



OFFICE BUILT FORM AND CHARACTERISTICS IN DOWNTOWN VANCOUVER

Land Use and Development - Profile
Step 1: Understanding Yesterday and Today

Metropolitan Core Jobs & Economy Land Use Plan

Highlights

- Built form characteristics vary clearly by office space class.
- Average site areas are significantly larger in Classes AAA and A than in Classes B and C.
- There is a clear decrease in average building size and density from Class AAA through to Class C.
- The typical floor area average is much higher in Class AAA than in Classes A and B.
- The average building height of Class AAA is 116 m, more than 20 metres higher than Class A.



HOW DOES BUILT FORM DIFFER IN THE FOUR OFFICE SPACE CLASSES?

Downtown Vancouver has just under 300 buildings with significant amounts of office space in them. Approximately 270 office buildings have been assigned to the four office class categories, Class AAA, A, B or C. In addition, there are 20 office buildings that have not been assigned a class or are government-owned office buildings. For the distribution of the office buildings into the four classes, please refer to the information sheet on "Distribution of Office Space by Class in Downtown Vancouver".

The four office space classes distinguish themselves by many factors, such as size of building, location, infrastructure provided, etc.

Table 1 shows a summary of some of the built-form characteristics. All characteristics show a clear variation by class:

- Site areas are significantly larger in Classes AAA and A than in Classes B and C. Interestingly, the upper range of site areas is actually larger in Class A than in AAA.
- There is a clear decrease in density, expressed as Floor Space Ratio (FSR), from Class AAA through to Class C.
- Building sizes are also largest in Class AAA and decrease with the other classes.
- Less obvious is the pattern of typical floor sizes: While Class AAA has the largest average typical floor size, Classes A and B have fairly similar average floor sizes. The largest individual floor plates can actually be found in Class B and C buildings. The reason for this is that some Class B and C office space is located in mixed use buildings or former warehouses with large floor plates.
- Classes AAA, A and B are almost the same when considering the number of floors; however, the average height for Class AAA buildings is 20 metres more than for Class A.
- Class AAA has the most recent buildings, which are on average 15 years old. Class A space is located in buildings that are on average 25 years old, while today's Class B and C buildings are located in older buildings.

Table 1: Summary of built-form characteristics by class (see Notes 1 to 4)

	Class AAA	Class A	Class B	Class C
Site area (average)	56,470	53,506	19,975	10,353
range from	17,812	10,474	4,228	2,334
to	96,534	129,495	82,084	67,319
Building size (average)	404,649	232,557	99,493	38,467
range from	243,180	33,679	6,000	8,300
to	650,325	540,300	594,172	164,393
FSR (average)	9.92	7.34	5.77	4.41
range from	6.22	2.86	0.88	0.78
to	15.30	14.90	11.96	14.09
Typical floor area (average)	15,943	11,742	10,477	7,198
range from	13,614	5,000	3,000	2,500
to	18,000	18,200	29,400	30,000
Number of floors (average)	24	23	10	5
range from	16	6	2	2
to	35	36	33	15
Height (m) (average)	116	95	n/a	n/a
range from	83	50	n/a	n/a
to	149	142	n/a	n/a
Age (average)	15 years	25 years	45 years	70 years
range from	1	0	4	10
to	32	96	111	114

Examples of Class AAA buildings

1. Bentall 5 at 550 Burrard St. is an example of a new AAA office building. It is unique in that it is vertically phased: the first phase, completed in 2002, is 21 storeys in height and approximately 414,000 square feet in size, with 340,000 square feet of leasable office space. The second phase is under construction and includes 13 storeys on top of Phase I, with an additional square feet of 238,000 leasable office space.

Year built: 2002 (Phase 2 currently under construction, to be completed in 2007)
 Site area: 46,000 sq ft (estimate without YWCA portion of site)
 Building Size: 619,000 sq ft
 FSR: 13.6 (not including YWCA portion of site)
 Typical floor size: 17,500 sq ft
 Height: 144 m (471 ft)



2. Shaw Tower at 1067 West Cordova St. is an example of Class AAA office space in a mixed use building. In addition to approximately 280,000 sq ft of office space, the building contains 215,000 sq ft of residential/live-work space.

Year built: 2004
Site area: 56,000 sq ft
Building Size: 499,000 sq ft (incl. residential/live-work space)
FSR: 8.9 (incl. residential/live-work space)
Typical floor size: 13,700 sq ft (office)
Height: 149 m (489 ft)



4. Park Place at 666 Burrard Street is an example of an older Class AAA office building. With about 650,000 sq ft of total building size, it is the largest office building in Vancouver. Park Place was constructed in 1984 and underwent significant renovations in 2002.

Year built: 1984
Site area: 17,800 sq ft
Building Size: 650,000 sq ft
FSR: 11.4
Typical floor size: 17,500 sq ft
Height: 140 m (459 ft)



3. The new Price Waterhouse Coopers Place at 250 Howe Street is an example of a new AAA office building that is relatively small in scale on a small site. The second largest tenant after Price Waterhouse Coopers is Electronic Arts. The top four floors of the building were specifically designed for the studios and offices of the computer game publisher.

Year built: 2002
Site area: 17,800 sq ft
Building Size: 275,000 sq ft
FSR: 15.3
Typical floor size: 13,600 sq ft
Height: 91 m (300 ft)

Examples of Class A buildings

1. 570 Granville is an example of a recently constructed Class A building in the CBD. It is approximately 92,000 sq ft in size and includes ground-floor retail uses.

Year built: 2000
Site area: 12,000 sq ft
Building Size: 92,000 sq ft
FSR: 7.7
Typical floor size: 5,000 sq ft
Height: 77 m (253 ft)



2. The Pivotal Building at 858 Beatty Street is a new office building in Yaletown. The building has retail space on the ground floor and office space on the remaining six floors.

Year built: 2002
Site area: 80,000 sq ft
Building Size: 170,000 sq ft
FSR: 2.9
Typical floor size: 10,000 to 23,000 sq ft (in two distinct sections of the buildings)
Height: 37m (121 ft)



3. Due to its architectural significance, the Marine Building at 355 Burrard Street is one of the most prominent office buildings in Vancouver. Built in 1935, this art deco building is listed on the Vancouver Heritage Register. The Marine Building would have been state of the art office space at the time of its construction. It has experienced significant technology upgrades and is still considered Class A today.

Year built: 1930
Site area: 21,000 sq ft
Building Size: 199,000 sq ft
FSR: 9.4
Typical floor size: 9,500 sq ft
Height: 98 m (321 ft)



Examples of Class B buildings

1. The Landing at 375 Water Street is a heritage building with Class B office space. Constructed in 1905, it was significantly renovated in 1987. Restaurant and retail space are located on the ground floor.

Year built: 1905
Site area: 24,000 sq ft
Building Size: 188,000 sq ft
FSR: 7.9
Typical floor size: 22,000 sq ft
Height: 30 m (98 ft)



2. 1138 Melville is an example of a newer Class B office building. The 18 storey building is located at the western edge of the Central Business District. The building is currently occupied by the Federal Government.

Year built: 2000
Site area: 20,000 sq ft
Building Size: 174,000 sq ft
FSR: 8.9
Typical floor size: 10,000 sq ft
Height: 70 m (229 ft)



3. Mainland Tech Centre at 910 Mainland Street is the new home of Business Objects. It is located in a former warehouse building that has been converted to Class B office space. The building was constructed in 1955, but was considerably upgraded in 2002.

Year built: 1955
Site area: 101,000 sq ft
Building Size: 290,000 sq ft
FSR: 2.7
Typical floor size: 93,000 sq ft
Height: 14 m (46 ft)



Examples of Class C buildings

1. The Lumberman's Building at 509 Richards Street is a fairly large historic Class C office building in the downtown core.

Year built: 1912
Site area: 4,000 sq ft
Building Size: 29,000 sq ft
FSR: 7.5
Typical floor size: 3,500 sq ft
Height: 34 m (115 ft)



2. Yaletown Mews is an example of more recently constructed Class C office space. Located at 1001 Cambie Street, it is on the edge of Yaletown.

Year built: 1990
Site area: 38,000 sq ft
Building Size: 43,000 sq ft (including residential and retail space)
FSR: 1.1 (including residential and retail space)
Typical floor size: 11,000 sq ft
Height: 3 storeys



3. 815 West Hastings Street is a relatively large Class C office building. It was constructed in 1976 and renovated in 1989. The building is just over 100,000 square feet in size and includes retail space on the ground floor.

Year built: 1976
Site area: 16,000 sq ft
Building Size: 106,000 sq ft
FSR: 7.0
Typical floor size: 13,000 sq ft
Height: 38 m (126 ft)



The data for this information sheet has been compiled from the following sources:

- Space4Lease.com
- City of Vancouver Building Permit and Development Permit data
- City of Vancouver VanMap
- City of Vancouver 3D Mapping
- Emporis website: www.emporis.com

1) To compute averages for the different characteristics, outliers were taken out of the data series in order not to skew the average (e.g. the Mainland Tech Centre, which has an extremely large site and floor plates, is not included in the calculations. It was nonetheless used as an example of a Class B office building).

2) The floor space ratio (FSR) is a measure of density and is calculated by dividing the total floor area of the building by the site area. Certain building elements are excluded from FSR calculations, therefore, the FSR given cannot necessarily be derived from the building size and site area stated here.

3) Building height was sourced from Emporis and compared to City of Vancouver 3D Mapping. The height given here is the structural height of the building, defined by Emporis as follows: "Structural height is defined as the vertical elevation from the base to the highest architectural or integral structural element of the building. This includes fixed sculptures, decorative and architectural spires, ornamental fences, parapets, balustrades, decorative beacons, masonry chimneys, and all other architecturally integral elements along with their pedestals."

(<http://www.emporis.com/en/ab/ds/sg/ra/bu/td/he/ou/#structuralheight>)

4) The average and range for Class A building heights have been derived from 21 of the 31 Class A office buildings.

This Information Sheet was published by the City of Vancouver. It is one in a series of Information Sheets produced for the Metropolitan Core Jobs and Economy Land Use Plan. The purpose of this initiative is to develop a long term land use policy plan to accommodate future economic activity and jobs in the Metro Core. For further information, please e-mail corejobs@vancouver.ca or visit the website www.vancouver.ca/corejobs