

**AIR**  
**INDUSTRIAL**  
**BUILDING**  
**STANDARDS**



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# AIR INDUSTRIAL BUILDING STANDARDS

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## 1. INTRODUCTION.

The following industrial building standards have been developed by the AIR Commercial Real Estate Association for the purpose of assisting owners and users of industrial buildings to determine the basis on which the gross building area is to be established. It has been the long-standing practice among owners and users of industrial property to determine rental rates based upon the gross building area. To the extent that the building being measured is a simple box, this method works well. It is when a building is more complex by virtue of decorative projections or recesses, or such functional items as recessed truck wells or covered loading docks, that a controversy may arise. The AIR Industrial Building Standards are intended to eliminate such controversy.

Building Standards # 1 through 5 address the five different variations found in most industrial buildings. Building Standards # 1 through 4 deal with the Gross Building Area of entire buildings. Building Standard # 5 deals with the Gross Building Area of a portion of a larger building. Multi-story industrial buildings are not included.

In each of the Building Standards certain words appear as defined terms. Section 3, "DEFINITIONS", gives the meaning of the defined terms as they are used in the AIR Industrial Building Standards. Defined terms are listed alphabetically in Section 3.

To use the AIR Industrial Building Standards, (i) select from Building Standards # 1 through 5 in Section 2 the one which fits the situation you are concerned with, (ii) read those Definitions in Section 3 which that Building Standard refers to, and (iii) read the General Guidelines in Section 4. It is not necessary to read this entire document in order to establish the Gross Building Area of any specific industrial building.

## 2. BUILDING STANDARDS 1 THROUGH 5.

**BUILDING STANDARD #1 (Building with no recesses and/or projections, and no Rentable Mezzanine):** In the case of an industrial building whose Exterior Walls consist of a single vertical plane with openings for personnel doors, truck doors and windows, the Gross Building Area shall be determined by:

- (a) Measuring the distance from the Exterior Surface of one Exterior Wall to the Exterior Surface of the Exterior Wall directly opposite, and
- (b) Multiplying the building width X the building depth, and

- (c) Adding or subtracting the area(s) of non-rectilinear portions of the building (if any).

[See Exhibit 1]

**BUILDING STANDARD #2** (Building with no recesses and/or projections, plus Rentable Mezzanine): In the case of an industrial building whose Exterior Walls consist of a single vertical plane with openings for personnel doors, truck doors and windows, and the interior of the building includes Rentable Mezzanine, the Gross Building Area shall be Determined by:

- (a) Following the same steps as above in Building Standard #1 with respect to the Footprint, and
- (b) Measuring the area within the Rentable Mezzanine in accordance with Section 4(f), and
- (c) Adding the area of the Footprint to the area of the Rentable Mezzanine.

[See Exhibit 2]

**BUILDING STANDARDS #3** (Building with recesses such as an interior truck well or recessed glass, and/or projections, with no Rentable Mezzanine): In the case of an industrial building one or more of whose Exterior Walls consist of two or more vertical planes as a result of the existence of

- Recessed entry or window elements
- Projecting entry or window elements
- Interior recessed truck well or rail loading area
- Covered truck dock (see Section 4 (i))

the Gross Building Area shall be determined by:

- (a) Determining the Dominant Portion of any Exterior Wall containing any of the projecting or recessed vertical planes referred to above, and
- (b) Determining the width and/or depth of the building based on the distance from the Exterior Surface of the Dominant Portion of any such Exterior Wall to the Exterior Wall directly opposite, and
- (c) Multiplying the building width X the building depth using the Dominant Portion dimension(s), and
- (d) Adding or subtracting the area(s) of non-rectilinear portions of the building (if any).

[See Exhibit 3]

BUILDING STANDARD #4 (Building with recesses such as an interior truck well or recessed glass, and/or projections, plus Rentable Mezzanine): In the case of an industrial building one or more of whose Exterior Walls consist of two or more vertical planes as a result of the existence of

- Recessed entry or window elements
- Projecting entry or window elements
- Recessed truck well or rail loading area
- Covered truck dock (see Section 4 (i))

and the interior of the building includes a Rentable Mezzanine, the Gross Building Area shall be determined by:

- (a) Following the same steps as in Building Standard #3 with respect to the Footprint, and
- (b) Measuring the area within the Rentable Mezzanine in accordance with Section 4 (f), and
- (c) Adding the area of the Footprint to the area of the Rentable Mezzanine.

[See Exhibit 4]

BUILDING STANDARD #5 (Part of a larger building): In the case of a portion of a larger industrial building being leased separately, the gross dimension(s) of either the width or the depth of such portion involving an interior Demising Wall shall be measured to the centerline of any such interior Demising Wall. In all other respects the Gross Building Area shall be determined in the same manner as in Building Standards #1 through 4.

[See Exhibit 5]

### 3. DEFINITIONS:

DEMISING WALL. A "Demising Wall" is any interior wall dividing one separately leased or occupied portion of a building from another.

DOMINANT PORTION. The "Dominant Portion" shall mean that portion of the Exterior Surface within any one vertical plane which is both (i) structural in character and (ii) whose total surface area contains the highest percentage of the total Exterior Surface area of that one Exterior Wall. By way of illustration: (i) if 60% of the Exterior Surface of one Exterior Wall of a building consists of recessed glass storefront falling within a first vertical plane; and (ii) 10% of the same Exterior Surface is structural in character falling within a second vertical plane; and (iii) 30% of the same Exterior Surface is structural in character and falls within a

third vertical plane, the 30% of the Exterior Surface which is structural would be the Dominant Portion for the purpose of determining the Exterior Dimensions.

NOTE: Any portion of the exterior concrete tilt-up wall of a concrete tilt-up building covered by the addition of a decorative element (e.g. surface-mounted Spandralite or glass panels) will be construed as constituting a part of the Exterior Surface of the structural portion it covers for the purpose of calculating the Dominant Portion, whether the structural portion is visible or not.

[See Exhibit 3 for an illustration of Dominant Portion]

EXTERIOR DIMENSIONS. The "Exterior Dimensions" of a building are determined by measuring the distance from the Exterior Surface of one Exterior Wall to the Exterior Surface of the Exterior Wall directly opposite, based on the Dominant Portion of each Exterior Wall. OR, in the case of a building occupied by two or more tenants, the Exterior Dimensions of any such portion of a larger building shall be measured to the center line of any Demising Wall separating one section of the Building from another.

EXTERIOR SURFACE. The "Exterior Surface" refers to the outside surface of any structural or non-structural component of an Exterior Wall falling within a given vertical plane in any one Exterior Wall. Windows and doors mounted in an Exterior Wall shall be deemed to be in the same vertical plane as the Exterior Wall so long as their thickness lies within the thickness of the Exterior Wall, or so long as they are mounted directly to the interior surface or Exterior Surface of the Exterior Wall.

EXTERIOR WALL. The "Exterior Wall" refers to the outermost structural wall, including its non-structural components, which forms the external perimeter of a building.

FINISHED MEZZANINE. "Finished Mezzanine" refers to any portion of a Mezzanine which has either (i) been developed at least to the extent of the addition of ALL of the following improvements, or (ii) for which a reasonable allowance has been provided for the addition of ALL of the following improvements:

- (a) Frame and drywall partition fully separating the area of the Finished Mezzanine from adjacent areas of the Mezzanine or the balance of the building, constructed at least to the height of an intersecting finished interior ceiling.

- (b) T-bar suspended ceiling or joisted ceiling with a fully finished interior surface.
- (c) Ducted heating and refrigerated air conditioning.
- (d) Fully finished floor covering (carpet, tile or sheet goods).
- (e) Lighting at an intensity throughout of not less than 50 f.c. at desk height.
- (f) Minimum electrical required by code.

FOOTPRINT. The "Footprint" of a building is the area of land occupied by a building, or portion of a larger building, calculated based on its Exterior Dimensions. For example, a building with Exterior Dimensions of 100 ft. X 200 ft. has a Footprint of 20,000 s.f. A Mezzanine (whether Finished or Storage Mezzanine) is never included in the building Footprint under any circumstances.

GROSS BUILDING AREA. The "Gross Building Area" of a building is the total area comprised of the building's Footprint plus Rentable Mezzanine, based on Exterior Dimensions. If the Rentable Mezzanine includes any Storage Mezzanine area:

- (a) The exact square footage of the Storage Mezzanine area to be included must be clearly identified; AND
- (b) It must be clearly stated that the Storage Mezzanine area so identified is included as Rentable Mezzanine in the Gross Building Area.

MEZZANINE. A "Mezzanine" is a floor structure within the Exterior Walls capable of supporting offices, warehousing or manufacturing activities, as a function of load-bearing capacity and compliance with applicable building codes governing the purpose for which the Mezzanine was constructed.

OFFICE AREA. To qualify as finished "Office Area," an area within the industrial building must be developed at least to the extent of the addition of ALL of the following improvements, whether constructed on the ground floor or the Mezzanine:

- (a) Frame and drywall partition fully separating the Office Area from adjacent areas of the industrial building, constructed at

least to the height of an intersecting finished interior ceiling (not the underside of the exterior roof of the building).

- (b) T-bar suspended ceiling or joisted ceiling with a fully finished interior surface.
- (c) Ducted heating and refrigerated air conditioning.
- (d) Fully finished floor covering (carpet, tile or sheet goods).
- (e) Lighting at an intensity throughout of not less than 50 f.c. at desk height.
- (f) Minimum electrical required by code.

PRINCIPAL STRUCTURE. A building which is designated as a property's "Principal Structure", may be so designated by virtue of:

- (a) Its size, OR
- (b) Its location on the property, OR
- (c) Its architectural character and importance, OR
- (d) Its structural components, OR
- (e) Any combination of these.

RENTABLE MEZZANINE. "Rentable Mezzanine" is any Storage Mezzanine which is expressly agreed by the parties to be included in the Gross Building Area OR any Finished Mezzanine (see Section 4 (h)).

STORAGE MEZZANINE. "Storage Mezzanine" is any Mezzanine constructed in accordance with applicable building codes, other than a Finished Mezzanine.

#### 4. GENERAL GUIDELINES, CLARIFICATIONS AND EXCLUSIONS:

- (a) Recessed entries, decorative projections and overhangs, covered loading docks, recessed truck wells and rail loading areas shall all be treated in the same manner, i.e., their impact on Gross Building Area will be determined on the basis of the Dominant Portion criteria.



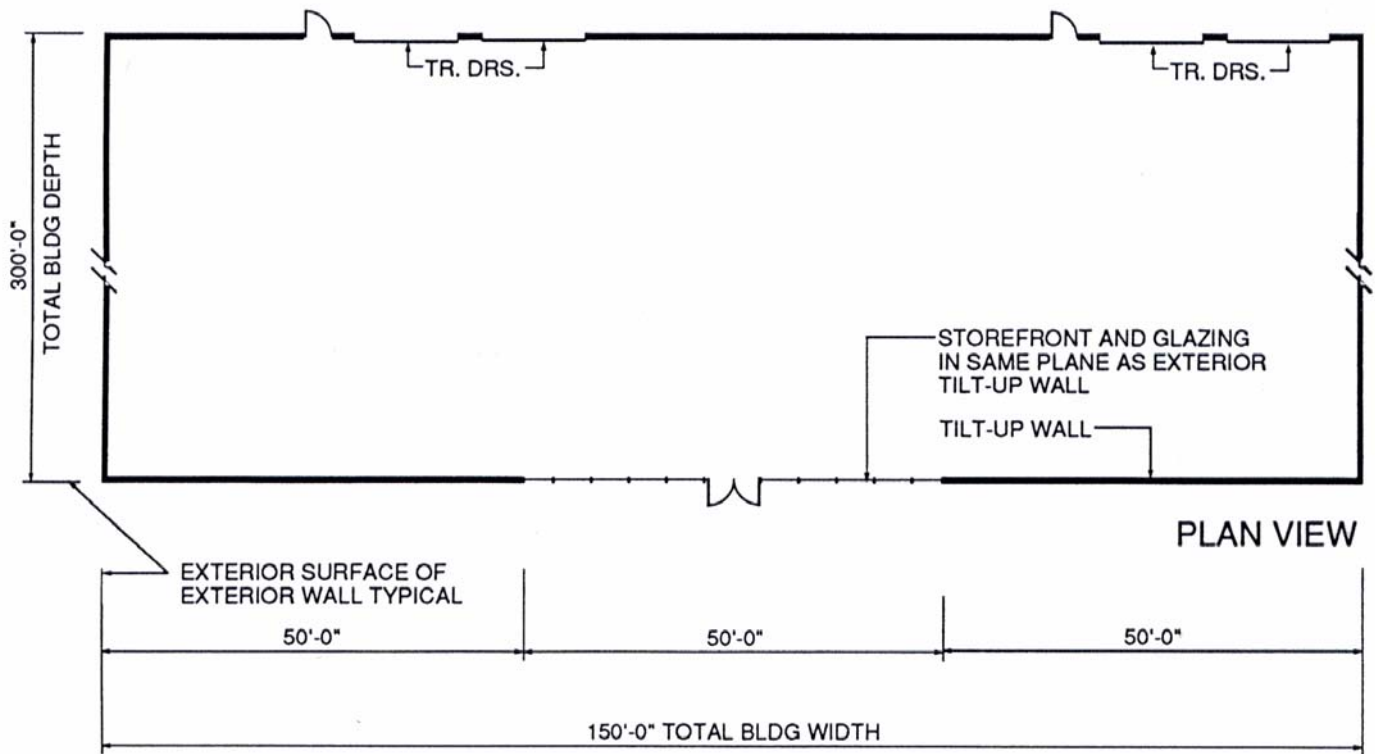
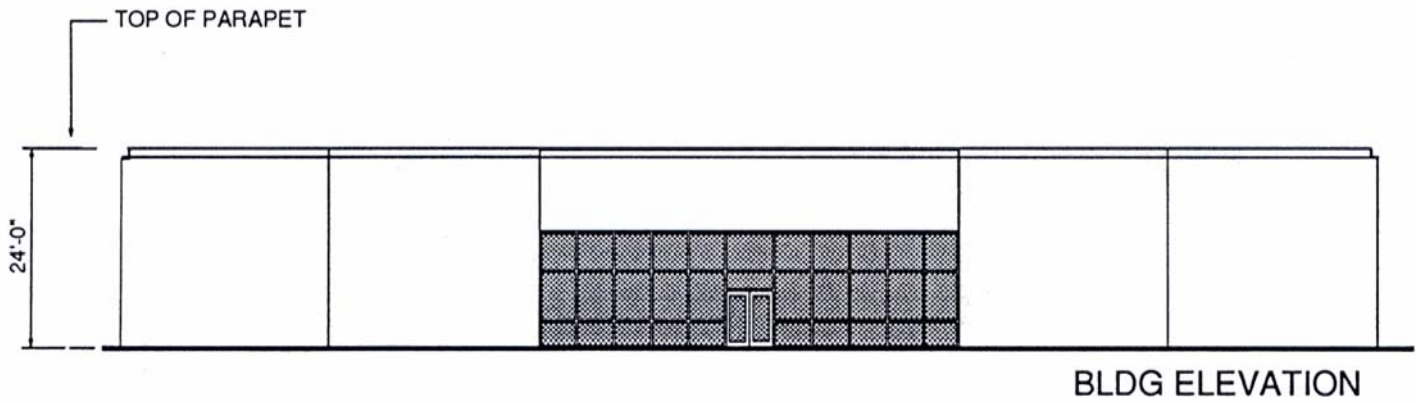
- (b) Finished Office Area shall include any improvements constructed within an industrial building which meet the definition for Office Area, including restrooms which are contiguous with the principal Office Area in the building. Restrooms which are located separately from the principal Office Area shall not be considered to be a part of the Office Area calculations.
- (c) Any portion of the Office Area in an industrial building located separately from the principal Office Area may be included in the total Office Area provided they are constructed in accordance with the Office Area definition. Any offices which fail to meet all of the above criteria may be separately identified as "Shop Offices".
- (d) As used in these AIR Industrial Building Standards, the term "Office Area" is intended solely to be descriptive of construction details, and is NOT intended to be determining as to the use to which such portions of a building may be put. For example, portions of an industrial building improved in this manner may be intended for use as a lunch area, lab area, R & D area, assembly area, light manufacturing or inspection area, as well as for general office purposes. In the process of marketing an industrial building, a building owner or industrial broker may describe portions of the building which meet ALL of the criteria of Office Area as defined above as "Offices" without intending to limit the uses of such portions to conventional "office" uses.
- (e) In a case in which there are two or more buildings on a property which are to be included in the total Gross Building Area, one building shall be designated as the Principal Structure, and the number of buildings to be included and their individual Gross Building Areas shall be clearly stated. Separate structures on a single property, whether attached to the Principal Structure or free-standing, shall be separately identified so that it is clear that any such structure which is being claimed as part of the Gross Building Area of the property:
  - (1) Is identified as a separate structure, that is, is not located within the Exterior Walls of the Principal Structure; and
  - (2) Is identified as to its basic structural components (for example, concrete block, frame and stucco, metal).
- (f) In any case in which a building includes Rentable Mezzanine, the gross area of the Rentable Mezzanine will be based on its exterior dimensions, i.e., from the interior surface of any Exterior Wall which it abuts to either: ..... the interior surface of the opposite abutting Exterior Wall; OR

- ..... the edge of the mezzanine floor surface which is open and adjacent to the warehouse or factory area, in the case of a Storage Mezzanine; OR
- ..... the warehouse/factory area side of a perimeter wall, in the case of a Finished Mezzanine.

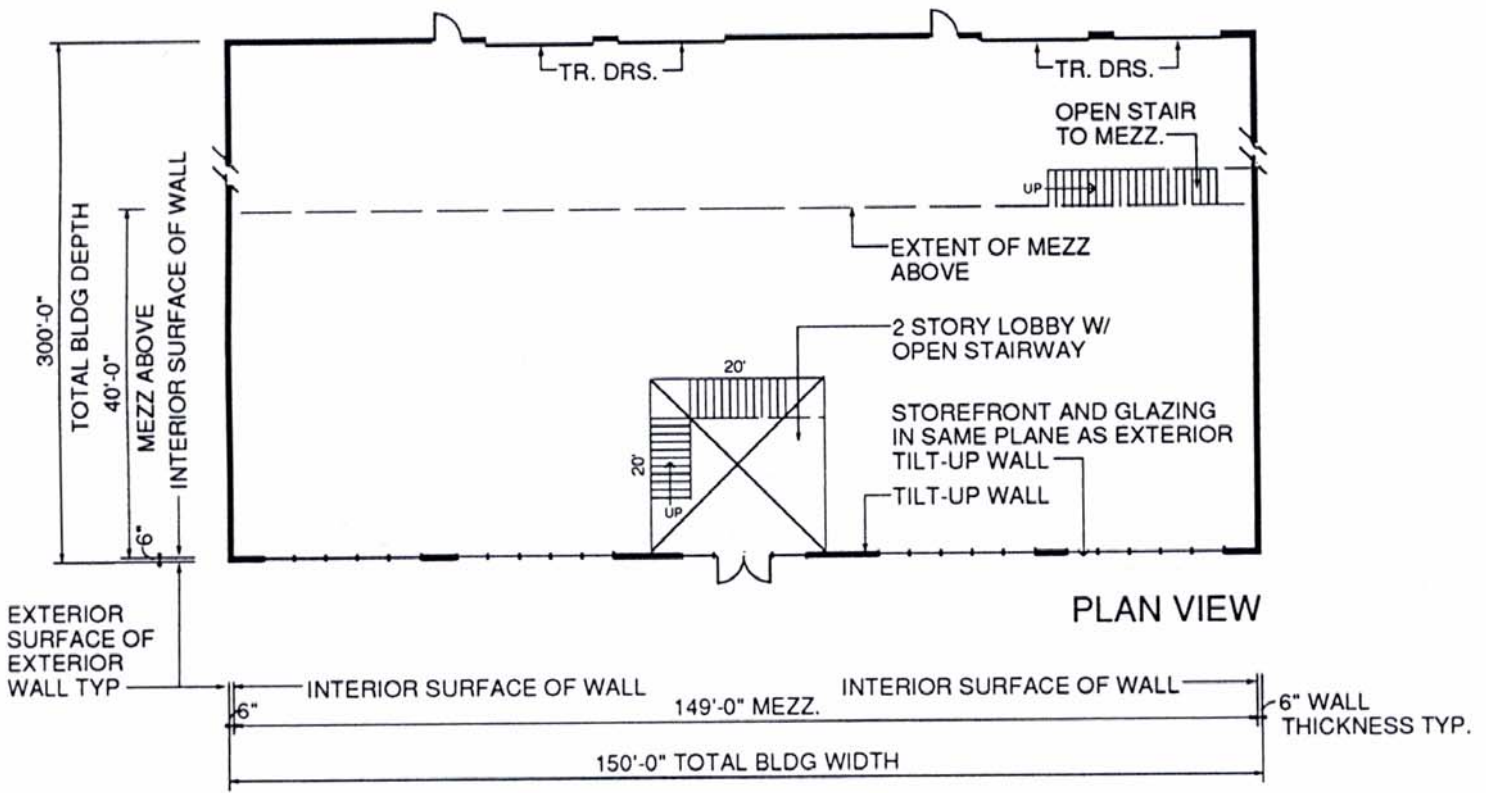
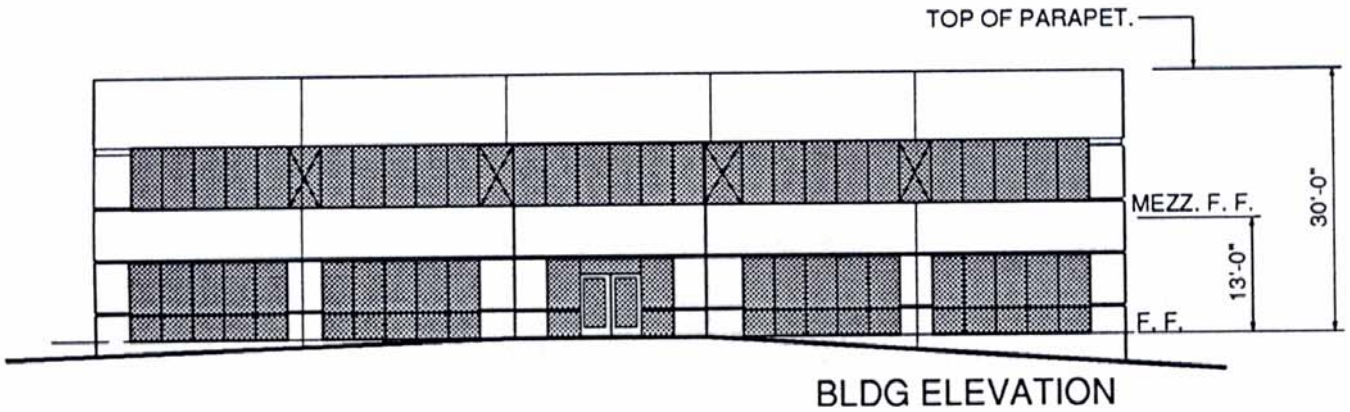
The floor area of a two story lobby, atrium or other similar element, and the floor area of any vertical elevator shaft and vertical ducting, shall be deducted from the gross area of a Mezzanine, and any open stairway to a Mezzanine shall not be included in determining the gross area of a Mezzanine (see Exhibit 2). An enclosed, air conditioned stairway to a Mezzanine, whether Finished or Storage Mezzanine, will be treated as follows:

- (1) If the enclosed stairway falls within the perimeter of the Mezzanine, 100% of the gross area of the stairway shaft will be deducted from the gross area of the Mezzanine and added to the gross area of the office area (if any) under the Mezzanine served by that stairway (see Exhibit 4).
  - (2) If the enclosed stairway falls outside the perimeter of the Mezzanine, 100% of the gross floor area occupied by the stairway shaft will be added to the gross area of the office area (if any) under the Mezzanine served by that stairway.
- (g) A Mezzanine is never considered as part of the building Footprint, regardless of whether it is Finished Mezzanine or Storage Mezzanine.
- (h) Storage Mezzanine which fully complies with building codes with respect to structural character, access and protective railings may or may not be included as Rentable Mezzanine in the Gross Building Area, as a function of market conditions. If a Storage Mezzanine is to be included as Rentable Mezzanine in the Gross Building Area:
- (1) The exact square footage of the Storage Mezzanine area to be included must be clearly identified; AND
  - (2) It must be clearly stated that the Storage Mezzanine area so identified is included as Rentable Mezzanine in the Gross Building Area.
- (i) A covered loading dock is never included in the Gross Building Area unless (i) its area falls within the Exterior Dimensions of the building, and (ii) its roof is an integral part of the building's roof system, in which case the area of the covered loading dock which falls within the Exterior Dimensions of the building shall be included in the Gross Building Area. If

the area of a covered loading dock falls within the Exterior Dimensions of the building but its roof is not an integral part of the building's roof system, then that portion of the area within the Exterior Dimensions of the building shall be excluded from the Gross Building Area.

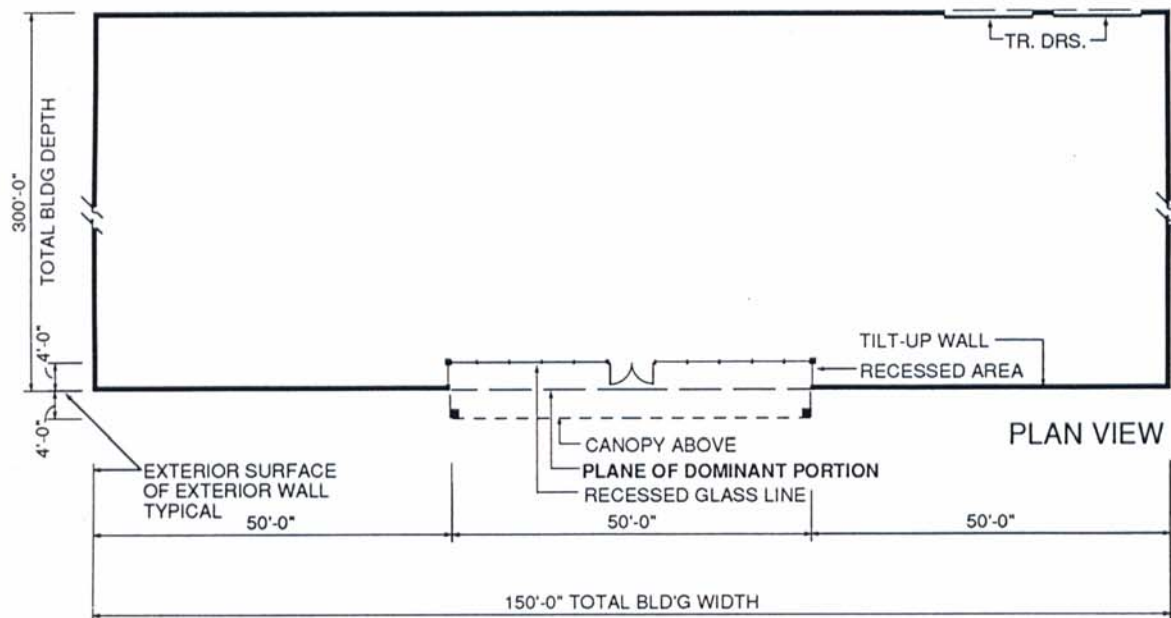
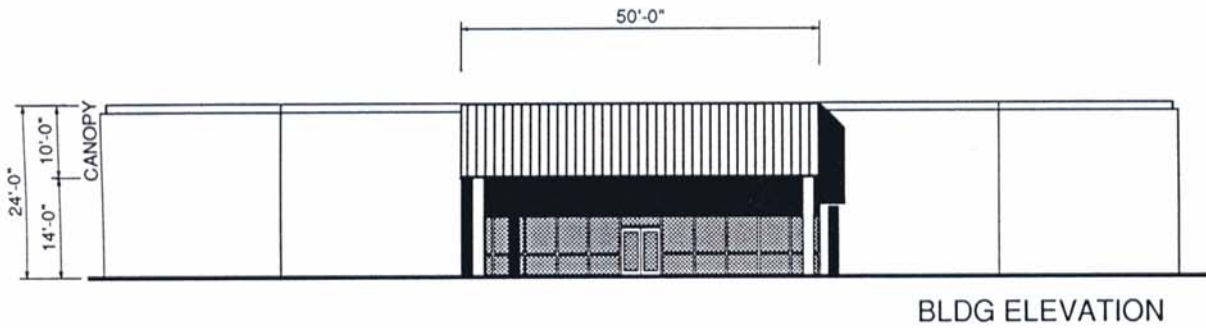


<p>GROSS BUILDING AREA (150' X 300') =</p>	<p>45,000 S.F.</p>
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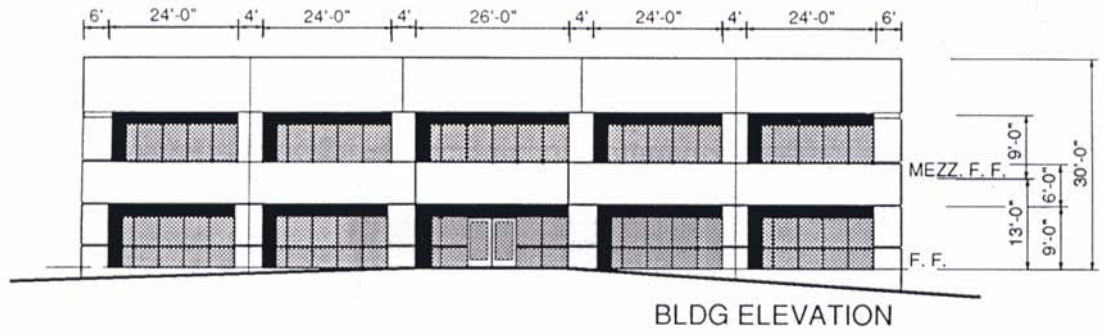
AREA OF FOOTPRINT (150' X 300')	=	45,000 S.F.
PLUS AREA OF MEZZANINE (149' X 40')	=	+ 5,960 S.F.
		50,960 S.F.
LESS AREA OF 2-STORY LOBBY (20' X 20')	=	- 400 S.F.
GROSS BUILDING AREA	=	50,560 S.F.

**EXHIBIT 2**

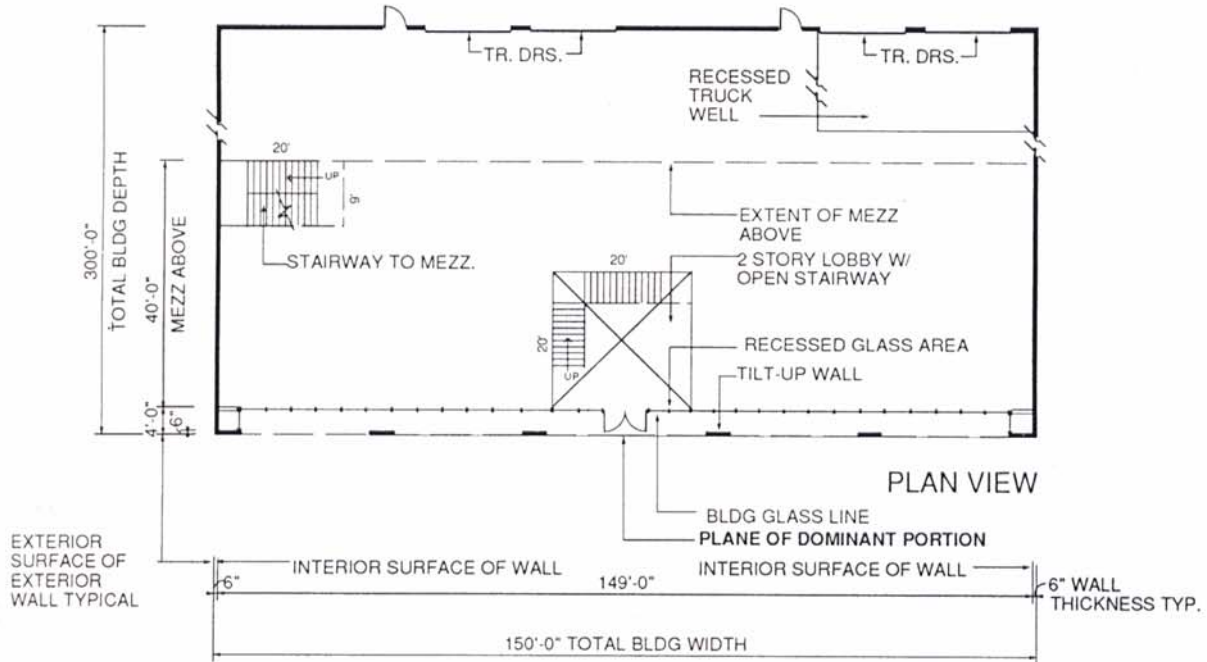


OVERALL SURFACE AREA OF FRONT EXTERIOR WALL (150' X 24')	=	3,600 SQ. FT.
LESS RECESSED GLASS ENTRY SURFACE AREA (50' X 14')	=	<u>-700 SQ. FT.</u>
SURFACE AREA OF STRUCTURAL ELEMENTS	=	2,900 SQ. FT.
LESS SURFACE AREA OF FACE OF CANOPY (50' X 10')	=	<u>-500 SQ. FT.</u>
SURFACE AREA OF REMAINING PORTION OF FRONT ELEVATION	=	2,400 SQ. FT.
DOMINANT PORTION : PORTION OF EXTERIOR SURFACE WITH HIGHEST PERCENTAGE	=	2,400 SQ. FT. (66.67%)
GROSS BUILDING AREA (150' X 300')	=	45,000 SQ. FT.

**EXHIBIT 3**



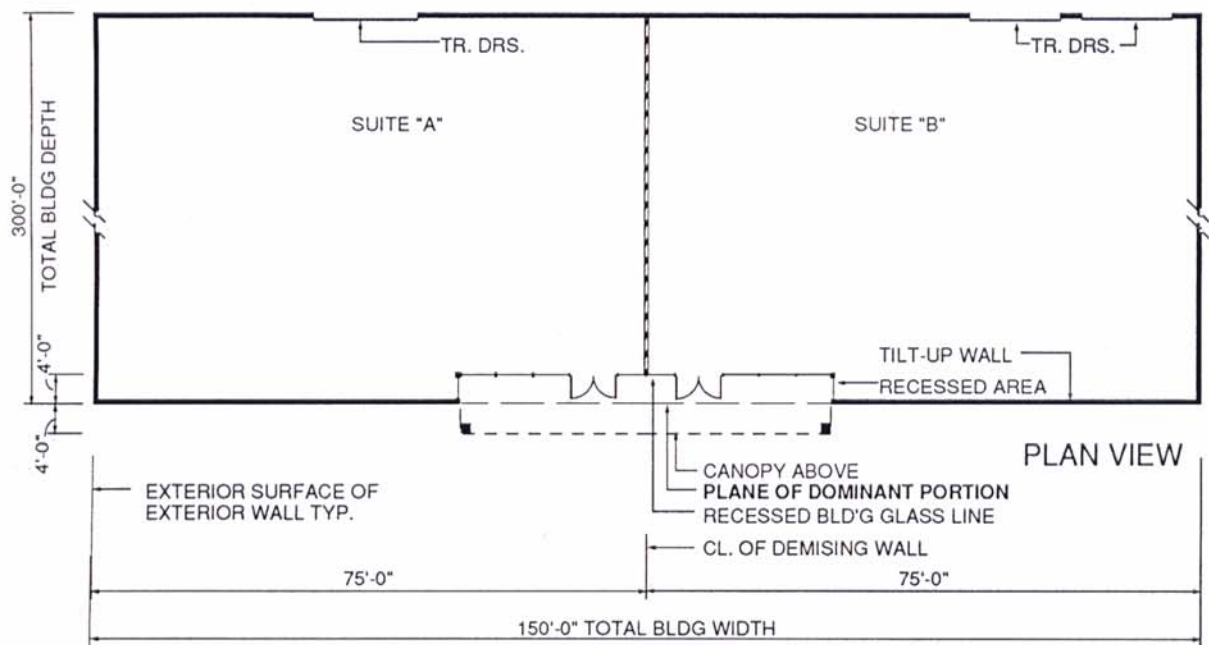
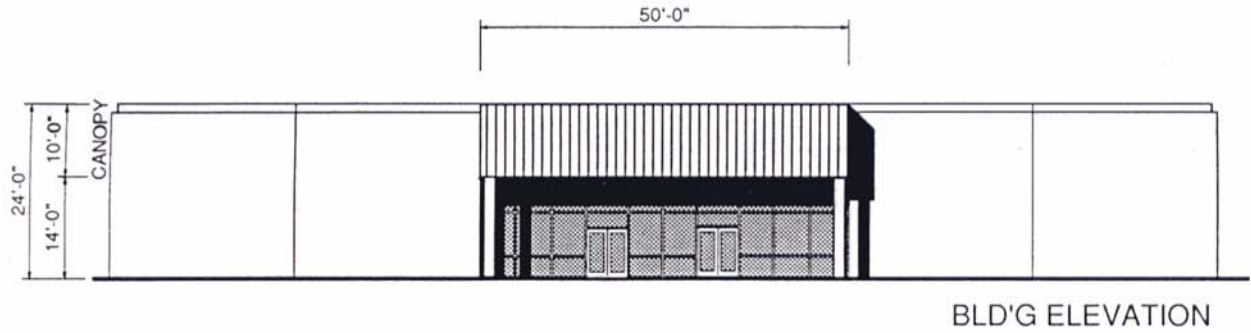
BLDG ELEVATION



PLAN VIEW

OVERALL SURFACE AREA OF FRONT EXTERIOR WALL (150' X 30)	=	4,500 S.F.
LESS RECESSED GLASS SURFACE AREAS		
FIRST FLOOR (9' X 138')	=	1,242 S.F.
MEZZ. FLOOR (9' X 138')	=	1,242 S.F.
TOTAL RECESSED GLASS SURFACE AREA	=	-2,484 S.F.
SURFACE AREA OF STRUCTURAL ELEMENTS	=	2,016 S.F.
DOMINANT PORTION :		
DOMINANT PORTION OF ENTRY ELEVATION (CONC. STRUCTURE IS DOMINANT PORTION BASED ON DEFINITION.)	=	2,016 SQ. FT. (44.8%)
AREA OF FOOTPRINT (150' X 300')	=	45,000 SQ. FT.
PLUS AREA OF MEZZANINE (149' X 40')	=	<u>+5,960</u> SQ. FT.
		50,960 SQ. FT.
LESS AREA OF 2-STORY LOBBY AND ENCLOSED STAIRWAY (20' X 20' + 9' X 20')	=	<u>-580</u> SQ. FT.
GROSS BUILDING AREA	=	50,380 SQ.FT.





OVERALL SURFACE AREA OF FRONT EXTERIOR WALL (150' X 24')	=	3,600 SQ. FT.
LESS RECESSED GLASS ENTRY SURFACE AREA (50' X 14')	=	<u>-700 SQ. FT.</u>
SURFACE AREA OF STRUCTURAL ELEMENTS	=	2,900 SQ. FT.
LESS SURFACE AREA OF FACE OF CANOPY (50' X 10')	=	<u>-500 SQ. FT.</u>
SURFACE AREA OF REMAINING PORTION OF FRONT ELEVATION	=	2,400 SQ. FT.
DOMINANT PORTION: PORTION OF EXTERIOR SURFACE WITH HIGHEST PERCENTAGE	=	2,400 SQ. FT. (66.67%)
SUITE "A" FOOTPRINT (75' X 300')	=	22,500 SQ. FT.
SUITE "B" FOOTPRINT (75' X 300')	=	22,500 SQ. FT.
GROSS BUILDING AREA (150' X 300')	=	45,000 SQ. FT.