

**7.4.2 Typical Office Building (1)**

	<u>Large (&gt;= 25,000 ft<sup>2</sup>)</u>	<u>Small (&lt;25,000 ft<sup>2</sup>)</u>
<b>Stock Floor Area (billion ft<sup>2</sup>)</b>	8.22	4.29
<b>Floor-Area Weighted Averages</b>		
Building Area (thousand ft <sup>2</sup> )	90-137	5.5-6.6
Floors	6-7	1-2
<b>SHELL</b>		
Percent Glass	40-50	15-20
Window R-Value	1.39-1.71	1.34-1.99
Window Shading Coefficient	0.69-0.8	0.71-0.82
Wall R-Value	2.5-6.0	3.9-6.3
Roof R-Value	9.1-12.6	10.5-13.3
Wall Material	masonry	masonry
Roof Material	built-up	built-up
<b>OCCUPANCY</b>		
Average Occupancy (ft <sup>2</sup> /person)	390-460	420-470
Weekday Hours (hrs/day)	12	11
Weekend Hours (hrs/day)	5	4
<b>EQUIPMENT</b>		
Average Power Density (W/ft <sup>2</sup> )	1	1
Full Lighting Hours (hrs/year)	3580	3360
<b>LIGHTING</b>		
Average Power Density (W/ft <sup>2</sup> )	1.3-1.8	1.7-2.2
Full Lighting Hours (hrs/year)	4190	3340
<b>SYSTEM AND PLANT</b>		
System and Distribution Type	Constant Volume w/ reheat VAV w/ economizer	Packaged single-zone Packaged single-zone w/ economizer
Heating Plant	Gas Boiler	Gas Furnace
Cooling Plant	Hermetic Centrifugal Chiller	Direct Expansion
Service Hot Water	Gas Boiler	Gas Water Heater

Note(s): 1) The prototypes are synthetic buildings compiled from statistical data from building surveys or conclusions from previous studies. The physical characteristics, system characteristics, and usage patterns are based upon various surveys, studies, engineering estimates, or engineering judgment.

Source(s): LBNL, Commercial Heating and Cooling Loads Component Analysis, June 1998, Table 10, p. 31.