

# Chapter 6

## Building Design

Printed June 08, 00

### Section 6.1 Purpose of This Chapter

The purpose of this Chapter is to establish rules and regulations for the exterior design of commercial buildings in certain zoning districts.

### Section 6.2 Authorization for Adoption of This Chapter

The regulations contained in this Chapter have been adopted under the authority of the following:

1. *Chapter 51 – General Powers of Municipalities of the Texas Local Government Code*, which authorizes a municipality to adopt ordinances, rules, or police regulations that are for the good government, peace, or the trade and commerce of the municipality.
2. *Chapter 211 – Municipal Zoning Authority of the Texas Local Government Code*, which authorizes a municipality to divide a municipality into districts and, within each district, regulate the erection, construction, reconstruction, alteration, repair, or use of buildings, other structures, or land.
3. *The Home Rule Charter of the City of Colleyville*, which authorizes the City Council to exercise all powers granted to municipalities by the Constitution or the laws of the State of Texas.

### Section 6.3 Variances and Appeals

Any person seeking approval of a development as required by this Land Development Code may request a variance from a requirement contained in this Chapter, or appeal a decision of an Administrative Official by submitting a request using the procedures described in *Chapter 1 – General Provisions* of this Land Development Code.

### Section 6.4 Definitions

Definitions applicable to this Chapter may be found in *Chapter 2 – Definitions* of this Land Development Code.

### Section 6.5 Commercial Building Design Standards

#### 6.5.A REQUIREMENTS

For buildings located within the Commercial Design District, it shall be the duty of the Administrative Official responsible for review of site plans to calculate the design score for all buildings in the Commercial Design District as part of the building permit and site planning process using Paragraphs A through G below as a design calculation work sheet.

#### Commercial Building Design Factors Work Sheet

##### A. Façade Articulation Variables

1. *L* = Length in feet of building perimeter visible from the street. \_\_\_\_\_ ft.

2. **F** = Length of the longest horizontal straight section of the exterior façade visible from the street. \_\_\_\_\_ ft.

In order to determine that any two horizontal straight sections of wall in the same plane are separate walls:

- a. There shall be an intervening physical separation of space or other wall sections which separate the two subject walls by not less than three feet.
  - b. The average offset distance of the intervening space and/or wall section shall be not less than one foot from the subject plane.
  - c. The total perimeter beam length of the intervening space and/or wall section shall not be less than five feet.
  - d. Materials used within the intervening separation may not be identical to materials used in more than one of the two same plane test sections.
  - e. Any two or more same-plane wall sections which do not meet all of the requirements of Paragraphs a, b and c above shall be determined to be part of one complete wall section.
3. **A** = Articulation ratio or  $L/F =$  \_\_\_\_\_
4. **Ka** = Articulation Score =  $A \times 2 =$  \_\_\_\_\_

#### B. Vertical Departure Variables

1. **P** = Total surface area of a projection of all surfaces visible from the street and which are relative to the four vertical planes of an imaginary cube which would enclose the building. \_\_\_\_\_ s.f.
2. **R** = Total surface area of a projection of all sloping or vertical departure surfaces of the building relative to the four vertical planes of an imaginary cube which would enclose the building. \_\_\_\_\_ s.f.

For the purpose of the calculation of "R";

- a. Buildings with principal wall sections which are generally rectangular must be aligned so that principal wall sections are parallel to a face of the test cube.
  - b. Only those surfaces which slope at an angle of not less than 15 degrees nor more than 75 degrees from the vertical plane may be included in this area calculation.
  - c. Circular, convex or concave regular surfaces which are offset at the central point of the curve by not less than one foot from the vertical surface and have a central angle of not less than 60 degrees may also be included.
  - d. **Q** = Number of test cube vertical surface projections (1,2,3 or 4) visible from the street. \_\_\_\_\_
3. **V** = Vertical departure ratio or  $R/P =$  \_\_\_\_\_
4. **Kv** = Vertical Departure Score =  $10 \times V =$  \_\_\_\_\_

#### C. Shade Coverage Variables

1. **S** = Total covered but unenclosed structural exterior area attached to the building as measured in square feet on a horizontal plane. \_\_\_\_\_ s.f.

- a. The floor area of covered exterior balconies may be included. Attached canopies, porches, verandas, and other shade oriented structural design features may also be included.
  - b. Each vertical opening into the shaded area must be framed on the top and sides by structural building materials with a cross sectional area parallel to the face of the opening which is equal in the aggregate to not less than 20 percent of the surface area of the opening.
  - c. The area under detached canopies shall be excluded.
2. **G** = Total area of the interior ground floor of the building. \_\_\_\_\_ s.f.
  3. **C** = Shade coverage ratio or **S/G** = \_\_\_\_\_
  4. **Kc** = Shade Score =  $100 \times C$  = \_\_\_\_\_

#### D. Horizontal and Diagonal Roof Planes Variables

1. **F** = "F" as previously calculated in Paragraph A(2) above. \_\_\_\_\_  
5% of **F** = \_\_\_\_\_
2. **E** = Total visible horizontal and diagonal eave planes, ridge planes and/or parapet top planes on the building. \_\_\_\_\_

For the purpose of this paragraph:

- a. Two eaves in the same horizontal plane but which are separated by not less than 5 percent of "F" shall be considered separate planes.
  - b. Two parapets in the same horizontal plane but which are separated by not less than 5 percent of "F" shall be considered separate planes.
  - c. A parapet with a wall length of less than 5 percent of "F" shall be considered a crenellation and shall not be counted as a parapet.
  - d. For every five crenellations, regardless of elevation, one equivalent plane may be added to the calculation of total planes. In like manner, one crenellation shall equal 0.2 horizontal / diagonal planes.
  - e. For an eave, canopy or mansard which overhangs the vertical surface of the building by not less than 18 inches, one plane shall be counted for the outer edge of the eave and one plane shall be counted at the intersection of the eave and the wall.
  - f. One plane shall be counted for each diagonal ridge or edge of a sloped roof and, if the edge is also an eave which overhangs the wall by not less than eighteen (18") inches it shall be counted as two planes.
  - g. For mansards which wrap around a building corner, planes shall not be counted as separate unless there are actual changes in elevation.
  - h. Two parapet tops which intersect at 90 degrees in the same horizontal plane shall be counted as separate planes.
3. **Q** = Total # of test cube surfaces visible from the street as identified in Paragraph B(2)(d) above. \_\_\_\_\_

4. **H** = Horizontal / Diagonal Planes Ratio or **E/Q** = \_\_\_\_\_
5. **Kh** = Horizontal / Diagonal Planes Score = **H** if total floor area is less than 50,000 s.f. For floor area greater than or equal to 50,000 s.f., "**Kh**" shall be not more than 10 points.  
\_\_\_\_\_

**E. Fenestration Variables**

1. **W** = Total number of windows, doors, and other openings into the structure through which light may pass. \_\_\_\_\_

For the purpose of this paragraph each opening must be framed on the sides, top and/or bottom by structural building materials with a surface area equal in the aggregate to not less than 50 percent of the surface area of the opening.

2. **Q** = As previously calculated in Paragraph B(2)(d) above. \_\_\_\_\_
3. **N** = Fenestration Ratio = **W/Q** = \_\_\_\_\_
4. **Kn** = Fenestration Score = **N** if total floor area is less than 50,000 s.f. For floor area greater than 50,000 s.f., "**Kn**" shall be not more than 10 points. \_\_\_\_\_

**F. Total Design Score:  $K_t = K_a + K_c + K_h + K_v + K_n =$  \_\_\_\_\_**

**G. Minimum Design Scores ( $K_t$ ) by Zoning District**

Zone –	CN	CPO	CC1	CC2	CC3	ML
Score –	25	25	30	25	20	30

- H. An applicant for a permit to construct a building which does not meet the minimum design score in Paragraph G above may present an appeal of the building design to the Planning and Zoning Commission. The Administrative Official responsible for site plan review may also present an appeal of a proposed design to the Commission or request an interpretation of a particular design guideline. Following a review of an alternate design, the Planning and Zoning Commission shall have the authority to find that the façade, horizontal / diagonal planes, fenestration, vertical departures and shade oriented design features of the alternate design meet the intent of Commercial Design District guidelines. The decision of the Planning and Zoning Commission shall be final.

**Section 6.6 Amendments to This Chapter**

Reserved for listing of amendments to this Chapter.

Ord. Number	Date	Subject