



A Planning Guide for Columbia's Future

Proposed Final Draft

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January 16, 2001

City of Columbia - Department of Planning and Development

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Our Vision

The vision for Columbia as expressed in this document is a one of a community where residents are content with their physical surroundings and a mix of uses co-exist in a manner that ensures the continued use and enjoyment of property.

Where a system of well planned roadways, greenbelts, regional parks along with sound neighborhoods as building blocks and a strong central city core forming the structure which supports a variety of business, social, recreational, and educational opportunities.

Where the efficient and proper arrangement of land uses and public infrastructure support continued growth and local governments and service providers cooperate to efficiently serve the growing population.

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Chapter One: The General Plan

1.1 Introduction

The Columbia Metro 2020 Community Guide Plan is a departure from the recent land use planning efforts undertaken for the City of Columbia. Metro 2020 represents a return to a generalized land use plan that addresses development within Columbia and the areas of Boone County outside the present corporate limits which are located within a Metropolitan Planning Area.

The five land use districts contained in the plan anticipate and encourage a mix of uses within each district. The mix of land uses envisioned are those that relate to and support activities within a district, with a scale and character to blend and complement the other uses.

Within each land use district, compatibility guidelines address the design, scale, and intensity of uses within the district. The compatibility guidelines are primarily intended to make certain that any nonresidential or residential land use does not detract from the value or marketability of the adjacent residential property, or diminish the use and enjoyment of the property.

Assumptions that guided the development of the Metro 2020 Community Guide Plan:

Metro 2020 represents a return to a generalized land use plan

1. The Metro 2020 Plan is intended as a guide for land use decisions and development and is not proscriptive;
2. The Metro 2020 Plan generalized land use districts will be consistent with the districts described in the adopted Land Use Plan;
3. The Metro 2020 Plan may be implemented by the existing subdivision regulations and zoning ordinance; and
4. The Metro 2020 Plan should recognize market forces and provide practical alternatives to achieve the Plan's goals.

1.2 Columbia and the Metro Area

The Metropolitan Planning Area is established by the Columbia Area Transportation Study Organization as the designated Metropolitan Planning Organization for Columbia and the Columbia Metropolitan Area. The boundary for the Metro area is determined by City and County representatives, as part of the CATSO, by identifying the areas that are likely to develop in the next 20 years. The Metro area forms the basis for all the CATSO roadway planning, which includes developing a twenty-year growth forecast for land use, population and employment. Joint City/County roadway planning for the metro area has been done since 1968.

Joint City/County roadway planning for the metro area has been done since 1968.

The Metropolitan Planning Area boundaries are updated every ten years as a prelude to the U.S. Census. Included are those areas around the City of Columbia in which development may occur over the next twenty years. Revisions to the Metro area boundaries were last adopted by CATSO in 1989.

1.3 Concept of the Metro 2020

In the initial development phases of the Metro 2020, a review of all the City of Columbia's previous land use plans was completed. In addition, a list was compiled of recent planning issues raised by community members and by City staff. Comments from neighborhood association presidents, developers, real estate interests, and environmental groups were solicited as part of the Planning and Zoning Commission Community Development Survey. The research provided the background for developing the concept of Metro 2020 Plan.

The "City Beautiful" movement focused on planning for larger community amenities such as parks, parkways, street trees, and public spaces

The examination of previous planning goal statements and interpreting community sentiment provided the philosophic underpinning for Metro 2020. This planning philosophy has been drawn from several sources: 1) The "City Beautiful" movement that focused on planning for larger community amenities such as parks, parkways, street trees, and public spaces; 2) The 1950's model neighborhood concept that focused neighborhood development on a central feature such as an elementary school or park; and 3) and elements of social planning that promoted the idea that a mix of housing types should be provided throughout the community.

From the review of all the past plan documents and comments received from the community, a series of core issues emerged concerning the present Land Use Plan;

1. Guidance for land use decisions on properties being annexed was not provided;
2. The adopted Land Use Plan is a defacto zoning map;
3. The Land Use Plan should be flexible and encourage a mix of compatible uses;
4. Promoting "quality" development is a priority.

To create a plan that would address these perceived deficiencies and provide the structure necessary to accomplish the stated Metro 2020 goals, a review of recent land use plans from other cities was undertaken. Plan documents were collected from many sources for new approaches to land use planning which could be adapted to the City of Columbia.

All of the plan documents collected and reviewed share a common element. The implementation of these plans rely on a highly restrictive set of land development regulations. One of the fundamental assumptions about the Metro 2020 plan is that the implementation of the plan would not require additional changes to the subdivision regulations and zoning ordinance. With this assumption in mind, the basic concepts of the Metro 2020 plan were developed.

The scope for the Metro 2020 Plan includes:

1. A plan that includes Columbia and the urban fringe;
2. A more generalized land use plan guided by policy;
3. Guidance for master planning to coordinate development and provide for neighborhood and community amenities.

The City of Columbia and Boone County have been jointly planning for the Columbia Metropolitan Area for many years, as part of the Columbia Area Transportation Study Organization (CATSO). Both the City and County jointly adopt the Major Thoroughfare Plan. Metro 2020 employs this joint planning area as the basis for planning practice in the urban fringe.

A review of the City of Columbia's land use plans since 1983 revealed a trend away from encouraging a mix of uses to one stressing the separation of various uses. This trend was due in no small part to the lack of regulatory authority to insure that any adjacent development would not have an adverse impact on property values or reduce the enjoyment of the property by its owner.

The foundations of the Metro 2020 Plan are the individual district compatibility guidelines. It is upon these guidelines that the land use districts are based. The compatibility guidelines are intended to provide guidance for development and to be flexible.

The Metro 2020 Plan is designed to promote the "master planned" development idea by planning for and providing amenities for neighborhoods and the community.

The Metro 2020 plan encourages the creation of neighborhood centers to provide a focal point for residents and to foster a sense of neighborhood identity. The systematic planning and provision of public amenities such as trail facilities, recreation equipment, play fields for organized sports, swimming facilities, parkways, schools, churches, day care facilities, parks and shopping opportunities at the neighborhood or community-scale is a central theme of the Metro 2020 plan.

1.4 Plan Elements: Land Use, Transportation, & Community Facilities

The Metro 2020 Plan contains three main planning sections that address the structure, form, and appearance of the community.

The five general land use districts, Neighborhoods, Open Space/Greenbelt, City Center, Commercial District, and Employment District are covered in Chapters 4-8. Each District is described by the various land uses that are appropriate within the district and outlines the conditions which should be met to insure that these uses are complementary and compatible.

The Transportation section covers the issues of mobility, connectivity, and access. Transportation infrastructure provides the framework for the land use districts within the community. Discussion in this section focuses on the existing and future transportation infrastructure which will be necessary to support the projected growth in the Metro area through the year 2020. This includes incorporating improved pedestrian and bicycle access as part of all future improvements.

The foundations of the Metro 2020 Plan are the individual district compatibility guidelines

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Chapter Two: Goals and Objectives

2.1 Goals for Metro 2020

The goals for the Metro 2020 plan were collected from previous plans developed for and adopted by the City of Columbia. These goals were updated to meet the development challenges that will face the community over the next twenty-plus years. These goal statements are broad expressions of the desired result that the plan is intended to facilitate.

Land Use Goals:

To contain urban development within an area that can be economically and efficiently serviced by the City of Columbia.

To guide and encourage high quality commercial and industrial development in appropriate locations throughout the city.

To promote high standards of environmental quality as it relates to water, air, and greenspace.

Transportation Goal:

To provide for the motorized and nonmotorized mobility of all residents of the city.

Housing Goals:

To maintain the stability of existing residential neighborhoods.

To promote cooperation between public, private, and not-for-profit agencies to create affordable housing for low and moderate income individuals and families.

Community Appearance and Design Goals:

To promote and maintain aesthetic quality in the physical development of the city and to develop a sense of pride in the structural and natural features of the community.

2.2 Objectives for the Plan Elements

An objective is an aspect or specific outcome of the goals toward which the Principles and Policies are directed. The following objectives were collected and updated from previous plans adopted by the City of Columbia and are now included as part of the Metro 2020 Plan:

A. Land Use

1. Develop principles and policies that will serve to prevent the inefficiencies associated with “sprawl” development.
2. Encourage high quality development that supports the character of established neighborhoods where conditions are appropriate for continued residential use.

3. Encourage a variety of single-family and multi-family housing to accommodate contemporary lifestyles and school choice.
4. Provide for regional, community, and neighborhood scale commercial facilities, where appropriate, throughout the city.
5. Ensure the continued viability of the City Center as the educational and cultural center for mid-Missouri.
6. Support the continued building of capacity, quality, diversity and sustainable community economic life.

B. Transportation

1. Maintain and develop a street system which best serves all modes of transportation and safety needs.
2. Develop and support mixed use developments and transit nodes as a means of reducing automobile traffic and to encourage pedestrian, bicycle and transit trips.
3. Encourage and facilitate safe bicycle travel for commuting as well as recreational purposes.
4. Provide for safe and convenient access.
5. Limit unnecessary through traffic in residential areas.
6. Support the development of a comprehensive pedestrian and bicycle trail network

C. Community Appearance and Design

1. Develop land use arrangements that consider the compatibility of various activities
2. Encourage development that is in harmony with the natural environment.
3. Encourage the preservation and restoration of architecturally or historically significant buildings and landmarks.
4. Consider public services delivery facilities in all planning-related matters.
5. Create focal points for new and existing neighborhoods by providing parks, schools, parkways, street trees, roundabouts, and other facilities and amenities.
6. Encourage the conservation and extension of greenbelts and open space.

2.3 Plan Implementation

Implementation of the Metro 2020 Plan will not be substantially different from the present Land Use Plan. No changes in the underlying zoning district classifications are proposed or contemplated as the result of adopting the Metro 2020 Plan.

As requests for changes in zoning occur, these requests will fall into two categories: 1) requests for changes to land use district boundaries; and 2) requests for changes in zoning within a land use district.

Requests for changes within a district will first be evaluated based upon the adopted land uses for the district in which the affected property is located. Each land use district contains a list of appropriate land uses. If the request for rezoning conforms with these land uses, the district compatibility guidelines will be employed to evaluate the merits of the requested change.

The Metro 2020 Plan may be implemented without requiring changes in the zoning ordinance. The district compatibility guidelines should serve as a guide by which to measure requested changes in zoning and the review of proposed development. Compatibility guidelines are intended to be flexible, to accommodate unique situations, innovative development, and reflect community values. The goal is to achieve an appropriate and acceptable design solution.

Changes to the zoning ordinance and subdivision regulations based up the principals and policies outlined in the Metro 2020 Plan would substantially enhance the implementation of the plan.

2.4 Sketch Planning

The sketch planning process offers a means to provide the coordination of land uses, street systems, access and amenities found in master planned communities. The opportunity to plan in detail for land use and streets in the areas where growth is anticipated promotes compatibility and connectivity.

At present, a preliminary subdivision plat must include all land under single ownership up to 80 acres. This process is an attempt to insure that the street network in the subdivision will connect with adjacent properties to provide adequate access and circulation within the area. The sketch plan process would extend this concept by expanding the scope of the planning area and by providing preliminary land use recommendations.

The goal of the sketch plan is to establish a consensus on the development pattern for large tracts and areas under multiple ownership. A sketch plan would cover a predefined area bordered by major roads, creeks, or other barriers to development. The contents of the plan would outline preliminary street alignments, neighborhood centers, identify future land uses and densities, greenbelts and parks. A sketch plan would not be a requirement for gaining development approvals.

Sketch planning provides a process for achieving many of the benefits of master planned residential and commercial areas in the Metro area. On the urban fringe where there are large areas of vacant land, the sketch plan offers an alternative to permanent zoning on property being annexed by establishing preliminary land use districts and densities that would guide future zoning requests.

Sketch planning is planning for compatibility on an area-wide scale.

A sketch plan may be developed by property owners and their engineers and/or at the direction of the City Council, through a process directly involving all the land owners within the plan area. When accepted by Council, the sketch plan would serve as the guide for future subdivisions, rezoning requests, and permanent zoning associated with voluntary annexations.

Sketch planning on the urban fringe should involve a joint City/County planning process. Individual sketch plans should be developed for areas of Boone County adjacent to the City.

2.5 Planning for the Metro Area

As property owners request annexation into the City of Columbia, unplanned land use changes are occurring as the City establishes permanent zoning. The zoning the property owner requests as part of the annexation process, may or may not reflect the recommendations outlined in the Boone County Land Use Plan. The City's present Land Use Plan does not cover areas that lay beyond the City limits and cannot offer guidance as to the merits of a particular zoning request.

A Land Use Plan for the area surrounding the City of Columbia would eliminate the unplanned land use changes that occur with each voluntary annexation. This would best be accomplished through a joint effort by Boone County and the City of Columbia.

The area boundary for joint planning could be defined several ways. These boundaries will need to be revisited periodically to reflect changes to service area boundaries and the Metropolitan Area:

1. A service area boundary that would include the areas that could be served by the extension of City sewers;
2. The Metropolitan Area boundary defined by the Columbia Area Transportation Study Organization; or
3. Groups of properties adjacent to the City of Columbia that could request voluntary annexation.

Chapter Three: Land Use and Compatibility

3.1 Introduction

The land use patterns of the City are shaped by market forces based upon public investments in roadways, rail service, sewer, water, electrical, and fire and police protection. All land uses have differing requirements for access, sewer, water, and services. The location and distribution of land uses by market forces relate to the degree of infrastructure required to support the individual use. Land use planning for the Metro 2020 plan is based upon this fundamental relationship of infrastructure and land use.

Land use planning for the Metro 2020 plan is based upon the fundamental relationship of infrastructure and land use.

The Metro 2020 plan introduces the concept of land use compatibility to promote a mix of uses instead of focusing on the separation of uses. Land use within the metro area may be reduced to five basic activities; residential, commercial, office, industrial, and open space. These basic land use activities form the core of the land use districts developed for the Metro 2020 plan.

Within these five categories the intensity of the land use activity may vary greatly. The challenge of creating new land use districts for the Metro 2020 plan was providing for a mix of complementary uses within each district yet insure that the intensity of the use does not adversely effect the surrounding area. For each land use district in the Metro 2020 plan, compatibility guidelines have been developed to address planning situations which if left unattended would likely have a negative outcome.

3.2 The Cost of Urban Sprawl

Urban sprawl is often discussed yet rarely understood. A definition for this term may be useful to better understand why it is a problem generally, and how it specifically affects the Columbia metro area.

In many large urban areas, sprawl is a problem because newer suburban development in smaller, outlying communities surround the older, central city. This situation prevents the central city from annexing and adding additional property to provide new tax revenues to pay for the services required by the growing population. This results in a declining tax base for the city and the attendant problems that arise from this situation, including decay and crime. In Columbia, the above situation does not exist. There are no other incorporated cities adjacent to Columbia that prevent its physical expansion. What does occur in the Columbia area is discontinuous development, which is also called "leapfrogging". A number of subdivisions have been developed in the unincorporated areas well outside the City limits and sewer service area. The practice of rural/urban development, which one author has called "rurburbia," occurs when urban density subdivisions are developed in a location surrounded by farmland and other open lands. Developed with centralized sewer systems that rely on sewage lagoons or "package plants" to provide for the primary treatment of household waste, the outfall from these facilities drain directly or indirectly into the creeks that run through the Metro area. This outfall degrades the water quality in the urban streams and exposes residents to potential health hazards when using trails and parks in the greenbelt corridors.

Another local manifestation of sprawl is the past practice of lot by lot development without subdividing. This is typically accompanied by residential development along the road with driveway access to the state route. Such development may be observed along many state routes within the metro area.

This pattern of large rural lots along roadways, especially State maintained routes, has created islands of land that are unavailable for development. This will promote discontinuous development by requiring residential developers to look further out to find properties of sufficient acreage to subdivide. This situation will increase the cost of extending lines to provide centralized sewer and delay development within the affected area.

Boone County has recently made changes in their development regulations to address these many of these issues.

Individual home sites of five+ acres developed with individual lagoons or septic systems pose the major impediment to compact development within the areas to be served by City sewer.

3.3 Land Use Compatibility

The Metro 2020 plan defines a compatible land use as one that relates to and supports activities within a district including a design that has a scale and character to blend with and complement the other uses. Likewise, compatibility applies to uses next to each other within a district. Each land use district in the Metro 2020 plan contains a set of compatibility guidelines which deals with these specifics.

The compatibility guidelines are intended to make certain that any nonresidential or residential development does not detract from the value or marketability of the adjacent property, or diminish the use and enjoyment of the property. Additionally, the compatibility guidelines address the appropriateness of a use based upon the impact on existing and future infrastructure capacity. The following outlines the basic elements of compatibility:

1. Use: supports and complements other uses in district;
2. Location: appropriateness based upon infrastructure and proximity to other uses;
3. Intensity: as measured by square footage, floor to area ratio, dwelling units/acre, height, traffic and area;
4. Design: lot size, setbacks, sidewalks, and street width; and
5. Amenity: landscaping, tree preservation and grading.

The Metro 2020 plan provides general guidelines from which a determination of compatibility may be reasonably based. The district compatibility guidelines are intended to be applied when considering land use changes, evaluating requests for rezoning, and to assist with site plan design and review.

3.4 Land Use Districts

The land use districts in the Metro 2020 plan aggregates the present classification system down to five districts, which represent a heterogeneous blending of the uses that define these categories. Compatibility of uses within each district is a defining feature. Each district has a set of principles and policies that apply to the predominant land uses of the district and the characteristics which make them compatible.

The compatibility guidelines are intended to make certain that development does not detract from the value or marketability of adjacent property, or diminish its use and enjoyment.

A. Neighborhood District

A broad mix of residential uses which also supports a limited number of nonresidential uses that provide services to the neighborhood residents.

B. Employment District

Employment Districts are locations for basic employment uses, including offices, corporate headquarters, manufacturing, warehouses, and research parks. The district contains significant concentrations of employment within the City and includes supporting uses such as multi-family residential, convenience retail, day care facilities, and restaurants.

C. Commercial District

The Commercial District contains a variety of citywide and regional retail uses, as well as offices, businesses, personal services and high density multi-family dwellings as supporting uses within the district. Most of the retail uses in this district depend on auto access to and from major roadways to support and sustain their business activity.

D. City Center

The City Center is intended to be the focal point of the City of Columbia, serving as the educational and government center of the community. This single district is an area of mixed uses and is built at a pedestrian scale. The City Center includes the Central Business District (CBD), which comprises the downtown office and commercial area, the University of Missouri, Stephens College, and Columbia College.

E. Open Space/Greenbelt

The Open Space/Greenbelt district is designed to provide for the recreational and aesthetic needs of the residents of Columbia. It is also intended to protect sensitive areas, such as flood plains and hilly terrain from development and to preserve prime natural areas. Uses included in this district are public and private parks; other open spaces, golf courses, and greenbelts.

3.6 Metro 2020 Population Forecast

Forecasting population growth for the Columbia Metro Area for the year 2020 was based on local housing demographic data including the 1990 Census and building permit information from Boone County Planning and Building Inspection and the City of Columbia.

The population of the Metro Area is expected to increase to 132,000 persons by 2020. This is an increase of 32,864 persons from the 1996 Metro estimated population of 99,136. It is projected that 88% of this increase, or 28,920 persons, will occur within the City of Columbia by 2020.

3.7 Metro 2020 Employment Forecast

In forecasting employment growth for the Columbia Metro Area for the year 2020, use was made of the state of Missouri's Department of Labor employment projections. For Service Delivery Area (SDA) Five, which contains eight central Missouri counties, including Boone, the Department of Labor forecasts an annual job growth of 1.25%. This would result in a total of 197,307

employees in SDA Five in 2020. Boone County's current percentage of total employment in the area is 44%, and if this percentage is maintained Boone's total employment in 2020 would be 86,815.

Since the Columbia Metro Area is the principal job generator of the region, however, it is projected that employment growth in Boone County will occur at a faster rate than in the rest of SDA Five. The anticipated growth rate for Boone County for the period from 1996 to 2020 is 1.3% annually. This results in an increase of 21,547 jobs to a total employment of 90,607 in 2020. Boone County's share of the SDA Five's total employment would be approximately 46%. The Columbia Metro Area's share of total employment in Boone County is assumed to be 90%, so employment in the Metro Area would increase by 19,392 persons. This is a total of 81,546 jobs, and a 31% increase from the 1996 total of 62,154. The 1996 employment of 69,060 in Boone County is classified as follows:

Table 1: Employment Type: Boone County 1996

Employment Type: Boone County 1996	% of Total
Manufacturing	9.0%
Government	31.1%
Services	21.6%
Commercial	23.2%
Agricultural	0.6%
Mining	0.1%
Construction	4.3%
Transport & Utilities	3.7%
Finance/Insurance/Real Estate	6.3%

Employment in the Metro Area in 2020 is projected to increase by 19,392 persons, for a total of 81,546 jobs

For 2020, it is projected that the above classifications will have minor changes, with some percentage growth in government and services, and minor declines in manufacturing and commercial. The following percentages are estimated for the new jobs to be created by 2020:

Table 2: Employment Type: Boone County 2020

Employment Type: Boone County 2020	% of Total	Change from 1996
Manufacturing	7.5%	-1.5%
Government	33.0%	+1.9%
Services	23.0%	+1.4%
Commercial	22.5%	-0.7%
Agricultural	0.6%	No Change
Mining	0.1%	No Change
Construction	4.0%	-0.3%
Transport & Utilities	3.3%	-0.4%
Finance/Insurance/Real Estate	6.0%	-0.3%

3.8 Metro 2020 Land Use Forecast

It is projected that 16,432 new housing units will be constructed in the Metro area, of which 14,606 will be added to City of Columbia by the year 2020. This projection assumes a 10% vacancy rate, and an average of 2.2 persons per household. Of these, 9,659 will be single-family houses, with 3,470 duplex units and 3,304 multi-family units. For single family homes, a range from 1-6 units per acre could be expected, with two or three units per acre the typical density. Land requirements for the total of 9,659 projected units could vary from 1,600 acres at the highest density, to 8,472 acres at the lowest density. Given typical range of densities, it is estimated that between 3,220 to 4,829 acres would be necessary for new single family development. At 2.5 units per acre, the midpoint of the range, 3864 acres would be required for the construction of the projected 9,659 new single family residences.

Duplexes are typically constructed at densities ranging from five to seven dwelling units per acre. The projected 3,470 duplex dwelling units could require the development of between 694 acres at the lowest density to 495 acres at the highest density. At six units per acre, the midpoint of the range, 578 acres would be required for the construction of the projected new duplexes.

Multi-family units are built to the highest densities, and can range from seven to 17 units per acre. This group includes townhouses, condominiums, single and two-story apartments. Acreage requirements for the projected 3,304 units could run from 472 acres at the lowest density (seven units/ acre) to 194 acres at the highest density of 17 units per acre. A density of 10 to 11 units per acre is most typical. At 11 units/acre, 300 acres would be necessary.

The estimated total acreage needed to build the projected 14,606 new housing units to be added to the City of Columbia by the year 2020, at the typical densities constructed, would be approximately 3,603 acres, or 5.63 square miles. Estimated acreage requirements for new employment will vary by the type of classification. For purposes of estimating the acreage necessary to accommodate new employment, the above employment types are combined and assigned to either office, industrial, or commercial categories. Industrial (3,006 new jobs) includes manufacturing, construction, transport & utilities, agriculture, and mining; office (7,563 new jobs) includes finance, insurance, and real estate and government; and commercial (8,823 new jobs) includes both commercial and service activities. Office is estimated to have on average 29 employees/acre, industrial 18 employees/acre, and commercial 20 employees/acre.

Table 3: Estimated Acreage for New Development through 2020

Land Use	Acres	% of Total
Residential	4,742	84.7%
Office	261	4.6%
Commercial	441	7.8%
Industrial	167	2.9%
Total	5,611	100.0%

To accommodate the projected additional 19,392 employees in the Metro Area by 2020, it is estimated that a total of approximately 869 acres will be needed. This includes; 167 acres for industrial, 261 acres for office, and 441 acres for commercial.

Chapter Four: Neighborhood District

4.1 What is the Neighborhood District?

A mix of residential uses which also supports a limited number of nonresidential uses that provide services to the neighborhood residents.

4.2 Defining Neighborhood Districts

The Neighborhood District is made up of individual neighborhoods. These neighborhoods should be both liveable and walkable. Liveable implies that a neighborhood is safe, with a focused center and easy access by various means of travel to schools, shopping, and services. Walkable implies that an individual neighborhood area can be walked across in about 10 minutes, with a choice of routes to everyday destinations.

The model for a typical individual neighborhood in the developing areas would cover 160 acres and would be approximately ½ mile across. The size of the neighborhood may be significantly larger or smaller than the typical neighborhood model, depending upon roadways and terrain that define the edges.

Boundaries for the Neighborhood District and the neighborhoods within would include features such as major roadways that create barriers to traffic and natural features such as creeks or lakes which create distinct edges.

In the developed areas of Columbia, the boundary for the Neighborhood District and the neighborhoods within may be defined by the transition from predominantly residential areas to commercial and office uses.

4.3 Neighborhood Principle

To maintain and protect residential areas by developing new neighborhoods integrated into the community and assuring that development within existing residential neighborhoods support the character and identity of the neighborhood community.

4.4 Neighborhood Policies

1. Neighborhood streets and sidewalks are the networks that connect subdivisions to form neighborhoods and should not be used to form barriers between one area and another. Streets with sidewalks should connect residential subdivisions.
2. Promote the inclusion of amenities as focal points.
3. Encourage a diversity of housing types to promote affordable housing.
4. Protect existing neighborhoods from the intrusion of incompatible land uses and assure that all new residential development maintains a consistent level of housing and neighborhood integrity.
5. Encourage the use of noncontinuous streets to avoid speeding and cut-through traffic in subdivisions and neighborhoods. Long, uninterrupted local streets are discouraged.

The Neighborhood District is made up of individual neighborhoods.

Neighborhood Hierarchy

Neighborhood District



Neighborhood



Subdivision

6. Promote a choice of neighborhood for both home owners and renters by encouraging a mix of housing unit types. Appropriate housing types include:
 - Single-family houses - large and small lot
 - Duplexes
 - Townhouses (single-family attached)
 - Multi-family housing;
7. The desired minimum density for all new residential uses within the Neighborhood District is two units/acre.
8. Provide the opportunity for including neighborhood commons without significantly altering the character of the neighborhood, attracting additional traffic from outside the neighborhood(s) served, or creating the demand for additional commercial zoning. These commons should have the following characteristics:
 - Residents should be able to access the center from a collector or local street without having to travel on an arterial street
 - Pedestrian oriented
 - Contain an appropriate mix of uses; retail, office, and residential
 - Provide a central feature or gathering place for the public
9. To promote walkability and convenience within neighborhoods encourage street connections. Cul-de-sac streets are appropriate in areas with difficult topography or when used to minimize the environmental impacts on floodplains and wetlands.
10. Provide sidewalks and/or pedestrian connectors if the block length in a subdivision or neighborhood is greater than 800 feet. Access to parks and trails should be provided from adjacent subdivisions.
11. Provide a choice of housing types that support choice of school and that allow people to live close to work.
12. Provide for neighborhood services, day care, health care, dry cleaning, and shopping.
13. Provide for the use of flexible development regulations to balance overall dwelling unit/acre density, achieve a mix of dwelling unit types, and to preserve open space and tree cover.

4.5 Compatible Uses and Densities

The overall housing density for a neighborhood should range from two units/acre to ten units/acre, not including areas unavailable for development such as floodplain, parks, or common open space, whether public or private. Subdivisions within a neighborhood may have densities lower than the two units/acre, provided the overall minimum density may be achieved when averaged with the housing densities on adjacent tracts or neighborhoods.

A. Uses/Densities

The following residential and nonresidential uses are compatible within the Neighborhood District at the densities specified:

1. Single Family Detached - maximum density of 5.5 units/acre
2. Single Family Attached - maximum density of 12 units/acre
3. Duplexes - maximum density of 8.7 dwelling units/acre
4. Garden apartments - maximum density of 17.4 dwelling units/acre
5. Private parks, greenbelts, and trails
6. Public space
7. Recreation facility
8. Schools and other community facilities
9. Church, mosque, synagogue
10. Neighborhood Common
11. Neighborhood Marketplace

B. Compatibility Guidelines:

The following compatibility guidelines should apply to the planning and development of residential uses within the Neighborhood District:

1. All development within the Neighborhood District will be compatible with the provisions of any applicable watershed and development resolutions adopted by the City Council.
2. The back lot line for new single-family detached subdivisions should only abut other single family lots, unless separated from other uses by a street or natural feature such as a greenbelt, ravine, or undisturbed groups of trees that provide a significant buffer. Large lots with sufficient depth to provide an adequate rear yard buffer may be acceptable.
3. In the developing areas, new subdivisions planned for duplexes with three (3) or more bedrooms should be located in the R-3 Medium Density Multiple-Family Dwelling District or as a Planned Unit Development (PUD) with a shared centralized parking area.
4. All residential uses, except single-family detached dwellings, may be located within a Neighborhood Commons.
5. Mixing duplex units on a block with single-family detached dwellings is discouraged, unless part of a Planned Unit Development (PUD).

4.6 Neighborhood Amenities

Neighborhoods should be planned to include amenities and focal points. An amenity may be any design which exceeds the minimum(s) required by the subdivision regulations, zoning ordinance, or street design standards that provides a defining character for an area and/or offers the opportunity for the inclusion of a community facility within the development. Possible amenities may include:

- Private or public parks
- Divided roadway with street trees,
- Roundabouts at four-way intersections
- Additional width of green space between sidewalk and curb
- Trails, greenspace, or connections to these facilities
- Cul-de-sacs offering pedestrian connections
- Reserved school sites
- Special street treatments
- Reserved church sites
- Reserved park sites
- Street trees

Amenities provide a defining character for an area

These amenities provide a defining character for an area and offer opportunities for community facilities to be included in the neighborhood. Small subdivisions and developments will not need to provide a park or other amenity

4.7 Neighborhood Common

The Neighborhood Common is intended serve as a central unifying element within a neighborhood. Its purpose is to serve as a focal point for neighborhood interaction and provide an amenity to the residents. Designed around a park or public space, the Neighborhood Common may include additional features such as a school or church, along with a limited number of small office and retail uses which serve the residents.

The Neighborhood Common should ideally be located in the center of the neighborhood. Other locations may be appropriate, such as the edge of the neighborhood, if it can be demonstrated that the alternate site better serves the residents. A Neighborhood Common is not to be located on arterial streets or at their intersections with other streets and are is not intended as to serve as commercial area for the community as a whole.

The inclusion of a Neighborhood Common is elective. The design should allow for a mix of uses and densities separate from single family homes yet integrated into the neighborhood. The design of the Neighborhood Common is flexible enough to support many of the attributes of a traditional neighborhood design.

A Neighborhood Common may vary in size from two to seven acres in size, based upon the typical neighborhood model, or from one to four percent of the total neighborhood area. Public parks and schools designed into the Neighborhood Common are exempted from the acreage and percentages guidelines. In larger neighborhoods, more than one Neighborhood Common may be appropriate.

Land use and activities for the Neighborhood Common include some of the following:

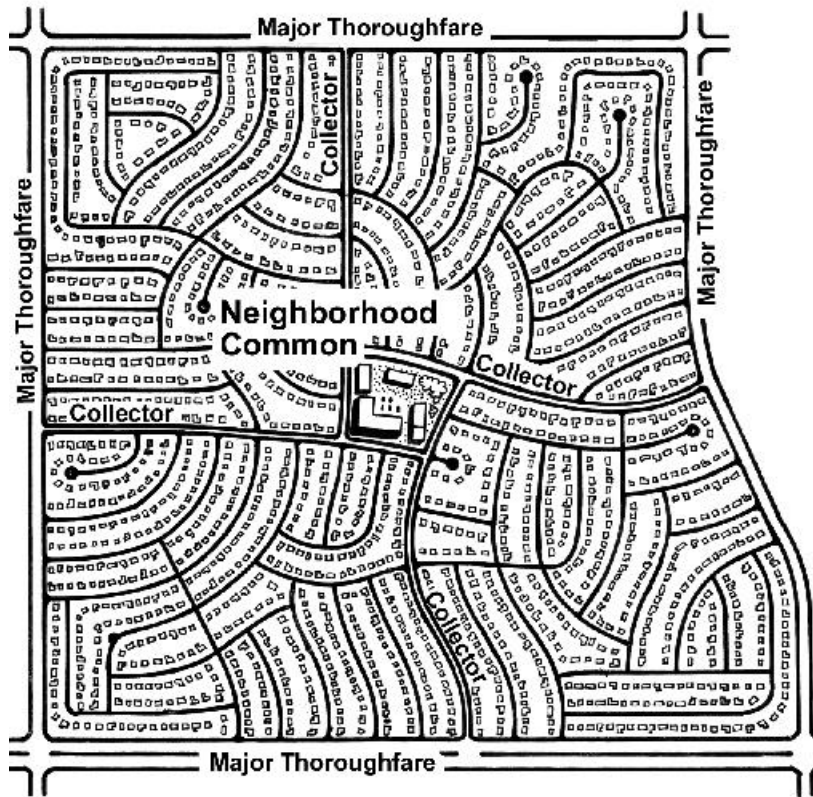
- a. Park or public space (public or private)
- b. Recreation facility
- c. School
- d. Children's or adult day care
- e. Church, mosque, synagogue
- f. Small professional offices and clinics
- g. Neighborhood market
- h. Other small businesses
- i. Attached single family or multi-family residential

Ideally, each neighborhood would include a Neighborhood Common that provides a park or a public space that serves as a year-round gathering place and focal point. The park or public space may be either public or private. The public space may be a square, plaza, pavilion, or other outdoor space accessible to all residents. If nonresidential uses are included, the park and/or public space should be an integral element of the Neighborhood Common, located in an attractive setting, highly visible and easily observed from public streets.

The following compatibility guidelines, in addition to those for the Neighborhood District, should apply to the planning and development of a Neighborhood Common:

1. Planned zoning district (O-P or C-P) for office and retail uses;
2. Total land area for non-residential uses should not exceed two acres;
3. Maximum percentage of impervious cover is seventy percent for nonresidential uses;
4. All rezoning requests for O-P or C-P should be accompanied by a site plan submitted for approval which covers the entire Neighborhood Common. The site plan should detailed building locations, all required parking, landscaping, and public space as well as a list of uses and any architectural controls being imposed.
5. Cut or fill for grading beyond the building footprint or for a parking area should be compatible with any nearby residential lots; and when completed, blend to match the surrounding topography.
6. When feasible, a landscaping strip should be included along the foundation of all buildings in areas not paved for delivery vehicle access or direct pedestrian access to an entrance/exit.

Model Neighborhood with Neighborhood Common

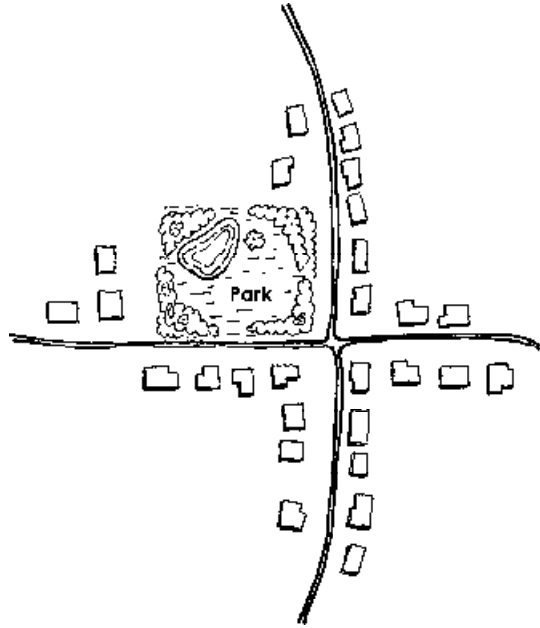


Adapted from Guide Plan for Columbia; Hare & Hare, 1966

7. The total nonresidential building square footage and the approved uses for the C-P or O-P site plan should generate no more than 1,000 ADT for all the combined uses.
8. Total building square footage for nonresidential uses should be no more than thirty percent of the lot or building site.
9. Nonresidential buildings should provide space for multiple tenants and uses.
10. A total of thirty percent open space is desirable for the Neighborhood Common overall.
11. Floodplain and/or other unbuildable areas included as part of the park or public space should support the overall design of the Neighborhood Common.
12. All nonresidential uses should have limited signage requirements and attract no more than a limited amount of traffic from outside the neighborhood.

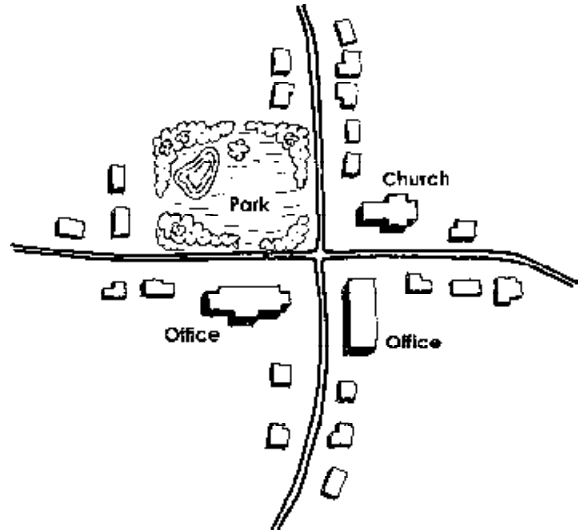
Neighborhood Commons Prototypes

The Neighborhood Common is intended as a central unifying element within a neighborhood.

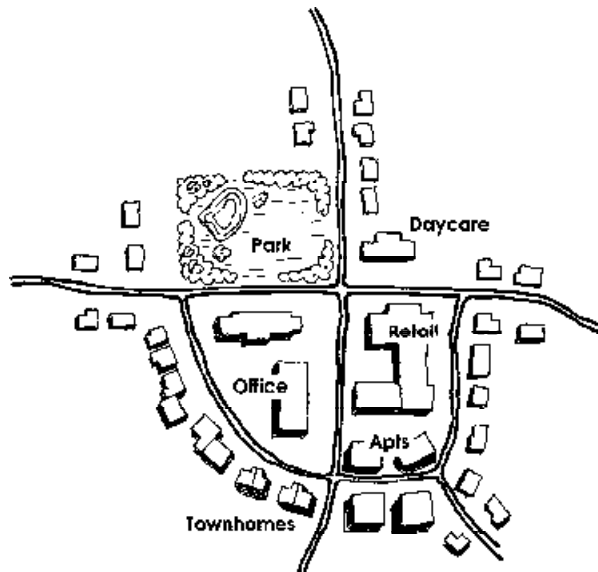


Neighborhood Common; With 2 Acre Park

Neighborhood Common; With 2 Acre Park, Church, and Small Offices for total of 5 acres



The Neighborhood Common provides for a mix nonresidential uses and housing types separate from single family homes yet integrated into the neighborhood.



Neighborhood Common; With 2 Acre Park, Daycare, Small Offices, Retail and Apartments for total of 7 acres

4.8 Neighborhood Marketplace

At specific locations along arterial streets, a Neighborhood Marketplace with retail uses serving several neighborhoods and higher density residential uses may be appropriate, if developed at a scale compatible to the surrounding area. A Neighborhood Marketplace should be centrally located within the residential areas to be served by the retail uses, preferably at the intersection of arterial streets that are neighborhood boundaries. Neighborhood Marketplaces should be separated by at least two miles and are intended to serve a population of 5,000 to 20,000 within a given market area.

The Neighborhood Marketplace provides for the sale of day-to-day needs and should be built around a primary tenant. The Neighborhood Marketplace should be between 30,000 and 100,000 square feet of gross leaseable area and contain a mix of retail and office uses. Ideally, the primary tenant would be a grocery store containing approximately 40,000 square feet of retail space. Other services may include small office uses, sit-down restaurants, specialty retail uses and service station/car wash, along with high density multi-family residential.

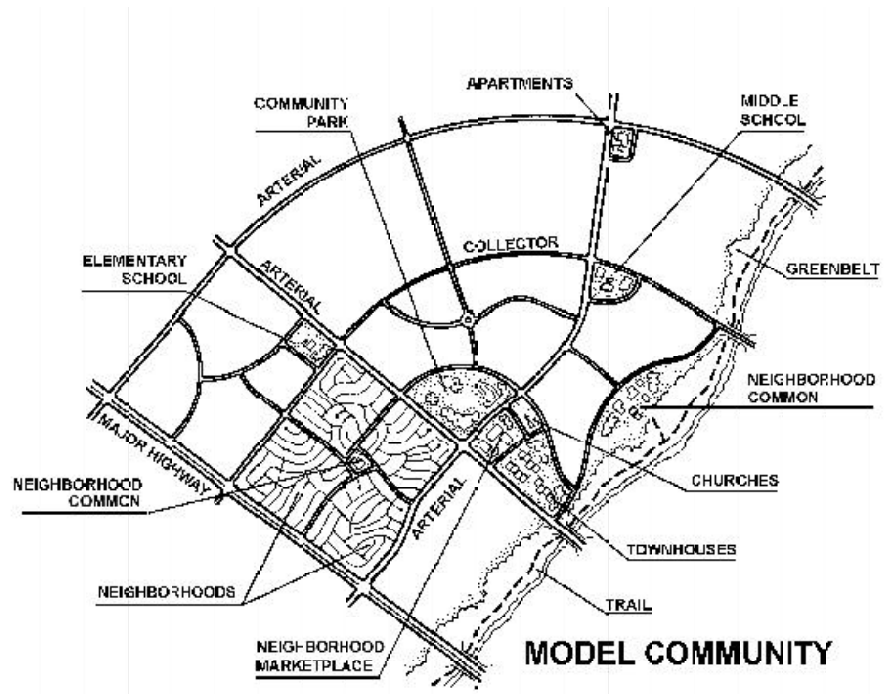
The Neighborhood Marketplace provides for the sale of day-to-day needs and should be built around a primary tenant, ideally, a grocery store

At the intersection of two arterial streets, a total of 60,000 to 200,000 square feet of nonresidential uses may be appropriate, provided that no single development exceeds the 100,000 square foot guideline for nonresidential uses.

High density multi-family housing and other housing types may be included as an element of the Neighborhood Marketplace.

The location of Neighborhood Marketplace within the neighborhood district necessitates a scale and style of development which will insure compatibility within the neighborhood setting. The following compatibility guidelines, along with those for the Neighborhood District, should be applied to the planning and development of a Neighborhood Marketplace:

1. Planned zoning district (O-P or C-P) for office and retail uses and PUD for residential;
2. A single Development Plan should apply to the entire site;
3. Sufficient street frontage for the Neighborhood Marketplace should be provided so that appropriate spacing exists for driveways on to an arterial street, especially if access to the arterial will be by driveway. Driveways should be designed to serve all uses within the development. Joint use driveways and cross easements are encouraged;
4. Controlled access onto arterial streets. Driveways should be appropriately spaced based upon accepted traffic engineering standards, with no more than two driveways per lot. Driveways should not be located within the operational area of an existing or future signalized intersection;
5. Access should be provided through a system of internal streets or parking aisles;
6. Pedestrian access to and from the Neighborhood Marketplace should be provided in a safe and convenient manner from the sidewalk system along the arterial(s).



Adapted from Guide Plan for Columbia; Hare & Hare, 1966

7. Buildings are encouraged to be located so that a percentage of the building front(s) is directly adjacent to the street and provide a pedestrian-oriented site design;
8. All street locations should be appropriately spaced from any arterial intersection based upon accepted traffic engineering standards. Streets should not be located within the operational area of an existing or future signalized intersection;
9. Access to all parking areas for individual buildings should be provided from an internal system for traffic circulation;
10. The maximum percent of impervious cover should be no more than seventy percent for any tract or lot;
11. Cut or fill for grading beyond the building footprint or for a parking area should be compatible with any nearby residential lots; and when completed, blend to match the surrounding topography;
12. Pedestrian connectivity through parking lots should be an integrated into the overall design of the Neighborhood Marketplace and connect all businesses within the development;
13. A reduction in the number of required parking spaces may be appropriate when the development has a centralized parking area shared by all uses. Additional landscaped area in lieu of parking is encouraged;
14. The landscaping should be specifically designed to integrate and relate to the surrounding residential environment. The quality of the landscaping should highlight and enhance the development and the residential area it serves; and

15. When feasible, a landscaping strip should be included along the foundation of all buildings in areas not paved for delivery vehicle access or direct pedestrian access to an entrance/exit.

4.9 Neighborhood Planning

The Metro 2020 Community Guide Plan may be employed at the neighborhood level to address specific development and infrastructure concerns of the area's residents. Neighborhood plans focus on older residential areas that maintain neighborhood vitality and are experiencing redevelopment pressure or encroachment of higher intensity uses at their fringe.

Residential areas within the Neighborhood District are identified as one of the following:

1. **Stable Neighborhood:** This classification is assigned to a neighborhood if its housing stock is in good condition, if it is predominately owner-occupied and single family. Property values and rents tend to be moderate to high. New subdivisions and older neighborhoods not yet experiencing redevelopment pressure fall into this class.
2. **Conservation Neighborhood:** Older areas experiencing redevelopment pressure but maintaining neighborhood vitality and cohesion. The housing stock is typically older, but of sound original construction. Some housing deterioration may be present, but the level of deterioration has not reached a state of delapidation. The housing is typically single-family, but some units have been converted to multi-family rental structures or replaced by higher intensity land uses. Property values and rents tend to be moderate, the majority of the units are owner occupied, although there is a high percentage of renters.
3. **Transitional Neighborhood:** Residential areas where the housing stock is predominately older, often of inadequate original construction. The area may be experiencing pressure for redevelopment to higher intensity, nonresidential uses. There is a high incidence of substandard housing with some dilapidation and a high percentage of low income households. Property values tend to be moderate to low, and the majority of the units are occupied by renters.

Neighborhood planning may also be used as a tool to address district boundary issues to provide for a compatible mix of uses at the neighborhood district fringe.

Chapter Five: Employment District

5.1 What is an Employment District?

Employment Districts are locations for basic employment uses, including offices, corporate headquarters, manufacturing, warehouses, and research parks. The district contains significant concentrations of employment within the City and includes supporting uses such as multi-family residential, convenience retail, day care facilities, and restaurants.

5.2 Defining Employment Districts

The Employment District is functionally defined as a workplace destination, typically in an area that has proximity and access to and from major roadways such as arterials, expressways, and freeways. Employment Districts may be located at the intersections of arterial streets, but are characteristically found along major roadways or a rail facility to create an employment corridor.

The Employment District is a workplace destination in an area that has proximity and access to major roadways

Boundaries for the Employment District would include features such as highways, arterial and collector streets and geographic features such as creeks or lakes that create distinct edges. In the developed areas of Columbia, the boundary for an Employment District may be defined by the transition from predominantly office or industrial uses to residential areas.

High density multi-family residences should be included as part of mixed use developments, or in areas within the District with limited exposure and access to major roadways. Office uses may be appropriate as a transition between industrial uses within the district when next to the Neighborhood District.

5.3 Employment District Principle(s)

To locate major employers in the community in areas with appropriate transportation infrastructure, access to arterial streets, and will be supported by existing or planned improvements.

5.4 Employment District Policies

1. Keep employment districts concentrated in highway and rail transportation corridors with centralized sewer service.
2. Encourage a mix of supporting uses within the employment district such as restaurants, convenience retail, child care, hotel/motel, services, and housing.
3. Office uses are appropriate in areas along highway corridors and interchanges. Office uses are suitable as a transition from neighborhoods to other higher intensity land uses. The characteristics that distinguish office uses from other uses are:
 - Relativity high numbers of employees per acre
 - A significant AM and PM peak hour traffic on weekdays
 - Typically business hours occur during daylight hours on weekdays
 - May require large paved surface parking lots with lights for employee parking
 - Traffic attracted all day long

4. Employment districts should be accessible to transit riders, pedestrians, and bicyclists and accommodate bus shelters/transfer facilities, where appropriate.
5. Industrial uses are appropriate in areas of the community that do not have high public visibility and areas along highway and rail corridors. The characteristics that distinguish industrial uses from office uses are:
 - Fewer employees per acre than an office of the same size and few visitors
 - May produce significant AM and PM peak hour traffic on weekdays
 - Emphasis on commercial truck and rail access
 - May require large paved areas for employee parking, outdoor work and storage
 - Building and site improvements are typically simple and functional
 - May operate 24 hours a day with three shifts of employees
6. Supporting uses in employment districts should be located within walking distance of major employment concentrations.

5.5 Compatible Uses and Densities

Within the Employment District, most of the permitted land uses are of a similar scale and intensity. However, there are industrial uses that have special requirements which, if not planned, may be incompatible with other district land uses.

Industrial uses that have outdoor storage should be located in isolated areas which will not interfere with existing development. These uses may require large tracts of up to 100 acres, highway access for heavy trucks, and/or railway access. The industrial truck traffic should not conflict with commercial and residential traffic, or rely primarily on roadways designed to serve these nonindustrial uses.

Employment Districts should be developed in such a way as to protect and use the large public investment in the streets, highways, and support infrastructure. Traffic generated within the district should not produce a burden on the street network that reduces the carrying capacity of the roadways.

Along arterial roadways, office and industrial parks/subdivisions that group individual businesses into attractive and organized developments should be the models.

Pedestrian access to and from uses within the Employment District should be provided in a safe and convenient manner from the sidewalk system along the arterial(s). Buildings are encouraged to be located so that a percentage of the building front(s) is directly adjacent to the street and provide a pedestrian-oriented site design.

All land uses, public and private, with the exception of some residential uses, may be appropriate to be located within this district.

A. Uses/Densities

There are uses that by the nature and scale of the commercial activity should generally be located only within the Employment District. These uses include:

1. All unplanned industrial development
2. Manufacturing
3. Single tenant and general office developments > 40,000 square feet
4. Tractor and farm equipment sales
5. Machine shops and industrial service facilities
6. Truck and rail shipping facilities

B. Compatibility Guidelines

The following compatibility guidelines should apply to the planning and development of all uses within an Employment District:

1. All development within the Employment District will be compatible with the provisions of any applicable watershed and development resolutions adopted by the City Council.
2. The side or back lot lines for all office, commercial and industrial uses should not abut any residential lot, except high density multi-family, unless separated by a natural feature such as a greenbelt, ravine, or undisturbed group of trees that provide a significant buffer. Large lots with sufficient depth to provide an adequate rear yard buffer may be acceptable.
3. No residential uses, with the exception of high density multi-family dwellings, should be located within an Employment District. Existing single family residences and duplexes should be considered transitional uses in the Employment District.
4. All office, commercial and industrial uses next to Neighborhood Districts, Open Space/Greenbelts or the City Center should be a planned zoning district, (O-P or C-P);
5. Sufficient street frontage should be provided so that appropriate spacing exists for driveways on to an arterial street, especially if access to the arterial will be by driveway. Driveways should be designed to serve all uses within the development. Joint use driveways and cross easements are encouraged;
6. All street locations should be appropriately spaced from any arterial intersection based upon accepted traffic engineering standards. Streets should not be located within the operational area of an existing or future signalized intersection;
7. Controlled access onto arterial streets. Driveways should be appropriately spaced based upon accepted traffic engineering standards, with no more than two driveways per lot. Driveways should not be located within the operational area of an existing or future signalized intersection;

8. The amount of cut or fill for grading a building pad or parking area should be minimized and when completed, blend with the surrounding topography. Filling in the 100 year floodplain and adjacent to Neighborhood and Open Space/Greenbelt Districts should be compatible with any nearby residential lots and not adversely effect adopted greenbelts.
9. Industrial uses with outdoor storage, rock quarries, and mines should not be located next to the Neighborhood District.

Chapter Six: Commercial District

6.1 What is a Commercial District?

The Commercial District contains a variety of citywide and regional retail uses, as well as offices, businesses, personal services and high density multi-family dwellings as supporting uses within the district. Most of the retail uses in this district depend on auto access to and from major roadways to support and sustain their business activity.

6.2 Defining Commercial Districts

The Commercial District may be functionally defined by the area that has proximity and access to and from major roadways such as arterials, expressways, and freeways. Visibility from and access to these major roadways is a defining feature. Commercial Districts are typically located at the intersections of arterial streets, to form a commercial center or along a major roadway forming a commercial corridor.

Boundaries for the Commercial District would include features such as highways, arterial and collector streets and geographic features such as creeks or lakes that create distinct edges. In the developed areas of Columbia, the boundary for a Commercial District may be defined by the transition from predominantly commercial and office uses to residential areas.

Office and high density multi-family residences should be included as part of high intensity mixed use developments, or in areas within the District with limited exposure and access to major roadways. Office use may be appropriate as a transition between commercial uses within the district when next to the Neighborhood District.

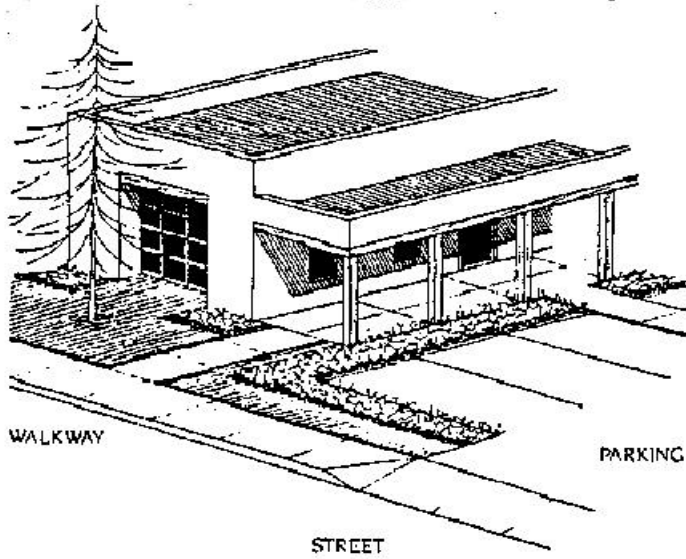
6.3 Commercial District Principle(s)

To ensure commercial development that is compatible with the adjacent land uses, appropriate to the traffic flow pattern and access available, and will be supported by existing or planned infrastructure.

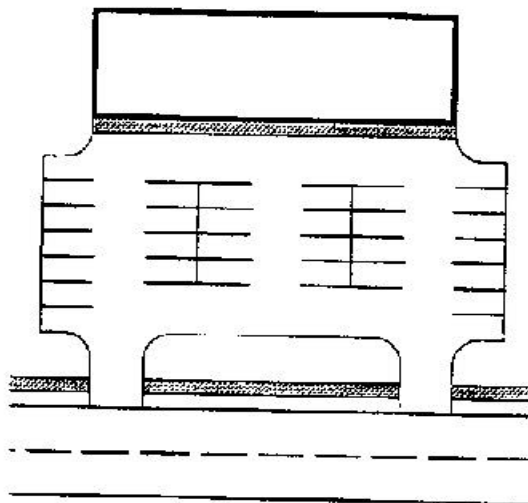
6.4 Commercial District Policies

1. Provide for large multi-tenant commercial centers with internal traffic circulation at appropriate locations at the intersections of arterial streets and at interchanges with limited access roadways.
2. Development in commercial districts will be encouraged to locate buildings so that a percentage of the building front(s) is directly adjacent to the street and provide a pedestrian-oriented site design.
3. Support the transition of existing, auto-oriented strip commercial areas to compact and connected mixed uses with pedestrian connections between businesses and neighborhoods.
4. Encourage new multi-tenant strip commercial centers of sufficient size to accommodate convenience and specialty retail, fast food restaurants, and auto oriented businesses.

Pedestrian Oriented Site Designs

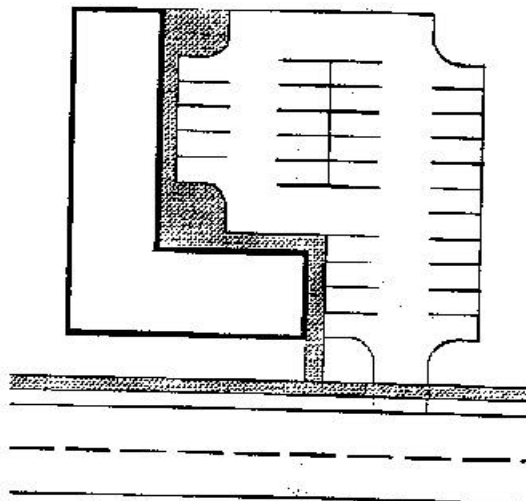


Pedestrian orientation of building with a continuous walkway from the street to the building entrance



Traditional auto-oriented site design

- Building sited at back of lot
- Pedestrians must walk through parking lot
- Creates the perception of a wide, fast street corridor



Pedestrian-friendly site design

- Building sited near street
- Convenient pedestrian access provided
- Street corridor perceived as narrower

5. Large retail establishments should be located in planned multi-tenant community or regional scale shopping centers. Large retail developments should provide pedestrian, bicycle and transit access, and any necessary off-site traffic improvements needed to serve the development.
6. Encourage planned commercial developments that provide the individual entrepreneur the opportunity to develop a private business on an individual basis as both owner and occupant.
7. Encourage connections between commercial developments by providing for shared access, shared parking, and shared signage.
8. Support subarea plans for the redevelopment of older commercial corridors.
9. Commercial districts should be accessible to transit riders, pedestrians, and bicyclists and accommodate bus shelters/transfer facilities, where appropriate.

6.5 Compatible Uses and Densities

Commercial Districts should be developed in such a way as to protect and use the large public investment in the streets, highways, and support infrastructure. Commercial traffic should not produce a burden on the street network that significantly reduces the carrying capacity of the roadways. Likewise, a higher density for all development within the district would concentrate high intensity business activities and promote the efficient development of areas served by existing infrastructure.

Along arterial roadways, shopping centers that group individual businesses into attractive and organized developments should be the models. The development of individual businesses on a single lot with inadequate arterial frontage is not appropriate, unless driveway access onto the arterial is shared with adjacent uses, or all access to and from the site is provided by a local or collector street.

All land uses, public and private, with the exception of some residential uses, may be appropriate to be located within this district.

A. Uses/Densities

There are uses that by the nature and scale of the commercial activity should generally be located only within the Commercial District. These uses include:

- a. Retail businesses > 40,000 square feet
- b. Shopping Center/Strip Mall > 70,000 square feet
- c. Fast food restaurants
- d. Auto sales and repair services
- e. Motels

B. Compatibility Guidelines

The following compatibility guidelines should apply to the planning and development of all uses within a Commercial District:

1. All development within the Commercial District will be compatible with the provisions of any applicable watershed and development resolutions adopted by the City Council.
2. The side or back lot lines for all commercial uses should not abut any residential lot, except high density multi-family, unless separated by a natural feature such as a greenbelt, ravine, or undisturbed groups of trees that provide a significant buffer. Large lots with sufficient depth to provide an adequate rear yard buffer may be acceptable.
3. No residential uses, with the exception of high density multi-family dwellings, should be located within a Commercial District. Existing single family residences and duplexes should be considered transitional uses in the Commercial District.
4. Lots or tracts with arterial frontage should provide shared access across the lot lines including joint-use driveways. Shared access should be encouraged along arterial streets.
5. All commercial and office uses next to Neighborhood Districts, Open Space/Greenbelts or the City Center should be a planned zoning district (O-P or C-P);
6. Sufficient street frontage should be provided so that appropriate spacing exists for driveways on to an arterial street, especially if access to the arterial will be by driveway. Driveways should be designed to serve all uses within the development. Joint use driveways and cross easements are encouraged;
7. Within a district a system of internal streets or parking aisles is desirable to provide access and connectivity between uses without relying upon the arterial street;
8. Controlled access onto arterial streets. Driveways should be appropriately spaced based upon accepted traffic engineering standards, with no more than two driveways per lot. Driveways should not be located within the operational area of an intersection which is signalized or will require signalization at a future date;
9. All street locations should be appropriately spaced from any arterial intersection based upon accepted traffic engineering standards. Streets should not be located within the operational area of an existing or future signalized intersection;
10. Developments with driveways onto arterials that would meet warrants for signalization are not compatible, and should be served by a public street;

11. The amount of cut or fill for grading a building pad or parking area should be minimized and when completed, blend with the surrounding topography. Filling in the 100 year floodplain within the Commercial District and next to Neighborhood and Open Space/Greenbelt Districts should be compatible with any nearby residential lots and not adversely effect adopted greenbelts.

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Chapter Seven: The City Center

7.1 What is the City Center?

The City Center District is intended to be the focal point of the City of Columbia, serving as the educational and government center of the City. This is an area of mixed uses and is at a pedestrian scale. The District includes the downtown office and commercial area, the University of Missouri, Stephens College, and Columbia College. It also contains a number of multi-family residential uses, including upper-story units in commercial and office buildings.

The City Center is intended to be the focal point for the Metro area

A major feature of the City Center is its pedestrian scale street environment. Densities are higher here than in other areas, and there is no off-street parking requirement. It includes wide sidewalks, and curb extensions at intersections to facilitate walking. On-street parking throughout the area narrows the streets and tends to slow traffic speeds. Most existing commercial and office buildings are built flush to the front property line, to take advantage of pedestrian traffic on the adjacent sidewalk. New and redeveloped properties should continue that design practice to maintain the pedestrian nature of the district. Street reconstruction projects and traffic signalization also need to be done with pedestrians in mind.

The City Center is also intended to be an attractive place for bicyclists, as it is within easy bicycling distance of central area residential neighborhoods. Bicycle parking areas need to be provided in both on-street and off-street locations, such as parking garages.

It is important to maximize the opportunities for people to live in the City Center. High density residential uses allow people to live within walking distance of all the services and opportunities in the Central Business District. These residents are potential customers for all of the commercial and services located in the central area, but often will not require parking spaces to access these opportunities. The presence of a large number of residents in the City Center enlivens the area and leads to a wider variety of uses, especially in the evenings when restaurants and entertainment venues are frequented. The presence of people in the area on a 24-hour basis also contributes to a safer street environment and subsequently less crime.

As part of the ideal to maximize the efficient use of land within the City Center, off-street parking should only be allowed in parking garages. Surface lots should be discouraged, and existing lots should gradually be phased out. The presence of surface parking lots takes up valuable land that could be accommodating uses that would produce property tax revenue and improve the area.

7.2 Defining the City Center

The boundary for the City Center District may be defined by major arterial and collector streets, or by the edges of University and college properties. District edges may also be areas containing a variety of uses that transition into owner-occupied single family residential uses.

7.3 City Center Principle(s)

The City Center provides the educational and cultural core of the community and will provide a mix of retail, office, and multi-family residential uses in a highly pedestrian-oriented, street focused environment.

7.4 City Center Policies

1. Within the pedestrian core, drive-through facilities may be appropriate as an accessory use to banks and financial institutions, if it can be demonstrated that the design and operation of the facility is compatible with the pedestrian environment.
2. Uses that generate high levels of pedestrian traffic should be encouraged on the street-level. Residential uses should be considered as part of a mix of uses within a building.
3. Multi-family and high density residential uses will be encouraged.
4. The City Center will continue to be the focus of governmental administration and service functions, cultural activities and higher education.
5. A transition of land use intensities should be encouraged to buffer Neighborhood Districts next to the City Center. The transitional uses should be of an appropriate scale and intensity as to not interfere or adversely affect the residential character of the neighborhoods and should relate to and support the neighborhood.
6. Streets and public spaces within the City Center should be designed to enhance pedestrian and bicycle activity.
7. The Columbia Transit System should maintain the central transfer facility located in the historic Wabash Station.
8. On-street and off-street bicycle parking will be included as part of street designs in the City Center.
9. New parking in the City Center should be provided in parking structures. Surface parking lots should be discouraged. Parking structures should have considerations made for the inclusion of retail uses on the street level, place driveways to avoid pedestrian and traffic conflicts, and be designed to be compatible with adjacent buildings.
10. The University of Missouri, Stephens College, and Columbia College are encouraged to work in concert with the City of Columbia to keep their Campus Development Plans updated on a regular basis.

7.5 Compatible Uses and Densities

The City Center District should be developed and maintained in a way to protect the pedestrian-orientation of the district and to preserve the high-density nature of the downtown and other components that make up this area.

A. Uses/Densities

1. Banks and financial institutions
2. Colleges and universities
3. High density multi-family residential

4. Government offices
5. Retail sales and offices
6. Churches, synagogues, and mosques
7. Hotels
8. Museums, galleries, and performing arts facilities
9. Theaters and night clubs
10. Restaurants

B. Compatibility Guidelines

1. All development within the City Center District will be compatible with the provisions of any applicable watershed and development resolutions adopted by the City Council.
2. Single family residences, unless on the National Register of Historic Places or contained within a recognized historic district, should be considered as transitional uses in the City Center. The City Center is a place for mixed use developments, and high-density residential uses. It will be appropriate over the long-term to facilitate the adaptive reuse of existing single family structures to uses that provide for greater density and variety.
3. Alleys should be maintained and kept open for pedestrian and vehicular uses. They should not be obstructed with walls, gateways, fences, dumpsters, or parked vehicles.
4. New public street projects should be designed to slow vehicle traffic speeds. Many existing streets in the district are narrow, having been built prior to the time when motor vehicles were the principal mode of transportation. This pattern should be maintained. Maintaining narrower traffic lanes, providing raised crosswalks, and constructing curb extensions are examples of designs that can keep vehicle traffic at appropriate speeds for an area with heavy pedestrian concentrations.
5. In areas with high levels of pedestrian activity, commercial and office buildings should be built with their orientation to the street to maximize pedestrian access and to support the established building pattern.
6. Small public spaces are suitable in the City Center. These may be pocket parks, (e.g., the park at 9th and Walnut) or public plazas and the like. Such places may include benches, fountains, and other features that make for an attractive social gathering place.
7. Surface parking lots are not generally compatible uses in this district, with the exception of university and college facilities and uses on the district fringe. In the latter cases, placing such parking facilities next to the Neighborhood District boundary is discouraged. Surface parking prevents the land it occupies from being used to contribute to the high-density and mixed use nature of the area.

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Chapter Eight: Open Space/Greenbelt

8.1 What is the Open Space/Greenbelt District?

The Open Space and Greenbelt District is designed to provide for the recreational and aesthetic needs of the residents of the community. It is also intended to protect sensitive areas, such as flood plains and hilly terrain, from development, and to preserve prime natural areas. Included in this district are public and private parks; other open spaces; and greenbelts.

8.2 Defining the Open Space Greenbelt District

Boundaries for the Open Space/Greenbelt District would include such things as the edge of the 100-year flood plain, and major or local streets. It also could be defined by the edges of subdivisions next to the greenbelts, such as the boundaries of lots on the bulbs of cul-de-sacs.

This district is also intended to include major City and other regional parks and recreational centers. Examples include state parks, such as Rockbridge Memorial State Park, and City parks such as Capen Park. These facilities are community-wide, serving the entire Metro Area.

8.3 Open Space/Greenbelt Principle(s)

To provide park land, open space, and greenbelts to meet the recreational and aesthetic needs of Columbia's citizens, to ensure the preservation the area's natural beauty, significant wildlife and plant habitats, and to maintain creek water quality.

8.4 Open Space/Greenbelt Policies

1. Insure that bicycle and pedestrian access is provided to and from parks, open spaces, greenbelts and surrounding neighborhoods.
2. Insure that small parks or outdoor spaces are located within walking distance of all residents. The design and location of parks and outdoor spaces should relate to the street and sidewalk system to create a focal point for the residents and should not be merely undevelopable open space in drainage areas or flood plains.
3. Provide for major community recreational facilities.
4. Encourage the dedication of greenspace conservation easements, greenspace access easements, and greenspace trail easements when property is subdivided in adopted greenbelt corridors.
5. Preserve trees and vegetation along stream flood plains.
6. Encourage an inventory of the ecology, biology, and geology of the Metro area.
7. Encourage a joint City/County cooperative arrangement for the development of parks, greenspace and recreational facilities within the Metro area.

8.5 Compatible Uses and Densities

Open spaces and greenbelt areas can serve a variety of functions. Greenbelts can function as the boundary between neighborhoods by buffering residential neighborhoods from non-residential zoning, such as commercial areas. Greenbelts serve to prevent the development of flood-prone lands and the costs and problems resulting from such activity, and preserving the trees and open lands in such areas.

Greenbelts are primarily located along major creek corridors within the Columbia area, encompassing the flood plain and the creek itself. The Greenbelt Plan adopted by the City Council includes the corridors of seven principal creeks:

Bear Creek
Flat Branch
Grindstone Creek
Hinkson Creek
Hominy Branch
Perche Creek
Rocky Fork

The greenbelt system has potential for both recreational and transportation benefits with the addition of pedestrian/bicycle trails in the corridors. An interconnected trail system provides the opportunity for walking and bicycling connections across the Metro area. Such a system allows for connections between major recreational facilities (e.g., Cosmo Recreation Area and Albert-Oakland Park). It provides access across major barriers to pedestrian and bicycle travel, such as major roadways and waterways. Residents may use these trails both for work and pleasure trips. Pedestrian and bicycle access from adjacent districts, especially neighborhoods, is important if open space/greenbelt districts are to be used to their full advantage.

Areas of the greenbelt threatened by development should be identified and considered for acquisition by the City. Greenbelt sections that are suitable for bicycle and pedestrian trails should be identified and a trail plan should be considered by the City Council.

A. Uses/Densities

There are uses that by the nature and scale of the activity that should generally be located only within the Open Space/Greenbelt District. These uses include:

1. Public or private parks: Park facilities are natural uses within the open space/greenbelt district. Both major community parks and neighborhood parks are compatible uses. Recreational facilities based around a lake would be included as well.
2. Playing fields for organized sports: Such playing fields are often part of park facilities, more typically in major community facilities such as Cosmo Park. They also are frequently found in conjunction with parks next to schools, which would usually be located within neighborhood districts. Major facilities, with parking for hundreds or thousands of vehicles, such as a high school or university football stadium or fairground are not compatible within this district. These uses are too intensive to be located in an Open Space/Greenbelt district.

3. Pedestrian/bicycle trails: Additional trails would also be desirable to encourage and allow wider use of alternative transportation modes across the entire Metro area. These would provide for recreation use, as well as promoting walking and bicycling. Specific pedestrian/bicycle trail connections from urbanized areas to the regional state parks, such as Finger Lakes, would be desirable.
4. Nature preserves: Like parks, nature preserves, whether publicly or privately owned, are natural uses for this district. Examples are the City's Grindstone Nature Area and the nearby land owned by the Greenbelt Coalition along Hinkson Creek.
5. Golf courses and driving ranges: Golf courses and the associated facilities as well as driving ranges are appropriate for this district.
6. Community Centers and Private Meeting Facilities: This would include community recreation centers and other private meeting facilities such as alumni centers, and community organizations.
7. Storm water facilities:
8. Agricultural uses, including crops and grazing livestock. This would include typical row crop plantings in creek bottoms, and the grazing of livestock on pasture or crop stubble.

B. Compatibility Guidelines

The following compatibility guidelines should apply to the planning and construction of all uses within an Open Space/Greenbelt District:

1. All development within the Open Space/Greenbelt District will be compatible with the provisions of any applicable watershed and development resolutions adopted by the City Council.
2. In sections of the district that are part of the greenbelt, the greenbelt corridor should have a width of 100' or wider, unless that portion of the naturally occurring flood plain is less than 100' in width.
3. Cut and fill should not be allowed within the naturally occurring floodplain in stream corridors designated as part of the City greenbelt. The only exemptions would be for planned street projects, such as connections or extensions, that are part of the City's adopted Major Thoroughfare Plan, or for the construction of pedestrian/bicycle trail projects.
4. Pedestrian and bicycle accesses should be allowed to provide connections from the district to adjacent subdivisions, whether residential or non-residential. These accesses should be a maximum of 10' wide and constructed of a permeable gravel surface, and should tie into sidewalks or other pedestrian facilities in the subdivision.
5. Buildings and parking lots, except recreational structures and parking associated with park facilities, should not be located within an Open Space/Greenbelt District.

6. In those greenbelt corridors that now contain pedestrian/bicycle trails, pedestrian accesses should be provided to adjacent neighborhoods. Such accesses may be public rights-of-way and make connections to public sidewalks or streets, or they may be either public or private easements. For private easements, the accesses should be maintained by the homeowners' association of the subdivision.
7. All greenbelt trail projects should maintain compatibility with any existing residences next to the trail through such means as landscape buffering and screening, berms, and other natural buffers. Trail projects will be developed with routes compatible to existing subdivisions, such as crossing the creek corridor when possible to avoid individual residences.
8. Future subdivision developments next to the greenbelt corridors with existing or planned trails should be encouraged to provide pedestrian/bicycle access to those trails. The right-of-way for these connections should be dedicated as part of the platting process, or the necessary easements shown on the final plat for the respective subdivisions.

Chapter Nine: Transportation

9.1 Mobility, Connectivity, Access, and Land Use

Transportation facilities are critically important in enabling the efficient movement of goods, services, and people. Persons need transportation to get to work, to school, and to services. It is the transportation infrastructure that defines the urban form.

Mobility and access are two terms that are frequently used in discussion of transportation issues, and a definition of each of these follows. Mobility is the ability and knowledge to travel from one location to another in a variety of travel modes. Access is the ability of people to get directly to the places they need and want to be. Access may also be defined as the means by which a person can accomplish some social or economic activity. While mobility indicates movement, access does not. Persons may gain access to goods and services through the Internet, and are able to make purchases directly from their residences without leaving the premises. They may do their jobs from home through telecommuting. Ideally, access to various locations is convenient enough physically such that great mobility is not necessary to reach them. For example, good access from neighborhoods to sites such as schools, parks, and shopping areas would not require a vehicle trip. Necessary for both access and mobility is connectivity, which means that streets, sidewalks, and other transportation facilities are connected to each other in a system. Having streets that do not connect to other streets, and that do not have sidewalks, limits mobility and access.

Given the pattern of new development since the 1950's, access to services and other locations is no longer as convenient as it once was. While access to jobs, shopping, and schools was once available within or directly next to neighborhoods, the separation of land uses through zoning codes has altered this. With land uses widely separated, more mobility is necessary to gain access to the economic and social activities people must reach. Dispersal of employment centers has required more long distance commuting. While people could once conveniently walk to most of their daily activities, this is no longer true.

Transit service is one element of the mobility issue. For those persons who do not have personal vehicles, transit is necessary for them to gain mobility. Access to transit service is critical. Bus routes need to serve the central city locations where a higher percentage of persons lacking vehicles reside. Direct physical access to the bus stops is needed, with sidewalks on both sides of all streets that are bus routes, and sidewalk access to bus stops and ramps.

A hierarchy of streets is important to facilitating mobility. Local streets and collectors provide connectivity from neighborhoods and other areas to major streets, such as arterials, freeways, and expressways. These higher order streets provide mobility through higher vehicle speeds and fewer obstacles.

A direct relationship exists between land use and travel patterns, and access is a determining factor. Land developments without decent transportation options in a variety of travel modes will lead to unsafe and congested conditions. For industrial and commercial uses, freight delivery, whether by heavy truck traffic or railroad, is dependent upon major roads and direct rail lines. Commercial land developers see major roads as the direct pipeline to customers and profits, and make their location decisions largely on the access of sites to such

roadways. Employment centers also need access to higher order roadways, to accommodate the commuting of employees. Residential uses do not require direct access to major roadways, only indirect access through the system of local streets. Connectivity to these major streets is necessary to reduce trip lengths and travel time.

Pedestrian and bicyclist connectivity is also important, particularly in residential developments. Direct connections from street to street are desirable, as opposed to the common practice of developing subdivisions with cul-de-sacs and loop streets. The latter pattern of development frequently results in an inability to travel directly from one residential neighborhood to another. For example, children should be able to walk or bicycle on the most direct route to local schools. Lack of street connections prevents this. For residential areas next to commercial areas, direct pedestrian/bicycle access to the sites provides convenience for the residents and eliminates the necessity of a vehicular trip for site access. Direct pedestrian and bicycle connectivity to neighborhood parks and recreational trails also eliminates the necessity of driving to access these facilities.

9.2 Street and Sidewalk Design

The street and its adjacent corridor must serve many modes of travel. It is important that the needs of all modes are incorporated into the street design. The City of Columbia Street Design Standards were adopted in 1962. Standards are continually updated. Street widths are part of the subdivision regulations and have not been changed since the early 1970's.

A key factor in promoting the safety and mobility of pedestrians and bicylists is the physical design of streets and sidewalks. The design standards must provide for the safe passage of all non-motorized traffic throughout the community. The following outline contains suggestions for ensuring that Columbia's street design practices accomplish the aforementioned:

- a. Consider a new functional roadway classification to create a secondary arterial street;
- b. Consider reducing pavement widths for collector streets without on-street parking;
- c. Consider changes to the sidewalk design standard to establish a 5-foot sidewalk width on collector and arterial streets or in areas with high pedestrian traffic. Retain the existing 4-foot minimum width for local streets within residential subdivisions;
- d. Consider changes to the bike lane design standard to provide for a bicycle/pedestrian sidepath and a raised bike lane;
- e. Consider providing additional right-of-way to allow for wider sidewalks and provide a street tree planting strip of 8-10 feet;
- f. Consider a new functional classification for collector streets serving residential areas; and
- g. Consider requiring the dedication of additional right-of-way for collector and arterial streets as part of the building permit approval process.

Another feature of the transportation system design is the aesthetic element. A visually pleasing streetscape is more attractive to pedestrians and bicyclists and encourages more travel by these modes. Street trees are a central feature of such an attractive streetscape.

Trees along a roadway have an impact on vehicle speeds. The proximity of the trees to the roadway visually narrows the street corridor which tends induce reduced vehicle speeds. The City of Columbia has no ordinance requiring the planting of street trees or policies that address street trees. The City's Department of Public Works has a Street Tree Planting Guideline in place.

The City should consider developing and adopting a street tree policy to include a list of appropriate species of street trees and outline the responsibility for their maintenance and removal. Street trees need to be closely monitored to avoid conflicts with pedestrians and service vehicles.

There are only two designs for planting street trees; planting in the parking strip between the curb and the sidewalk, or planting beyond the sidewalk. Both designs are acceptable although planting along a given street should not mix the two designs.

9.3 Roadways

In 1974 the Columbia Area Transportation Study (CATSO) was designated by the Governor of Missouri as a Metropolitan Planning Organization (MPO). The MPO designation allowed access to federal funding for street and bridge improvement projects. It also required that the MPO perform transportation-related planning in accordance with the federal 3-C process. The 3-C process of continuing, cooperative, and comprehensive planning is funded by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). This process is necessary for the continued receipt of federal/state capital and operating money. The City of Columbia Department of Planning and Development functions as staff for the MPO.

CATSO has two committees to perform and oversee its 3-C planning. The CATSO Technical Committee is composed of staff planners, engineers, and other transportation professionals from the Missouri Department of Transportation (MODOT), Boone County, and the City of Columbia. This committee deals with technical aspects of plans, studies and reports for the Columbia Metro Area. The CATSO Coordinating Committee is made up of upper level city and county staff members, local elected officials, MODOT staff, FHWA staff, and FTA staff. This is a policy making body that directs the activities of the technical committee and approves documents prepared on behalf of the MPO.

CATSO serves the Columbia Metropolitan Area, which includes the City of Columbia and the surrounding unincorporated areas anticipated becoming urbanized in the next 20 years. The current metropolitan planning area boundary was adopted by the Coordinating Committee on March 18, 1993.

The majority of the issues that CATSO deals with are related to roadways. It has now become accepted practice that roads are to perform specific functions. This innovation replaced the earlier pattern of the grid system that consisted of largely undifferentiated streets. The purpose of a specialized system is to increase the efficiency and safety of the circulation system. One result is to keep through traffic out of residential neighborhoods. An efficient roadway system consists of a hierarchical classification of streets based on the function of each type of street.

Since 1968, there has been an adopted Major Thoroughfare Plan for the Columbia Metro Area. The Major Thoroughfare Plan is jointly adopted by the City of Columbia and Boone County and contains a hierarchy of streets based on function. The classes, in ascending order, are collector, arterial, expressway, and freeway. Local streets are not included in the plan. Each type of street performs a different function in terms of access and mobility. Expressways and freeways have as their sole function mobility for through traffic. Arterials are principally for traffic mobility, with access to adjacent properties a secondary function. Collector streets have a mixed function, providing access to properties with frontage and mobility to through traffic in similar proportions.

9.4 Bicycle and Pedestrian Facilities

The Columbia City Council established the Commission on Bicycling in 1977, in response to citizen concerns about bicycling issues. The Commission serves as an advisory board, examining problems relating to bicycling and suggesting solutions. In 1978 the Commission developed a Bicycle Master Plan, which was adopted by the City Council in November 1979. The plan, which is currently under review by the Bicycle and Pedestrian Commission, proposed a number of bicycle routes. Included were three types of routes:

Class I: Bicycle routes used exclusively by bicycles and pedestrians.

Class II: Bicycle lanes along existing public streets, separated from vehicle traffic by painted stripes.

Class III: Signs on existing public streets designating bicycle routes, with no vehicle separation.

The plan adopted in 1979 has been partially implemented, with the majority of the routes being Class III.

A comprehensive revision of the Bicycle Master Plan was undertaken in 1993. This revision, like the previous plan, includes Class I, II, and III routes. This document was prepared by the Commission, and revised with assistance from city staff. The revised Bicycle Master Plan was approved by the Bicycle Commission and the Planning & Zoning Commission in July 1993. The plan was adopted by the City Council in November 1993. Some implementation of the plan has occurred. The Columbia Bicycle and Pedestrian Commission is currently reviewing the plan and is considering significant changes to the existing plan document. The Bicycle Master Plan should be integrated into any masterplan developed for citywide pedestrian/non-motorized facilities.

As of 1998, Columbia had one Class I route, the MKT parkway, which extends southwest from the Fourth and Cherry Street intersection to Scott Boulevard. Portions of nine streets are designated as Class II routes. Parts of twenty streets are classified as Class III routes.

To accommodate walking as a mode of travel, both residential and other types of development need to provide facilities for pedestrians. Most important is a sidewalk system along public street right-of-way, allowing pedestrians to be separated from vehicle traffic. Within the Columbia metro area, a system of sidewalks exists only within the boundaries of the City of Columbia. Outside the city limits, no such facilities are present.

Current city subdivision regulations require sidewalk construction on both sides of new streets as new development occurs. In the early part of the century, sidewalks were constructed as urbanization took place. Later, there was an extended period after World War II during which sidewalks were not constructed as part of new development. In 1974, new city subdivision regulations took effect which require sidewalk construction on both sides of new streets as new development occurs. As a result of the years of development without sidewalks, there are a number of neighborhoods that have no sidewalks, or only a partial sidewalk system. A Master Sidewalk Plan adopted in 1976 attempted to address this problem.

The most recent Master Sidewalk Plan for Columbia was adopted in 1996, and revised in 1997. This plan identifies 41 new sidewalk construction projects. These potential projects fall into two categories: 1) Sidewalk projects along currently improved (with curb and gutter) streets (25 projects); and 2) Sidewalks to be built as part of future street improvement projects (16 projects). The plan focuses on improving the existing system by constructing important connections, particularly near schools, parks and other facilities where pedestrian traffic can be expected. The Master Sidewalk Plan should be integrated into any masterplan developed for citywide pedestrian/non-motorized facilities.

Although sidewalk and other pedestrian facilities can be expected to be concentrated within the city limits of Columbia, there are urban areas on Columbia's fringe that have sufficient density to be served by a sidewalk system. A potential sidewalk policy to be adopted for the Columbia MPO would be for sidewalks to be required along both sides of arterial streets within the urbanized area. This would provide pedestrian access and safety to arterial streets, which can be major barriers to pedestrian travel without sidewalks.

Facilities alone are not sufficient to maximize the safety and convenience of walking. There should be a conscious effort in land use planning to accommodate walking, at both a community level and in planning for specific sites.

Commercial and office areas should provide independent access ways for pedestrians separate from vehicle access. Ideally, there is direct pedestrian access for adjacent residential areas. Site planning should minimize the amount of walking that must occur in vehicle parking areas, to lessen the chances of collisions with pedestrians. Side lot and on-street parking are two ways to avoid having vehicles back over walkways.

The use of access management, parking restrictions, and other mechanisms alone will not provide for functional commercial or office developments. An example can be found in the communities that closed downtown streets and eliminated parking to create pedestrian malls. Shoppers then found it less convenient to get to the downtown, since most of them were traveling by auto. The result was frequently the deterioration of the downtown. To counter this possibility, methods for restricting auto access and protecting pedestrians need to be combined with land use planning that emphasizes walkable scale development. A critical element is the provision of a variety of residential options within walkable distance of commercial and office areas. The proximity of a mixture of land uses is necessary to promote the pedestrian mode. Without such land use planning, restricting auto access to commercial areas will only lead to a loss of function.

Designs and planning techniques that promote a walkable scale need to be employed for all types of land uses, in both new and infill developments, to maximize the benefit to pedestrians. Mixed use developments and traditional neighborhood designs are two ways of achieving this. Land use ordinances should provide for neighborhood schools, pocket parks, and neighborhood-scale commercial areas. Seating should be provided throughout retail areas and other pedestrian corridors. Ideally, businesses should front on sidewalks, with parking in side or rear areas. This is especially important in downtown areas.

9.5 Transit and Paratransit

The City of Columbia operates Columbia Transit, formerly CATS, which serves as the sole publicly funded bus service in the metro area. The city has operated the system since 1965, when it took over from a private operator. Columbia Transit runs four full service fixed routes and one commuter route. Columbia Transit also operates a para-transit service dividing the city up into four service zones for scheduling. The City of Columbia policy on providing transit service is: "to provide service to those areas demonstrating a need for service and show support for the service through their ridership".

The annual ridership in 1980 was 1,100,000+. From that high in 1980, ridership declined from 1981 to 1990. The decline in ridership follows the national trend of reduced transit ridership. Locally the decline in fixed route ridership was picked up on the University of Missouri Parking Lot Shuttle Bus. The combined ridership in 1993 for Columbia Transit and the Parking Lot Shuttle Bus was approximately 1,100,000 riders.

In August 1993, the previous ten route looping bus system designed in 1965 was replaced with a five route crosstown routing scheme. The effect of the changes were reduced travel times for transit riders and a greatly reduced transfer rate, from 35% to 14%. The time spent per trip was reduced from a maximum of one hour and five minutes to a maximum of thirty-five minutes. FY 1998 ridership was 696,000+ with another 650,000+ served by the University of Missouri Parking Lot Shuttle, giving a combined ridership of 1,346,000+. CT has been experiencing a 20+% growth rate over the last three years on the fixed route system. CT maintains a fleet of 17 buses, all equipped with wheelchair lifts.

In January 1993 paratransit service was started at CT for individuals with disabilities which prevents them from using fixed route service. Initially this service was operated with three vans that were converted to ADA specifications locally. This initial ridership of 4,567 in FY 93 has grown to an annual ridership of 25,428 in FY 98. The system currently has eight vehicles running during peak service and four vehicles all day long. Paratransit continues to grow at a 20+% growth rate per annum.

CT fixed route transit and para-transit services are available from 6:25 a.m. to 6:05 p.m., Monday through Wednesday and from 6:25 a.m. to 10:05 p.m., Thursday through Friday, and 9:45 a.m. to 10:05 p.m. on Saturday. Buses run on 40 minute headways during the peak morning and evening periods and 80 minute headways midday, night, and Saturday on three routes; as well as 40 minute headways all the time on one route. Para-transit service is operated on a one hour response time, reservations must be made 24 hours in advance. Para-transit serves the whole city with priority given to ADA service area (3/4 mile from a fixed route).

CT's transfer facility is located downtown in the Wabash Station building. This facility should remain in its current location, serving the City Center and adjacent neighborhoods. Higher density development promotes greater transit ridership. As such, the higher density residential in the City Center and adjacent areas, and the three campuses with their student populations are prime locations for transit service. Major employment areas should also be served by transit. Such areas include the University of Missouri campus, the Columbia Mall, and other commercial areas such as those in the Interstate 70 corridor.

9.6 Railways

Freight service to the area is provided by the Columbia Terminal Railroad (COLT), which is owned and operated by the City of Columbia. The Columbia metro area has no passenger rail service. The nearest passenger rail service is provided through Jefferson City, located 30 miles south of Columbia.

The City of Columbia acquired the COLT line from Norfolk and Southern in October 1987. The railroad line runs between Columbia and Centralia and has 21.43 miles of mainline track. COLT serves the industrial land uses along the Route B corridor in northeast Columbia. Other land uses served include a commercial lumber facility located north of downtown and the City Municipal Power Plant. In fiscal year 1997, 1,394 carloads of freight were carried on the line. This was a 5.2% increase from FY 96, and is more than triple the traffic load than was transported by Norfolk Southern in the 1980's. The increase was due to growth in traffic in steel, lumber, and wax. The line served 10 customers in FY 97, including the City Water and Light Department, which operates the railroad. Most of the traffic is inbound, with 97% being in this category. Coal makes up the single biggest component of the traffic.

9.6 Airports

The Columbia metro area is served by the Columbia Regional Airport, which is located 8.5 miles southeast of Columbia, several miles outside the metro area boundary. The airport is owned and operated by the City of Columbia, and consists of approximately 1,314 acres. Initial construction at the site was completed in 1968, with the terminal building being constructed in 1969 and the air traffic control tower in 1973.

Airport facilities include the terminal building, ramp, hangar storage, auto parking, fuel facilities, and aircraft servicing areas. The terminal area includes almost 21,000 square feet of space for lease purposes. Parking facilities are included for the public, employees, and rental car operations. Public parking is provided for approximately 300 vehicles, with an overflow lot containing about 50 spaces. About 30 spaces are provided for employee and rental car parking.

The facility includes two runways, and is served by one commercial airline. TW Express provides flights to St. Louis's Lambert Field. In mid-1999, the new Ozark Airlines will begin operations at the airport, providing service to Chicago. The airport is served on a daily basis by Airborne Express, an air freight service. The commercial airlines carry a minimal amount of freight. Some commercial land uses depend on air freight to conduct their business, including United Parcel Service and other similar delivery services, as well as the US Postal Service.

Major east-west highway access to the Columbia airport is provided by Interstate 70. Principal access to the airport is provided by US Highway 63, and State Route H provides direct access to the airport access road on the west side

of the facility. This access road is an internal circulation road providing access to the facilities, including the terminal, on the west side of the airport. It forms a one-way loop around the vehicle parking lot west of the terminal, and also accesses the general aviation area, the Flight Service station, and the US Postal Service south of the terminal. Another road provides access to the air traffic control tower on the east side of the airport. Access to this road is provided by Range Line Road.

Taxi service is available from Columbia to the airport, and several local motels provide airport shuttle service.

Chapter Ten: Community Facilities

10.1 Introduction

There are several specialized land uses existing within the metro area known as community facilities. Community facilities provide key services such as public education, fire protection, and community/regional parks. Planning for these facilities has been completed by the agencies responsible for the activity.

The Metro 2020 Community Structure Plan does not provide specific locations for these uses, but does attempt to determine which land use district is appropriate.

10.2 Columbia Public Schools

Planning for new school facilities in the metro area is the responsibility of the Columbia Public School District. Overcrowding at certain schools has been a chronic problem, especially at schools serving newly developing areas. New residential construction within a school's service boundary is the primary cause of overcrowding at these existing school facilities. Land use decisions should consider school crowding; however, the overcrowding at a particular location may be a temporary condition.

A five year forecast is developed by Columbia Public Schools to estimate anticipated student enrollment. This estimate is based upon the number of births within the District and adjusted for migration.

Responding to future facilities needs is complicated by several factors. The Columbia Public School District has no mechanism or budget to acquire sites in advance of need, funding for construction is subject to voter approval, and the acreage required for school sites limit donations of suitable tracts by developers. Typical site requirements for new schools requires properties from 15 to 50 acres as outlined below:

Elementary	15 - 20 acres
Middle School	20 - 30 acres
Junior High	30 - 40 acres
High School	40 - 50 acres

The specific location of school facilities often depends upon reserved or donated property within a large subdivision or development. The City of Columbia and the school district could explore a variety of methods which would facilitate the reservation or purchase of school sites in advance of the actual need.

10.3 Community and Regional Parks

Community parks serve the recreational needs of many neighborhoods. This class of park facility is approximately 80 acres in size and features open space, sports fields, picnic facilities and tennis courts. In 1994 the City Council accepted the Parks, Recreation and Open Space Master Plan that established recommendations for City wide parkland acquisition.

For example, the Parks, Recreation and Open Space Master Plan is general in nature. The plan identified the need for a community park in southeast

Columbia, in the vicinity of New Haven Road and U.S. Highway 63, although it did not indicate a specific location. Likewise, the Metro 2020 plan does not identify any future locations for these park facilities. For this reason, only the existing parks have been shown as part of the Open Space/Greenbelt district.

As new community parks are acquired and developed the Metro 2020 land use district boundaries will be amended to reflect the additions to the Open Space/Greenbelt district.

Regional Parks and Conservation Areas serve a multi-county area and offer opportunities for a broad range of activities not available in the Community Parks. These facilities offer fishing lakes, off-road motorcycle trails, equestrian trails, shooting ranges, and large tracts of forest for hiking and passive recreation. Regional parks within or serving the Metro area include Rockbridge State Park and Finger Lakes State Park which are operated and maintained by the State of Missouri Department of Natural Resources. Conservation Areas within or serving the Metro Area include Rocky Fork Lakes, and Three Creeks Conservation Area, which are administered by the State of Missouri Department of Conservation.

Planning for new or expanded regional facilities within the Metro Area are the responsibility of the abovementioned State agencies.

10.4 Neighborhood Parks

Over the years, the City has struggled with the lack of adequate parkland available within neighborhoods. The issue of mandatory parkland dedication or fees in lieu of land dedication has come up on at least three occasions since the early 1970's. At no time, however, has an actual parkland dedication ordinance been proposed.

In 1994 the City Council adopted a Parks Master Plan that established policies for City wide parkland needs. To facilitate the implementation of the neighborhood parks element of the Parks Master Plan, representatives from Parks and Recreation should be involved early in the development process so potential park sites can be identified.

A systematic approach for park location and park land acquisition should be developed. Options include:

1. A permanent fund for park land acquisition;
2. A parkland dedication ordinance; and
3. Credits to developers for private parks or open space within developments.

10.5 Scenic Roadways

The City of Columbia adopted a scenic roadway ordinance in 1998, with Rock Quarry Road adopted as the first scenic roadway in Columbia. Many collector streets shown on the Major Thoroughfare Plan, extending from the City out into the Metro Area, may qualify as scenic roadways, such as Strawn Road and the West Broadway extension.

A list of potential scenic roadways in the Metro area and design standards for each roadway should be developed. Special consideration should be given to

developing a preliminary design for the reconstruction of Rock Quarry Road which would preserve the existing roadway and trees, provide an off-street facility for bicyclists and pedestrians within the roadway corridor and provide for the efficient movement of auto traffic.

10.6 Stormwater Management

The City of Columbia's Stormwater Management Plan was adopted in 1991 and last amended in 1994 when the City's Stormwater utility was established.

The Environmental Protection Agency (EPA) has developed revised guidelines and regulations for local communities to implement regarding stormwater management. Uncontrolled stormwater runoff has been identified as a significant threat to the water quality of many creeks, streams, and rivers in urban areas. A comprehensive evaluation of the EPA regulations is ongoing by the City's Department of Public Works.

As part of the review of designs appropriate for managing stormwater, the following suggestions should be addressed:

- a. Consider options for design of drainage ways, such as the use of natural vegetation and grassed areas for the drainage as an alternative to concrete structures; and
- b. Consider the possible use of detention pond dams to provide pedestrian/bicycle access and neighborhood parks.

10.7 Fire Protection

Fire stations are distributed throughout the community to minimize the time it takes for an emergency vehicle to arrive on the scene. The service area for a fire station is based upon the area which can be traveled in a given response time from the station.

The City of Columbia and the Boone County Fire District (BCFD) provide fire protection and emergency service within the Metro area. A territorial agreement was reached between the City and BCFD for the provision of service to newly annexed areas. A service boundary was established in 1994, and amended in 1997, as part of the original territorial agreement.

The City of Columbia and BCFD completed individual fire station location studies in 1994. One of the goals stated in the study is that the Columbia Fire Department should have fire apparatus on the scene of a reported emergency inside the City of Columbia within 4.5 minutes from the time of dispatch to 80% of the emergency incidents.

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Addendum: The History of Planning in Columbia

Land use planning by the City began in 1933, when the City Planning firm of Hare and Hare was hired to produce "A City Plan for Columbia, Missouri." Completed and adopted in 1935, this plan for Columbia also established the first zoning and subdivision regulations, and street design standards. A park and parkway system was proposed which included portions of what is now the Hinkson Creek Greenbelt and the MKT Trail. The parkway formed a southern "loop" around the edge of the then developed areas of the city. This proposed "loop" with an updated alignment would ultimately be constructed as Stadium Boulevard.

Important changes to Columbia occurred in the 1950's and early 1960's. The city had experienced significant population and employment growth associated with the postwar expansion of the University of Missouri. The structure of Columbia had changed as well, with the construction of Interstate 70. Completed in 1963, Interstate 70 separated Columbia into two distinct areas with I-70 as the north/south dividing line.

In 1965, the firm of Hare and Hare was hired once again to update the 1935 plan. A two-volume plan "Columbia Tomorrow - A Guide Plan" was completed in 1967. Key features of the "Columbia Tomorrow" plan were the establishment of a 1990 urban limit line in which to focus the land use recommendations, much of which was outside the corporate limits of the City. The plan also suggested a redevelopment plan for property along Business Loop 70, which was no longer the major east/west highway as a result of the completion of Interstate 70.

The Guide Plan Report "Columbia Tomorrow" was produced during the same time that the Columbia Area Transportation Study Organization (CATSO) was undertaking a roadway plan study for Columbia and the surrounding area.

The "Columbia Tomorrow Guide Plan" was adopted in 1967 with the caveat that subsequent revisions would be made subject to the adoption of a Major Thoroughfare and Collector Street Plan. A Major Thoroughfare Plan was completed by CATSO in 1968 for Columbia and the surrounding area defined as the Columbia Metropolitan area. This plan was adopted by the City Council in October 1968.

In 1969, a major annexation was undertaken by the City that added 19.07 square miles, an increase of 85% over the City's total area of 22.42 square miles in 1968. As a result of the annexation, permanent zoning needed to be established on the newly annexed properties.

With the "Columbia Tomorrow - A Guide Plan," the Major Thoroughfare Plan, and the area of the city nearly doubled, a new land use plan that incorporated all these elements was initiated. This plan covered the City of Columbia and those areas of Boone County that were within the CATSO Metropolitan Planning Area. The land use plan map was general in nature and included the Major Thoroughfare Plan as one of its elements. A unique feature of the plan was the circumferential greenbelt shown around Columbia. On November 16, 1969, the "Columbia Area General Plan" was adopted by the City Council. Included in the resolution was a revocation of all other plans including the previously adopted Major Thoroughfare Plan, and the Hare and Hare "Columbia Tomorrow - A Guide Plan."

In late 1979, the City Council requested an update of Columbia's Comprehensive Plan, since more than a decade of growth and development in the City had outdated the 1969 General Land Use Plan. The 1969 General Plan was viewed as not offering the necessary guidance with respect to land use planning policy and required considerable interpretation when attempting to evaluate the merits of requests for rezoning. Staff from the Department of Planning and Development were charged with completing this update.

After a year long process of public involvement, one central issue that emerged was the need for "quality" development. "Quality" may be interpreted as a code word for landscaped parking areas, attractive building facades, roof lines, and building materials. On January 3, 1983, the City Council adopted the plan revisions. The 1983 plan included many of the recommendations of the 1975 "A Master Plan for the Central Area" which focused on the preservation of the Central Business District as a retail center. A significant departure from the 1969 plan was the absence of any land use guidance for areas beyond the City limits.

Lacking the development regulations to address the issue of "quality" development, the structure of the 1983 land use plan was adapted to serve as an implementation tool to partially achieve this goal. The Land Use Plan evolved away from a general land use district plan to a lot by lot depiction of the intended future land use. Quality is not exclusively an aesthetic issue but also one that considers the compatibility of adjacent land uses.

In 1989, revisions to the 1983 land use plan were undertaken. The planning issues concerning future growth were focused on the quality of development. Lacking the regulatory mechanisms to establish a quality standard for development, the plan continued the trend begun with 1983 plans to become a mirror image of the zoning district map.

In 1990 as revisions to the Land Use Plan were completed, several planning issues emerged because of community reaction to development that was occurring along Forum Boulevard and proposed development next to the MKT Trail. The development on Forum Boulevard provided a catalyst for concerns about tree preservation and residential development encroaching on the MKT trail, spawning a series of new ordinances and plans.

Beginning in 1991 and the following years, the City adopted a landscaping ordinance, a tree preservation ordinance, adopted significant revisions to the sign ordinance and adopted a storm water management plan. In addition, the City purchased 300+ acres of land as a buffer for the trail, to protect it from encroaching development. The \$1,800,000 purchase of the trail buffer was approved by voters as part of a 1/4 cent sales tax election held in 1992.

The 1990 plan helped provide the foundation for neighborhood planning. Since 1990, neighborhood plans have been undertaken for the North Central neighborhood and the Benton-Stephens neighborhood. Both neighborhoods border the proposed City Center and share several common issues; 1) University/College impact on residents, 2) high percentage of rental properties, and 3) land use transitions at the neighborhood fringe.