAL BUILDING	21.149	13.479	13.860	15.812	17.406	18.729	19.930
RESIDENTIAL	28.876	29.166	29.218	31.004	32.854	34.681	36.412
GRAND TOTAL	92.252	70.350	62.886	70.258	78.307	85.684	92.861
Verticals						
All Other Civil	10.106	7.102	2.823	5.439	7.674	10.292	13.188
Bridges	6.413	1.869	1.445	1.860	2.070	2.236	2.403
Dams / Canals / Marine Work	0.686	0.620	0.398	0.473	0.507	0.529	0.541
Power Infrastructure	13.294	9.641	3.815	5.007	6.204	7.079	7.800
Roads	7.860	5.823	5.702	6.376	6.978	7.335	7.601
Water and Sewage Treatment	3.866	2.651	5.626	4.288	4.612	4.802	4.986
CIVIL	42.226	27.705	19.809	23.443	28.046	32.273	36.520
(Yr/yr % change)	*-25.5%*	*-34.4%*	*-28.5%*	*18.3%*	*19.6%*	*15.1%*	*13.2%*
Offices (private)	2.743	0.657	0.620	0.949	1.188	1.414	1.618
Parking Garages	0.166	0.108	0.153	0.154	0.164	0.171	0.175
Transportation Terminals	0.807	0.190	0.081	0.164	0.222	0.267	0.318
Commercial	3.716	0.955	0.855	1.267	1.575	1.852	2.111
(Yr/yr % change)	*31.8%*	*-74.3%*	*-10.5%*	*48.3%*	*24.3%*	*17.6%*	*14.0%*
Amusement	2.383	1.819	1.650	1.874	1.985	2.079	2.149
Religious	0.169	0.131	0.114	0.128	0.132	0.136	0.139
Community	2.552	1.950	1.764	2.002	2.117	2.215	2.288
(Yr/yr % change)	*-9.8%*	*-23.6%*	*-9.6%*	*13.5%*	*5.7%*	*4.6%*	*3.3%*
Educational	5.169	3.515	3.734	3.965	4.191	4.384	4.564
(Yr/yr % change)	*61.2%*	*-32.0%*	*6.2%*	*6.2%*	*5.7%*	*4.6%*	*4.1%*
Fire and Police Stations	0.613	0.366	0.431	0.467	0.488	0.505	0.518
Government Offices	0.834	1.450	1.404	1.440	1.483	1.526	1.557
Government	1.447	1.816	1.835	1.908	1.972	2.031	2.075
(Yr/yr % change)	*17.6%*	*25.5%*	*1.0%*	*3.9%*	*3.4%*	*3.0%*	*2.2%*
Manufacturing	1.014	0.667	1.097	1.338	1.638	1.882	2.055
Warehouses	0.977	0.868	0.780	0.847	0.902	0.954	0.998
Industrial	1.991	1.535	1.877	2.186	2.540	2.836	3.053
(Yr/yr % change)	*-12.7%*	*-22.9%*	*22.3%*	*16.4%*	*16.2%*	*11.6%*	*7.6%*
Hospitals / Clinics	2.335	1.058	1.657	2.093	2.523	2.936	3.402
Medical Misc.	0.893	0.533	0.542	0.577	0.602	0.624	0.644
Medical	3.229	1.591	2.199	2.670	3.125	3.559	4.047
(Yr/yr % change)	*59.5%*	*-50.7%*	*38.2%*	*21.4%*	*17.0%*	*13.9%*	*13.7%*
Hotels	1.077	0.592	0.508	0.710	0.783	0.732	0.646
Retail Misc.	0.722	0.450	0.387	0.379	0.381	0.395	0.405
Shopping	1.246	1.073	0.701	0.725	0.724	0.725	0.740
Retail	3.045	2.116	1.596	1.814	1.887	1.852	1.792
(Yr/yr % change)	*12.4%*	*-30.5%*	*-24.5%*	*13.6%*	*4.1%*	*-1.9%*	*-3.3%*
NON-RESIDENTIAL BUILDING	21.149	13.479	13.860	15.812	17.406	18.729	19.930
(Yr/yr % change)	*23.7%*	*-36.3%*	*2.8%*	*14.1%*	*10.1%*	*7.6%*	*6.4%*
Multi-Family	13.957	13.114	12.519	13.325	14.120	14.873	15.618
Single-Family	14.920	16.052	16.698	17.679	18.735	19.809	20.793
RESIDENTIAL	28.876	29.166	29.218	31.004	32.854	34.681	36.412
(Yr/yr % change)	*0.4%*	*1.0%*	*0.2%*	*6.1%*	*6.0%*	*5.6%*	*5.0%*
TOTAL NON-RESIDENTIAL	63.375	41.184	33.669	39.254	45.452	51.003	56.450
(Yr/yr % change)	*-14.1%*	*-35.0%*	*-18.2%*	*16.6%*	*15.8%*	*12.2%*	*10.7%*
GRAND TOTAL	92.252	70.350	62.886	70.258	78.307	85.684	92.861
(Yr/yr % change)	*-10.1%*	*-23.7%*	*-10.6%*	*11.7%*	*11.5%*	*9.4%*	*8.4%*

EXPLANATION: Table 7 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 8 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

| Table 9: Canadian Provinces, Total Construction Starts — ConstructConnect						
	Actuals (Level in $ Millions CAD)	**Forecasts (Year versus previous year % change)**				
Regions/Provinces (East to West)	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Atlantic region	$3,274	-13.9%	9.2%	20.8%	16.9%	16.8%
Quebec	$9,417	8.1%	-10.3%	9.9%	9.6%	5.6%
Ontario	$27,656	-15.4%	17.0%	9.8%	7.3%	5.7%
Manitoba	$6,932	-63.7%	95.8%	8.3%	6.3%	6.0%
Saskatchewan	$1,605	-15.1%	39.0%	14.6%	13.8%	6.4%
Alberta	$10,994	-5.1%	18.3%	16.4%	14.1%	15.2%
British Columbia	$10,470	16.4%	-5.5%	9.6%	7.5%	7.5%
Canada	$70,350	-10.6%	11.7%	11.5%	9.4%	8.4%

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

| Table 10: Canada Four Largest Provinces: Type-of-Structure Forecasts ($ Billions CAD)								
		Actuals		**Forecasts**				
		2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Quebec	Residential	3.636	4.336	3.945	3.530	3.635	3.838	3.944
	Non-res Building	3.411	2.338	3.041	2.518	2.687	2.904	3.044
	Engineering/Civil	7.152	2.744	3.191	3.081	3.712	4.250	4.624
	Total	14.199	9.417	10.176	9.129	10.033	10.992	11.611
(Yr vs previous yr % Change)		*17.1%*	*-33.7%*	*8.1%*	*-10.3%*	*9.9%*	*9.6%*	*5.6%*
Ontario	Residential	12.061	12.616	12.513	12.817	13.603	14.178	14.795
	Non-res Building	5.988	4.935	4.916	5.686	6.149	6.441	6.697
	Engineering/Civil	11.436	10.105	5.965	8.864	10.309	11.624	12.583
	Total	29.485	27.656	23.393	27.367	30.060	32.243	34.075
(Yr vs previous yr % Change)		*26.2%*	*-6.2%*	*-15.4%*	*17.0%*	*9.8%*	*7.3%*	*5.7%*
Alberta	Residential	4.378	3.772	3.835	3.901	4.235	4.528	4.936
	Non-res Building	4.585	2.342	2.218	2.739	3.070	3.395	3.732
	Engineering/Civil	8.213	4.880	4.382	5.710	7.068	8.472	10.213
	Total	17.176	10.994	10.435	12.350	14.374	16.395	18.881
(Yr vs previous yr % Change)		*-38.9%*	*-36.0%*	*-5.1%*	*18.3%*	*16.4%*	*14.1%*	*15.2%*
British Columbia	Residential	6.713	6.020	6.547	6.761	7.142	7.614	7.977
	Non-res Building	4.311	1.992	2.098	2.371	2.610	2.758	2.961
	Engineering/Civil	12.130	2.458	3.540	2.383	2.866	3.199	3.645
	Total	23.154	10.470	12.185	11.515	12.618	13.570	14.583
(Yr vs previous yr % Change)		*74.5%*	*-54.8%*	*16.4%*	*-5.5%*	*9.6%*	*7.5%*	*7.5%*

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Table: ConstructConnect.

Graph 19: Canadian Grand Total Construction Starts — ConstructConnect
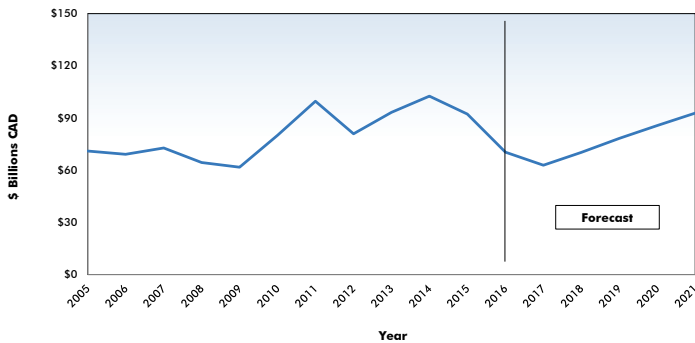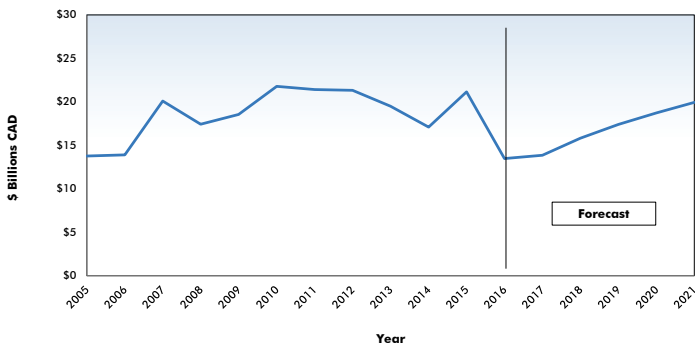

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 20: Canadian Residential Construction Starts — ConstructConnect
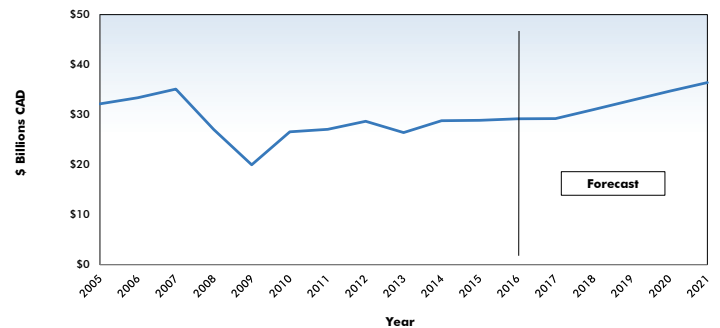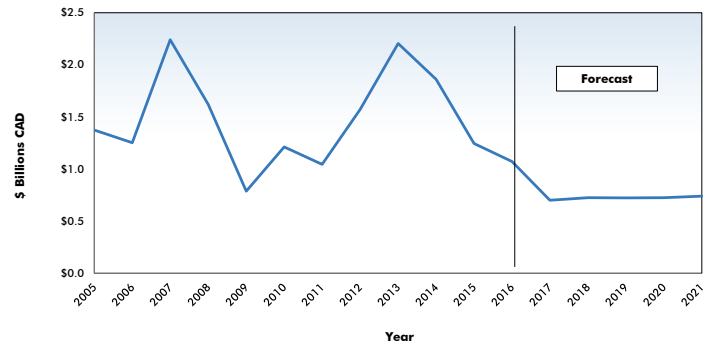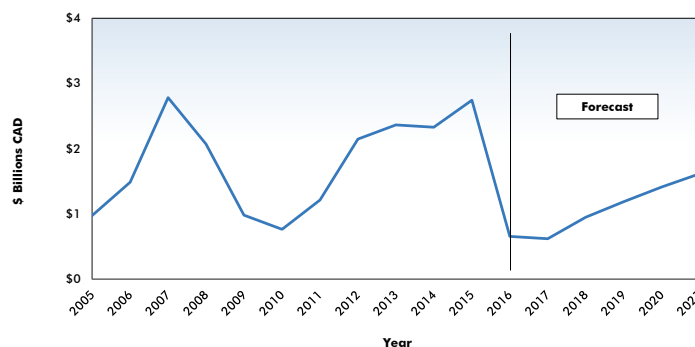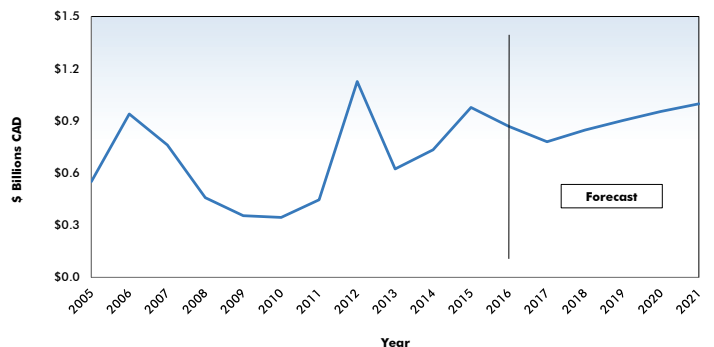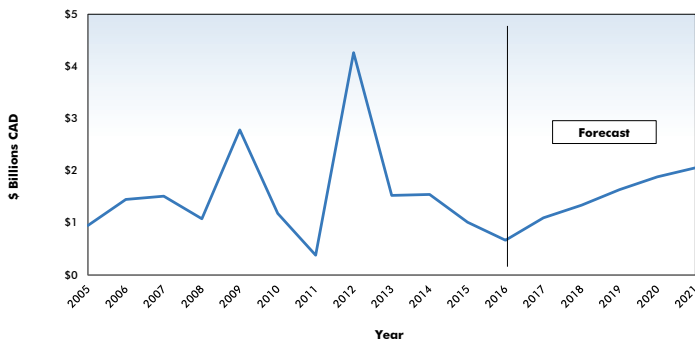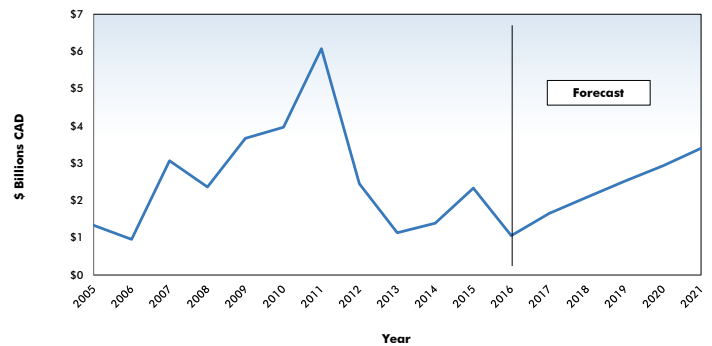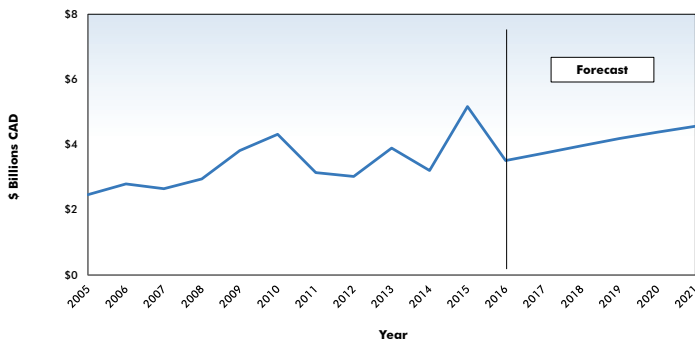

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 21: Canadian Non-Residential Building Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 22: Canadian Shopping/Retail Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 23: Canadian Private Offices Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 24: Canadian Warehouse Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect.
Chart: ConstructConnect.

Graph 25: Canadian Manufacturing Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

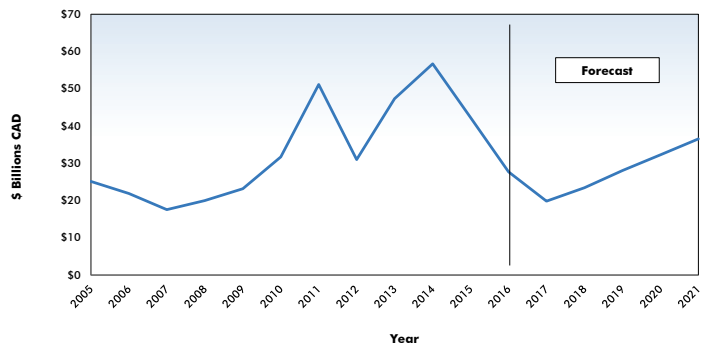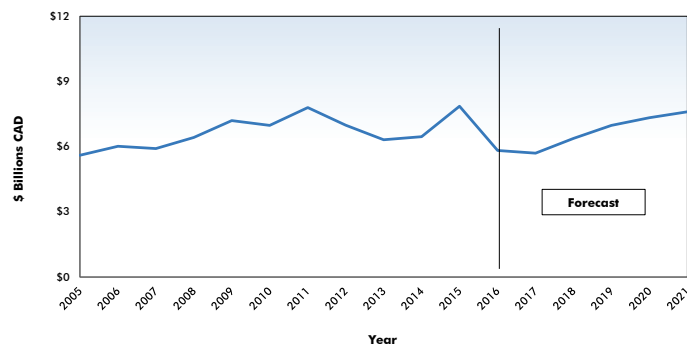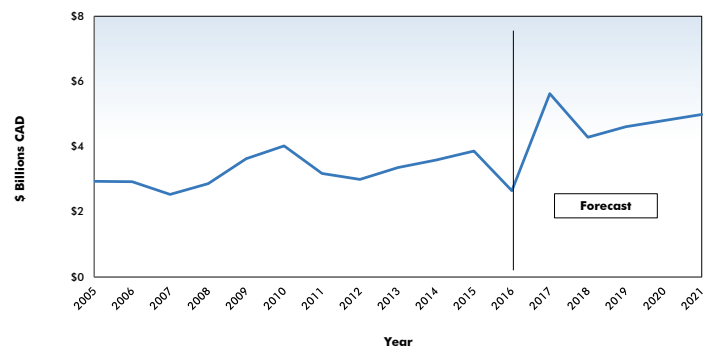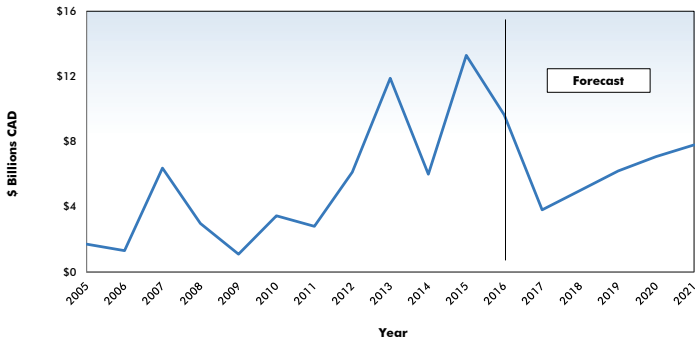## Graph 26: Canadian Hospital/Clinic Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 27: Canadian Education Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 28: Canadian Engineering Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 29: Canadian Roadwork Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 30: Canadian Water and Sewage Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.
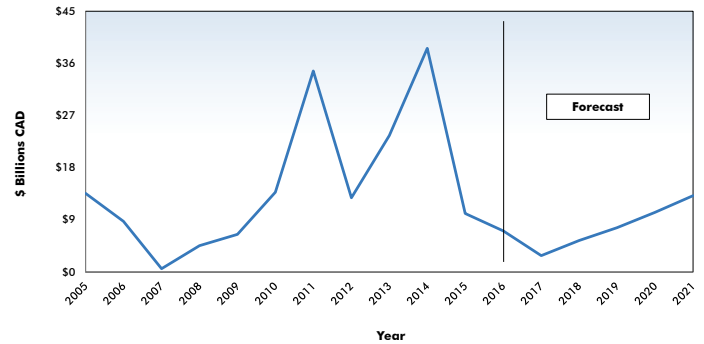
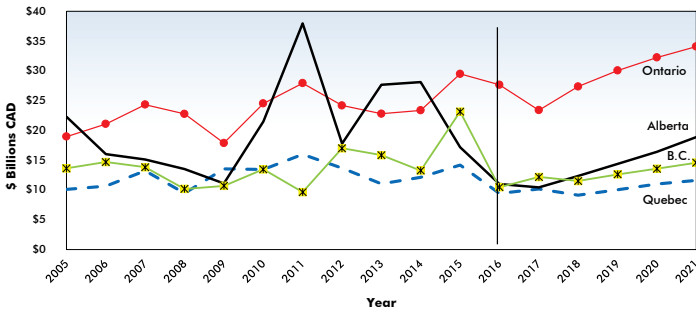### Graph 31: Canadian Power Infrastructure Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

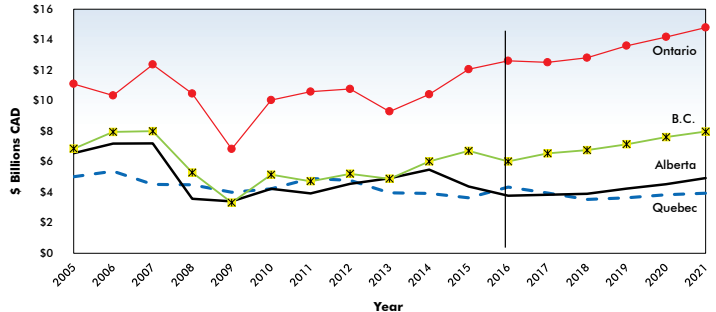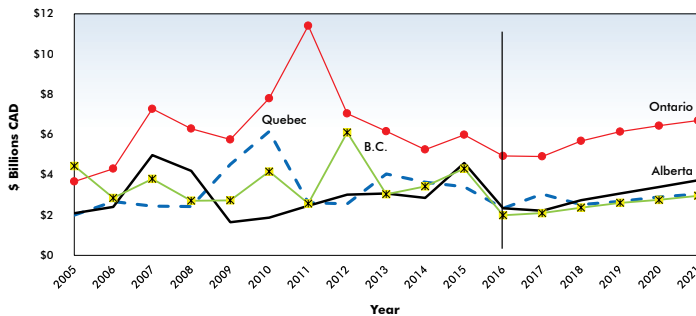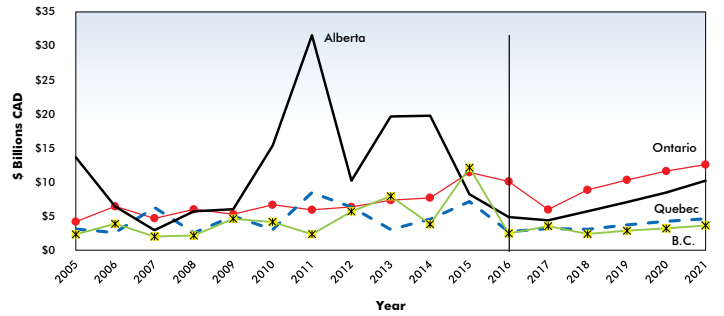### Graph 32: Canadian Oil and Gas Plants, Pipelines Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 33: Canada Four Largest Provinces (by Population): Total Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 34: Canada Four Largest Provinces: Total Residential Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 35: Canada Four Largest Provinces: Total Non-residential Building Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 36: Canada Four Largest Provinces: Total Engineering/Civil Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Table 11: U.S. Type-of-Structure Forecasts (Square Feet Millions)							
	Actuals		**Forecasts**				
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Single-family	1,454.8	1,544.2	1,640.6	1,800.9	1,963.1	2,103.1	2,237.9
Multi-family	410.2	508.3	502.0	532.2	542.4	553.1	568.3
TOTAL RESIDENTIAL	1,865.0	2,052.5	2,142.6	2,333.0	2,505.4	2,656.2	2,806.2
(Yr/yr % change)	*14.0%*	*10.1%*	*4.4%*	*8.9%*	*7.4%*	*6.0%*	*5.6%*
Hotels/Motels	58.7	113.2	178.4	168.5	152.7	137.6	123.9
Shopping/Retail	150.3	188.9	86.6	90.5	95.8	98.7	101.6
Parking Garages	26.6	27.7	25.8	28.2	30.6	31.2	31.7
Amusement	36.4	21.2	20.6	21.9	23.4	24.5	25.2
Private Offices	91.0	112.1	110.2	117.2	123.9	119.4	114.3
Govenmental Offices	13.6	19.5	19.1	19.2	20.2	20.8	21.2
Laboratories (Schools & Industrial)	8.0	6.3	5.0	6.1	7.1	7.7	8.0
Warehouses	201.3	155.7	175.4	185.4	192.5	198.0	203.9
Sports Stadium/Convention Center	28.3	27.5	26.1	27.7	27.7	28.4	29.1
Transportation Terminals	11.5	7.6	8.4	10.7	12.5	14.1	14.8
TOTAL COMMERCIAL	625.6	679.6	655.7	675.4	686.2	680.3	673.8
(Yr/yr % change)	*47.2%*	*8.6%*	*-3.5%*	*3.0%*	*1.6%*	*-0.9%*	*-1.0%*
TOTAL INDUSTRIAL (manufacturing)	87.2	104.2	70.5	69.8	75.5	78.7	81.1
(Yr/yr % change)	*-16.6%*	*19.5%*	*-32.3%*	*-1.0%*	*8.1%*	*4.2%*	*3.1%*
Religious	6.7	5.9	6.4	6.4	6.3	6.3	6.3
Hospitals/Clinics	23.5	37.8	27.3	28.5	30.9	32.3	33.1
Nursing Homes/Assisted Living	36.7	46.2	41.0	45.0	47.4	50.2	51.9
Libraries/Museums	3.7	4.2	2.5	2.7	3.0	3.1	3.1
Courthouse	1.7	1.9	2.5	2.4	2.3	2.4	2.6
Police/Fire	5.0	7.1	7.1	7.4	7.5	7.8	8.0
Prisons	3.6	2.8	3.8	3.5	3.6	3.8	4.0
Military	3.6	8.9	12.6	14.0	15.4	16.6	17.4
Educational Facilities	144.0	170.4	170.6	179.1	185.0	188.3	190.7
MED misc	14.0	19.1	23.4	23.1	22.0	22.0	22.1
TOTAL INSTITUTIONAL	242.7	304.2	297.1	311.9	323.4	332.7	339.2
(Yr/yr % change)	*4.1%*	*25.4%*	*-2.3%*	*5.0%*	*3.7%*	*2.8%*	*2.0%*
Miscellaneous Non-Res Building	19.2	32.7	26.8	26.4	27.2	27.8	28.4
TOTAL NON-RES BLDG	974.7	1,120.7	1,050.1	1,083.4	1,112.3	1,119.4	1,122.5
(Yr/yr % change)	*25.3%*	*15.0%*	*-6.3%*	*3.2%*	*2.7%*	*0.6%*	*0.3%*
RESIDENTIAL + NON-RES BLDG	2,839.7	3,173.1	3,192.6	3,416.5	3,617.8	3,775.6	3,928.7
(Yr/yr % change)	*17.6%*	*11.7%*	*0.6%*	*7.0%*	*5.9%*	*4.4%*	*4.1%*

EXPLANATION: Table 11 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 12 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

The square footage forecasts are largely determined by dividing the dollar value forecasts by an average dollar-per-square-foot value. The underlying dollar-per-square-foot calculation is based on the most relevant of current data. While the projected dollar values are generated through econometric modeling driven by key economic and demographic variables, both the dollar value and square footage forecasts also allow for discretionary overrides when warranted by extraordinary circumstances, such as unique mega project start-ups.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Table 12: U.S. Type-of-Structure Forecasts
Arranged to match the alphabetical category drop-down menus in INSIGHT (Square Feet Millions)

	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Summary							
NON-RESIDENTIAL BUILDING	974.7	1,120.7	1,050.1	1,083.4	1,112.3	1,119.4	1,122.5
RESIDENTIAL	1,865.0	2,052.5	2,142.6	2,333.0	2,505.4	2,656.2	2,806.2
RESIDENTIAL + NON-RESIDENTIAL BUILDING	2,839.7	3,173.1	3,192.6	3,416.5	3,617.8	3,775.6	3,928.7
Verticals							
Offices (private)	91.0	112.1	110.2	117.2	123.9	119.4	114.3
Parking Garages	26.6	27.7	25.8	28.2	30.6	31.2	31.7
Transportation Terminals	11.5	7.6	8.4	10.7	12.5	14.1	14.8
Commercial	129.1	147.3	144.4	156.1	166.9	164.6	160.8
(Yr/yr % change)	*13.0%*	*14.0%*	*-2.0%*	*8.1%*	*6.9%*	*-1.4%*	*-2.3%*
Amusement	36.4	21.2	20.6	21.9	23.4	24.5	25.2
Libraries / Museums	3.7	4.2	2.5	2.7	3.0	3.1	3.1
Religious	6.7	5.9	6.4	6.4	6.3	6.3	6.3
Sports Arenas / Convention Centers	28.3	27.5	26.1	27.7	27.7	28.4	29.1
Community	75.2	58.7	55.6	58.7	60.3	62.2	63.8
(Yr/yr % change)	*36.3%*	*-21.9%*	*-5.3%*	*5.5%*	*2.7%*	*3.2%*	*2.5%*
College / University	41.1	54.3	52.5	53.9	54.8	55.6	56.2
Elementary / Pre School	51.3	52.5	53.8	58.6	62.0	63.1	63.6
Jr / Sr High School	47.5	57.4	59.2	61.1	62.4	63.5	64.7
Special / Vocational	4.1	6.2	5.1	5.5	5.8	6.0	6.2
Educational	144.0	170.4	170.6	179.1	185.0	188.3	190.7
(Yr/yr % change)	*-2.2%*	*18.3%*	*0.1%*	*5.0%*	*3.3%*	*1.8%*	*1.3%*
Courthouses	1.7	1.9	2.5	2.4	2.3	2.4	2.6
Fire and Police Stations	5.0	7.1	7.1	7.4	7.5	7.8	8.0
Government Offices	13.6	19.5	19.1	19.2	20.2	20.8	21.2
Prisons	3.6	2.8	3.8	3.5	3.6	3.8	4.0
Government	23.9	31.4	32.5	32.4	33.7	34.8	35.9
(Yr/yr % change)	*12.9%*	*31.4%*	*3.5%*	*-0.2%*	*4.0%*	*3.4%*	*3.0%*
Industrial Labs / Labs / School Labs	8.0	6.3	5.0	6.1	7.1	7.7	8.0
Manufacturing	87.2	104.2	70.5	69.8	75.5	78.7	81.1
Warehouses	201.3	155.7	175.4	185.4	192.5	198.0	203.9
Industrial	296.4	266.2	251.0	261.3	275.1	284.3	293.0
(Yr/yr % change)	*49.9%*	*-10.2%*	*-5.7%*	*4.1%*	*5.3%*	*3.4%*	*3.0%*
Hospitals / Clinics	23.5	37.8	27.3	28.5	30.9	32.3	33.1
Medical Misc.	14.0	19.1	23.4	23.1	22.0	22.0	22.1
Nursing Homes	36.7	46.2	41.0	45.0	47.4	50.2	51.9
Medical	74.3	103.1	91.7	96.5	100.3	104.4	107.1
(Yr/yr % change)	*17.3%*	*38.8%*	*-11.0%*	*5.2%*	*3.9%*	*4.1%*	*2.5%*
Military	3.6	8.9	12.6	14.0	15.4	16.6	17.4
(Yr/yr % change)	*2.5%*	*148.4%*	*41.1%*	*11.7%*	*10.0%*	*7.7%*	*4.7%*
Hotels	58.7	113.2	178.4	168.5	152.7	137.6	123.9
Retail Misc.	19.2	32.7	26.8	26.4	27.2	27.8	28.4
Shopping	150.3	188.9	86.6	90.5	95.8	98.7	101.6
Retail	228.2	334.8	291.8	285.4	275.6	264.1	254.0
(Yr/yr % change)	*29.9%*	*46.7%*	*-12.8%*	*-2.2%*	*-3.4%*	*-4.2%*	*-3.8%*
NON-RESIDENTIAL BUILDING	974.7	1,120.7	1,050.1	1,083.4	1,112.3	1,119.4	1,122.5
(Yr/yr % change)	*25.3%*	*15.0%*	*-6.3%*	*3.2%*	*2.7%*	*0.6%*	*0.3%*
Multi-Family	410.2	508.3	502.0	532.2	542.4	553.1	568.3
Single-Family	1,454.8	1,544.2	1,640.6	1,800.9	1,963.1	2,103.1	2,237.9
RESIDENTIAL	1,865.0	2,052.5	2,142.6	2,333.0	2,505.4	2,656.2	2,806.2
(Yr/yr % change)	*14.0%*	*10.1%*	*4.4%*	*8.9%*	*7.4%*	*6.0%*	*5.6%*
RESIDENTIAL + NON-RESIDENTIAL BUILDING	2,839.7	3,173.1	3,192.6	3,416.5	3,617.8	3,775.6	3,928.7
(Yr/yr % change)	*17.6%*	*11.7%*	*0.6%*	*7.0%*	*5.9%*	*4.4%*	*4.1%*

EXPLANATION: Table 11 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 12 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Table 13: Canada Type-of-Structure Forecasts (Square Feet Millions)							
	Actuals		**Forecasts**				
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Single-family	128.3	138.1	145.9	153.4	161.5	170.5	178.9
Multi-family	83.9	74.0	67.3	73.2	79.6	84.5	88.8
TOTAL RESIDENTIAL	212.1	212.2	213.1	226.6	241.1	254.9	267.7
(Yr/yr % change)	*-2.5%*	*0.0%*	*0.5%*	*6.3%*	*6.4%*	*5.7%*	*5.0%*
Hotels/Motels	2.9	2.4	2.0	2.8	3.2	3.0	2.6
Private Offices	10.7	3.1	3.1	5.0	6.3	7.3	8.2
Govenmental Offices	2.2	3.0	2.8	2.9	3.0	3.1	3.2
Shopping/Retail	13.2	10.8	7.0	7.3	7.4	7.5	7.7
Retail Miscellaneous	3.2	1.6	1.4	1.4	1.4	1.4	1.5
Parking Garages	0.8	0.2	0.7	0.7	0.7	0.8	0.8
Amusement	5.9	5.5	4.5	5.4	6.2	6.6	6.9
Warehouses	7.2	10.1	7.5	8.2	9.2	9.8	10.3
TOTAL COMMERCIAL	46.0	36.6	29.0	33.8	37.4	39.5	41.1
(Yr/yr % change)	*4.7%*	*-20.4%*	*-20.8%*	*16.5%*	*10.8%*	*5.6%*	*4.2%*
TOTAL INDUSTRIAL (manufacturing)	5.4	2.7	3.8	4.6	5.0	5.4	5.8
(Yr/yr % change)	*-2.4%*	*-49.0%*	*38.1%*	*20.6%*	*10.4%*	*8.1%*	*6.5%*
Religious	0.7	0.4	0.4	0.4	0.4	0.4	0.4
Hospitals/Clinics	3.8	2.2	4.5	5.1	5.7	6.2	6.8
MED misc	2.7	1.6	0.6	0.6	0.7	0.8	0.8
Transportation Terminals*	0.6	0.2	0.0	0.1	0.2	0.4	0.6
Police/Fire	0.9	0.6	0.8	0.8	0.8	0.9	0.9
Educational Facilities	15.7	10.6	9.7	10.6	11.8	12.5	13.0
TOTAL INSTITUTIONAL	24.6	15.6	16.0	17.6	19.7	21.1	22.5
(Yr/yr % change)	*36.4%*	*-36.4%*	*2.1%*	*10.3%*	*11.7%*	*7.3%*	*6.6%*
TOTAL NON-RES BLDG	76.0	55.0	48.7	56.0	62.1	66.0	69.4
(Yr/yr % change)	*12.6%*	*-27.6%*	*-11.3%*	*14.8%*	*11.0%*	*6.3%*	*5.1%*
RESIDENTIAL + NON-RES BLDG	288.1	267.1	261.9	282.5	303.3	321.0	337.2
(Yr/yr % change)	*1.0%*	*-7.3%*	*-2.0%*	*7.9%*	*7.3%*	*5.8%*	*5.0%*

* With respect to Tables 11 and 13, 'transportation terminals' is the one type-of-structure that is categorized differently in Canada (institutional) than in the U.S. (commercial), for reasons having to do with government statistics.

EXPLANATION: Table 13 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 14 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

| Table 14: Canada Type-of-Structure Forecasts Arranged to match the alphabetical category drop-down menus in INSIGHT (Square Feet Millions)							
	Actuals		Forecasts				
	2015	2016	2017	2018	2019	2020	2021
Summary							
NON-RESIDENTIAL BUILDING	76.0	55.0	48.7	56.0	62.1	66.0	69.4
RESIDENTIAL	212.1	212.2	213.1	226.6	241.1	254.9	267.7
RESIDENTIAL + NON-RESIDENTIAL BUILDING	288.1	267.1	261.9	282.5	303.3	321.0	337.2
Verticals							
Offices (private)	10.7	3.1	3.1	5.0	6.3	7.3	8.2
Parking Garages	0.8	0.2	0.7	0.7	0.7	0.8	0.8
Transportation Terminals	0.6	0.2	0.0	0.1	0.2	0.4	0.6
Commercial	12.1	3.5	3.8	5.9	7.2	8.4	9.6
(Yr/yr % change)	*21.4%*	*-70.7%*	*7.3%*	*54.1%*	*23.6%*	*16.3%*	*14.3%*
Amusement	5.9	5.5	4.5	5.4	6.2	6.6	6.9
Religious	0.7	0.4	0.4	0.4	0.4	0.4	0.4
Community	6.6	5.9	4.9	5.8	6.6	7.0	7.3
(Yr/yr % change)	*-3.4%*	*-11.6%*	*-17.0%*	*19.5%*	*13.7%*	*6.6%*	*3.8%*
Educational	15.7	10.6	9.7	10.6	11.8	12.5	13.0
(Yr/yr % change)	*47.6%*	*-32.8%*	*-8.5%*	*8.9%*	*11.7%*	*6.0%*	*4.4%*
Fire and Police Stations	0.9	0.6	0.8	0.8	0.8	0.9	0.9
Government Offices	2.2	3.0	2.8	2.9	3.0	3.1	3.2
Government	3.1	3.6	3.6	3.7	3.8	3.9	4.0
(Yr/yr % change)	*-24.1%*	*15.3%*	*-0.8%*	*4.2%*	*3.7%*	*2.5%*	*2.1%*
Manufacturing	5.4	2.7	3.8	4.6	5.0	5.4	5.8
Warehouses	7.2	10.1	7.5	8.2	9.2	9.8	10.3
Industrial	12.6	12.8	11.3	12.8	14.2	15.3	16.1
(Yr/yr % change)	*0.9%*	*1.6%*	*-12.1%*	*13.4%*	*11.1%*	*7.4%*	*5.5%*
Hospitals / Clinics	3.8	2.2	4.5	5.1	5.7	6.2	6.8
Medical Misc.	2.7	1.6	0.6	0.6	0.7	0.8	0.8
Medical	6.5	3.9	5.1	5.7	6.4	7.0	7.6
(Yr/yr % change)	*31.8%*	*-41.0%*	*33.2%*	*11.9%*	*12.0%*	*8.6%*	*8.3%*
Hotels	2.9	2.4	2.0	2.8	3.2	3.0	2.6
Retail Misc.	3.2	1.6	1.4	1.4	1.4	1.4	1.5
Shopping	13.2	10.8	7.0	7.3	7.4	7.5	7.7
Retail	19.2	14.7	10.4	11.5	12.0	11.9	11.8
(Yr/yr % change)	*4.5%*	*-23.5%*	*-29.2%*	*10.2%*	*4.5%*	*-0.9%*	*-1.2%*
NON-RESIDENTIAL BUILDING	76.0	55.0	48.7	56.0	62.1	66.0	69.4
(Yr/yr % change)	*12.6%*	*-27.6%*	*-11.3%*	*14.8%*	*11.0%*	*6.3%*	*5.1%*
Multi-Family	83.9	74.0	67.3	73.2	79.6	84.5	88.8
Single-Family	128.3	138.1	145.9	153.4	161.5	170.5	178.9
RESIDENTIAL	212.1	212.2	213.1	226.6	241.1	254.9	267.7
(Yr/yr % change)	*-2.5%*	*0.0%*	*0.5%*	*6.3%*	*6.4%*	*5.7%*	*5.0%*
RESIDENTIAL + NON-RESIDENTIAL BUILDING	288.1	267.1	261.9	282.5	303.3	321.0	337.2
(Yr/yr % change)	*1.0%*	*-7.3%*	*-2.0%*	*7.9%*	*7.3%*	*5.8%*	*5.0%*

EXPLANATION: Table 13 conforms to the type-of-structure ordering adopted by many firms and organizations in the industry. Specifically, it breaks non-residential building into ICI work (i.e., industrial, commercial and institutional), since each has its own set of economic and demographic drivers.

Table 14 presents an alternative, perhaps more user-friendly and intuitive, type-of-structure ordering that matches how the data appears in ConstructConnect's on-line product 'Insight'.

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.
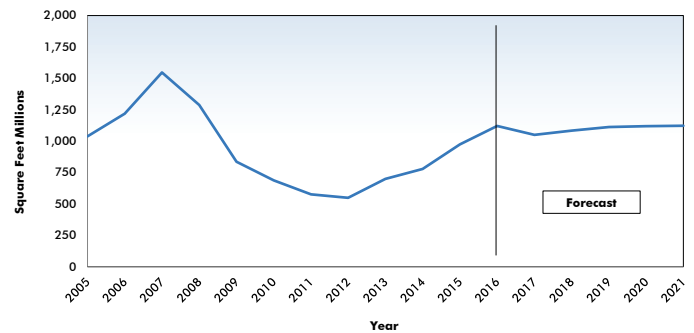
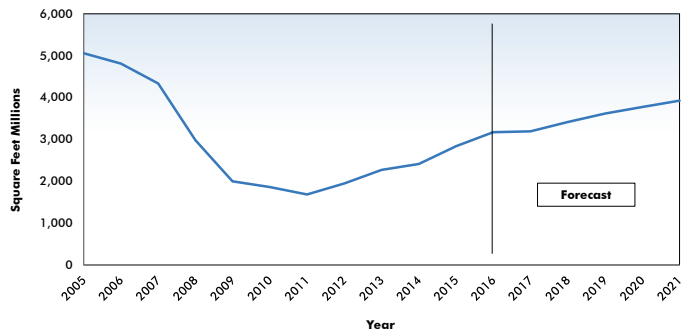## Graph 37: U.S. Residential Construction Starts — ConstructConnect
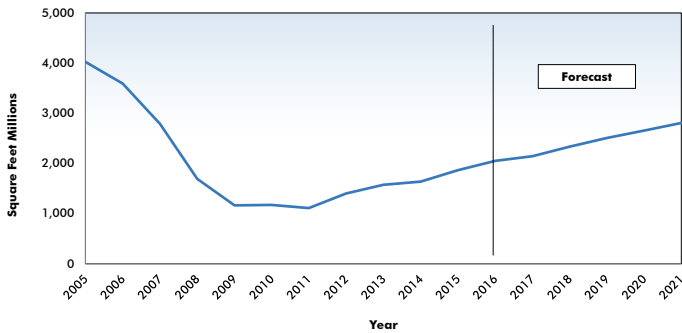
Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

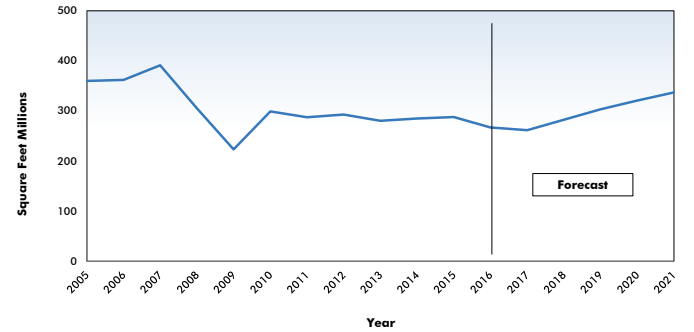## Graph 38: U.S. Non-Residential Building Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 39: U.S. Residential + Non-Residential Building Construction Starts — ConstructConnect
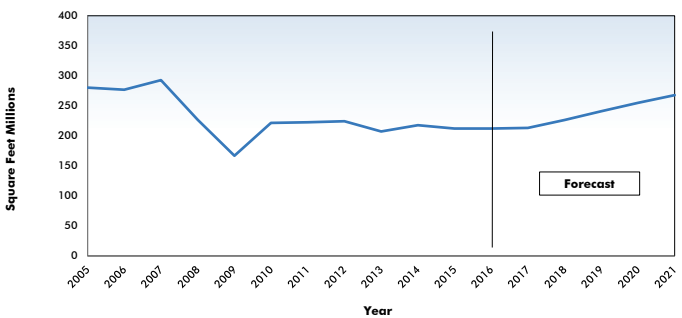

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

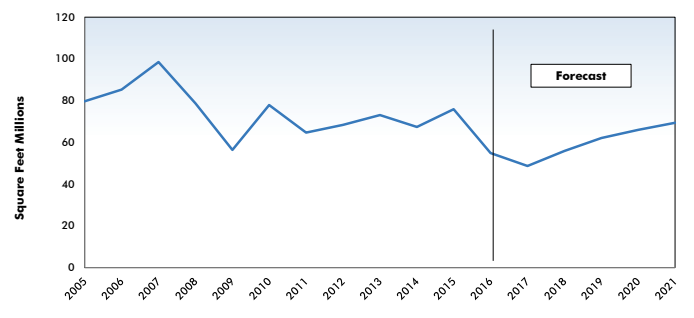## Graph 40: Canada Residential + Non-Residential Building Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 41: Canada Residential Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

Graph 42: Canada Non-Residential Building Construction Starts — ConstructConnect

Source of actuals: ConstructConnect "Insight" / Forecasts: Oxford Economics and ConstructConnect. Chart: ConstructConnect.

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