

# Construction Cost Guide



# 2011

**Altus Group** In 2005, Altus brought together the most trusted and respected names in real estate and development consulting to create a comprehensive and focused platform to better serve a broad client base. In 2009, we expanded our global footprint by combining with Altus Page Kirkland to become the leading multidisciplinary provider of independent real estate consulting and professional advisory services worldwide. Our independent, comprehensive services and software bring focus to the entire real estate development cycle.

## Altus Group Cost Consulting

As members of your project team we offer unparalleled expertise in construction cost consulting and development project management to help you deliver your project on time and on budget. We do this by employing a structured cost budgeting, cost monitoring and alternate planning process. This means an enhanced return on investment and better management of cost risk for our clients.

Altus has earned an enviable reputation within the construction and real estate industries because we have invested in understanding those industries like no other consulting group. With local insight, we are globally equipped to drive forward client projects.

Extending our global reach and perspective, Altus Page Kirkland perfectly complements our service offering: a market leader with a client-focused culture, offering services that span the international property and construction life cycle.



As a trusted source of cost management consulting expertise, accurate capital cost analysis and market information we can help your organization meet – and exceed – its objectives.

### Who?

A seasoned team of professionals who combine deep local understanding with global reach to provide clients with necessary decision-making information on construction costs and trends.

### What?

A wealth of experience and broad base of knowledge to offer our clients' projects the leading industry advantage.

### Where?

We are where our clients are and want to be – with local insight we are globally equipped to drive their projects forward.

### Why?

A commitment to providing clients with measurable results that enhances their ability to make choices with clarity and confidence, while maximizing value.

### How?

An innovative, team-based approach guided by proprietary information and expert advice to enhance traditional professional services.

**Our Advantage Is Your Advantage** Our advantage is rooted in superior market intelligence, specialized expertise and 50 years of demonstrated experience.

We maintain one of the largest, most up-to-date databases of construction cost information, thereby ensuring that our experts have access to accurate, time-sensitive information on a range of public and private projects, even those in the planning or development stage. Through the partnerships in our company – Realty Tax and Research, Valuation and Advisory – we constitute Canada's leading depository of cost, valuation and tax information.

## Notes On Correct Use Of Cost Data

### 1. Guide Only

The construction cost data contained herein is of a general nature only and subject to confirmation with respect to specific circumstances.

The unit rates for the building types described are an average range only for that particular type of building. The unit rates assume that a level, open site exists with no restrictions from adjoining properties. It is assumed that stable soil conditions prevail. Average quality finishes (unless otherwise stated), both to the exterior and interior, are also assumed.

Judgment factors must be applied within the average range to allow for:

- |                                   |  |
|-----------------------------------|--|
| ■ Quality                         | ■ Type of contract                         |
| ■ Location                        | ■ Extent of site works                     |
| ■ Building shape, size and height | ■ Design method                            |
| ■ Topography and soil conditions  | ■ User requirements                        |
| ■ Schedule                        | ■ Purchasing power of developer/contractor |
| ■ Site restrictions               |  |
| ■ Market conditions               |  |

### 2. Construction Cost Escalation/De-Escalation

An "escalation allowance" is a contingency (usually a percentage) added to the estimated construction estimate to allow for inflation in labour and material costs between the date of the estimate and the contract award. As the project moves closer to the onsite start date, the contingency reduces; reflecting the reduced risk of escalating costs.

As we prepare this 2011 Guide, the de-escalation we experienced in 2009, and a more stable cost market in 2010, appears to be ending. We are seeing a return of cost escalation for a number of trades. This brings new cost challenges. Accordingly, it is even more imperative than ever to have a detailed construction estimate prepared in order to obtain an accurate projection of your project construction costs.

### 3. Construction Costs Only

The unit costs outlined herein cover construction costs only. In all commercial developments, the project budget must also include for development or "soft" costs. These would include some or all of the following:

- |                                      |                                |
|--------------------------------------|--------------------------------|
| ■ Land and related costs             | ■ Levies                       |
| ■ Architectural and engineering fees | ■ Tenant incentives            |
| ■ Government registered programs     | ■ Permits and DCCs             |
| ■ Insurance and bond costs           | ■ Purchaser upgrades           |
| ■ Legal fees                         | ■ Appraisals                   |
| ■ Special design consultants         | ■ Soil and environmental tests |
| ■ Special equipment and furnishings  | ■ Land surveys                 |
| ■ Management costs                   | ■ Realty taxes                 |
| ■ Site services outside the property | ■ Broker commissions           |
| ■ Interest charges and lender's fees | ■ Contingencies                |
| ■ Marketing and advertising          |                                |

## 4. Correct Measurement & Use Of Square Foot

In preparing a “cost per square foot” guide, we must be clear on how we define the area used as the denominator to calculate this value. We have adapted the Canadian Institute of Quantity Surveyors definition, which dictates:

1. Measure each floor to the outer face of the external walls;
2. No deductions for openings at stairs, elevators or vertical ducts are made;
3. A deduction is made for a non-service vertical protrusion, ex: atrium space;
4. Mezzanine floors are generally included;
5. Balconies are excluded; enclosed solariums in residential condominiums are included;
6. Sloping and stepped floors (auditoriums/movie theatres) are measured flat; and,
7. Exclude all external covered walkways.

The values calculated by building types that usually have underground parking (condominiums, offices and hotels) allow for an underground parking component of 30%. Rates for buildings where parking is not common (schools, hospitals and retail) will need parking costs added; based on the “parking garage rate” in the guide.

## 5. Federal & Provincial Sales Taxes

The unit costs provided exclude Goods & Services Tax, but include Provincial Sales Tax. However, July 1, 2010 has seen the introduction of Harmonized Sales Tax (HST) in both Ontario and B.C. For advice on the implications of HST on your project costs and revenues, please contact our offices directly at [cost@altusgroup.com](mailto:cost@altusgroup.com).

## Cost Data Parameters

Measurement & Application of Cost per Square Foot (\$/sq. ft.)

Floor area above grade is traditionally known as Gross Livable Area (GLA), while the combined above and below grade floor area is traditionally referred to as Gross Floor Area (GFA). To simplify calculation estimates, unit costs should be applied only to Gross Liveable Area (GLA) – under the assumption that GLA averages 70% of GFA. Unit costs should be applied to the 70,000-square-foot GLA as follows:

Applied Example: A 7-storey office (100,000 sq. ft.) building in Toronto:

Area of Building	Below Grade	30,000 sq. ft.	30%
	Above Grade	70,000 sq. ft.	70%
	Total (GFA)	100,000 sq. ft.	100%

Approximate cost is 70,000 sq. ft. x \$165 - \$220 = \$11,550,000 - \$15,400,000

Notes: 1. All costs are in Q1 2011 dollars. 2. Unit costs cover construction costs only – all development or “soft” costs are excluded. 3. Rates are based on average standards and should only serve as basic guidelines. There is no substitute for a detailed estimate. 4. Unit prices exclude GST/HST. 5. Please refer to the Altus Group Cost Consulting Canadian Centre Index for individual city averages.

### Altus Group Cost Consulting Canadian Centre Index (Provincial)

<b>British Columbia</b>		4. Muskoka/Barrie	105
1. Victoria	108	5. Toronto	
2. Vancouver	100	Downtown Core	112
3. Whistler	120	GTA	100
4. Southern Interior	95	6. Eastern (Kingston, Cornwall)	108
5. Northern Interior	115	7. Ottawa	98
<b>Western/Prairies</b>		8. North (Sudbury, Thunder Bay, Trans Canada Corridor)	119
1. Calgary	100	<b>Quebec</b>	
2. Edmonton	97	1. Montreal	100
3. Regina/Saskatoon	105	2. Quebec City	94
4. Winnipeg	108	<b>Maritimes (Halifax)</b>	
<b>Ontario</b>			*79
1. Southwestern Ontario		<b>NWT/Nunavut</b>	
Windsor	105	1. Yellowknife	*190
London	100	2. Iqaluit	*240
Tri-City (Cambridge, Guelph, Kitchener-Waterloo)	100	3. Remote Communities	*275
2. Hamilton and Surrounding Areas	102	* Indexed to Toronto (GTA)	
3. Niagara Peninsula	106		

BUILDING TYPE		\$/sq. ft.	VANCOUVER			CALGARY			EDMONTON			TORONTO (GTA)*		
OFFICE BUILDINGS	Under 5 Stories		180	-	210	165	-	190	160	-	185	155	-	205
	5 - 10 Stories		200	-	250	175	-	205	170	-	200	165	-	220
	10 - 20 Stories		230	-	280	210	-	230	200	-	225	175	-	250
	20 - 30 Stories		280	-	350	220	-	265	210	-	255	205	-	260
	Over 30 Stories		n/a	-	n/a	255	-	320	240	-	310	240	-	335
STORES	Strip Plaza		85	-	115	90	-	130	95	-	130	75	-	140
	Enclosed Mall		190	-	250	175	-	245	170	-	240	175	-	215
	Anchor/Department Store		150	-	200	135	-	185	135	-	180	120	-	170
	Supermarket		150	-	180	135	-	185	135	-	180	105	-	145
	Discount Store		100	-	115	100	-	125	95	-	125	90	-	115
SCHOOLS	Elementary		180	-	200	145	-	190	140	-	185	145	-	165
	High School		200	-	250	170	-	230	165	-	225	155	-	175
	Technical/Vocational School		250	-	300	215	-	290	210	-	285	205	-	270
	Universities & Colleges		280	-	350	255	-	345	250	-	340	310	-	370
HOSPITALS	Chronic Care		320	-	420	310	-	420	305	-	410	325	-	425
	Active Treatment/Acute Care		400	-	520	440	-	600	435	-	590	450	-	625
	Laboratories (Level 1 & 2)		450	-	550	395	-	535	385	-	525	415	-	540
SENIORS' HOUSING	Congregate Care/Long Term Care		220	-	300	160	-	225	155	-	225	180	-	260
	Assisted Living		185	-	240	150	-	200	145	-	200	145	-	185
HOTELS	Budget		135	-	190	130	-	160	125	-	160	125	-	160
	4 Star Full Service		190	-	280	175	-	230	170	-	225	190	-	245
	Luxury		300	-	450	250	-	355	245	-	345	275	-	400
PARKING GARAGES	Free Standing (Above Grade)		60	-	80	60	-	75	60	-	70	45	-	70
	Underground		75	-	90	75	-	110	70	-	110	75	-	130
RESIDENTIAL CONDOMINIUMS/APARTMENTS	Basic Quality		170	-	210	145	-	205	140	-	195	155	-	175
	Medium Quality		190	-	240	205	-	245	195	-	235	175	-	220
	High Quality		240	-	290	240	-	325	230	-	310	225	-	400
	Point Towers - 50 to 80 Storeys (Medium Quality)		260	-	350	n/a	-	n/a	n/a	-	n/a	225	-	295
	Point Towers - 50 to 80 Storeys (High Quality)		330	-	400	n/a	-	n/a	n/a	-	n/a	275	-	450
TOWNHOUSES	Row (Medium Quality)		90	-	110	90	-	125	90	-	125	90	-	115
	Stack (Medium Quality)		110	-	135	115	-	150	115	-	150	115	-	150
	Walk-Up Timber Frame (Basic)		130	-	150	90	-	125	90	-	120	105	-	125
	Walk-Up Timber Frame (Medium)		145	-	170	110	-	145	105	-	140	115	-	140
	Walk-Up Timber Frame (High)		180	-	240	140	-	190	135	-	185	145	-	210
HOUSES	Speculative (Basic Quality)		100	-	165	100	-	120	100	-	120	85	-	105
	Speculative (Medium Quality)		165	-	225	110	-	155	110	-	150	110	-	175
	Speculative (High Quality)		225	-	350	190	-	290	185	-	285	210	-	350
	Custom Built		400	-	1,000	280	-	940	270	-	890	300	-	1,000
LIGHT ENGINEERING FACTORIES & WAREHOUSES	28' Clear Height (20,000 - 50,000 SF)		80	-	100	75	-	90	70	-	85	70	-	90
	28' Clear Height (50,000 - 100,000 SF)		75	-	95	70	-	85	65	-	80	60	-	75
	28' Clear Height (100,000 - 200,000 SF)		70	-	90	55	-	75	50	-	70	50	-	65
SITE SERVICING (includes underground storm, sewer, water, hydro, earthworks, curbs, asphalt roadways and sidewalks)	Local Roads - 8m Road Width (per metre)		2,500	-	3,200	2,500	-	3,100	2,500	-	3,100	2,700	-	3,400
	Arterial Roads - 9m Road Width (per metre)		2,700	-	3,800	2,700	-	3,700	2,700	-	3,700	2,900	-	4,000
	Arterial Roads - 12m Road Width (per metre)		3,500	-	4,100	3,400	-	4,100	3,400	-	4,100	3,700	-	4,400
	Private Roads - 6m Road Width (per metre)		2,100	-	2,500	2,000	-	2,600	2,000	-	2,600	2,200	-	2,800
	Residential Row Townhouses (per unit)		17,500	-	25,000	17,600	-	24,900	17,600	-	24,900	19,100	-	27,000
	Industrial (per acre)		115,000	-	165,000	112,400	-	169,400	112,400	-	169,400	124,200	-	187,200
	Commercial (per acre)		150,000	-	225,000	151,500	-	250,100	151,500	-	250,100	167,500	-	275,300

\*Costs for Toronto (GTA) take into consideration recent changes to the building code as well as the Toronto Green Standard.

BUILDING TYPE		\$/sq. ft.	OTTAWA/GATINEAU			MONTREAL			HALIFAX		
OFFICE BUILDINGS	Under 5 Stories		155	-	200	140	-	185	120	-	150
	5 - 10 Stories		65	-	210	145	-	210	130	-	165
	10 - 20 Stories		180	-	240	160	-	250	140	-	190
	20 - 30 Stories		200	-	280	195	-	270	150	-	210
	Over 30 Stories		n/a	-	n/a	230	-	340	n/a	-	n/a
STORES	Strip Plaza		90	-	145	70	-	145	70	-	105
	Enclosed Mall		160	-	200	155	-	200	120	-	150
	Anchor/Department Store		125	-	150	100	-	150	95	-	110
	Supermarket		110	-	145	95	-	125	90	-	110
	Discount Store		90	-	115	75	-	105	70	-	85
SCHOOLS	Elementary		145	-	180	140	-	165	130	-	155
	High School		170	-	210	150	-	175	155	-	180
	Technical/Vocational School		220	-	265	200	-	260	200	-	230
	Universities & Colleges		255	-	325	260	-	340	210	-	270
HOSPITALS	Chronic Care		325	-	425	300	-	385	280	-	335
	Active Treatment/Acute Care		450	-	625	440	-	625	400	-	520
	Laboratories (Level 1 & 2)		375	-	525	385	-	480	325	-	430
SENIORS' HOUSING	Congregate Care/Long Term Care		180	-	260	150	-	255	140	-	200
	Assisted Living		145	-	185	120	-	180	115	-	150
HOTELS	Budget		125	-	175	125	-	180	100	-	130
	4 Star Full Service		180	-	245	180	-	245	130	-	175
	Luxury		245	-	375	250	-	410	200	-	250
PARKING GARAGES	Free Standing (Above Grade)		50	-	75	45	-	70	50	-	65
	Underground		90	-	145	65	-	105	70	-	105
RESIDENTIAL CONDOMINIUMS/APARTMENTS	Basic Quality		155	-	175	130	-	155	110	-	150
	Medium Quality		175	-	200	155	-	190	125	-	160
	High Quality		200	-	260	190	-	310	145	-	225
	Point Towers - 50 to 80 Storeys (Medium Quality)		n/a	-	n/a	n/a	-	n/a	n/a	-	n/a
	Point Towers - 50 to 80 Storeys (High Quality)		n/a	-	n/a	n/a	-	n/a	n/a	-	n/a
TOWNHOUSES	Row (Medium Quality)		90	-	115	75	-	110	75	-	95
	Stack (Medium Quality)		110	-	165	100	-	135	100	-	140
	Walk-Up Timber Frame (Basic)		100	-	120	95	-	115	80	-	100
	Walk-Up Timber Frame (Medium)		105	-	140	100	-	135	90	-	115
	Walk-Up Timber Frame (High)		145	-	210	140	-	190	125	-	175
HOUSES	Speculative (Basic Quality)		80	-	105	80	-	95	70	-	80
	Speculative (Medium Quality)		95	-	150	100	-	140	85	-	115
	Speculative (High Quality)		200	-	350	185	-	310	180	-	270
	Custom Built		325	-	825	300	-	625	n/a	-	n/a
LIGHT ENGINEERING FACTORIES & WAREHOUSES	28' Clear Height (20,000 - 50,000 SF)		75	-	95	70	-	90	55	-	70
	28' Clear Height (50,000 - 100,000 SF)		65	-	80	55	-	80	50	-	65
	28' Clear Height (100,000 - 200,000 SF)		55	-	70	50	-	70	45	-	55
SITE SERVICING (includes underground storm, sewer, water, hydro, earthworks, curbs, asphalt roadways and sidewalks)	Local Roads - 8m Road Width (per metre)		2,700	-	3,400	2,600	-	3,300	2,400	-	3,100
	Arterial Roads - 9m Road Width (per metre)		2,900	-	4,000	2,800	-	4,000	2,600	-	3,600
	Arterial Roads - 12m Road Width (per metre)		3,700	-	4,400	3,600	-	4,400	3,300	-	4,000
	Private Roads - 6m Road Width (per metre)		2,200	-	2,800	2,100	-	2,700	1,900	-	2,500
	Residential Row Townhouses (per unit)		20,000	-	27,000	18,700	-	26,400	17,100	-	24,300
	Industrial (per acre)		125,000	-	185,000	119,500	-	180,000	111,800	-	168,500
	Commercial (per acre)		170,000	-	275,000	161,100	-	264,800	150,700	-	247,800

# Brief Description of Building Types

## 1. Office Buildings

The costs given are for speculative office buildings. Basic mechanical and electrical services, washrooms, and finishing of ground floor entrance lobby and elevator lobbies to upper floors are included. The cost of tenant partitioning and finishes, with the exception of ceiling and column finishes, are excluded. The cost of finishing this space can fluctuate widely between \$40 – \$75/sq.ft. depending on the density of partitioning and the quality of finishes.

## 2. Shopping Centres/Retail

The cost of providing parking facilities (traditionally grade-level parking) is excluded from the unit cost provided. The CRU space is considered shell. The public space is finished.

## 3. Schools & Colleges

The costs given exclude any allowance for fixtures, furnishings and equipment (FF&E), and for building and site supplementary costs.

## 4. Hospitals

With more than 40 subcategories of space types available in hospitals, the mix of costs can fluctuate significantly depending on the type of facility being constructed, the mix of beds to surgeries and building configuration. Parking is excluded.

## 5. Seniors' Housing

Costs can fluctuate significantly depending on whether the facility is operated for a profit or is community based, the level of care and the services provided to residents.

## 6. Hotels

The costs may exclude any allowance for fixtures, furnishings and equipment (FF&E) but each operator has its own definition. The cost for a budget hotel assumes no restaurant or bar facilities and minimal meeting/conference areas. The costs of 4-star and luxury full-service hotels include dining and conference facilities, spa services and special-use lounges.

## 7. Parking Garages

The costs for below-grade parking garages assume that temporary support to the excavated sides of the proposed garage is required. For above-grade garages, the area of the roof should be excluded from the floor area calculations notwithstanding that this may be usable area. The "efficiency" of garages (space/car) is also a useful cost guideline.

## 8. Residential Condominiums & Apartments

The costs provided are for high-rise residential. The square-foot costs of condominiums vary significantly depending on the unit size, quality of finishes, complexity of design, location and services provided within the building.

## 9. Townhouses

The floor area of the basement and garage should be excluded from the calculation of the applicable floor area to be used with the unit rate provided.

## 10. Houses

As with townhouses, the area of the basement and garage should be excluded. Prices vary significantly depending on the number and type of units constructed in the development, as well as the quality of the project.

## 11. Light Engineering Factories & Warehouses (Light Industrial)

The costs given assume that the façade is finished on three sides with architectural block and one side with facebrick. The warehouse space is “shell” but heated. Mezzanine area excluded. A finished office component comprising approximately 15% of the area is included.

## 12. Site Servicing

The rates for residential site servicing are based on costs per centre line of road and allow for underground storm, sewer, water and hydro services, earthworks, curbs, asphalt roadways and sidewalks. Items such as berms, retaining walls, noise barrier fences, entrance features, storm ponds, landscaping and external services are excluded. The higher end of the specified range should be used for municipalities, which require crusher run limestone in lieu of granular materials for the base road construction and/or where curb or road sub drains are required. Arterial road costs may be partially recoverable from the local municipality or region. The rates for townhouse servicing are provided on a per unit basis. The rate for industrial and commercial site servicing are provided on a per acre basis.

**Altus Group** is the leading multidisciplinary provider of independent real estate consulting and professional advisory services worldwide. With a staff of over 1,700, Altus Group has a network of over 60 offices in 14 countries worldwide, including Canada, UK, Australia, Asia and the United States.

We operate four interrelated Business Units, bringing years of expertise together into one comprehensive platform: Research, Valuation and Advisory; Cost Consulting and Project Management; Realty Tax Consulting and Geomatics services. Altus’ clients include banks, financial institutions, governments, pension funds, asset and fund managers, developers and landlords and companies engaged in the oil and gas industry.

### Other Services Include:

#### Research, Valuation and Advisory

- Real estate valuation and advisory services
- Annual property/portfolio valuation, acquisition and disposition strategy
- Financial due diligence
- Specialized market research
- Information technology services
- Demographic forecasting and analysis
- Land-use planning issues

#### Geomatics

- Land settlement and cadastral surveys
- Construction surveys
- 3D laser scanning and mapping
- GPS and LIDAR
- Digital data collection and manipulation
- Environmental site assessments (Phase I, II & III)
- Remediation

#### Realty Tax Consulting

- Assessment appeal (including expert witness)
- Tax due diligence
- Vacancy rebate counsel
- New construction/ preliminary property assessment studies
- Ongoing property tax management and budgeting



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