

AIA Document D101

Methods of Calculating Areas and Volumes of Buildings

There is no single standard for calculating areas and volumes of buildings. This document describes several options for calculation that may be at variance with applicable building code(s). Concurrence as to method(s) used and conformance to applicable code(s) is necessary.

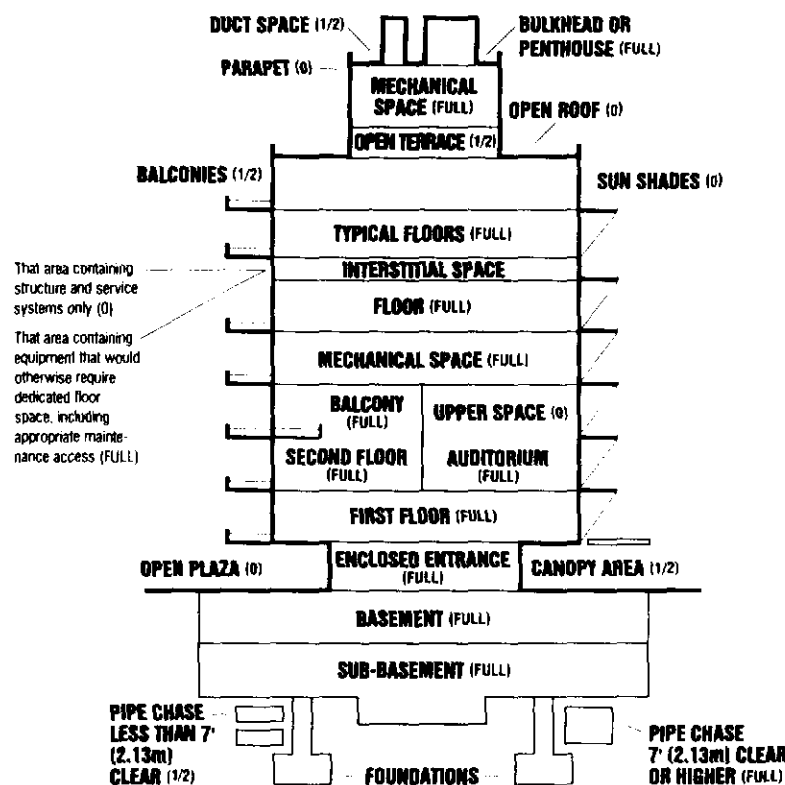
ARCHITECTURAL AREA OF BUILDINGS

The ARCHITECTURAL AREA of a building is the sum of the areas of the floors of the building, measured from the exterior faces of exterior walls or from the centerline of walls separating buildings. The architectural area includes basements, mezzanines, intermediate floors and penthouses, provided that these areas have a minimum of seven feet (2.13 meters) headroom height. Discretion is advised in calculating areas of interstitial space, such as mechanical spaces where live load requirements meet or exceed those permitted for habitation under local building codes.

- Paved or finished covered areas, such as open porches and similar spaces, shall have the architectural area multiplied by an area factor of 0.50.
- The architectural area does not include such features as utility chases (less than seven feet [2.13 meters] to any physical obstruction), exterior terraces, steps or eaves.

ARCHITECTURAL VOLUME OF BUILDINGS

The ARCHITECTURAL VOLUME (cubic volume) of a building is the sum of the products of the areas defined above, multiplied by the floor-to-floor height or floor-to-mean-finished-roof height.



ARCHITECTURAL
AREA DIAGRAM



The STANDARD NET ASSIGNABLE AREAS are those portions of a building that are available for assignment as usable area or as rental area to an occupant.

OFFICE ASSIGNABLE AREAS

The USEABLE AREA is measured and calculated:

- from the center lines of common walls or partitions separating two or more USEABLE AREAS;
- to the inside surface of interior finishes of other walls or partitions separating such USEABLE AREAS from shared common areas, such as corridors, interior atriums and the exterior;
- without deduction for the building's functionally necessary elements, such as columns, projections and minor vertical floor penetrations for mechanical and electrical duct enclosures.

The RENTABLE AREA is measured and calculated:

- from the center lines of demising walls or partitions separating two or more RENTABLE AREAS;
- to the inside surfaces of the exterior walls; and
- including the pro-rata share of common areas, such as corridors and atriums;
- without deduction for the building's functionally necessary elements, unless it is a major vertical penetration such as a stairway, elevator or escalator shaft that is shared with the floors above or below.

The sum of all tenant's RENTABLE AREAS should equal the entire area of the building's floor(s) after deductions have been made for any major vertical penetrations shared with the floors above or below.

Additions may be made for major vertical penetrations such as stairways or other transportation elements when those penetrations are contained solely within the tenant's USEABLE AREA and RENTABLE AREA and the use is not shared with other tenants.

RETAIL ASSIGNABLE AREAS

RETAIL AREAS, sometimes referred to as Gross Leasable Area (G.L.A.), are computed by measuring from the exterior face of the building, store front or lease line, to the exterior face of the other outer building wall(s) or outer face of common area partitions and from the center line of walls between adjacent lease spaces, without deduction for the building's functionally necessary elements such as columns, projections and minor vertical floor penetrations for mechanical and electrical duct enclosures.

RESIDENTIAL LIVING AREAS

RESIDENTIAL LIVING AREAS include those spaces used for habitation in accordance with applicable building code(s) and ordinance(s). All areas are measured from the outside of the exterior walls.



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