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Acknowledgements

The successful development of the 2004 McKinney Comprehensive Plan was made possible by individuals who contributed their time and expertise for the expressed purpose of making McKinney a better community for future generations. The City of McKinney would like to express its appreciation to those individuals and residents who provided invaluable time, input, and assistance in the development of this plan.

In Memory
Gabe Nesbitt, Councilmember

Citizens of McKinney

McKinney City Council

Bill Whitfield, Mayor
Thad Helsley, Mayor Pro Tem
Scott Lewis, Councilmember
Gilda Garza, Councilmember
Pete Huff, Councilmember
Brian Loughmiller, Councilmember
Gabe Nesbitt, Councilmember
Don Dozier, former Mayor
Dr. Brad Wysong, former Councilmember

McKinney Planning and Zoning Commission

Bill Cox, Chairperson
Don Day, Vice-Chairperson
Flo Henry, Commissioner
Eric Zepp, Commissioner
Travis Ussery, Commissioner
Herb Trenham, Commissioner
Randy Pogue, Commissioner
Greg Brewer, former Commissioner
Michael Carr, former Commissioner
Kelley Stone, former Commissioner
Dr. Rudy Churner, former Commissioner

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Executive Summary

Introduction

The 2004 McKinney Comprehensive Plan is a document developed from community input and the leadership of McKinney to guide decision making for McKinney's future growth and development. The document is a guide for decision makers - City staff, the City's elected and appointed leadership, McKinney residents, and investors in the community - regarding City policies and issues related to land use, transportation, urban design, parks and recreation, and infrastructure. The comprehensive plan reflects the vision of what McKinney residents want their community to be and how it should be achieved.

Work on the 2004 McKinney Comprehensive Plan began in January 2003 and culminated in March 2004. The plan is an update of the previous plan, the 1990 McKinney Comprehensive Plan. The Joint Committee (the McKinney City Council and Planning and Zoning Commission) reviewed the progress and deliverables for the 2004 plan and provided insight and direction in the plan's development. The orderly development of the McKinney Comprehensive Plan process was broken down into five distinct phases:

Phase 1 Community Vision
Phase 2 Status of McKinney
Phase 3 Community Needs Assessment and Goal Setting
Phase 4 Comprehensive Plan Elements
Phase 5 Implementation

Early in the 2004 plan process, the community's goals and objectives were identified through stakeholder interviews and a review of existing documents. The goals and objectives were further enhanced by the Joint Committee to provide direction in the plan's development.

The report outline and highlights of the 2004 McKinney Comprehensive Plan are noted in the Executive Summary. These highlights include the land area being considered, existing conditions, demographics, community input, goals and objectives, future land use plan, future land use plan modules, economic development and fiscal impact, and work plans.

The McKinney Comprehensive Plan reflects the vision of what McKinney residents want their community to be and how it should be achieved.

Report Outline

The McKinney Comprehensive Plan report is broken down into thirteen sections that are listed below:

Section 1	Introduction
Section 2	Planning Process
Section 3	Goals and Objectives
Section 4	Existing Conditions
Section 5	Alternative City Form Scenarios
Section 6	Economic Development and Fiscal Impacts
Section 7	Land Use Element
Section 8	Transportation Element
Section 9	Parks and Recreation Element
Section 10	Water / Wastewater Element

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Section 11	Urban Design Element
Section 12	Educational Facilities and Services Element
Section 13	Implementation

The first four sections provide general information about the purpose of the comprehensive plan, the planning process for McKinney, the development of the comprehensive plan's goals and objectives, and the existing conditions influencing growth and development in McKinney. Section 5 examines the different forms of city development that could shape McKinney's future built landscape and how a preferred plan - the option selected that includes aspects of most city form alternatives - is used to fashion the future land use plan and future land use plan modules. Section 6 qualifies the fiscal realities of the comprehensive plan by performing a fiscal analysis of the plan in its goal of providing a sustainable and affordable community. Sections 7 through 11 explore the five major elements that will influence McKinney's future growth and development based on community values and existing conditions. Section 12 is intended to aid in the coordination of each school district's capital facilities planning with the City of McKinney's Comprehensive Plan. Section 13, the final section of the comprehensive plan, deals with the responsibilities for adopting, implementing, amending, updating, and monitoring the plan and lists the work plans needed to move the comprehensive plan forward.

The McKinney Comprehensive Plan concentrates on an area of approximately 115.8 square-miles, with the City of McKinney having 62.8 square-miles and McKinney's ETJ capturing the remaining 53 square-miles. This combined land area accounts for 13% of Collin County.

Land Area Considered

The McKinney Comprehensive Plan is focused on the growth and development of McKinney and the community's role in the greater North Texas region. The comprehensive plan is focused on those areas inside the McKinney city limits and the City's extra-territorial jurisdiction (ETJ). The McKinney Comprehensive Plan concentrates on an area of approximately 115.8 square-miles, with the City of McKinney having 52.8 square-miles and McKinney's ETJ capturing the remaining 53 square-miles. This combined land area accounts for 13% of Collin County.

Existing Conditions

Located in the center of Collin County, Texas - one of the fastest growing counties in Texas and the nation - the McKinney area is crisscrossed by three major regional highways (SH 121, US 75, and US 380), one railroad line (owned by Dallas Area Rapid Transit), and contains the only major general aviation airport in Collin County. In the Dallas-Fort Worth area, McKinney is located in the northeastern quadrant approximately 30-miles north of downtown Dallas on US 75 and roughly 35-miles northeast of Dallas-Fort Worth International Airport on SH 121. These two regional highways form a 'growth triangle' that has defined regional growth patterns in recent decades with McKinney at the northern apex of the triangle. Communities along each corridor have experienced strong population and employment growth during the last three decades. The first waves of this growth reached the McKinney area twenty years ago.

Changing Demographics

According to the Census, McKinney's population jumped from 21,283 people to 54,369 between 1990 and 2000, an increase of 33,086 people. During this same period, McKinney's annual average population growth rate was 15.5%, far exceeding the 2.9% for the Dallas-Fort Worth area. McKinney's share of population in Collin County climbed to 11.1% in year 2000, up from its 8.1% share in 1990.

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The latest population estimates from the City of McKinney indicate McKinney has 122,083 people as of January 1, 2009, an increase of 67,714 residents from the 2000 Census. The 2009 population estimate is just under six times the City's population in 1990.

Based on the latest information from the 2000 Census, the population of McKinney is dominated by adults from 25 to 44 years of age with a large percentage of the population in professional and management occupations. Educational attainment and median household income for McKinney were well above the averages for the nation and the Dallas-Fort Worth, but just slightly below the Collin County averages. Just less than half of McKinney's adult population had received some form of college degree. Between 1990 and 2000, McKinney's median household income more than doubled and was close to matching the average in Collin County.

Community Input

Soliciting public input and incorporating the public's values into the comprehensive plan provided the basis for developing the plan further. To generate greater community involvement in the comprehensive plan, several communication tools were used. These included the following:

- Joint Committee meetings
- Public input sessions following monthly Joint Committee meetings
- Stakeholder interviews
- Telephone survey
- Citizen survey questionnaire
- Three community meetings at different locations in the City from April 7th through April 11th
- Stakeholder group meetings in September and October
    - Industrial
    - Commercial
    - McKinney Independent School District
    - Developers and property owners in the ETJ
    - East McKinney residents
    - Eldorado / Stonebridge Ranch residents
- McKinney Project Office staff by professional planners and urban designers with HNTB
- Write-ups for the City of McKinney's *McKinney City Times*
- McKinney Comprehensive Plan web page

Other means of getting the word out about McKinney's Comprehensive Plan process included presentations before community organizations (McKinney Community Development Corporation and McKinney Economic Development Corporation) and conducting interviews with reporters from the local newspapers.

Goals and Objectives

In the first months of the comprehensive plan process, the Joint Committee agreed to an initial set of draft goals and objectives. The development of the initial set of draft goals and objectives came about through a combination of stakeholder interviews and a review of existing documents, such as: the City Core Values - S.P.I.R.I.T., Core Businesses (Mission), McKinney Vision 2012: Guiding Principles, McKinney Vision 2020; Guiding Principles, Strategic Goals 2007 and 2008, and previous long

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range plans. Many of the ideas expressed in these existing documents were incorporated as appropriate into the initial draft goals and objectives. These initial draft goals and objectives provided direction as the comprehensive plan process moved forward and were utilized in developing the alternative city form scenarios that resulted in the draft future land use plan and draft future land use plan modules. The draft goals and objectives were adjusted by the Joint Committee again in September 2003 based on additional community input.

Listed below are the fourteen goals agreed to by the Joint Committee that guided the development of the McKinney Comprehensive Plan:

The rapid pace of growth in McKinney requires a plan that provides flexibility to changing market conditions, while maintaining a clear direction for the community's desired growth.

- Goal A Economic development vitality for a sustainable and affordable community
- Goal B Preservation of Historic McKinney
- Goal C Attractive hometown that promotes McKinney's Character
- Goal D Leisure and recreational opportunities
- Goal E Financially sound city government
- Goal F Utility and infrastructure systems (water supply, wastewater treatment, storm drainage, etc) adequately serving existing and future residents, businesses, and visitors
- Goal G A multi-modal transportation network that is clean, safe, and efficient
- Goal H Attractive urban design elements (gateways, corridor treatments, edges, and view sheds)
- Goal I Public safety services consistent with community values
- Goal J A managed traffic flow and thoroughfare system
- Goal K Land use compatibility and mix
- Goal L Protection of environmental resources of McKinney
- Goal M Affordable city services that enhance the quality of life
- Goal N Well planned future

Future Land Use Plan, Future Land Use Plan Module Diagrams, Supporting Text

The rapid pace of growth in McKinney requires a plan that provides flexibility to changing market conditions, while maintaining a clear direction for the community's desired growth. McKinney's future land use system is a solution to the problems faced in trying to plan for all areas of a community that is experiencing rapid growth. Components of the plan include the future land use plan, the future land use plan modules, and supporting text indicating the desired use of the land. This three tier system for guiding McKinney's growth and development requires that each part be used in conjunction with the other two parts.

The future land use plan is a graphic illustration of the general land use mix desired for McKinney and its ETJ. This map includes bold and pastels colors, with the bold noting areas with limited or no development while pastel colors characterize areas with significant development or zoning. The future land use plan modules diagram presents the same geographical area, but breaks this area down into 64 planning areas, or modules. Module types are denoted by one of eleven dominant land use types containing a variety of secondary land uses allowed. The percentage land use mix in each module is allowed based on locational criteria noted in the supporting text. In addition to providing locational criteria for the future land use plan modules, the supporting text includes an overview, land use table, land use description, and community form for each module section.

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Economic Development and Fiscal Impact

A unique aspect of the McKinney Comprehensive Plan is the development of the Development Simulation Model (DSM). The DSM used as part of City of McKinney's Comprehensive Plan provides three separate analyses to be used in the development of the Future Land Use Plan and in making land use decisions in the future - Build Out Scenario Comparison, Ten-year Cash Flow, and Cost/Benefit Potential Comparison. This model provides a clear, comparative link between future land use and its resulting impact on public finances allowing staff, as well as elected and appointed officials, to make informed decisions that benefit the City of McKinney.

Implementation

To ensure that the goals of the comprehensive plan are realized requires a program for implementation. Nine (9) work plans were identified that will institute compliance to the goals and objectives expressed in McKinney's Comprehensive Plan. Listed below are the identified work plans:

1. Display side-by-side for public review and reference in the McKinney City Hall Council Chamber and the Development Services lobby the future land use plan and the future land use plan modules diagram
2. Review and modify City's codes and ordinances for compliance to the McKinney Comprehensive Plan document
3. Refine module / land use implementation process
4. Refine and tweak fiscal impact / economic development system
5. Prioritize the top three items in the Urban Design Element that need implementation and provide schedule
6. Initiate Parks & Recreation Gateway plan
7. Initiate sector plans
8. Develop intergovernmental support for promoting the Collin County Multimodal Transportation Corridor
9. Update the library master plan

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Section 1: Introduction

This section summarizes the organization of the plan, establishes the purpose of the McKinney Comprehensive Plan, defines the planning area, and provides a brief overview of the unique history of McKinney, Texas. The Introduction sets the stage for the information included in the plan such as goals and objectives, physical data, fiscal analysis, and the plan elements that define future growth directions and opportunities.

1.1 Introduction of McKinney Comprehensive Plan

The McKinney Comprehensive Plan is intended to direct the long-term physical development and growth of the city for the next five to ten years. At that point the plan will need to be updated after evaluating the changes that have occurred in the planning area under the plan. The plan communicates McKinney's vision for the community as defined by the stakeholders and is also a long-range statement of public policy guiding that vision. The plan allows McKinney the ability to:

- Balance the level of service with the community's values and desires,
- Coordinate public and private investment,
- Respond to growth and development pressures by an approved method for evaluating impacts on the City's fiscal structure,
- Minimize the impacts associated between residential and commercial uses, and
- Provide a rational and reasonable basis for making decisions about community development

The McKinney Comprehensive Plan is a statement of community values, ideals, and vision defining McKinney's future development and growth.

McKinney's Comprehensive Plan establishes a basis for continued planning activities designed to produce the best possible decisions about a community's future. The framework for other planning activities, ranging from urban design plans to public health and safety regulations are developed from the ideas expressed in the comprehensive plan document for McKinney.

McKinney's Comprehensive Plan is divided into thirteen sections. Each section is designed to accomplish specific objectives of the planning process, and each section deals with the specifics of the topic. The planning process will be described in detail in the following section. The sections are listed below:

Executive Summary
Section 1 Introduction
Section 2 Planning Process
Section 3 Goals and Objectives
Section 4 Existing Conditions
Section 5 Alternative City Form Scenarios
Section 6 Economic Development and Fiscal Impact
Section 7 Land Use Element
Section 8 Transportation Element
Section 9 Parks and Recreation Element
Section 10 Water / Wastewater Element
Section 11 Urban Design Element
Section 12 Educational Facilities and Services Element
Section 13 Implementation
Definitions

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1.2 Purpose

The McKinney Comprehensive Plan is a multi-purpose document developed to serve the citizens of McKinney, its elected and appointed officials, and the City staff on a daily basis. The purpose of the comprehensive plan is to serve as:

1. A community statement about the direction and form of McKinney's future development and growth,
2. A guide for decision makers within the City of McKinney,
3. An educational resource, and
4. A tool for managing McKinney's economic, social and physical development to achieve the quality of life desired by its citizens

Community Statement

The Comprehensive Plan is a statement of community values and ideals leading to a singular vision.

The plan is a statement of community values and ideals leading to a singular vision. It organizes a wide variety of elements that make-up the comprehensive picture of McKinney. The comprehensive plan document allows this picture or vision to be viewed by all.

Guide for Decision Makers

For McKinney's elected and appointed officials, as well as City staff, the comprehensive plan provides guidance. The window of opportunity for making informed decisions is limited, and the plan provides information while that opportunity is present. The comprehensive plan provides direction for decision making on matters such as community values, fiscal opportunities or cost, and assists in their day-to-day administrative roles.

As a guide for decision makers the comprehensive plan should be consulted on a frequent basis. The comprehensive plan can assist City Council and staff in planning for new facilities, reviewing staffing levels, and evaluating the levels of city services. Development of the annual City budget should also include a review of the goals and objectives of the comprehensive plan. Ordinance updates, policies and special studies should reference the comprehensive plan to ensure that the vision of the plan is being considered. It should be noted that in many cases these activities will be done to implement the plan in order to achieve that vision. The comprehensive plan should also serve as the basis of the capital improvements program.

All development related applications should be reviewed in the context of the comprehensive plan. Annexations, zoning cases, and development agreements in particular should work to further the ideas espoused by the plan. Cases which are not discretionary such as site plans and plats should also be evaluated to their conformance to the plan. Recommendations for ordinance changes which are necessary so that these development projects are more line with the plan should be considered.

Education Resource

Given that the plan can be viewed by everyone in the community, the plan is also able to serve as an educational tool. Education occurs as the citizens and community leaders plan for the organized development of achieving McKinney's goals. The plan uses text, diagrams, charts, photographs, and graphic maps to address the many issues facing the future of McKinney.

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By making public our plans for physical development, the plan satisfies a basic but key educational requirement. By laying out a physical plan for the City, its residential and commercial areas, its roads and bridges, its water and sewer system, its parks and schools, the plan sets the course for future decisions and actions. Residents can make informed choices about where to establish their homes, owners of land understand the potential future uses for their property as well as property in the surrounding area. It also assists local government in where services and facilities are needed. This resource is provided through:

A. An informed group of citizens is important in providing for effective public participation and discussion on these issues. The plan serves as an information resource in order to allow every citizen to participate fully.

B. The public participation process served to crystallize the views and vision of the citizens/stakeholders in graphic form that depicts relationships in the planning area. The phone survey, individual meetings, and public meetings led to the development of the goals and objectives which serve as the vision for the community.

The comprehensive plan is a dynamic guide to help citizens and community leaders plan for McKinney's future.

Tool for Managing McKinney and Achieving High Quality of Life

Consequently, the McKinney Comprehensive Plan becomes a tool for managing the growth and maturity of the City to achieve the quality of life desired by its residents. Since the adoption of McKinney's last comprehensive plan (May 1990) the City has experienced rapid growth, compelling McKinney to complete a new comprehensive plan. This plan revises and updates all elements toward future growth projections. This comprehensive plan provides future services needs to support planned growth, and supporting new roads, water lines, sewer lines, parks, and public facilities.

To function as an active working document, the comprehensive plan is designed to be flexible and provide latitude for more detailed analyses; however, decisions should be consistent with the goals, objectives, and policies established in the McKinney Comprehensive Plan. The plan is a dynamic guide to help citizens and community leaders plan for McKinney's future.

Unique to this plan is the degree to which the fiscal impact of development has been incorporated into the plan. As a result of discussion occurring in the community as the update was being planned, City Council directed staff that one component of the plan was to develop a fiscal modeling component to the plan. To this end, the City hired Insight Research Corporation to develop this component.

Insight Research Corporation created a Development Simulation Model (DSM) that could measure fiscal impacts of each land use decision. The input provided by this model helps to ensure that each change to the future land use plan allowed for a balanced tax base. The comprehensive plan's emphasis on financial responsibility provides the City with additional information that can be a basis for making future land use decisions.

1.3 Texas Municipalities

In the McKinney Comprehensive Plan, as in all comprehensive plans created in the State of Texas, the desire is to assist communities to plan for quality and orderly development. The authority regarding the development of the McKinney Comprehensive Plan is given to Texas municipalities through Chapter 213 of the

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Texas Local Government Code. Chapter 213 states the purpose of a municipal comprehensive plan as follows:

> *"The powers granted under this chapter are for the purpose of promoting sound development of municipalities and promoting public health, safety, and welfare."*

Legislation suggests that the parts covered in a comprehensive plan provide for the long-term development of the community. This comprehensive plan for McKinney uses this legislation to define plans for future land use, future land use modules, transportation, parks & recreation, urban design, water, wastewater and educational facilities and services. The McKinney Comprehensive Plan titles these coordinated sets of plans "elements," with each element being specific to its name and content.

The McKinney Comprehensive Plan will have the support of city development regulations and ordinances. These items and others will be developed and adopted to provide an additional level of detail toward the implementation of this plan. This comprehensive plan provides the foundation for making changes and gives direction to the establishment of new regulations that implement the vision, goals, plans, and policies of the McKinney Comprehensive Plan.

1.4 Planning Area

The City of McKinney is the county seat for Collin County. Collin County is one of the fastest growing counties in Texas and the nation. In the last two decades

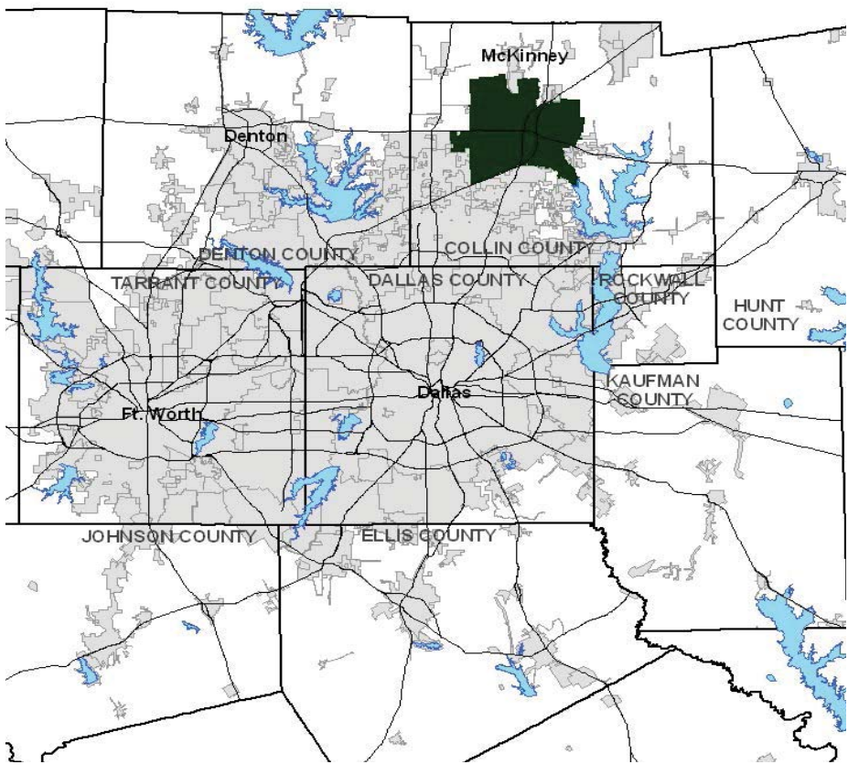

Figure 1.1 - McKinney's location within the Dallas-Fort Worth area.

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McKinney has shared in this rapid growth. McKinney, located on the northeastern quadrant of the Dallas Fort Worth Metroplex, is approximately 30 miles north of downtown Dallas on Central Expressway (US 75) and approximately 35 miles northeast of DFW International Airport on SH 121. Figure 1.1 shows McKinney's location in the Dallas-Fort Worth area. McKinney is located at the northern apex of a triangular regional growth pattern defined historically by these two roadways. In the last three decades communities along each roadway have experienced strong population and economic growth.

McKinney is surrounded by many other cities: Frisco and Prosper to the west; Celina, Weston, and Melissa to the north; Princeton and Lowery Crossing to the east; with Fairview and Allen to the immediate south. In addition, the City of New Hope is surrounded by the City of McKinney's extraterritorial jurisdiction (ETJ). Figure 1.2 shows the general vicinity map for the City in relationship to surrounding communities.

The planning area for this comprehensive plan includes both the City of McKinney's current incorporated area and land within McKinney's ETJ. As of January 2009, McKinney's incorporated area includes 62.8 square miles or 40,192 acres. McKinney's ETJ includes 53 square miles or 33,920 acres. Together the total area that is being included in the Comprehensive Plan covers roughly 115.8 square miles or 74,112 acres. This area covers 13.07% of Collin County's 886 square miles. Figure 1.2 defines the land currently in the City's incorporated boundary and ETJ.

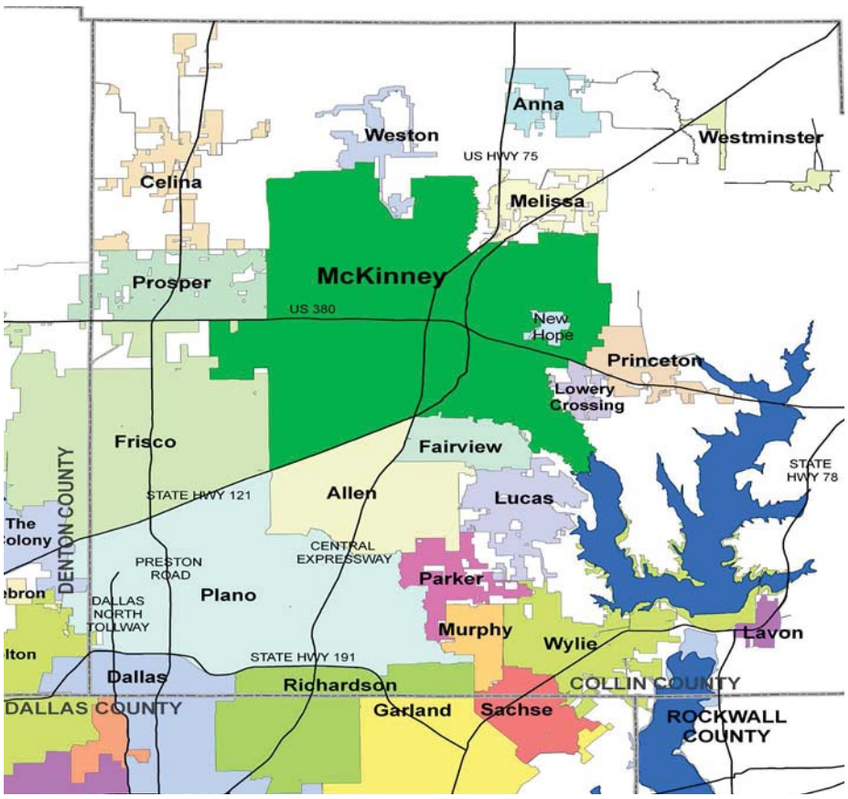

Figure 1.2 - McKinney and surrounding communities in Collin County.

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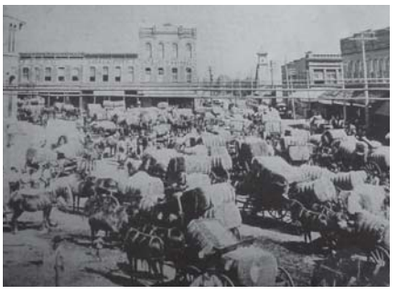
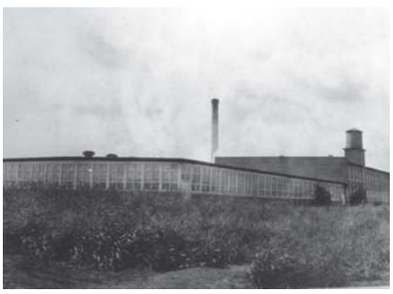
1.5 Historical Overview

McKinney has been blessed with a rich and wonderful past. This past provides the symbols for a community that is much more than a suburb of Dallas. Today, McKinney is a city of two-halves - one centered about a historic town square with all key roads leading to the square, and the other half a growing high-quality planned community with all the current amenities. The choices and opportunities are abundant.



Cotton market, 1896. Farmers bring cotton to town, where buyers sit in second floor windows to bid.



Texas Textile Mills, est. 1910. Largest manufacturer of denim west of the Mississippi. Closed operations in 1969.

Agricultural Roots

As noted earlier, McKinney serves as the county seat of Collin County. Collin County was established in 1846 and McKinney in 1848. Both City and County were named for Mr. Collin McKinney, a patriot, land surveyor, legislator, and one of the 56 signers of the Texas Declaration of Independence.

The cultivation and processing of locally grown crops fueled much of McKinney's late nineteenth- and early twentieth-century growth and prosperity. During this period, Collin County emerged as one of the leading agricultural centers in Texas. Cotton prevailed as the county's largest and most significant farm product; however, corn, wheat, and oats were also grown in large quantities. Although crop production in the McKinney area continues today, its role in the local economy diminished after World War II.

McKinney's cotton-processing structures played a significant role in the town's history and development during the late nineteenth and early twentieth centuries. Much of the area's vast agricultural potential was realized through the construction and operation of these facilities. Their establishment aided the town's commercial development because area farmers came to McKinney to sell their crops and then purchased goods at downtown stores. These property types also laid the foundation for the town's industrial development and supported the establishment of a textile mill.

Town Square

The town square was laid out on a cardinal grid with the courthouse in its center. The square was the sole public space set aside in the original town plan.

The town square is one of the symbols that people throughout North Texas recognize as being McKinney. The original town site presented a cardinal-point grid plan with a courthouse square near the city's center, a popular town plan throughout Texas. The majority of the state's county seats, especially those of the same vintage as McKinney, are arranged similarly. The square was the sole public space set aside in the original town plan. Anticipating that property near the town's center would be in great demand for business purposes, the city's surveyors made lots facing onto the courthouse square long and narrow, measuring 25 by 100 feet. Such a layout enabled merchants to erect buildings with storefronts for displaying

McKinney town square, late 1880s.

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their goods to passerby and room within to conduct business and stock their merchandise. George White and Ethelred Whitley, who surveyed the new town site, divided the remainder of the City's blocks into equally sized lots that were reserved for residential use.

Kenyon Grocery, ca. 1930s. later Bergvall & Son, located at 119 S. Tennessee. First grocery to have air conditioning in McKinney.

Arrival of the Railroad

The arrival of the railroad in 1872 greatly stimulated economic growth and brought new wealth to McKinney. The railroad enticed several industrial enterprises, such as a textile mill, grain elevators and a flour mill, to locate in the community. It also influenced much of the town's physical growth, as well as settlement patterns within the City. In addition, the railroad linked the once physically and socially isolated community with the rest of the nation, thus allowing new ideas, people, and goods to arrive in McKinney.

Post World War II

The McKinney Comprehensive Plan of 1964 was the first to propose the loop road around downtown (US 75). This event, along with post WW II population growth and a desire for a decentralized growth pattern away from urban centers, changed the image of McKinney. Prior to US 75, commercial growth was focused in downtown and along SH 5 and Highway 24 (current US 380). With the arrival of US 75, growth began to look further west.

McKinney transitioned into a growing suburban community. This happened at first with residential neighborhoods developing between the historic district and US 75. Then development began to occur west of US 75.

With the establishment of the Eldorado and Stonebridge Ranch planned communities, the focus on suburban development became greater. Eldorado is a 1,105-acre community established in 1980. Stonebridge, originally zoned in 1986, is even larger with 4,750 acres. Both of these developments have been tremendously successful due to the overall quality and response to working with the natural environment. Some of the most visually attractive land in McKinney is within these two premier communities. The infrastructure which was constructed by both of these developments allowed smaller neighborhoods to develop around them. In the 1990s, growth had continued and tremendous growth is occurring in the areas north of US 380 and east of US 75, primarily along Wilmeth Road and Lake Forest Drive.

The new century has brought many new opportunities for the community. McKinney is now one of the largest municipalities in Collin County with almost 116 square miles in their jurisdiction and ETJ. The strong commercial and residential growth north of Dallas is influencing development decisions. Plano is almost completely developed and will be experiencing redevelopment. The communities currently experiencing rapid growth are Frisco, McKinney, and Allen.

Craig Ranch, a new planned community in McKinney sited near the intersection of Frisco, Allen, and McKinney on SH 121, is one of the latest large developments. This development is targeting a new and emerging segment in the development marketplace - new urbanism. New urbanism style developments create buildings that draw from historic precedents. These precedents for Craig Ranch include a focus on public space, pedestrian scaled streets, mixed use development (residential above commercial), and architectural standards that are influenced by historic Texas models. Mr. Andres Duany with his company was the master planner for this development in 2001. This development and many others show the range of live

The arrival of the railroad in 1872 greatly stimulated economic growth and brought new wealth to McKinney. It enticed industrial enterprises to locate here, influence physical growth and settlement patterns, and linked the community with the rest of the nation.

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and work options that McKinney offers its residents.

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Section 7: Land Use Element

Land uses are affected by the decisions of individuals, private groups, and public bodies. These include property owners, real estate investors and developers, local residents, City Council, City Staff, local boards and commissions, school districts, county government, the North Central Texas Council of Governments, utility providers, and even state legislators. Land use also affects many decisions facing the community, from where to locate a new home or business, to where to build a road, to the size of a sewer line, to how many elementary schools to build, to projecting the fiscal health of the City, to how to provide water for the area in 50 years, etc.

This section of the McKinney Comprehensive Plan serves as the basis by which the City of McKinney makes land use decisions. This includes the City Council, the Planning & Zoning Commission, and City Staff. This element also serves as the basis for many other plans - water & sewer master plans, thoroughfare plan, parks plan, etc. Because this plan affects so many other plans, changes to it need to be carefully considered.

In addition to serving as a guide for decision making, the land use element serves as the foundation for zoning and subdivision regulations as well as the Capital Improvements Program (CIP).

The pattern of land uses proposed by this element is consistent with the goals and objectives of the Comprehensive Plan and is intended to lead to the type of community desired by the citizens. In developing the element, the goals and objectives had to be balanced and compromises had to be made where one goal conflicted with another. For example, some land uses conflict with one another if in close proximity, yet without both of them, the city's tax base is unbalanced. Weighing the goals to find a balance through compromise and creative solutions will be key when making decisions based on the various plans which make up this element.

The land use element is comprised of text as well as maps that graphically illustrate the concepts of the plan. These include the existing land use plan and the future land use plan element. The future land use plan element includes the future land use plan module, the future land use plan, definitions, the land use table, the locational criteria, etc. Caution should be used so as not to rely too heavily on any one component of the plan.

The entire section, and to some degree the entire Comprehensive Plan, should be referenced when making a decision. To focus on only one statement in the plan or one aspect of a map leads to an incomplete understanding as to the overall goals and objectives of the plan.

Like the entire Comprehensive Plan, the land use element of the plan applies to an area larger than the city limits. The planning area includes the city limits and the City's extraterritorial jurisdiction or ETJ. Though the City's zoning authority extends only to the city limits, many decisions the City makes affect land use throughout the entire area. These decisions include the approval of subdivisions, the construction of public infrastructure, and the expansion of the city limits.

Land use affects many decisions facing the community, such as where to locate a new home or business, where to build a road, determining the size of a sewer line or how many elementary schools to build, projecting the fiscal health of the City, and how to provide water for the area in 50 years, for example.

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7.1 Existing Land Use

The existing land use map, along with the zoning map, were shown with a great degree of deference when the land use element and the future land use plan were developed. The existing land use map indicates the uses of property. This map was developed over time using the state tax codes, which are provided by the Collin Central Appraisal District for all parcels of land. This was supplemented through the review of a recent aerial photo, field verification, and grouping of land use types/ categories. Changes and modifications were then made as necessary. This information allowed for a database to be created regarding the amount of each land use in the City.

A map showing the existing zoning, excluding "AG" - Agricultural zoning, for undeveloped areas was created to supplement the existing land use map. These areas, although not developed, have existing zoning and development rights. The City Council determined early on to try to honor zoning already present as much as possible and directed staff to consider this when developing the future land use plan. When the zoning of an existing parcel or area significantly conflicts with the goals of the Comprehensive Plan, the City may find it beneficial and necessary to consider rezoning the property into a district (or districts) that better conforms to the goals of the plan.

A review of McKinney's existing land use map and associated land use database served to focus discussion of existing land use issues and how land should be used in the future to continue the positive aspects and mitigate the negative aspects. This review also allowed for an analysis of the factors, both local and regional, which led to the existing land use pattern. This provided insight into which of those factors are anticipated to continue impacting land use. We can also begin to distinguish those factors the City can influence from those the City cannot. The plan can be implemented via the City's regulatory powers and is not dependent on factors beyond the City's control.

Table 7.1: Existing Land Use (2003)

Category	Type	Approximate Acreage	% of Existing City Limits
Undeveloped	Agricultural/Vacant	+/- 22,400 acres	59%
Developed Open Space	Golf/Private Open Space/Parks	+/- 2,700 acres	7%
Residential	Single Family/Multi-Family/ Townhomes & Duplex	+/- 7,200 acres	19%
Commercial	Retail/Office	+/- 1,900 acres	5%
Industrial	Industrial	+/- 1,100 acres	3%
Public/Semi-Public	Government/Airport/Schools/Utility/ Right-of-Way	+/- 1,900 acres	5%
Other	Other Uses	+/- 80 acres	2%
Total Acreage		+/- 37,280 acres	100%
Extraterritorial Jurisdiction (ETJ)		+/- 36,000 acres	--

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Existing Land Use Table (2003)

The Existing Land Use Table (2003) lists the seven categories of existing land uses, some uses in that category, the approximate acreage of each category for the City limits, the total acreage for the City limits and ETJ, and the percentage of each category for the City limits. The data is as of January 2003.

Existing Land Use Descriptions - 2003

The existing land use map indicates 17 types of land uses. It is anticipated the land designated as agricultural will develop as some other type of use in the future. Although floodplain is shown on the existing land use map, it is not considered a land use type. The floodplain designation overlays a base designation of another land use. The most common designations are vacant and agricultural, given the limited ability to develop land within the floodplain. The following are brief descriptions of each land use type.

Agricultural - Land used for agricultural uses.

Vacant - Undeveloped land and including vacant lots within developed residential and commercial subdivisions.

Golf Course - Public or private golf courses and driving ranges.

Parks - Open space amenities for both active and passive recreation. This category includes sport facilities, open space, playgrounds, recreation centers, and aquatic facilities. It does not include private neighborhood recreation centers.

Private Open Space - Preserved open space under private ownership, including common areas, nature preserves, and private neighborhood parks and recreation facilities, that does not have the ability to be further developed.

Single-Family - Residential development with one detached unit per lot.

Townhouse & Duplex - A single-family dwelling unit on one lot attached to another dwelling unit on a separate lot on one or two sides. A duplex can also be two attached units on a single lot.

Multi-Family - Residential development with multiple units on one lot, or two or more attached units on separate lots. This category includes apartments, three-plexes and four-plexes.

Retail - Commercial development providing goods for sale, such as a grocery store, drug store, restaurant, or department store. Some service providers and offices are grouped with retail when located in a shopping center.

Office - Commercial development providing services for sale such as an accountant or a physician, or providing general office and administrative uses.

Industrial - Commercial development devoted to the processing of raw materials and/or the production of goods and/or wholesale storage of goods.

Government - Includes all developed properties owned by government enti-

ties, except public parks including buildings, post offices, jails, etc.

Airport - Land used for an airport both private and government owned.

Schools - Land used for educational uses, both public and private, ranging from kindergarten to high school.

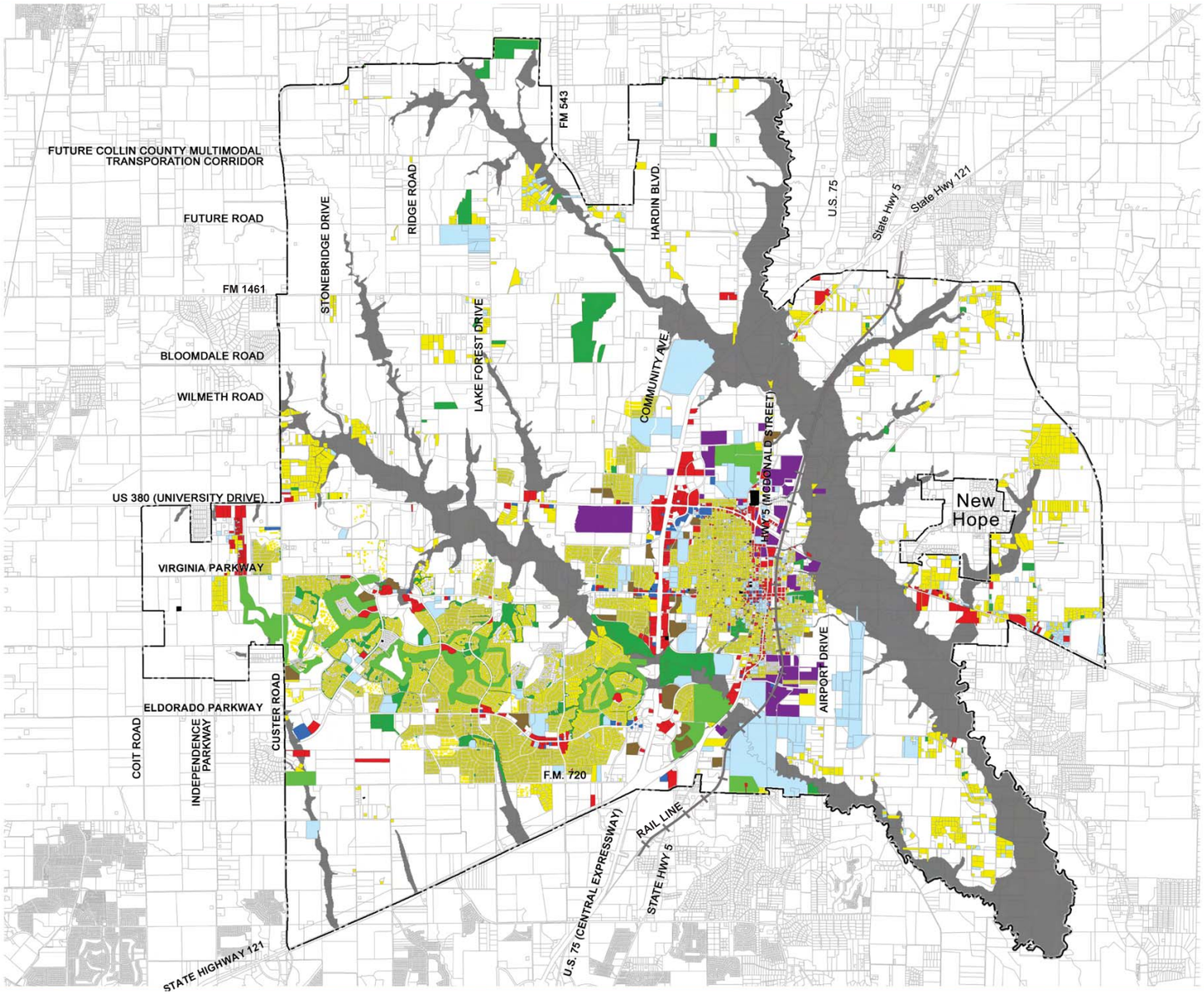
Utility - Land owned by and/or used by public utility that provides for the transfer of utilities, such as transfer stations. This does not include overhead lines or underground pipelines.

Right-of-way - Land set aside for use as roads and alleys.

Other - Land used for uses other than those categorized above. Primary uses in this category are tax exempt, and include churches, non-profit uses, heritage farms, cemeteries, and institutions of higher learning.

Existing Land Use Map - 2003

The following graphic depicts the existing land use inventory within the City of McKinney and its ETJ. This map is developed using the state tax codes, which are provided by the Collin Central Appraisal District for all parcels of land. This land use inventory was verified using 2003 aerials and accompanied with field observations by McKinney City Staff. The foldout map was developed by City of McKinney GIS personnel and HNTB planners.



CITY OF MCKINNEY
COMPREHENSIVE PLAN

EXISTING LAND USE

LEGEND
- Floodplain
- Golf Course
- Parks / Open Space
- Institution (Schools, Government, Church)
- Industrial
- Retail
- Office
- Single Family
- Multi-Family
- Private Utilities

Source Date: March 2003
Source: City of McKinney GIS Department Data

22 March 2004
FIGURE 7.2

1 Square Mile
100 Acres
Feet
0 3,500 7,000

URBAN DESIGN + PLANNING HNTB DALLAS TEXAS
Planning, Civil Engineering, Urban Design, Landscape Architecture & Consensus Development

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7.2 Future Land Use System

The future land use system is a major component of the Comprehensive Plan. It is comprised of maps and text indicating the desired use of land. The use of land is a significant part of the community's vision for the future. It is from this plan that other future plans are based and decisions are made. The thoroughfare plan and water and wastewater master plans are all developed from assumptions based upon the type, location, and intensity of development indicated by the future land use system. The future land use plan should be referenced when considering development proposals and the location of public facilities.

McKinney System

The future land use system for McKinney is slightly different from most plans in that it has two maps working together to plan land uses. These two maps are the **McKinney Future Land Use Plan** and the **McKinney Future Land Use Plan Module Diagram**. This system developed as a solution to the problem of trying to plan for all areas of such a fast growing, rapidly changing community. This pace of growth can cause the plan to quickly become less effective as a planning tool. At the same time, the City has a need to plan for its future and a desire to affect the type of community becomes. The combination of the two maps, and supporting text, create a plan with both a clear direction for future development and enough flexibility to respond to changing conditions.

The first step in the development of the plan was an initial review of the current land use map. As part of this effort, factors that have influenced the way McKinney has developed over time were studied. A development suitability analysis was done in order to gain an understanding of features that will influence future development. As the Comprehensive Plan process continued, the goals and objectives were developed and input was received on the city form scenarios. These became the base for documenting the vision of the community and creating a future land use plan.

The most significant challenge to creating the future land use plan was making the plan flexible enough to deal with changing market conditions over a long period of time. With no reliable way to predict market conditions within that long period, the plan has been designed to accommodate a range of possible conditions. It was decided that long range land use plans for such a large area are best when they avoid setting specific details, such as the size and location of commercial properties, and instead provide a range of acceptable options. When a specific development is proposed, the market conditions present at that time can be considered, and the best option within that range can be chosen.

A series of criteria for future development were created to evaluate development proposals. Other aspects were left to the market to determine. These ideas were further refined and developed to create the future land use system for McKinney.

Components

McKinney's future land use system includes three important components that work together and are interdependent. These components are the **Future Land Use Plan**, the **Future Land Use Plan Modules Diagram**, and the **supporting text**.

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Future Land Use Plan

The future land use plan map is a graphic illustration of the general land use type mix desired by the City for the entire planning area. It should be noted that the colors shown on the map do not correspond to a particular zoning district and each color designation or module may allow for a range of uses. **This map should be used in conjunction with the module map and the accompanying text, including flexibility factor and locational criteria to assess the types of land uses to be allowed in a particular area**.

The map includes both bold and pastel colors. The bold colors distinguish areas with limited existing development and/or zoning from areas having significant development or zoning, which are represented by the pastel colors. A generalized alignment of major roadways is shown on this map to serve as a point of reference. Refer to the transportation element and thoroughfare plan for information about the location and size of roadways. An examination of the water and wastewater master plans, the parks and open space plan, and hike and bike trail plan should also occur when utilizing this map.

Future Land Use Plan Modules Diagram

The future land use plan module diagram breaks the City and ETJ into 61 planning areas or modules. Each module is characterized by one of twelve dominant or primary land use types indicated by a particular color and land use code (SM - Suburban Mix - yellow, I - Industrial - purple, etc.). Within each module, a variety of land uses are allowed based on its land use mix and locational criteria, which are included as part of the supporting text. Modules that have significant existing development and/or zoning are cross-hatched to distinguish them from modules with less development and/or zoning. This is necessary as the land use mix and locational criteria function differently based on the additional constraints found in these more developed areas.

The boundaries of the modules were determined by natural and man made features such as rivers, creeks, roadways, zoning, and existing land uses. The size of the modules was determined based on the above features, infrastructure/service needs (in the case of Suburban Mix modules the ability to support one elementary school; however, with the final consideration focused on the number of elementary schools being based on density and household size), and the ability to absorb that particular land use types mix of uses.

Supporting Text

In order to utilize the future land use plan and the future land use plan module diagram, the supporting text must be taken into consideration. The supporting text includes the individual module sections, the locational criteria, and the module tables. To some degree, this entire chapter should also be referenced.

The module descriptions include an introduction and a definition of each of the 12 modules. Each individual module section includes an overview, a land use table, a land use description, community form, and locational criteria.

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The future land use plan modules table is a record of the land uses percentage and acreage for each module type, which is used to track development in each module. It will be updated on a regular basis as property is zoned and development occurs.

The Process for Utilization section is the "How to" section, describing how the various text components and the two maps are used to make land use decisions and respond to and act on request for zoning changes and plan amendments.

Process for Utilization

There are two processes for utilizing the future land use system, one for areas having significant zoning and development and one for areas that do not. These more developed areas are distinguished on the future land use plan map and the future land use plan modules diagram by pastel colors and cross hatching. The process for more developed areas places more importance on the existing development pattern, not exceeding the existing (or currently planned) infrastructure capacity, and providing transitions between uses. The process for less developed areas puts greater importance on achieving a balanced mix of uses and building the desired city form throughout the module.

Additionally, city policies relating to specific land use types or areas of the city should be utilized in conjunction with this section. The Multi-Family Policy, which was in effect at the time of this update, is incorporated as part of the Comprehensive Plan and is included in the appendix. The Multi-Family Policy should be considered when reviewing any zoning requests for multi-family uses. The Multi-Family Policy discusses various regulations to limit the amont and location of multi-family uses. The ultimate goal of the Multi-Family Policy is to create a 10% city -wide cap on multi-family units. Other specific city policies, as they are developed, should likewise be included when land uses or classifications are being considered.

Significantly Developed Areas

Although not necessarily infill or redevelopment, much of these areas includes property already developed and/or zoned for development. To a large degree, it is assumed that property will develop within the range of land uses allowed by the current zoning. As a result, the future land use plan map designates these areas as it is anticipated that they will develop based on the existing zoning or the adjacent land uses. This was done so that infrastructure could be sized and public facilities could be planned for the most likely uses. That being said, there will clearly be cases where a different set of land uses is not only acceptable but is desirable for economic, land use compatibility, and balanced land use mix reasons. However, the new zoning requested should not contradict the desired existing and anticipated development pattern.

Each rezoning request must be weighed against the goals and objectives of the Comprehensive Plan to determine the degree to which the request is in keeping with or in conflict with them. In most cases, each request will be in keeping with some and at odds with others. In reviewing zoning requests, the positive effects (ones that meet the community's goals) must be weighed against the negative effects (ones that are neutral or contradictory to them). The following is a list of some of the factors to consider:

- Specific Area Plans or Studies: In some cases a more detailed analysis of a particular area may have been conducted, and a specific plan for a neighborhood or area may have been adopted. This plan should be

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referenced when evaluating land use questions within an area covered by the plan. The plan should be built upon the Comprehensive Plan and provide additional details about the area's goals and expectations.

The following specific area plan has been completed: Town Center Study (March 2008).

- Impact on Infrastructure: The water master plan, wastewater master plan and master thoroughfare plan are all based on the anticipated land uses as shown on the future land use plan. Any change in zoning, which will alter the type or intensity of land uses, should also evaluate the degree to which these plans are impacted. It will frequently be necessary for the applicant to conduct a study to determine the effect of the change on the system. This study will be conducted under the supervision of City Staff. Changes should not be approved when there is anticipated to be inadequate capacity and no acceptable method of providing the additional capacity required. Solutions, which negatively impact the level or quality of service, increase costs to the city, or unfairly burden neighboring land owners, are unacceptable. When a proposed potential development would utilize more capacity than is planned, special consideration should be given.

- Impact on Public Facilities/Services: Public services include schools, fire and police, libraries, parks, and sanitation services. Similar to infrastructure, public facilities/services are planned for based on the anticipated land uses. Unlike infrastructure, the negative impacts on public facilities/schools may not be felt immediately. This should not lead one to believe they are any less real. In many instances, the negative implications can be more severe.

- Lack of Compatibility with Existing and Potential Adjacent Land Uses: It is important to have appropriate transition of land uses. However, it will not always be possible to create the most ideal transition between land uses, given current development patterns. Careful consideration should be given to ensure that an acceptable transition is provided. In some cases, specific design elements may be used to mitigate some of these impacts.

- Economic Impact: When weighing the economic impact of a particular land use decision, it is important to weigh not only the short-term implications but also the long term fiscal implications. Although the tax benefits of developed property are positive, undeveloped property has very little cost to the City and school districts for services. A realistic expectation that the property will be able to develop at some point in the future is important. Economic modeling should be done to quantify the fiscal implications. As part of the modeling, assumptions must be made. Although in individual cases, some of the actual costs and benefits may differ, to deviate in a particular case can be problematic. Most often, applicants will have a tendency to emphasize the factors which positively impact the model, causing the results to be skewed and less reliable.

- Over Concentration of a Use: To allow for an over-concentration of a particular land use type sometimes creates long-term problems. An over-concentration is a situation where it can reasonably be expected that many of this type of use will not be viable in the future. That being said, a great deal of deference should be shown to the market to deter-

mine the appropriate mix. Economies change over time, and many of these changes cannot be predicted. To try to predict these changes and develop solutions may overly constrain the free market. In cases where there is a concern that an over concentration may occur, the goals and objectives of the plan for the type of community that is desired must be considered and applied cautiously.

Areas with Minimal Development

These areas are characterized by very little existing zoning and limited development other than sparsely scattered estate type development, which has generally occurred over time. Much of the land is still used for agricultural purposes and, in many cases, has not yet been incorporated into the City limits. Although existing land uses should be considered when making land use decisions, an assessment should occur as to whether it is anticipated that those uses will be viable in the long term. The impact of the timing of different types of land uses on future land uses should be considered when making a decision to zone land even for a use allowed within a module.

- Conformance with Desired Land Uses Mix: The percentage mix of land uses within the modules was developed with the goals and objectives of a Comprehensive Plan in mind. This was done for a number of reasons: to plan for infrastructure and public facilities, to achieve a desired mix of land uses, which has economic and quality of life implications. The range of uses provided allows for an acceptable level of flexibility. A proposal for a land use mix beyond the acceptable range should be considered as a request to amend the Comprehensive Plan. Only by reviewing that part of the Comprehensive Plan can all the issues and implications of the proposal be given proper consideration.

- Locational Criteria: The locational criteria provide a guide as to where uses should be located in relation to major roadways, adjacent uses, public facilities, etc. It is understood that some uses require greater visibility from major roadways, a greater ease of access, etc. Certain uses are better able to incorporate natural features as an amenity. Planning for an appropriate transition between uses is important in providing for the quality of life expected by the community. Each module type has a unique set of locational criteria appropriate for that module's land use mix.

- Compliance with Community Form: The community form section describes the character of the built environment in each module. Proposed rezoning requests should be considered in the context of the descriptive narrative of the Community Form. While the land use mix and locational criteria sections are more related to the type of land use, the community form deals more with the way that development relates to the built environment. Community form is the fabric binding the various uses together to foster a sense of place.

- Impact on Infrastructure: The water master plan, wastewater master plan and master thoroughfare plan are all based on the anticipated land uses as shown on the future land use plan. Any change in zoning, which will alter the type or intensity of land uses, should evaluate the degree to which these plans are impacted. It will frequently be necessary for the applicant to conduct a study to determine the effect of the change on the system. This study will be conducted under the supervision of City

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Staff. Changes for which there is not anticipated to be adequate capacity and no acceptable solution is proposed should not be approved. Solutions, which have a negative impact on level or quality of service, increased costs to the city or unacceptable implications for other landowners, should not be allowed. When the proposed potential development would utilize more capacity than is planned, careful consideration should be given.

- Impact on Public Facilities: Similar to infrastructure, public facilities and services (schools, fire and police, libraries, parks, and sanitation services) are planned for based on the anticipated land uses. Unlike infrastructure, the negative impacts on public facilities/schools may not be felt immediately. This should not lead one to believe they are any less real. In many instances, the negative implications can be more severe.

  To help establish appropriate fire insurance premiums for residential and commercial properties, insurance companies need reliable information about a municipality's fire protection services. The Insurance Services Office (ISO) - an independent statistical, rating, and advisory organization that serves the property/casualty insurance industry - provides that information through the Public Protection Classification program. ISO collects information on a community's public fire protection, such as the available water supply in the area and its emergency communication facilities and analyzes the data using the Fire Suppression Rating Schedule. The Fire Suppression Rating Schedule is broken down into the following components:

  - 10% - How well the fire department receives and dispatches fire alarms
  - 50% - How well the fire department compares to ISO standards
  - 40% - How well the city's water supply compares to the ISO standards

  In Texas, an extra 5% may be added to the final calculations as a result of Texas Exceptions to the Fire Suppression Rating Schedule.

  ISO then assigns a Public Protection Classification from 1 to 10. Class 1 represents exemplary public protection, while Class10 - the worst rating - represents less than minimum recognized protection.

  According to the McKinney Fire Department, McKinney has a current Public Protection Classification of Class 4, with the last inspection being performed in 1990. In 1990, these exceptions added sufficient points to McKinney's final score, moving the City's score from Class 5 to Class 4. Rating inspections occur approximately every 12 to 15 years, and McKinney will be requesting a reclassification inspection in the second half of 2009. For comparison purposes, other cities in Collin County have the following Public Protection Classification:

  Allen - Class 2
  Frisco - Class 1
  Plano - Class 1
  Richardson - Class 2
  Wylie - Class 1

  ISO is not the only system that insurance companies use to determine

the fire insurance rates charged by a particular insurance company in a community. ISO is the rating company used by most insurance companies to determine the cost of fire insurance. A lower ISO rating in McKinney would have differing impacts of different types of buildings in McKinney. Generally, a lower ISO rating will result in a lower insurance cost for nearly every building in the City.

- Compatibility with Adjacent Land Uses: The issue of compatibility is addressed indirectly as part of the development of the land use mix, locational criteria and compliance with urban form sections and should be consulted when evaluating a zoning request. The specific circumstances should be considered but with the understanding that land use mix needs to be considered in the context of the entire city and the Comprehensive Plan as a whole.

- Timing of the Zoning Request: Many of the modules allow a range of uses. It should be understood that land should be zoned for a secondary use only when it will not impact the ability of the primary land use to develop. In modules designated for regional commercial or office park, it may be necessary to delay the zoning on land for residential uses as the residential uses may preclude or hinder the primary commercial uses from developing. The nonresidential development pattern may need to become established, along with infrastructure such as road alignment, before it can be determined where the residential uses should be located. In some instances, residential may serve as infill development where appropriate.

7.3 Future Land Use Plan Component

The future land use plan map is one of two maps comprising McKinney's future land use system. The text in this portion of the section is designed to support the map, by providing a table of the uses shown on the map and definitions of the uses.

Future Development Patterns

For the purpose of future planning efforts, the planning area has been divided into seven (7) sectors - the Town Center, the Regional Employment Center, the West Side, the Northwest Side, the Southeast, the Northeast, and the Northern Corridor. It is anticipated that the City will continue to conduct more specific sector studies to provide for a closer study of these areas and to plan for their development on a more micro level. These areas were created based on natural and man made features that create boundaries, the time or era of development, a common development or land uses characteristic, or a proposed unique feature.

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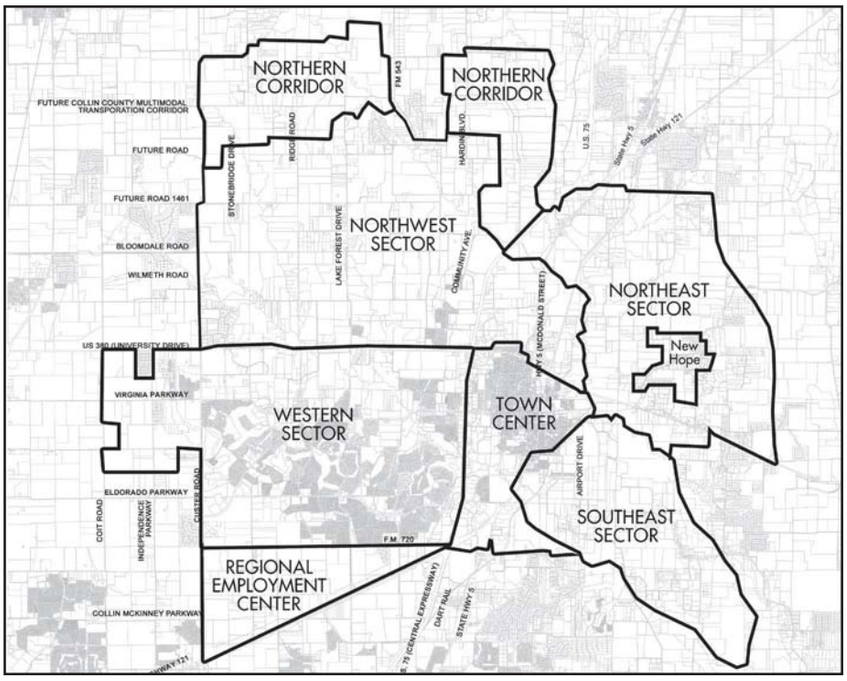

Figure 7.3: Sector Map

1. Town Center - This is a holdover designation from the 1990 Comprehensive Plan. The town center extends generally from US Highway 380 on the north to Elm Street on the south, US 75 on the west to the East Fork of the Trinity River to the east. This area includes the oldest developments in McKinney and is characterized by development patterns that occurred over the first 150 years of the community. Many of the issues facing this area are those associated with redevelopment. Problems typical of gentrification exist in certain areas as well. Planning efforts to focus on transition of uses, development standards that are appropriate given existing constraints, providing adequate infrastructure and public services to accommodate redevelopment, etc.

   In August 2006, the City of McKinney initiated the Town Center Study as a proactive approach to addressing the development pressures that were being felt in the Town Center area. With significant involvement from local stakeholders, the City hosted a series of public design workshops exploring how basic urban design principles could be used to foster healthy revitalization and redevelopment in the Town Center. See the Town Center Study Phase 1 Report (adopted March 2008) for additional information.

2. Regional Employment Center - In 1999, the City of McKinney in conjunction with the Gateway Planning Group began development of a sector plan for a Regional Employment Center (REC). So named because it was designated by the 1990 Comprehensive Plan to provide land for corporate campus style headquarter facilities as well as large scale manufacturing and distribution facilities. As shown in Figure 7.3, the REC was originally a triangularly shaped area of approximately 4,500 acres generally bordered by SH 121, Custer Road, McKinney Ranch Parkway (formerly FM 720) and US 75. In the late 1990s, the City began to feel pressure to allow development not in keeping with

what was envisioned by the 1990 Comprehensive Plan. Up until that time, a lack of infrastructure had limited the developability of much of the area. However, when residential development from the northeast began to approach, the extension of utilities for similar types of development became more feasible. Concerned that the existing plan for the area was unrealistic, an REC sector planning effort began.

After significant property owner involvement, the result that emerged was a radically different plan with enough residential density to support a proposed mix of high intensity, regionally-appealing non-residential uses. The revised plan (adopted in March 2003), along with public-private partnerships to provide infrastructure, led to the rapid start of development in the REC Sector of McKinney. The adopted REC Study and associated development regulations served as the guiding tool for development in the REC Sector of McKinney for almost a decade after its adoption.

In 2014 and 2015, in partnership with property owners and city leaders, the vision for the REC Sector was revisited to evaluate the ultimate feasibility for achieving the urban-style development pattern that was originally established in 2003. Through this process, it became clear that the vision for urban-style development was too large to be achievable over 4,500 acres and under current conditions. As a result, the vision was adapted to capture current market conditions and concentrate the urban-style development pattern that was originally called for as part of the 2003 REC Study to a smaller footprint more attainable in today's market. Throughout the remainder of the REC Sector, the goal for development now centers on a significant concentration of regionally-scaled commercial, retail and service uses that are supported by a mix residential uses in both urban and traditional development patterns, as well as large office and corporate headquarters that provide substantial employment opportunities. The adapted vision is still reminiscent of the original vision in terms of its desire to establish this sector of McKinney as a regional destination. See the Tollway Commercial Module and Urban Mix Module descriptions for additional information.

3. Western Sector - The western sector is approximately 25,400 acres and is generally bounded by US Highway 75 on the east, US Highway 380 on the north, FM 720 on the south and on the west by the edge of the McKinney ETJ, future Coit Road. While most of this area is either already developed or is zoned for development, there are still some tracts zoned as "AG" - Agricultural, as well as some areas west of Custer Road, which have not yet been annexed. Nearly half of the area is occupied by the Stonebridge Ranch and Eldorado master planned developments. While most of this area is developed or anticipated to develop for suburban style residential and supporting commercial uses, the areas along US 75 and US 380 have developed for more intensive regional commercial uses. The northeast portion of this sector is anchored by the 196-acre Raytheon facility. Development is generally progressing westward and northwestward.

4. Northwest Sector - Development of this area is generally just beginning, with the exception of scattered estate type development. There are a number of large undeveloped "PD"s - Planned Development Districts, the Crow-Billingsley tract and Franklin Ranch. The area is generally lacking in infrastructure, with water and wastewater lines just beginning to be

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extended. Many roads have not yet been improved to City standards.

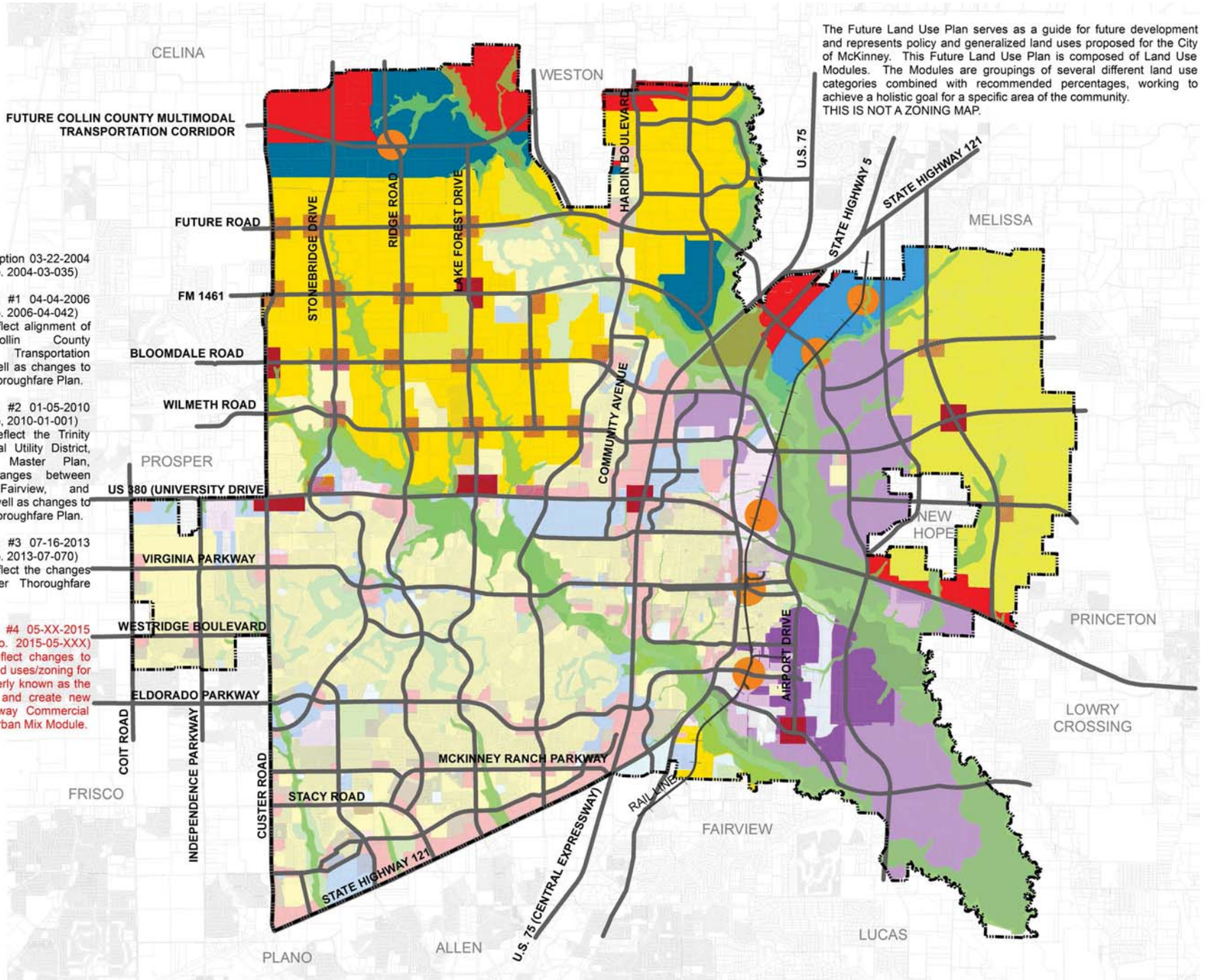
5. Southeast Sector - This area includes the Collin County Regional Airport as the primary feature and is planned to develop for industrial uses, which desire a location near the airport. This area is bounded by the East Fork of the Trinity River and Wilson Creek to the east and south. There currently exists some estate type development that is scattered throughout the area and is clustered in spots. A lack of infrastructure has limited development in much of this area, but development is anticipated to occur as it is extended.

6. Northeast Sector - Some estate type development exists, but there is very little infrastructure. The East Fork of the Trinity River, which serves as the western boundary of this sector, creates a significant barrier to providing infrastructure to this area. The infrastructure is necessary to allow for more intensive development to occur. This area encircles the Town of New Hope.

7. Northern Corridor - The main feature, a future multi-modal corridor, is still in the early planning stages. The area is generally undeveloped, but some estate type development exists. It is expected that development pressure to allow single-family residential development will occur as development approaches from the south and east. The Northern Corridor also contains a large undeveloped Municipal Utility District (MUD) called Trinity Falls. In 2006, the developer, Marlin Atlantis, proposed this development and entered into various development agreements with the City of McKinney. Trinity Falls is envisioned to be a master-planned development located wholly within the northern reaches of McKinney's ETJ (generally between Weston and US 75), with ultimate build-out of approximately 4,500 single-family residential units and a limited amount of complementary non-residential uses (retail, office, schools, parks, and open space).

Future Land Use Plan Map

The following graphic depicts the future land use plan for the City of McKinney, including McKinney's ETJ. The future land use plan was developed through the City of McKinney Comprehensive Planning process, incorporating the goals and objectives of the community; the guidance of McKinney City Staff and HNTB - the Comprehensive Plan consultants; input solicited from residents through stakeholder interviews, community meetings, public input meetings, telephone surveys, and community questionnaire responses; and the direction provided by the Joint Committee made up of members of the City of McKinney City Council and McKinney Planning and Zoning Commission. The foldout map was developed by City of McKinney GIS personnel and HNTB planners.



The Future Land Use Plan serves as a guide for future development and represents policy and generalized land uses proposed for the City of McKinney. This Future Land Use Plan is composed of Land Use Modules. The Modules are groupings of several different land use categories combined with recommended percentages, working to achieve a holistic goal for a specific area of the community.
THIS IS NOT A ZONING MAP.

* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

* Amendment #1 04-04-2006 (Ordinance No. 2006-04-042) Revised to reflect alignment of Future Collin County Multimodal Transportation Corridor as well as changes to the Master Thoroughfare Plan.

* Amendment #2 01-05-2010 (Ordinance No. 2010-01-001) Revised to reflect the Trinity Falls Municipal Utility District, the Airport Master Plan, boundary changes between McKinney, Fairview, and Princeton as well as changes to the Master Thoroughfare Plan.

* Amendment #3 07-16-2013 (Ordinance No. 2013-07-070) Revised to reflect the changes to the Master Thoroughfare Plan.

* Amendment #4 05-XX-2015 (Ordinance No. 2015-05-XXX) Revised to reflect changes to anticipated land uses/zoning for the area formerly known as the REC Module and create new modules: Tollway Commercial Module and Urban Mix Module.

CITY OF MCKINNEY
COMPREHENSIVE PLAN
FUTURE LAND USE PLAN

Legend

- Existing and Future Thoroughfares
- Extraterritorial Jurisdiction
- Rail Lines
- Floodplain

FUTURE LAND USE MODULES

- Estate Mix
- Suburban Mix
- Urban Mix
- Town Center
- Transit Village (1/4 mile radius)
- Community Village
- Regional Commercial
- Tollway Commercial
- Regional Employment
- Office Park
- Industrial
- Airport Industrial
- Potential Commercial within the Residential Module (Based on Locational Criteria)

ANTICIPATED LAND USES / ZONING

- Floodplain
- Golf Course
- Parks/Open Space
- Government/Schools
- Airport
- Heavy Manufacturing
- Light Manufacturing
- Commercial Historic
- Commercial
- Neighborhood Business
- Mixed Use
- Office
- Residential/Low Density
- Residential/Medium Density
- Residential/High Density
- Residential/Urban High Density

Source: City of McKinney Planning Department Data

XX May 2015
FIGURE 7.4

0 1 2 Miles

100 Acres

1 Square Mile

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Future Land Use Plan Module Diagram Definitions

Suburban Mix: The predominant use is single-family detached housing. It also allows for medium density residential as well as neighborhood office and retail facilities, which support the residential component. Community facilities such as schools, parks and churches are also included.

Estate Mix: The primary use is single-family residential on large lots, with a limited amount of more dense single family residential and support office and retail uses.

Town Center: A mix of residential housing types with both neighborhood and regional office and commercial uses as well as significant amounts of community facilities - government offices, churches, schools and parks.

Transit Village: Development based around a transit center and including medium density residential, office and retail uses. Each transit village is anticipated to have a different mix of uses with some composed of regional office and commercial uses and others with greater amounts of entertainment and commercial uses with varying degrees of residential uses.

Community Village: An area of concentrated development. Generally it is a grouping of commercial uses serving a larger region. It includes office, retail, entertainment and community facilities. Some residential uses may be allowed when designed to minimize impacts from and to the primary commercial uses.

Regional Employment: A large scale office and potentially light industrial/ research development providing employment on a regional level.

Tollway Commercial: The principal uses include commercial, office, and entertainment uses with a strong regional draw, as well as vertical mixed-use projects that can be integrated into surrounding commercial uses. A mix of other residential housing types are permitted in small percentages and include, single-family, medium density, and high density urban residential uses. Community facilities such as churches, schools and parks are distributed throughout the module.

Urban Mix: The predominant use is single-family detached housing in both urban and traditional style patterns. This module also allows for medium density and high density urban residential with neighborhood office and retail facilities supporting the residential component. Community facilities such as schools, parks and churches are also included.

Regional Commercial: An area of large scale commercial development providing for retail and service uses on a regional level.

Office Park: This area is characterized by the primary use, which are office parks. It also includes supporting retail and service uses.

Airport Industrial: Development focused around its proximity to the airport. It Includes a range of industrial and support uses.

Industrial: Development includes industrial, manufacturing, office, distribution, and warehouse uses with support retail and office uses.

For additional information regarding the Town Center and Transit Village modules, refer to the Town Center Study Phase I Report (adopted March 2008).

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Anticipated Land Use Definitions

Floodplain: Land adjacent to a river, creek, or lake and is susceptible to flooding (100 year floodplain is designated on the plan).

Golf Course: A public or private golf course.

Park/Open Space: Public and private recreation facilities.

Government/Schools: Schools, public or private, municipal and county buildings, etc.

Airport: City owned property associated with the operation of the Collin County Regional Airport.

Heavy Manufacturing: Heavy industrial includes mining, salvage yards, concrete batch plants, and similar intensive manufacturing and processing operations.

Light Manufacturing: Light industrial refers to land and buildings used for the production of some type of goods with minimal outside storage such as electronics, manufacturing, products assembly, etc. Uses should be relatively nuisance free.

Commercial Historic: Commercial uses within the historic downtown.

Neighborhood Business: Land and buildings used for retail sale of convenience goods and personal services such as grocery stores, barber or beauty shops, etc.

Office: These areas provide for office buildings with supportive retail and service uses intended primarily for occupants of such office buildings. It may also include an office park, which is a tract containing multiple office buildings, support uses, and open space designed, planned, constructed, and managed on an integrated and coordinated basis.

Commercial: Uses can include some of the more intensive commercial uses such as hotels, auto dealerships, department and furniture stores, as well as banks, restaurants, large home improvement stores, etc.

Mixed Use: An area of vertically integrated office, retail and residential uses in an urban style development.

Mobile Home Park: Land for the renting or leasing of sites for the location, occupancy, or accommodation of one or more mobile home dwelling.

Residential Estates: Characterized by single-family homes on large lots, generally at least a one acre minimum.

Residential/Low Density: Typified by single- family homes with a density of up to 3.5 dwelling units per acre. See Suburban Mix Module for density

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calculation method.

Residential/Medium Density: This category has densities ranging from 5 to 12 dwelling units per acre and may include a variety of residential types such as single family attached units (duplex, triplex, fourplex) row houses, single family cluster or garden home developments, and townhouses.

Residential/High Density: This residential type is characterized by multi-family or apartment buildings, and may have development densities ranging from 12 to 24 dwelling units per acre.

Residential/Urban High Density: This residential type is characterized by multi-family or apartment buildings in an urban and pedestrian oriented style of development, and may have development densities that are greater than 24 dwelling units per acre.

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7.4 Future Land Use Plan Module Diagrams Component

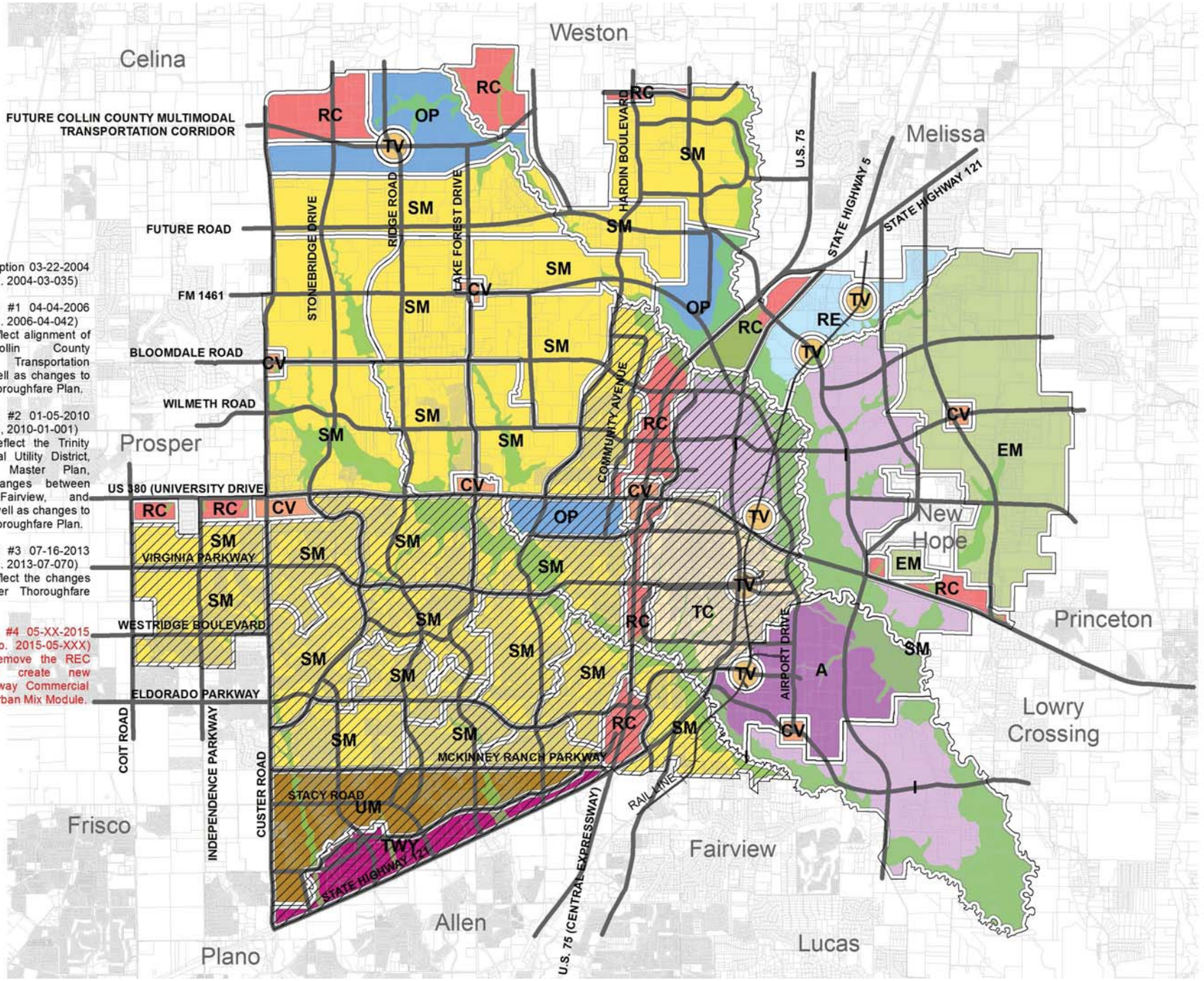
To help maintain McKinney's community values and guide the City's future growth, City officials have worked to devise a method for planning and monitoring development. This method for guiding new development provides City Staff an efficient means to quantify land use changes and provide City Leaders a way to justify future development decisions and their fiscal impact on the City. To help monitor development, City Staff and consultants have developed the Future Land Use Plan Module Diagram component to be used in conjunction with the future land use plan component. The Future Land Use Plan Module Diagram helps to ensure that decisions made on land use issues are based on fiscal realities, thereby avoiding the arbitrary assignment of land uses to areas on the future land uses plan map. By incorporating the Future Land Use Plan Module Diagram into the City's Fiscal Impact Model, both City Staff and City Leaders have a tool to justify decisions and manage the community's growth.

Future Land Use Plan Module Diagram

The following graphic depicts the Future Land Use Plan Modules Diagram for the City of McKinney within McKinney's current city limits and ETJ. The Future Land Use Plan Module Diagram was developed through the City of McKinney Comprehensive Planning process, incorporating the goals and objectives of the community; the guidance of McKinney City Staff; input solicited from McKinney residents through stakeholder interviews, community meetings, public input meetings, telephone surveys, and community questionnaire responses; and the direction provided by the Joint Committee made up of members of the City of McKinney City Council and McKinney Planning and Zoning Commission. The foldout map was developed by City of McKinney Staff and HNTB planners.

Future Land Use Plan Module Diagrams Table

The Future Land Use Plan Module Diagrams Table lists the land use modules in the City of McKinney's future land use plan. Along with the land use modules are columns indicating the total acreage for each land use module, and the land use category types within each module with a column for land use category type base percentage and acreage of each land use in the future land use plan. This table or series of tables will be updated by City Staff as land is zoned and developed in order to track the current land use mix.



* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

* Amendment #1 04-04-2006 (Ordinance No. 2006-04-042) Revised to reflect alignment of Future Collin County Multimodal Transportation Corridor as well as changes to the Master Thoroughfare Plan.

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* Amendment #3 07-16-2013 (Ordinance No. 2013-07-070) Revised to reflect the changes to the Master Thoroughfare Plan.

* Amendment #4 05-XX-2015 (Ordinance No. 2015-05-XXX) Revised to remove the REC Module and create new modules: Tollway Commercial Module and Urban Mix Module.

CITY OF MCKINNEY
COMPREHENSIVE PLAN

FUTURE LAND USE PLAN MODULE DIAGRAM

Legend

- Rail Line
- Existing and Future Thoroughfares
- Floodplain

FUTURE LAND USE MODULES

- EM Estate Mix
- SM Suburban Mix
- UM Urban Mix
- TC Town Center
- TV Transit Village
- CV Community Village
- RC Regional Commercial
- TWY Tollway Commercial
- RE Regional Employment
- OP Office Park
- A Industrial
- I Airport Industrial

MODULE TYPE

- Existing Modules
- Future Modules

Source: City of McKinney Planning Department Data

XX May 2015
FIGURE 7.5

Miles
0 1 2

1 Square Mile
100 Acres

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Future Land Use Mix Category Descriptions

Within the City of McKinney future land use plan, there are nineteen land use categories. The descriptions below have been developed to help provide guidance regarding the City's future development. Floodplain has not been described as it is considered undevelopable due to natural forces and economic limitations.

Estate Residential: Residential properties having one permanent single family detached dwelling unit on a parcel of land ranging in size from greater than two acres to less than ten acres. The size of the residential property is a key consideration for this classification of residential use. This residential use maintains an openness of the land. Estate Residential allows for larger than average lots than can incorporate personal activities and interest, but does not encourage large-scale commercial agricultural endeavors.

Single-Family Residential: One single family detached dwelling unit built on a parcel site. The detached dwelling unit is open on all four sides with the structure centered towards the middle of the parcel. The housing unit provides space for entertaining, habitation, personal cooking, sanitary accommodations, and storage that would be used by members of a family unit or an individual inhabitant.

Single-Family Urban Residential: One or two single family dwelling units built on one or two parcels. The structure is situated in close proximity to the street. The housing unit provides space for entertaining, habitation, personal cooking, sanitary accommodations, a carriage house, and storage that would be used by members of a family unit or an individual inhabitant. The street pattern is typically a modified grid pattern.

Medium Density Residential: Medium density residential is attached housing units and includes townhouses, apartments, and four-plexes.

High Density Urban Residential: This residential type is characterized by multi-family or apartment buildings in an urban and pedestrian-oriented style of development, such as structures situated in close proximity to the street, parking internal to the site with limited visibility from adjacent streets, and streetscape features that encourage pedestrian activity. Structured parking and vertical mixed-use developments with residential uses above ground floor commercial are encouraged within this residential type.

Retail - Neighborhood: Retail services serving the needs of the surrounding cluster of neighborhoods, generally a trade area of +/- one mile. Retail - Neighborhood provides a location for the selling or offering of consumer goods and services to the public in a non-habitation space. The size of Retail - Neighborhood ranges generally from 1,000 square feet up to 250,000 square feet.

Retail - Urban: A retail building set closer to street curb having shared or reduced parking standards. This retail product supports a street-level, pedestrian-oriented environment within a higher-density location. This use works well with adjacent Office - Urban and Mixed Use structures and can benefit further through the close proximity to a transit station. Retail - Urban structures can be either single-story or up to three-stories in height but frequently must be at least two stories.

Retail - Regional: Retail - Regional serves a trade area of +/- five miles. This use provides a location for the selling or offering of consumer goods and services to the public in a non-habitation space. The size of Retail - Regional generally ranges from 250,000 square feet up to 2,500,000 square feet.

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Table 7.6: Future Land Use Plan Modules

Land Use Module	Acres in Future Land Use Modules Plan	Land Use	Base Percentages	Acres of Each Land Use in Future Land Use Plan
Suburban Mix	31,539	Single Family Residential	65%	20,500
		Medium Density Residential	10%	3,154
		Office - Neighborhood	5%	1,577
		Retail - Neighborhood	5%	1,577
		Community Facilities	15%	4,731
Estate Mix	4,495	Estate Residential	75%	3,371
		Single Family Residential	10%	449
		Office / Retail Neighborhood	5%	225
		Community Facilities	10%	449
Town Center	2,449	Single Family Urban Residential	35%	858
		Medium Density Residential	10%	245
		Mixed Use	10%	245
		Retail - Retail Urban/Regional	10%	245
		Office - Office Urban/Regional	5%	122
		Entertainment	5%	122
		Light Industrial / Manufacturing	10%	245
		Community Facilities	15%	367
Transit Village	717	Mixed Use	40%	287
		Medium Density Residential	20%	143
		Office - Urban	15%	107
		Retail - Urban	10%	72
		Entertainment	5%	36
		Community Facilities	10%	72
Community Village	912	Retail - Regional	45%	411
		Office - Regional	15%	137
		Medium Density Residential	15%	137
		Single Family Urban Residential	10%	91
		Entertainment	5%	46
		Community Facilities	10%	91
Regional Employment	804	Office - Urban	30%	201
		Medium Density Residential	25%	201
		Mixed Use	20%	161
		Retail - Urban	10%	80
		Entertainment	5%	40
		Community Facilities	10%	80
Tollway Commercial	1,459	Tollway Commercial	70%	1,021
		Mixed Use	10%	146
		Single Family Residential	5%	73
		Medium Density Residential	5%	73
		High Density Urban Residential	5%	73
		Community Facilities	5%	73
Urban Mix	2,616	Single Family Urban Residential	30%	785
		Single Family Residential	25%	654
		Retail - Neighborhood	15%	392
		Medium Density Residential	10%	262
		High Density Urban Residential	10%	262
		Office- Neighborhood	5%	131
		Community Facilities	5%	131
Regional Commercial	4,224	Retail - Regional	55%	2,323
		Retail - Neighborhood	15%	624
		Office - Regional	15%	624
		Entertainment	5%	211
		Lodging	5%	211
		Community Facilities	5%	211
Office Park	2,937	Office - Regional	60%	1,762
		Retail - Regional	15%	441
		Lodging	15%	441
		Medium Density Residential	5%	147
		Community Facilities	5%	147
Airport Industrial	2,119	Airport Operations	25%	530
		Light Industrial / Manufacturing	25%	530
		Office - Regional	15%	318
		Flex Office/Warehouse	15%	318
		Retail - Neighborhood	10%	212
		Lodging	5%	106
		Community Facilities	5%	106
Industrial	6,110	Light Industrial / Manufacturing	50%	3,055
		Office - Regional	20%	1,222
		Flex Office / Warehouse	15%	916
		Retail - Neighborhood	10%	611
		Community Facilities	5%	305

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Office - Neighborhood: Office - Neighborhood typically represents a single-story office structure that compliments the aesthetic qualities of the surrounding residential neighborhoods. Office - Neighborhood space is attractive for tenants with limited space needs (space needs greater than 5,000 square feet and less than 50,000 square feet). This office space provides either surface or covered parking for tenants and visitors and is appropriate for suburban environment.

Office - Urban: Multiple story office built closer to street curb, attractive for both tenants with limited space needed and tenants with larger space needs. This office product provides either surface or garage parking for tenants and visitors in a suburban environment. In a higher density urban setting parking for tenants and visitors would be available by garage.

Office - Regional: Multiple story office built in a campus style complex of buildings and set back from the roadway. Office - Regional is attractive for tenants with larger space needs and convenient access to regional roadways and transit lines. Access to this office product can be by an entry driveway and parking for tenants and visitors is provided either through surface or garage facilities. Depending on building size, tenant demand, and convenience, support facilities such as drug stores, restaurants, office services, and personal needs can be incorporated into Office - Regional.

Mixed Use: Mixed Use provides two or three uses under the same roof of a multi-story building. This vertical mix of uses incorporates ground floor retail and/or office with residential, office, or lodging above. Combinations for Mixed Use include retail on the lower floors with residential above, retail on the lower floors with office above, retail on the lower floors with lodging above, office on the lower floors with residential above, office on the lower floors with lodging above, a combination of retail and office on the lower floors with residential above, and a combination of retail and office on the lower floors with lodging above.

Research & Development: Research & Development is a concentration of business and educational establishments. This collected partnership works together in a campus setting in the pursuit of scientific and technological breakthroughs and patented applications. Facilities include space for laboratories, research and technology, and offices.

Light Industrial/Manufacturing: Light Industrial/Manufacturing includes facilities used for the receiving, staging, processing, assembly, and shipping of raw materials or goods. Such facilities require reliable access to utility and transportation infrastructure as well as plentiful source of skilled labor.

Flex Office/Warehouse: Flex Office/Warehouse is flexible space for its occupants to conduct their business. This flexibility is in the form of floor space configuration for offices, showrooms, warehouse, distribution, light manufacturing and processing. Because it can meet the needs of warehouse users this space provides amenities associated with stand alone warehouse space.

Airport Operations: This contains the fenced-in area of Collin County Regional Airport, including the airport's terminal, landside and airfield operated maintained in accordance with all federal, state, and city regulations. Also included are the fuel farms and aviation support facilities providing direct access to airport taxiways and runways.

Entertainment: Entertainment types of facilities provide locations for viewing live performances, cinema, and musical productions; for participating in competitive

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games; and entertainment-related theme establishments that provide a mixture of novelties, entertainment, and shopping. Closely related uses that support and can be part of entertainment include eating establishments.

Lodging: Lodging represents establishments that providing overnight dwelling accommodations and personal services to the traveling public for a fee. Lodging establishments can be categorized by price points, level of services offered, size by total number of units, affiliation, and groups served.

Community Facilities: Community facilities represent public uses that provide for the safety, educational, transit, and spiritual needs of a community. Public safety needs include facilities for police, fire, and emergency workers and equipment. Educational centers include all public or private institutional facilities offering instruction from kindergarten upwards to post-graduate university levels, either in a single structure or spread out with multiple buildings in a campus environment. Transit includes the property, parking facilities, and stations that support the collective movement and distribution of people at a single location. A transit station serves as the focus for bus, light rail, and/or commuter rail transit service within a concentration of higher density uses. It is a stopping point along a transportation route where people embark and disembark in their commutes. A transit station can be a stand-alone facility or integrated with other uses, such as retail, office, and entertainment, to create a seamless, festive urban center to a broader urban village. Religious grounds and buildings are used for gatherings and spiritual awareness. Some structures connected with the main sanctuary are used as gathering halls for banquets, classrooms, meeting halls, recreation centers, and communication centers. In addition, some religious complexes provide residential units for clergy and religious orders.

Employment Center: An Employment Center is a concentration of commercial or industrial developments with employment ranging from 1,000 to 2,500 workers within a single establishment or employment ranging from 2,500 to 5,000 employees within a campus complex of less than 50 acres. Employment Center would be the hub of activity for a much larger area featuring associated and subsidiary businesses.

Tollway Commercial: Tollway Commercial represents land uses that contribute to a significant concentration of regionally-scaled commercial, retail and service uses as well as campus style office and corporate headquarter uses that provide substantial employment opportunities to the surrounding area. Commercial and office uses are attractive for tenants with larger space needs and convenient access to regional highways.

Future Land Use Plan Module Diagrams Descriptions

There are eleven different future land use plan module types, which are described below. The module descriptions provide more detailed information about the characteristics of each module. This information includes each module's land use table with the flexibility factor, land use notes and recommendations, a brief description of each module's community form, and locational criteria to help guide each module's development patterns.

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7.5 Suburban Mix Module

A Suburban Mix module is made up of land uses that promote a neighborhood setting with single-family detached houses as its primary development type. The single-family residential component drives this module with retail and office developments providing convenient access to daily goods and services while promoting a more balanced tax base. Single-family tracts in this module make good use of the rolling terrain and changing topography along McKinney's creek channels. Recreation and leisure amenities, neighborhood schools, parks and other community facilities add to the quality of life for residents within the module.

Below are representative photographs of each specific land use type included in this module.

Single-Family Residential

Medium Density Residential

Retail - Neighborhood

Office - Neighborhood

Community Facilities (Park)

Table 7.7: Suburban Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Single-Family Residential	65%	+/- 5%
Medium Density Residential	10%	- 5%
Retail - Neighborhood	5%	+ 5%
Office - Neighborhood	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	15%	+/- 5%
Total	100%	

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Land Use

Single-family residential uses generally comprise 65% of a Suburban Mix module. The density of each single-family tract and the total of all single-family tracts in the module should not exceed 3.5 units per acre (gross). In order to take into consideration the topographical differences in property and the impact floodplain, erosion hazard setbacks, and lakes can have on the form of development, density calculations shall consider these factors along with how the design of the residential area is in keeping with the overall goals and objectives of the Comprehensive Plan and the urban design element.

Density shall be calculated based on land used for residential dwellings. Areas used for retail, office, commercial, parks and schools shall not be considered. The density shall generally be 3.2 dwelling units per gross acre of residential property, exclusive of areas of floodplain, erosion hazard setbacks, and lakes. The density may be increased up to 3.4 dwelling units per acre if the principles espoused in the urban design element are incorporated into the design of the subdivision and included as part of the zoning.

Additionally, 2 dwelling units per acre floodplain may be allowed for floodplain up to 35% of the area to be used for residential development not encumbered by floodplain, erosion hazard setbacks, or lakes. To achieve the density credit for floodplain, the entire residential development shall comply with the design principles espoused in the urban design element. This density credit may be awarded even if the area of floodplain is to be dedicated for parkland.

In general the median and mean lot size shall be a minimum of 7,200 square feet.

Medium density residential uses should not exceed 10% of the module's land and should not exceed a density of 8 units per acre. Retail uses should occupy at least 5% of the module. Office uses should also occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should occupy approximately 15% of land area in the module. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Suburban Mix module:

1. The general module size is based on the number of acres to accommodate the target number of students of an elementary school (approximately 650 students based on 2003 McKinney Independent School District figures) with the modules corresponding density; nevertheless, the number of elementary schools will be based on density and household size.
2. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
3. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting corresponding changes in other categories.
4. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.
5. The locational criteria defines the physical parameters of how different land uses and their physical parameters come together to shape a neighborhood or commercial development. The locational criteria should be followed as development plans are prepared in McKinney.

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Community Form

The form of the built environment in a Suburban Mix module is centered on the suburban-style home and standard traditional neighborhood unit. This traditional neighborhood unit can have commercial land uses (retail and office) located near neighborhoods at the intersections of arterials. Pedestrian connections such as sidewalks and trails are important to provide access from the residential to the commercial uses.

Community form for medium density uses is best described as enclaves. Medium density residential can be either urban or garden style in layout. Urban style medium density buildings have common setbacks and parallel public streets. Garden style housing sites buildings in clusters away from public streets.

Commercial uses should have unified architecture, well planned pedestrian connections linking buildings, parking, and amenities, buildings sited to create pedestrian spaces, and parking fields broken into smaller sizes with the use of landscape.

Community facilities should be sited to act as a transition between land uses that are not directly compatible. Neighborhood parks and open space intended to serve the module's residents should be sited more internally, and pedestrian connections to them from neighborhoods are desirable. Floodplains, heavily-wooded areas, and other land not best-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

While McKinney features areas for lower-density housing (e.g. Estate Mix) and higher-density housing (e.g. Town Center, REC), the Suburban Mix modules provide housing for the majority of citizens, and does so at typical suburban densities. The module provides significant opportunities for owner-occupied housing on medium-sized lots, with convenient access to the most frequently needed retail uses.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following locational criteria are for the Suburban Mix module:

LC1. Retail and office uses are to be located nearest the intersection of two major arterials.
LC2. Retail and office uses should not be organized in a linear form; instead they should be planned as villages. Note: reference community form.
LC3. The future land use plan identifies potential locations of commercial (retail and office) development at intersections of two arterials. This is shown as red lines in a hatched pattern of squares. These areas may be developed as either commercial or residential based on the allowed land use module mix.
LC4. Non-residential low impact development may be located in certain situations at collector-arterial intersections. This low impact development includes vet clinics, professional office, and day-care facilities.
LC5. Parks should be developed in areas to preserve existing trees, wetlands, or

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natural habitat. Parks should also work in conjunction with school sites and be accessible by pedestrians, bicycles, and public streets.

LC6. Open space should be used as an amenity for surrounding development. Many times the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways - a common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

LC7. Medium density residential should be located near the intersection of two arterials. This land use can be sited between single family residential and commercial uses.

LC8. This module is anticipated to require one elementary school.

LC9. This module will require at least one neighborhood park. Parks can and should also relate to the quantity and quality of the natural environment in the module.

LC10. This module and the residential neighborhoods will include a variety of lot sizes. The lot sizes need to vary by a meaningful width.

LC11. Public streets should be sensitive to the natural slope of the land in order to maximize views and provide ease of drainage. This is best demonstrated with proposed streets paralleling contours.

LC12. Public streets also need to be aligned to provide interest, variation, and order. A residential neighborhood needs to have a street layout that provides primary linkages to community facilities and amenities.

LC13. Streets in single-family residential areas should be designed primarily to connect the homes to arterials, and not be designed to encourage arterial-to-arterial or "cut-through" traffic.

LC14. Sidewalks and hike & bike trails should be provided to accommodate pedestrians and bicyclists on both sides of public streets.

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7.6 Estate Mix Module

The Estate Mix module is focused primarily around low-density residential uses that reflect a rural setting. The lot sizes for estate residential generally range from 2 acres to 10 acres. Single-family residential uses on smaller lots are less frequent and placed adjacent to smaller retail and office centers that serve a broader land area due to the lower densities.

There are two Estate Mix Modules located in the north and northeast corner of the community. The first module borders the City of Weston and the other extends north from US 380 around the east side of the Town of New Hope and continues north to the City of Melissa.

Below are representative photographs of each specific land use type included in this module.

Estate Residential

Single-Family Residential

Retail

Office

Community Facilities (Park)

Table 7.8: Estate Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Estate Residential	75%	+/- 5%
Single-Family Residential	10%	- 5%
Retail &/or Office Neighborhood	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+/- 5%
Total	100%	

EXHIBIT B

Land Use

Estate residential comprises 75% of an Estate Mix module. Single-family density residential uses should not exceed 10% of the module's land and should not exceed a density of 3.0 units per acre. Retail and office uses should occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should include approximately 10% of the module. Each of these percentages have a flexibility factor that can been seen in the previous chart.

General notes and recommendations for land uses in the Estate Mix module:

1. The general module size is based on the number of acres to accommodate the target number of students of an elementary school (approximately 650 students based on 2003 McKinney Independent School District figure) with the modules corresponding density; nevertheless, the number of elementary schools will based on density and household size.
2. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
3. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting changes in other categories.
4. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape an area. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment in Estate Mix module should complement and encourage the low density residential and rural commercial uses. The module should concentrate non-residential uses at intersections of arterials locating them within close proximity of the intersection to prevent a sprawling appearance along the arterials.

Agricultural uses not permitted elsewhere in the city are permitted within estate residential, but performance standards should limit them to activities that do not conflict with the enjoyment of residential properties. However, residents should expect the agricultural uses to provide a different character to the area and a different quality of life than other modules. These uses should not be so intense as to be incompatible with residential uses. However, uses allowed in the Estate Mix module are intended for rural areas, and are not typical of what would be planned for in a suburban setting.

The estate residential land use is characterized by single-family residential homes on 2 to 10 acre lots. Auxiliary structures, such as barns and sheds, and limited livestock are permitted on residential lots. There is potential for non-residential uses to be located adjacent to the estate lots due to the agricultural activities common in the module and the large nature of the residential lots.

The form of the built environment in single-family residential developments in the Estate Mix module is similar to but more rural in nature than that found in the Suburban Mix module. The standard single-family development would be located in close proximity to intersections of arterials and adjacent to natural features that would serve as buffers between the residential units and the rural/agricultural uses that are typical in the Estate Mix module. Single-family developments are also intended to be dispersed throughout the module and much smaller than developments found in

the Suburban Mix module. Clusters of single-family residential should not exceed fifty units in any one location.

Commercial uses should be well planned with parking fields broken into smaller sizes with the use of landscape. However, some of the commercial uses within the module may be more agricultural and rural in character, attracting customers from a wider area; the commercial uses are not intended to attract significant volumes of traffic.

Fewer neighborhood parks will be provided in the Estate Mix module due to the spread out nature of the residential units and the rural feel of the module. Floodplains, heavily-wooded areas, and other land not well-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following locational criteria are for the Estate Mix module:

LC1. Retail and office uses are to be located nearest the intersection of two major arterials.
LC2. The future land use plan map identifies commercial (retail and office) development at intersections of two major arterials. This is shown as red lines in a hatched pattern in the pattern of squares. These areas are generally proposed for commercial development.
LC3. Non-residential low impact development may be located in certain situations mid block along arterials. This low impact development includes: vet clinics, professional offices, and day-care facilities.
LC4. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should also work in conjunction with school sites.
LC5. This module is anticipated to require at least one elementary school.
LC6. This module will require at least one park. Parks can and should also relate to the quantity and quality of the natural environment in the module.
LC7. Suburban residential uses should be dispersed in small clusters of no more than 50 units throughout the module and located in close proximity to arterial intersections.

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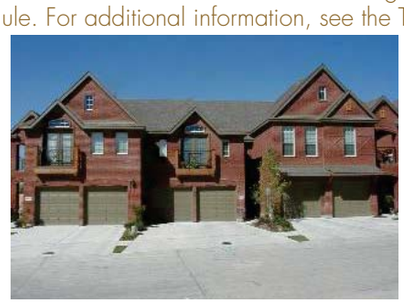
7.7 Town Center Module

The Town Center module is the historic heart of McKinney and stretches from the earliest developments of the community in and around the historic downtown to land first developed around 1970. The built environment features buildings and structures typical of every style common between 1870 and 1970, from the dense urban pattern of downtown, to smaller lots homes, to the larger lots that would become the suburban style. The land use pattern also reflects those times, with residential uses intermixed with and in close proximity to commercial uses. A great deal of redevelopment and infill is occurring within the Town Center module, with much of the housing being built through the City's affordable housing program. This module extends outwards from McKinney's historic core north to US 380, west almost to US 75, south to Wilson Creek and east to the East Fork of the Trinity River.

UPDATE: The Town Center Study Phase 1 Report (2008) outlines key concepts that should be referenced when considering land use decisions in the Town Center module. For additional information, see the Town Center Study Phase 1 Report (2008).

Single-Family Urban



Medium Density Residential

Mixed Use

Office and Office - Urban/Regional

Retail and Retail - Urban/Regional

Entertainment

Community Facilities (Park)

Unique Relationships

The Town Center module will accommodate the unique issues of planning for an area in its second, third, and even fourth phase of development. While some undeveloped land remains and other properties are being developed for the first time, the vast majority of the module has been developed at least once and much of it has already been redeveloped. Corridor studies may be needed in the future to address the transitions of land uses within the module as continued redevelopment occurs.

The buildings, properties, and public infrastructure have both the benefits of their original design and the burdens associated with age and meeting the demands of modern society. Because this area is so different from any other part of the community, a unique module has been created to enhance its assets and address the future.

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Table 7.9: Town Center Land Use

Land Use	Existing Percentage of Acreage
Single-Family Urban Residential	35%
Medium Density Residential	10%
Mixed-Use	10%
Retail & Retail Urban/Regional	10%
Office & Office Urban/Regional	5%
Entertainment	5%
Light Industrial	10%
Community Facilities (Parks, Schools, Churches, etc.)	15%
Total	100%

It should be noted that residential, retail, and office uses can all be allowed in the mixed use category of this table. In acting to change the land use balance on a smaller scale, the function of both the immediate surrounding area and the entire module should be considered. Within the Town Center module, much of the mixed use development is centered around the downtown commercial district.

Land Use

Given that the Town Center module is mostly developed and includes a wide variety of land uses, the percentage of the land area devoted to each use is not as important as the compatibility with existing uses. As a result, the flexibility factor has been removed, but this does not indicate that land use percentages are static.

Community Form

Because the module features a wide variety of land uses in close proximity to each other, the relationship and interaction between them is critical to its function. The variety of land uses function well in the Town Center module due to several factors. A grid street pattern allows for land uses to easily front and/or back each other and therefore limits negative impacts. Appropriate edges and buffers are also important in the placement of these varying land uses. All development within this module needs to use a grid street pattern. Pedestrian sidewalks need to be included for all land uses in this module.

Much of the future development in this module occurs as infill. This infill development is typically at a smaller scale than greenfield development. The infill pattern should be compatible with and complimentary to existing land uses.

Locational Criteria

Each module is defining a set of locational criteria for the elements comprising that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to maintain and enhance high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

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The following locational criteria are for the Town Center module:

LC1. Infill development should be compatible with and complementary to adjacent existing land uses.

LC2. Development should pay special attention to infrastructure capacity. The Town Center module has aging infrastructure that in many cases is over capacity, and new development should not worsen the level of utility services for neighboring land uses.

LC3. Infill development in this module should continue the existing grid street pattern.

LC4. Land use transitions need to occur at the rear of the property. Land use transitions should not occur at the street in the front of development. Example: land uses across the street from each other should be the same, in most occurrences.

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7.8 Transit Village Module

The Transit Village module is designed to maximize the potential of a special transportation opportunity, such as a rail station or public transit transfer station. Given the critical transit component, development of these modules will be impacted by the timing of the transit facility. Each of the transit modules will differ in its character based on the type of transit facility, the existing development, and the module type surrounding the transit village. The location of transit villages will be dependant on the infrastructure in the immediate area. Transit villages can be dispersed throughout the city and will not be restricted to possible rail stations.

Two transit villages are shown in proximity to the future Collin County Multi modal Transportation Corridor, while five of the transit villages are centered along the rail line running north/south to the east of SH 5. The right-of-way for the rail line has been acquired by the Dallas Area Rapid Transit System (DART). Provision for mass transit will become critical to the future growth and sustainability of the City.

Transit Village modules serve as gateways, marking the entrances into the community along rail or multi-modal corridors. Transit Village modules provide consumer and employment opportunities for residents of McKinney and the region. The modules add to the quality of life of McKinney residents and provide fiscal benefits connecting McKinney businesses to the larger market of North Texas.

Below are representative photographs of each specific land use type included in this module.

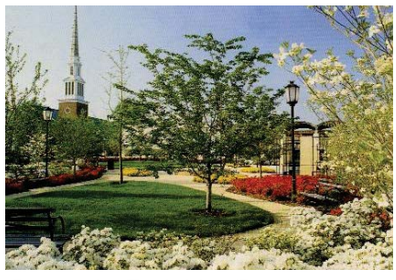
Office - Urban

Retail - Urban

Mixed Use

Medium Density Residential

Entertainment



Community Facillities (Park)

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Table 7.10: Transit Village Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Mixed Use	40%	+ 10%
Retail - Urban	10%	+/- 5%
Office - Urban	15%	+/- 5%
Medium Density Residential	20%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

In anticipation of future rail transit, a conceptual illustrative vision for the rail transit village in the Town Center was developed as part of the Town Center Study Initiative. For more information on this site, refer to the Town Center Study Phase 1 Report (2008).

Land Use

The Transit Village is a compact module centered on a significant opportunity to access public transportation. The Transit Village is a multi-modal node, where people can transfer from one mode of transportation to another. People will be walking, riding bikes, driving cars, catching buses and trains, and transferring between these different modes. The module's residents can walk to buses and/or trains, while other citizens may drive there, park, and ride a bus or train to their place of work.

Retail and office uses should not be reduced to less than 55% of the module, and residential uses should comprise at least 15% of it. Entertainment uses are encouraged as they add a recreational character to the module, but the modules in high employment, low residential areas may not be able to sustain entertainment uses. Community Facilities, both publicly maintained and privately maintained, are critical to the module and should not be less than 5%. The distribution of land uses within each module will vary with the character of the surrounding area (residential, commercial, industrial), the verticality proposed (height of buildings, combination of uses & functions), and the level of transportation opportunities (number of bus routes, frequency of trains, commuter park-and-ride convenience). All the above noted percentages are without any potential flexibility factor.

The above criteria is intended to describe in general terms the potential mix of land uses anticipated. However, each transit village is anticipated to have a different character and, as a result, a unique mix of appropriate uses. The existing light rail transit stops in the Cities of Plano, Richardson and Dallas each have a unique character and a different mix of land uses surrounding them. More detailed plans should be developed prior to the zoning of the transit villages so that this mix can be established.

General notes and recommendations for land uses in the Transit Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities provides for land use transfer between all categories.

4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built form of a Transit Village module is centered around a "heart" - a public space - in which the transit station(s) are located with frontage facing retail and entertainment uses. The "heart" is surrounded by multi-story buildings, helping to define its boundaries, but important view corridors into and out of the heart should be maintained. Large single-story structures and large surface parking lots should locate outside the periphery of the heart. The module should also accommodate all the modes of transportation converging within it. The module should also feature a visual edge or boundary, making it distinct from the surrounding area. The module's compact size makes access to the different uses within the module efficient.

The land surrounding the heart of the module should accommodate retail, office, entertainment and residential uses, and buildings and interior spaces that are multi-functional are encouraged. The module's transportation facilities for passengers should be incorporated into the heart as well. The periphery of the module can be less dense and intense than the center, with shorter, more horizontal buildings and larger parking areas.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction.

However, since each transit village is anticipated to have a different character, a unique set of land use criteria will need to be developed for each of the modules. More detailed plans should be developed prior to the zoning and development of the transit villages so that this mix can be established. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Transit Village module:

LC1. Transit station facilities should be located at the central point within this module.
LC2. Higher density uses such as Mixed Use, Retail - Urban, and Office - Urban should be located near or across from the transit station.
LC3. Uses such as Medium Density Residential and service-oriented Community Facilities (fire stations, community centers, operations centers, parking lots) should be located towards the periphery of the module as appropriate.
LC4. Land uses along the periphery of the modules should be sensitive to the adjacent modules and land uses in order to provide for the appropriate transition between uses.
LC5. Ground-level active uses will have frontage onto public streets, rather than be separated from the street by large parking areas typical of a suburban shopping center.
LC6. Residential housing options should be designed to provide for a variety lifestyle choices.
LC7. Natural features such as streams, wetlands, and groves of trees within the

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module should be incorporated into the urban fabric.

LC8. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment and to add emphasis within the module's urban fabric.

LC9. Sidewalks should be placed on both sides of the street.

LC10. Transportation facilities and streetscape amenities such as transit stations, bridges, sidewalks, street signage, lighting, should be enhanced to provide interest, variation, and order within this high-density pedestrian friendly urban environment.

LC11. The module should have a minimum of one major arterial fronting a transit station.

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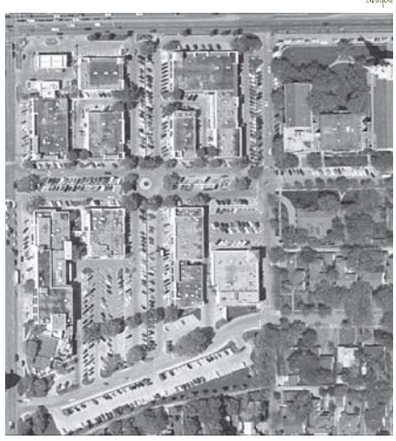
7.9 Community Village Module

The Community Village module is intended to concentrate higher-intensity commercial uses and higher-density residential around an arterial-arterial intersection in a suburban residential area. Creating a Community Village module within one or more Suburban Mix modules benefits both the residential and commercial uses in each. The co-location of more intense uses creates opportunities for a sense of place not possible in a more sprawling pattern of commercial uses along an arterial. The module provides for both fiscal and quality of life benefits to the community.

Below are representative photographs of each specific land use type included in this module.



Retail - Regional

Office - Regional

Medium Density Residential

Single-Family Urban

Entertainment

Community Facilities (Park)

Table 7.11: Community Village Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Retail - Regional	45%	+ 5%
Office - Regional	15%	+/- 5%
Medium Density Residential	15%	+ 5%
Single-Family Residential	10%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

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Land Use

The Community Village module is smaller in area than other modules, average size of approximately 100 acres, surrounded by one or more other modules most often Suburban Mix or Estate Mix modules. The Community Village is a separate module from the surrounding area, and its land uses do not count as part of the neighboring modules. Community Village modules combine both residential and commercial uses within a more organized form than typically found in suburban areas.

Community Village modules are located at arterial-arterial intersections. Retail - Regional, with uses serving a broader market area than the traditional suburban retail establishments, is the primary use in this module, accounting for 45% of the land area. Secondary uses, such as Office - Regional and Entertainment, account for 15% and 5% respectively of the module's acreage and function as complementary uses with this large retail grouping. Residential uses make up a quarter of the module's land area, with Medium Density Residential accounting for 15% and Single-Family Urban capturing 10% of the acreage. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Community Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities provides for land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The commercial core of this module will include Retail - Regional, Office - Regional, Entertainment, and pedestrian active Community Facilities (such as post offices and churches). The recommended form for commercial uses is a village concept. This village concept is necessary to soften the impacts of the allowed uses. The village concept is defined through unified architecture; well planned pedestrian connections linking buildings, parking, and amenities; buildings sited to create pedestrian spaces; and parking fields broken into smaller sized with the use of landscape. Ground floor space should respond to the pedestrian sidewalks with display windows and entrances.

In the commercial core of the Community Village, intense commercial buildings may be multi-story (greater the two-stories). Medium Density Residential also may be in large or multi-story buildings. The additional height should be respectful of the adjacent uses and may be limited if it has the potential to negatively impact them. At the periphery of the Community Village will be the residential uses and community facilities. These uses will serve to transition the more intensive uses in the commercial core of the Community Village to the less intensive residential uses outside the module. Medium Density Residential uses in smaller or two-story buildings will buffer the commercial uses in the core of the module while Single-Family Urban uses will be located at the outer edge of the module.

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Given the larger area served, access by cars will be significant; however, pedestrian connectivity should be incorporated for those living or working in closer proximity. Pedestrian enhancements should be provided to add emphasis and insure safety along pedestrian corridors. Facilities for public transit stops and pedestrian access to these facilities are also strongly encouraged.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Community Village module:

LC1. Higher intensive uses such as Retail - Regional, Office - Regional, and Entertainment should be located at the core of this module.
LC2. Single-Family Urban should be located at the periphery of the module.
LC3. Building heights will be stair-stepped from the more intensive commercial uses in the core down to the less intensive residential uses in the periphery.
LC4. Medium Density Residential and Community Facilities (such as schools, churches, community centers, and parks) should be used to transition to less dense residential uses outside of the community village.
LC5. In the module's commercial core, parking fields should be broken into smaller sized areas with the use of landscape.
LC6. Natural features such as streams, wetlands, and groves of trees within the module should be incorporated into the urban fabric.
LC7. Within the commercial core of the module, there should be an interior roadway channeling traffic to the major arterials but not into the module's periphery residential areas.
LC8. Pedestrian-enhanced cut-through walkways and interior courtyards are desirable to link the module's commercial core to the residential periphery.
LC9. There will be minimum of two major arterials crossing within the module or adjacent to the module.

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7.10 Regional Employment Module

The Regional Employment module is designed to create an urban-style, multi-use development built around a major regional employment establishment or an agglomeration of major employment establishments. The Regional Employment module fosters a working community within a larger city where residents can enjoy an urban-friendly environment mixing working, shopping and living in close proximity to regional transportation corridors, including major freeways, transit lines, and hike and bike trails.

Below are representative photographs of each specific land use type included in this module.

Office - Urban

Medium Density Residential

Mixed Use

Retail - Urban

Entertainment

Community Facilities (Park)

Table 7.12: Regional Employment Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Office - Urban	30%	+/- 5%
Medium Density Residential	25%	+/- 5%
Mixed Use	20%	+ 10%
Retail - Urban	10%	+/- 5%
Entertainment	5%	+ 5%
Community Facilities (Parks, Schools, Churches, etc.)	10%	+ 5%
Total	100%	

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Land Use

The Regional Employment module provides within McKinney a location for a major employment complex to be centered, surrounded by an environment of residential, shopping, entertainment, and community facilities. This module is similar to Legacy Park in Plano and the area around the Telecom Corridor in Richardson.

On average, Office - Urban accounts for 30% of the Regional Employment module; however, this use can be an additional five percentage points higher. Uses, such as Retail - Urban and Entertainment, help support the residential population generated by Medium Density Residential and the Mixed Use complexes. Mixed Use, accounting for 20% of the module, provides a flexibility of uses within a vertical structure, such as retail or office at street-level with residential above, retail at street-level with office above, or retail or office at street-level with lodging above. This combination of uses helps generate an active street environment, both during the business day and after hours.

Community Facilities, both publicly and privately maintained, are critical to the module and should not be less than 10%. The distribution of land uses within each module will vary with the character of the surrounding area (residential, commercial, industrial), the verticality proposed (height of buildings, combination of uses & functions), and the level of transportation opportunities (number of bus routes, frequency of trains, commuter park-and-ride convenience).

Each of these percentages have a flexibility factor that can been seen in the previous chart.

General notes and recommendations for land uses in the Transit Village module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages with corresponding changes in other categories.
3. The flexibility factors for mixed use, residential, retail, office, and community facilities provides for land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The physical form of the Regional Employment module is focused around one major regional employment establishment or a cluster of major employers. These employment activities can be centered in the module, or in close proximity to a Transit Village module. The employment complex can take the form of a single corporate campus or a cluster of buildings developed around a central focus.

Both supporting and taking advantage of the major employment establishments are residential and commercial uses. While having a higher density than that found in the Suburban Mix module, the densities in the Regional Employment module are lower than those occurring in the Transit Village modules. Retail - Urban, Entertainment, Mixed Use, and pedestrian intensive Community Facilities (such as libraries, post offices, churches) should have unified architecture, well planned pedestrian connections linking buildings, parking and amenities; buildings sited to create pedestrian

spaces, and structured or surface parking.

Medium Density Residential uses should blend into other residential and commercial uses; however, at the periphery of the module only Medium Density Residential and Community Facilities (such as parks, schools, churches) should be allowed. The module's transportation network should link major employment establishments with regional transportation corridors, such as major freeways and regional transit lines, and with regional and local hike and bike trails. Natural features found in the module, such as stream corridors, woodlands, and bluffs, should be incorporated as natural public amenities by providing open space and softening the surrounding built environment.

Locational Criteria

Each module is defining a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria is for the Regional Employment module:

LC1. Major employment structures and complexes will be located towards the interior of the module. Less intense land uses such as medium density residential and community facilities should be located on the periphery of the module to provide a desirable transition of uses.
LC2. Retail, Office, Mixed Use, and Entertainment uses should be located along major arterials linking major employment structures and major employment complexes with nearby transit stations, or in high density clusters built on a system of interconnecting streets functioning as the module's commercial core.
LC3. Uses such as Medium Density Residential and Community Facilities should be located towards the periphery of the module.
LC4. Residential housing options should be designed to provide for a variety lifestyle choices.
LC5. Commercial districts within the Regional Employment Module should provide defined public places and activity centers. This can be accomplished by the utilization of greens, plazas, and other open space.
LC6. Natural features such as streams, wetlands, and groves of trees within the module should be incorporated into the urban fabric.
LC7. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment and to add emphasis within the module's urban fabric.
LC8. Selected streets should terminate at streets fronting along parks and significant urban buildings (such as government buildings and religious institutions) to add emphasis within the module's urban fabric.
LC9. At least one major thoroughfare should provide direct access from the module's interior to a nearby regional freeway and a transit station.
LC10. Public streets that make up the module's commercial core should be developed in a grid pattern.
LC11. Major thoroughfares should be developed to emphasize and protect important view corridors.
LC12. Sidewalks should be placed on both sides of the street.
LC13. Pedestrian-enhanced cut-through walkways and interior courtyards are desirable within larger urban blocks in the module's commercial core.

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LC14. The transportation network within the module should provide right-of-way access for regional and local hike and bike trails to link with major employment structures and complexes and with nearby transit stations.

LC15. Transportation facilities and streetscape amenities such as transit facilities, bridges, sidewalks, street signage, lighting, and bike racks should be enhanced to provide interest, variation, and order within the interior of the module and the module's commercial core.

EXHIBIT B

7.11 Tollway Commercial Module

The Tollway Commercial module is designated for significant regional commercial, office, and vertical mixed-use opportunities in the city. The module provides land for intense retail and campus style office and corporate headquarter uses in larger structures not typically appropriate in close proximity to single-family residential dwellings. The module also provides opportunities for high-traffic generators, such as entertainment and hotel uses. Given its location along State Highway 121 (Sam Rayburn Tollway), the Tollway Commercial module is a critical element to the City of McKinney, providing the fiscal benefit of sales tax revenue to the city and school districts, and the quality of life benefit with major shopping destinations convenient to businesses and visitors.

Below are representative photographs of each specific land use type included in this module.

Tollway Commercial

Mixed Use

Single-Family Residential

Medium Density Residential

High Density Urban Residential

Community Facilities (Park)

Table 7.13: Tollway Commercial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Tollway Commercial	70%	Unlimited
Mixed Use	10%	+/- 5%
Single-Family Residential	5%	- 5%
Medium Density Residential	5%	- 5%
High Density Urban Residential	5%	+/- 5%
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

EXHIBIT B

Land Use

The Tollway Commercial module is dependent on high traffic volumes as it will serve both customers from within the city and beyond it. Within the Tollway Commercial module, there should be a high intensity of regionally-scaled retail and service uses; large scale office uses (providing substantial employment opportunities); and pockets of vertically-integrated mixed use structures with non-residential uses on the ground/lower floors with a residential component above. The module serves a regional market area including both residents and businesses in McKinney and surrounding cities. The intense retail and service use developments that occur along the frontage of SH 121 should be scaled appropriately to maximize visibility from SH 121 and contribute to the regional footprint that is called for as part of the Tollway Commercial module. In addition, the module should offer a large corporate campus anchored by an urban-style, multi-use development that is densely developed and can cater to the needs of large office and corporate office users.

These intense retail and office uses provide a fiscal benefit to the community, bringing in property tax and sales tax revenue to the City and the school districts. Typically, these commercial uses have a positive fiscal impact on the City, as the cost of the City services they demand is less than the tax revenue they generate. Similarly for the school districts, they bring in revenue without directly generating more students to be served. Also, their significant shopping opportunities give local and area consumers more choices and options and provide convenient access to goods and services that otherwise would require a trip outside the city. This provides a quality of life benefit to residents, helps attract large employers, and brings in customers from outside the city.

General notes and recommendations for land uses in Tollway Commercial modules:

1. The proposed land uses in this module are calculated using gross acreage.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for tollway commercial, mixed use, residential, and community facilities allows land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built environment in the Tollway Commercial module is oriented around the automobile. Customers arrive and depart by car, and the buildings, sites, signage, and infrastructure should be designed for significant levels of traffic. Buildings should be oriented towards the adjacent regional frontages and are typically large, multi-story, structures with a deep setback from the road. Sites should be designed to facilitate ingress from the arterials without causing excessive friction and reducing their efficiency. Signage should be large enough to be noticeable to passing drivers without creating a cluttered, discordant streetscape. Many of the developments will require extensive lighting across the site, but lighting levels should not be so high as to pollute the night sky or disrupt the enjoyment of nearby residential areas.

Retail and service uses will be substantial in the Tollway Commercial module, and can accommodate large office campuses that broaden the options for consumers. Entertainment uses and lodging opportunities enhance the quality of life of residents

and attract consumers from outside the city.

Locational Criteria

Each module defines a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed, defined, and implemented in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality commercial and employment areas while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Tollway Commercial module:

LC1. Residential uses shall generally be located no closer than 1,000 feet from State Highway 121 (Sam Rayburn Tollway)

LC2. Intensity of uses should be considered when located on the periphery of the Tollway Commercial module to minimize the negative impacts on adjacent land uses.

LC3. Structured parking should be encouraged. Where surface parking exists, the parking areas need to be connected with the building with pedestrian walkways. These walkways should be landscaped and signed.

LC4. Pedestrian connections need to be provided between adjacent commercial buildings. These walkways provide pedestrians the linkage between buildings.

LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC6. Retail, Office, Mixed Use, and Entertainment uses should be located along major arterials and regional frontages or in high density clusters functioning as the module's commercial core.

LC7. Commercial districts within the Tollway Commercial module should provide defined public places and activity centers. This can be accomplished by the utilization of greens, plazas, and other open space.

LC8. Open space amenities within this module such as parks and public plazas should be strategically placed to support the pedestrian street environment in and around vertical mixed use buildings and large activity center, and should also complement the module's urban fabric.

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7.12 Urban Mix Module

The Urban Mix module is made up of land uses that promote a neighborhood setting with single-family detached houses as its primary development type. The single-family residential component drives this module with neighborhood-scaled retail, service, and office developments providing convenient access to daily goods and services while promoting a more balanced tax base. Single-family tracts in this module make good use of the rolling terrain and changing topography along McKinney's creek channels. Recreation and leisure amenities, neighborhood schools, parks and other community facilities add to the quality of life for residents within the module.

Below are representative photographs of each specific land use type included in this module.

Single-Family Urban Residential

Single-Family Residential

Retail - Neighborhood

Medium Density Residential

High Density Urban Residential

Community Facilities (Park)

Table 7.14: Urban Mix Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Single-Family Urban Residential	30%	+/- 5%
Single-Family Residential	25%	+/- 5%
Retail - Neighborhood	15%	+/- 5%
Medium Density Residential	10%	+/- 5%
High Density Urban Residential	10%	- 5%
Office - Neighborhood	5%	+/- 5%
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

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Land Use

Single-family detached residential uses generally comprise more than half of the Urban Mix module. The densities of each single-family tract in the module may vary based on proximity to urban nodes within the module and the development style of the neighborhood (ie. suburban or urban). In order to take into consideration the topographical differences in property and the impact floodplain, erosion hazard setbacks, and lakes can have on the form of development, density calculations shall consider these factors along with how the design of the residential area is in keeping with the overall goals and objectives of the Comprehensive Plan and the urban design element.

Density shall be calculated based on land used for residential dwellings. Areas used for retail, office, commercial, parks and schools shall not be considered. The density shall generally be 3.2 dwelling units per gross acre of residential property, exclusive of areas of floodplain, erosion hazard setbacks, and lakes. The density may be increased up to 3.4 dwelling units per acre if the principles espoused in the urban design element are incorporated into the design of the subdivision and included as part of the zoning.

Additionally, 2 dwelling units per acre floodplain may be allowed for floodplain up to 35% of the area to be used for residential development not encumbered by floodplain, erosion hazard setbacks, or lakes. To achieve the density credit for floodplain, the entire residential development shall comply with the design principles espoused in the urban design element. This density credit may be awarded even if the area of floodplain is to be dedicated for parkland.

In general the median and mean lot size shall be a minimum of 7,200 square feet.

Medium density residential uses should not exceed 10% of the module's land and should not exceed a density of 12 units per acre, while high density urban residential should occupy no more than 10% of the module. Retail uses should occupy at least 15% of the module. Office uses should also occupy at least 5% of the module. Community facilities, such as parks, schools, and places of worship, should occupy approximately 5% of land area in the module. All the above noted percentages are without any potential flexibility factor.

General notes and recommendations for land uses in the Urban Mix module:

1. The proposed land uses in this module are calculated using gross acreage.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while affecting corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities allow land use transfer between all categories.

The locational criteria defines the physical parameters of how different land uses and their physical parameters come together to shape a neighborhood or commercial development. The locational criteria should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment in the Urban Mix module is centered on the suburban and urban-style dwellings within a standard traditional neighborhood unit. This traditional neighborhood unit can have commercial land uses (retail and office)

located in close proximity to neighborhoods at the intersections of arterials to provide convenient shopping opportunities for daily goods and services. Pedestrian connections such as sidewalks and trails are important to provide access from the residential to the commercial uses.

Medium density residential can be either in an urban or traditional style in layout, but should blend into other adjacent residential and commercial uses. Urban style medium density residential and High Density Urban Residential buildings should be constructed in an urban and pedestrian-oriented manner with structures in close proximity to the street with on-street parking or parking internal to the site with limited visibility from adjacent streets), while traditional medium density residential will have common setbacks from public streets. Vertical mixed-use and structured parking is encouraged with the High Density Urban Residential use category, incorporating ground floor commercial uses with residential uses above.

While having densities typically higher than that found in the Suburban Mix module, densities in the Urban Mix module are lower than those occurring in the Transit Village modules. Retail - Neighborhood, Office – Neighborhood, and Community Facilities (such as libraries, community centers, or churches) should have unified architecture, well planned pedestrian connections linking buildings, parking and amenities; and buildings sited to create pedestrian spaces.

Natural features found in the module, such as stream corridors, woodlands, and bluffs, should be incorporated as natural public amenities by providing open space and softening the surrounding built environment.

Commercial uses should have unified architecture, well planned pedestrian connections linking buildings, parking, and amenities to the neighborhood unit, buildings sited to create pedestrian spaces, and parking fields broken into smaller sizes with the use of landscape.

Neighborhood parks and open space intended to serve the module's residents should be sited more internally, and pedestrian connections to them from neighborhoods are desirable. Floodplains, heavily-wooded areas, and other land not best-suited for development can be used to provide open space, hike & bike trails, or pedestrian connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality residential neighborhoods, commercial villages, and community facilities while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Urban Mix module:

LC1. Streets in single-family residential areas should be designed primarily to connect the homes to arterials, and not be designed to encourage arterial-to-arterial or "cut-through" traffic.

LC2. Public streets also need to be aligned to provide interest, variation, and order. A residential neighborhood needs to have a street layout that provides primary linkages to community facilities and amenities.

LC3. Sidewalks and hike & bike trails should be provided to accommodate pe-

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destrians and bicyclists on both sides of public streets.

LC4. This module and the residential neighborhoods will include a variety of lot sizes. The lot sizes need to vary by a meaningful width.

LC5. Medium Density Residential and High Density Urban Residential should be located near the intersection of two arterials. This land use can be sited between single-family residential and commercial uses.

LC6. Retail and office uses are to be located nearest the intersection of two major arterials. Non-residential low impact development may be located in certain situations at collector-arterial intersections. This low impact development includes vet clinics, professional office, and day-care facilities.

LC7. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should also work in conjunction with school sites and be accessible by pedestrians, bicycles, and public streets.

LC8. Open space should be used as an amenity for surrounding development. Many times the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways - a common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

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7.13 Regional Commercial Module

The Regional Commercial modules provide a significant amount of the shopping opportunities in the city, being heavily dedicated to retail and office uses. The modules provide land for intense retail and office uses and larger structures not appropriate for residential areas. They also provide opportunities for high-traffic generators, such as entertainment and lodging uses. The modules are a critical element to the City of McKinney, providing the fiscal benefit of sales tax revenue to the city and school districts and the quality of life benefit with major shopping opportunities convenient to businesses and visitors.

Below are representative photographs of each specific land use type included in this module.

Retail - Regional

Office - Regional

Retail

Entertainment

Lodging

Community Facilities (Church)

Table 7.15: Regional Commercial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Retail - Regional	55%	Unlimited
Office - Regional	15%	+/- 5%
Retail - Neighborhood	15%	Unlimited
Entertainment	5%	Unlimited
Lodging	5%	Unlimited
Community Facilities (Parks, Schools, Churches, etc.)	5%	+/- 5%
Total	100%	

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Land Use

The Regional Commercial modules are dependent on high traffic volumes as they serve both customers from within the city and beyond it. Consequently, they are located along regional connectors, such as US 75, US 380, and the proposed Collin County Multimodal Transportation Corridor. The modules serve a large market area including both residents and businesses in McKinney and surrounding cities. The modules should provide a variety of services including retail, office, entertainment, and lodging opportunities.

These intense retail and office modules provide a fiscal benefit to the community, bringing in property tax and sales tax revenue to the City and the school districts. Typically, these commercial uses have a positive fiscal impact on the City, as the cost of the City services they demand is less than the tax revenue they generate. Similarly for the school districts, they bring in revenue without directly generating more students to be served. Also, their significant shopping opportunities give local consumers more choices and options and provide convenient access to goods and services that otherwise would require a trip outside the city. This provides a quality of life benefit to residents, helps attract large employers, and brings in customers from outside the city.

General notes and recommendations for land uses in Regional Commercial modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for residential, retail, office, and community facilities allows land use transfer between all categories.
4. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built environment in Regional Commercial modules is oriented around the automobile. Customers arrive and depart by car, and the buildings, sites, signage, and infrastructure should be designed for significant levels of traffic. Buildings should be oriented towards the adjacent regional connectors and are typically large, single story, and with a deep setback from the road. Sites should be designed to facilitate ingress from the arterials without causing excessive friction and reducing their efficiency. Signage should be large enough to be noticeable to passing drivers without creating a cluttered, discordant streetscape. Many of the developments will require extensive lighting across the site, but lighting levels should not be so high as to pollute the night sky or disrupt the enjoyment of nearby residential areas.

Retail uses dominate the Regional Commercial module, but only in combination with other commercial uses does the module function at its best. Office uses broaden the options for consumers. Entertainment uses and lodging opportunities enhance the quality of life of residents and attract consumers from outside the city. It is not expected that Community Facilities would use land in Regional Commercial modules.

Office uses often locate within retail districts, but zoning districts for just office uses can help a module reach the table's distribution of land uses. Regional Commercial

should not have more than 20% dedicated to office uses as other modules, like Office Park, allow them at higher levels. Entertainment and Lodging uses can greatly contribute to the success of a Regional Commercial module, but because they have very specific locational criteria, some modules may not be suitable for them. In those cases, their 15% can be redistributed into the Retail and Office categories.

Locational Criteria

Each module defines a set of locational criteria for the elements that comprise that set of land uses. This list of criteria is further developed, defined, and implemented in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to plan and construct high-quality residential neighborhoods, commercial districts, employment areas, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Regional Commercial modules:

LC1. Screens and buffers are needed along the back of many of these commercial land uses, when the adjoining land use is not another commercial use.

LC2. Parking areas need to be connected with the building with pedestrian walkways. These walkways should be landscaped and signed.

LC3. Buildings should be planned in a manner that provides visual sight lines connecting pedestrian access and building front doors. This can be termed, village concept, providing quality site design organization.

LC4. Pedestrian connections need to be provided between adjacent commercial buildings. These walkways provide pedestrians the linkage between buildings.

LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC6. Intensity of uses should be considered when located on the periphery of the Regional Commercial module to minimize the negative impacts on adjacent land uses.

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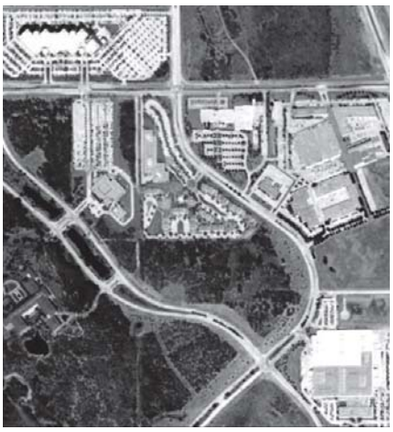

7.14 Office Park Module

The Office Park module provides significant employment opportunities within the community, housing major employers that need convenient transportation, high quality public services, and a worker friendly environment. In addition to office uses, the modules provide for the supporting uses, such as retail and lodging opportunities. The module also provides for the amenities that employees desire, such as lakes, plazas, and fountains, which make for a more aesthetically-pleasing employment environment.

Below are representative photographs of each specific land use type included in this module.

Office - Regional

Retail - Regional

Medium Density Residential

Lodging

Community Facilities (Park)

Table 7.16: Office Park Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Office - Regional	60%	Unlimited
Retail - Regional	15%	- 10
Medium Density Residential	5%	+/- 10%
Lodging	15%	Unlimited
Community Facilities (Parks, Schools, Churches, etc.)	5%	+ 5%
Total	100%	

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Land Use

Office regional comprises 60% of an Office Park module. Retail regional land uses should not exceed 15% of the module's land. Lodging should also occupy at least 15% of the module. Medium Density Residential completes the development pattern with a minimum of 5% land use. Community Facilities, such as parks, schools, and places of worship, should include approximately 5% of the module. Each of these percentages have a flexibility factor that can be seen in the previous table.

General notes and recommendations for land uses in Office Park modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all retail, office, entertainment, lodging, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (office, retail, entertainment, lodging, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment of Office Park modules will feature mostly moderately sized buildings, though some areas may have buildings of significant height and volume with surface or structured parking. Office areas are often built in campus setting with more landscaping and aesthetic amenities such as lakes, fountains, open spaces, urban forests, and public art than land developed for retail uses.

Office Uses provide some of the most significant employment opportunities within the community. This provides a quality of life benefit to residents, giving them a larger and broader range of job options, and a fiscal benefit to the community, providing tax revenue to the City and school districts and only moderate demands on public services. The module also helps provide the City with a daytime population that shops at local businesses convenient to their place of employment.

Commercial uses should have unified architecture; well planned pedestrian connections linking buildings, parking, and amenities; buildings sited to create pedestrian spaces; and parking fields broken into smaller sizes with the use of landscape.

Community form for medium density uses is best described as enclaves. Medium Density Residential can be either urban or garden style in layout. Urban style medium density buildings have common setbacks and parallel public streets. Garden style housing sites buildings in clusters away from public streets.

Community Facilities should be sited to act as a transition between land uses that are not directly compatible. Parks within Office Park modules should serve as open space for leisure and recreational activities for both the residents and employees in the module. Floodplains, heavily-wooded areas, and other land not well-suited for development can be used to provide open space, hike & bike trails, or pedestrian

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connections.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, residential enclaves, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Office Park module:

LC1. Intensity of uses should be considered when located on the periphery of the Office Park module to minimize any negative impacts on adjacent property and to provide adequate transition of land uses.

LC2. Parking areas need to be connected to the building with pedestrian walkways. These walkways should be landscaped and signed.

LC3. Structured parking facilities must have a façade treatment that is similar and compatible with the façade of the office building.

LC4. Buildings should be planned in a manner that provides visual sight lines connecting pedestrian access and front doors.

LC5. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC6. Parks should be developed in areas to preserve existing trees, wetlands, or natural habitat. Parks should be accessible by pedestrians, bicycles, and public streets.

LC7. Public streets should be sensitive to the natural slope of the land in order to maximize views and provide ease of drainage. This is best demonstrated with proposed streets paralleling contours.

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7.15 Airport Industrial Module

The Airport Industrial module is intended to focus on the opportunities made available by Collin County Regional Airport (TKI), located on McKinney's east side. The airport is a tremendous opportunity to grow a sector of the economy that is unique to all of Collin County. The airport is designated as a reliever airport in the Dallas-Fort Worth Metroplex system. Convenient access to the airport allows people and goods to be efficiently transported throughout the country and even internationally. The module will provide opportunities for those industrial and office uses that desire convenient access to an airport.

The Airport Master Plan Update was approved by the City Council on November 2, 2004, and the FAA approved the Part 150 Noise Study effective on April 28, 2006. The Master Plan calls for a replacement runway to meet federal safety design standards, a replacement air rraffic control tower to enhance the safety of flight, and three (3) taxi lanes to accommodate the movement of aircraft.

Below are representative photographs of each specific land use type included in this module.

Collin County Regional Airport

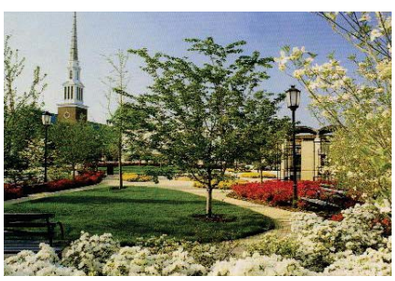
Light Industrial

Flex Office/Warehouse

Office - Regional

Retail

Lodging



Community Facilities (Park)

EXHIBIT B

Table 7.17: Airport Industrial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Airport Operations	25%	Unlimited
Light Industrial / Manufacturing	25%	Unlimited
Office - Regional	15%	Unlimited
Flex Office / Warehouse	15%	Unlimited
Retail - Neighborhood	10%	Unlimited
Lodging	5%	Unlimited
Community Facilities	5%	+ 5%
Total	100%	

Land Use

With the exception of Community Facilities, which will occupy generally between 5% and 10% of the area, the acreage percentages are intended to serve as a guide with regard to anticipated mix of land uses. It is anticipated that the development of Airport Operations, Light Industrial/Manufacturing, Flex Office/Warehouse, and Office-Regional will drive the need for retail and lodging facilities.

General notes and recommendations for land uses in the Airport Industrial module:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all industrial, office, retail, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (industrial, office, retail, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The built form of areas near the airport will include large buildings scaled toward air travel. Proposed facilities on airport property must adhere to standards that provide for safe aviation facilities, while accommodating future aviation demand. The form of the built environment for industrial uses often features large structures with large floor plates used for manufacturing, shipping, and storing materials and products. These buildings are typically of a single floor with taller than average ceiling heights.

Industrial form includes storage in covered or semi-enclosed structures. Support structures and facilities are common and provide backup electricity, reserve equipment, and maintenance systems. Shipping facilities and docks may also be required for the loading and unloading of trucks or rail cars. Facilities may be secured through fencing and screening walls, and significant lighting may be required to secure the grounds and equipment at night.

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Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City of McKinney's codes and ordinances that regulate land development and construction. This includes completion of the airport master plan. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, industrial, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Airport Industrial module:

LC1. Retail and service uses should be organized around the intersection of major roadways. This clustering of service type uses is to provide for convenient access from the airport as well as office and industrial users.

LC2. Buffers and screens are important components in industrial development patterns. They are used to minimize the adverse impacts of light, noise, and views of truck traffic, storage yards, movement of freight, and manufacturing processes. They should be used in the planning for industrial development as needed.

LC3. Where adjacent to existing residential areas, the anticipated intensity of proposed land uses should be considered in order to provide a more compatible transition between uses.

LC4. The height of structures and impact of uses (light, smoke, wildlife, etc) on the safety of airport operations should be considered.

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7.16 Industrial Module

The Industrial module provides much of the city's opportunities for manufacturing, assembly, and warehouse uses. Industrial uses are dependent on reliable transportation, and the Industrial modules are located along and near major regional access points such as US 380, the Collin County Multimodal Transportation Corridor, and Collin County Regional Airport. Some of them also have access to the existing railroad line in McKinney.

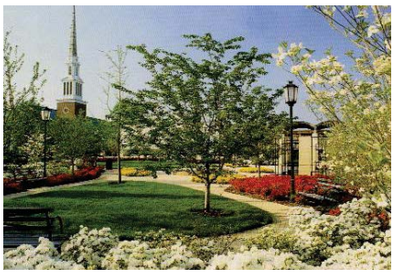
Below are representative photographs of each specific land use type included in this module.

Light Industrial

Office - Regional

Flex Office/Warehouse

Retail



Community Facilities (Park)

Table 7.18: Industrial Land Use

Land Use	Percentage of Acreage	Flexibility Factor
Light Industrial / Manufacturing	50%	Unlimited
Office - Regional	20%	+/- 10%
Flex Office / Warehouse	15%	Unlimited
Retail - Neighborhood	10%	+/- 5%
Community Facilities (Parks, etc.)	5%	+ 5%
Total	100%	

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Land Use

Light Industrial/Manufacturing comprises 50% of an Industrial module. Office Regional land uses should account for approximately 20% of the module's land. Flex Office/Warehouse is anticipated to occupy approximately 15% of the module. Retail completes the development pattern with 10% land use. All the above noted percentages are without any potential flexibility factor. It should be noted that the light industrial, office and flex space are anticipated to dictate the amount of support type uses. To some degree the market will also dictate the location of the uses if in keeping with the overall development pattern. Community Facilities, such as park should make up approximately 5% of the module.

The module provides for a combination of uses that support industrial activities. Office uses provide the administrative and management support industrial activities need and are often desirable in close proximity to them. Retail uses within the module provide convenient goods and services to those employed in the industries and office. Industrial uses serve as economic generators within the local economy. The added value is captured within the local economy, multiplying into office jobs, retail goods and services, and residential investment.

General notes and recommendations for land uses in Industrial modules:

1. The proposed land uses in this module are calculated using gross acreage minus the 100-year floodplain.
2. A flexibility factor with (plus/minus) can go upward or downward, a + (plus) can only go up, and a - (minus) can only go downward from the recommended percentages while corresponding changes in other categories.
3. The flexibility factors for all industrial, office, retail, and community facilities allow land use transfer between all categories.
4. Flexibility factors for land use types that are labeled unlimited offers the greatest opportunity for modifications. The only stipulation is that commercial land uses (industrial, office, retail, etc) replace other commercial uses as a switch.
5. The locational criteria defines the physical parameters of how different land uses and their elements come together to shape a neighborhood or commercial development. They should be followed as development plans are prepared in McKinney.

Community Form

The form of the built environment for industrial uses often features large structures with large floor plates used for manufacturing, shipping, and storing materials and products. These buildings are typically of a single floor with taller than average ceiling heights.

Industrial form includes storage in covered or semi-enclosed structures. Support structures and facilities are common and provide backup electricity, reserve equipment, and maintenance systems. Shipping facilities and docks are frequently required for the loading and unloading of trucks or rail cars. Facilities may be secured through fencing and screening walls, and significant lighting may be required to secure the grounds and equipment at night.

Locational Criteria

Each module defines a set of locational criteria for the components that comprise that set of land uses. The locational criteria are recommendations for siting these specific land uses together. This list of criteria is further developed and defined in the City

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of McKinney's codes and ordinances that regulate land development and construction. The goal of the locational criteria is to achieve high-quality employment areas, commercial villages, and civic centers while responding sensitively to the natural environment and North Texas ecosystem.

The following criteria are for the Industrial module:

LC1. The impact of potential industrial uses on adjacent existing residential uses and environmentally sensitive areas should be considered when determining the appropriate intensity of uses for particular areas.

LC2. Buffers and screens are important components in industrial development patterns. They are used to minimize the adverse impacts of light, noise, and views of truck traffic, storage yards, movement of freight, and manufacturing processes. They should be used in the planning for industrial development as needed.

LC3. Transportation networks should be well planned to ensure adequate/appropriate levels of service.

LC4. Public facilities can be planned as an amenity for this module. These areas can be the focus for planning and site organization. This planning will allow pedestrian linkages to and from public facilities and the adjacent development.

LC5. Open space should be used as an amenity for surrounding development. Many times, the open space takes the form of a floodplain, wetlands, or stands of existing trees. This integration can occur in many ways. A common method is to have a road front the open space providing a public view, access or "front-door" to the amenity.

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Section 8: Transportation

A community's land use pattern and transportation system interacts constantly with one another in that different types of land uses have different transportation needs; for example, single-family residential uses require local and collector streets to accommodate low speeds and low traffic, while commercial uses require arterial streets for handling major traffic volumes caused by shoppers. Conversely, the transportation system may have an impact upon the types of land uses that predominate in a particular land use module; for example, rail and interstate access can be important for industrial uses.

This section of the McKinney Comprehensive Plan serves to define a future thoroughfare system that is consistent with the City of McKinney's long range land use plans. Population and employment projections from the Land Use element were the basis for modeling future transportation demand. The thoroughfare plan defines a hierarchy of roadway functions providing a balance between mobility and access. The Thoroughfare Plan describes the general location, type and functional classification for thoroughfares within McKinney. This Plan serves as a general guide for long range growth of the City's future roadway network. The Thoroughfare Plan is implemented primarily through a series of capital improvement programs, land owner agreements, and developer-constructed roads over many years. Due to increasing traffic congestion within Collin County, continued high-quality growth of McKinney will be dependent upon the implementation of the Thoroughfare Plan and, with other multi-modal transportation systems. McKinney and other cities in Collin County will need to plan and construct additional multi-modal systems (light rail, commuter rail, bicycle lanes, pedestrian trails, buses, etc.) to support the growth as the area matures.

The thoroughfare plan describes the general location, type and functional classification for thoroughfares within McKinney.

8.1 Function and Benefits of Thoroughfare Planning

An important purpose of the McKinney Thoroughfare Plan is to provide a long-range vision to assist in thoroughfare facility implementation. The Thoroughfare Plan has been developed to support the Future Land Use Plan by identifying a system of roadway corridors to move both people and goods.

The major benefits provided by the McKinney Thoroughfare Plan include:

- Identifying right-of-way (ROW) needs in advance of new development or as it occurs;
- Identifying roadways that will accommodate traffic from adjacent land use patterns;
- Limiting the potential for high traffic volumes on neighborhood streets;
- Anticipating when funds must be programmed for needed roadway improvements; and
- Reducing the potential negative effects due to increased traffic congestion.

Thoroughfare Plan and Growth

The aim of the Thoroughfare Plan is to help guide the development of the community's roadway system in a manner consistent with managing traffic demands, accommodating growth estimates of the City, and supporting transportation policies. Proper transportation planning can assist in ensuring that limited transportation funds are utilized efficiently and effectively. As such, this Thoroughfare Plan will help identify capital street improvements needed as traffic demands increase. For the transpor-

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tation system to keep pace with increasing traffic demands, a capital improvement strategy needs to be developed from the City's Thoroughfare Plan. The location of present and future residential, commercial, and industrial enterprises affects major street and highway locations and their carrying capacity. Conversely, the location of major streets and highways within the urban area will influence the urban development pattern. The Comprehensive Plan has taken into account the relationship between land uses and thoroughfares as an important component in community form.

An effective thoroughfare plan includes five (5) framework elements:

1. A long-range plan that addresses increased travel demand and projected growth.
2. A process to perform traffic impact analyses of new developments.
3. Implementation of access management, transportation system management (TSM), and travel demand management (TDM) programs.
4. Coordination with county, regional (North Central Texas Council of Governments (NCTCOG)), and state (Texas Department of Transportation (TxDOT), North Texas Tollway Authority (NTTA)) planning programs.
5. A flexible plan with a process in place for updating/revising the plan as conditions warrant.

Access management is the combination of physical techniques and transportation policies that control the flow of traffic between roads and surrounding lands.

Traffic Impact Analysis Process

It is recommended that the City establish a process that helps the community understand the demands and impacts placed on the community's transportation network from development. This will allow the City to better estimate future traffic demands and related roadway improvements. This process is accomplished by the preparation of traffic impact analyses.

There are two types of traffic impact analyses conducted that support development processes. The first is a traffic impact analysis that assesses the effects a particular development's traffic will have on the transportation network resulting from a change in land use different from the Future Land Use Plan. The second type assesses the specific site and roadway improvements needed resulting from a proposed development. These studies are important in assisting public agencies in making land use decisions. These studies can be used to help evaluate whether the development is appropriate for a site; ensures adequate access is available for the proposed development; that sufficient roadway capacity exists to accommodate it; and what type of transportation improvements may be necessary.

Access Management

Access management is the combination of physical techniques and transportation policies that control the flow of traffic between roads and surrounding lands. Several common physical techniques for this are limiting the number of curb cuts into a private development, organizing the curb cuts into private development with others as a planned system, and using separate access lanes to access several smaller developments. The policies of access management include: regulating the number of driveways and median openings along a transportation corridor, encouraging shared access driveways between businesses, and incorporating street design standards that facilitate traffic flow.

This process protects the public investment in roadways and the need to move traffic through the City and not have congestion points. In addition, access management balances the desire for access to private property with the mobility needs of the community.

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Transportation System Management (TSM)

Transportation system management strategies help to alleviate traffic congestion by increasing the efficiency, safety, or flow of traffic on a community's existing transportation facilities. TSM can provide a viable alternative to costly reconstruction or road widening projects. These strategies can optimize the performance of the City's transportation network without adding new infrastructure that is often much more expensive and can be disruptive during construction.

Added capacity is gained through TSM measures such as high occupancy vehicle (HOV) lanes, intelligent transportation systems, facility design and modification, access management techniques, traffic signal timing changes and phasing, sidewalk widening, and other operation-oriented strategies. Other strategies, such as traffic calming and safety measures, support livability more than just TSM.

Travel Demand Management (TDM)

Travel demand management strategies are complementary to TSM strategies. TDM strategies help alleviate automobile traffic demand through ridesharing, peak-period spreading (flexible work schedules, staggered work hours, or compressed work weeks), enhanced transit and paratransit use, and parking management programs. TDM strategies are policy related components that assist in transportation management. An example of this for the future would be if the employees of Corporation A in McKinney were working off peak schedules, say 7:00 am to 4:00 pm. This would create a reduced demand in McKinney at the peak travel times nearest 8:00 am and 5:00 pm.

Project Planning Coordination

As the adjacent regional transportation facilities develop and grow around and within the City of McKinney, it is imperative that the City takes an active role in the planning and design of these TxDOT, NTTA, and other public and private roadway projects to ensure that these facilities are coordinated with planned City roadways. These roads include: US 75, US 380, SH 5, SH 121, FM 720, FM 1461, and others. The City also needs to coordinate roadway improvements with Collin County, NCTCOG, and surrounding municipalities. It is recommended that the City explore and consider incorporating multi-modal systems that provide alternative modes of travel to the private automobile. The process of adding capacity to existing roadways can be limited and a financial burden to the community. Alternative modes of travel will enhance the livability of the community by providing additional transportation choices and offer additional means of travel that can not be added to the existing roadway system.

Plan Update

The City of McKinney's Thoroughfare Plan should be flexible and should be reviewed on a yearly basis to incorporate changes in local conditions. The flexibility of the Plan is illustrated via the conceptual alignments of future roadways. The Plan indicates a generalized location for roads that will require additional site analysis and design. The plan is a guide that will indicate the appropriate combination of roadway capacity and property access needed to provide a balance between public mobility and neighborhood integrity in each sector of the City. In developed sections of the City, the Thoroughfare Plan provides guidance for upgrading and or protecting the integrity and character of existing thoroughfares and neighborhoods.

The McKinney Thoroughfare Plan is a guide that will indicate the appropriate combination of roadway capacity and property access needed to provide a balance between public mobility and neighborhood integrity in each sector of the City.

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8.2 Thoroughfare Plan Development

The development and application of a functional street classification system and a travel demand forecasting model are two components in the development of the Thoroughfare Plan. Functional street classifications define the role of each major thoroughfare and reflect a set of characteristics that are common to all roadways within each classification. The travel forecasting model assists in evaluating future roadway capacity and functional requirements by providing future travel forecasts for the local and adjacent regional transportation network. The development of this model enables a plan to be developed that can move projected traffic demands.

Functional Classification System

McKinney's existing and future roadway system can be divided into a system called functional classifications. Functional classification is the grouping of highways, roads and streets by the character of service they provide and was developed for transportation planning purposes. Basic to this process is the understanding that individual routes do not serve travel singularly. Rather, most vehicular travel involves movement through a network of roads. This network of roads is driven by the residents of McKinney every day. Comprehensive transportation planning uses functional classification to determine how travel can be channelized within the network in a logical and efficient manner. Functional classification defines the part that any particular route should play in serving the flow of trips through a network.

The classic transportation chart (Figure 8.1) graphically depicts the relationship between the hierarchical functional classifications and the balance between access and mobility.

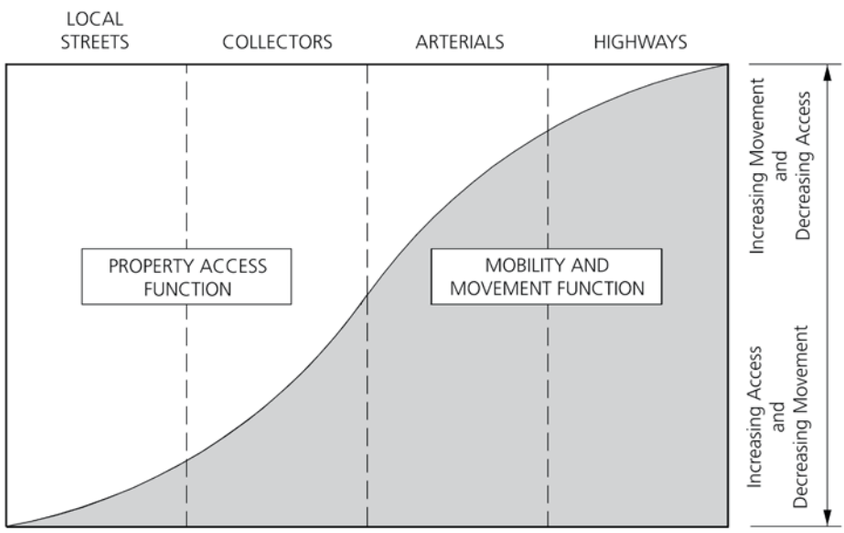

Figure 8.1: Functional Classification Model

The roadway system within McKinney can be divided into four (4) general classifications. They are as follows:

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Local Streets

The local street is intended for low volume, low speed traffic movements. They provide access to residential lots and buildings sites. These streets should be arranged to discourage most through-traffic, except traffic that is directly related to the area. Because the streets are characterized by low volume, low speed traffic, they have narrower pavement widths consisting of two moving lanes.

For many years McKinney has been cognizant of the need to plan for local street systems within residential developments. Through past planning efforts, a network of residential streets is being developed to provide form and structure to neighborhood areas. Most streets in older sections of the City have varying right-of-way and pavement widths. The narrow paving widths found for many of these streets near the center of the City reflect the space needed at that time for vehicular travel when the subdivisions were platted.

Local streets that link and connect different subdivisions need to be direct and logical in alignment. Sometimes, a local street system will evolve which requires travel onto a major arterial to gain access to a subdivision within the same neighborhood. Consideration for continuity between subdivisions is particularly important when evaluating school-age children's needs for reaching school or park facilities within their neighborhood.

Local streets in McKinney

Collector Streets

A collector street's primary function is to collect and distribute traffic from local access streets to the arterial or major streets. These streets move moderate amounts of traffic volumes and provide limited access to adjacent properties. Collectors supplement the arterial system and should not be continuous for long distances. The collector street is usually located in a manner to discourage through-traffic movements. This is accomplished by the disruption of traffic flow by offsetting intersections and by incorporating curvilinear design.

Although not shown on the City of McKinney Thoroughfare Plan, collector streets are a critical component of the thoroughfare network. A well-designed system of collector streets can prevent potential problems on residential streets such as overly high traffic volumes and excessive speeds. Given the typical spacing of arterial streets (generally one (1) mile), a system of north/south and east/west collector streets could be provided midblock between arterials. These streets should not be continuous between arterials, as they would then be used for "cut-through" travel patterns.

Collector street in McKinney

The locations of collectors should be established as development plans, general development plans and preliminary plats are being prepared. The collectors should frame the edges of distinct neighborhoods. Houses should not front these collectors and instead should generally back to them. Additional collectors should be provided as necessary to distribute traffic throughout the neighborhood.

Arterial Streets

The greatest number of roads in the McKinney system is made of arterial streets. The main function of arterials is to provide for continuity and high traffic volume movement between major activity centers (employment and commercial centers, etc.) Property access is a medium level priority with an emphasis on limiting the location of driveways and groups of curb cuts that access this thoroughfare type. Arterials are usually divided to provide space for future left turn or through-lanes once traffic conditions are warranted. Hence, some arterials will contain four travel lanes, two

Arterial street in McKinney

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in each direction, and others will contain six travel lanes, three in each direction.

Arterial street in McKinney

Strategic Regional Arterial

A Strategic Regional Arterial (SRA) is a facility with operational characteristics between those of freeways and other arterials. SRAs offer the characteristics associated with expressways, such as grade separations at arterial intersections and speed limits of 50 miles-per-hour, but usually require much less right-of-way. Since one of the primary goals of building an SRA is to increase vehicular movements in a corridor, traffic signals, and other control devices that contribute to delay should be minimized, but when necessary, should be spaced such that the impacts on through traffic movements are kept to a minimum. SRAs are typically spaced no closer than 3 to 5 miles apart and they should not penetrate residential neighborhoods. An SRA is generally recommended in corridors characterized by high through-traffic volumes or those which service land uses of regional significance such as large office complexes and shopping malls. SRAs provide the high-level of capacity roadway needed without the freeway's regional components such as frontage roads, access ramps, and state controls. This high capacity roadway can be a highly valued element for McKinney and its goals for increased economic development.

Tollways

SH 121 (Sam Rayburn Tollway) in Collin and Denton Counties is a 6-lane toll road which passes through the cities of McKinney, Allen, Plano, Frisco, The Colony, Carrollton, Lewisville, and Coppell. The SH 121 project in Collin County extends from US 75 to the Dallas North Tollway (DNT). The Sam Rayburn Tollway features all-electronic toll collection.

US 75 in McKinney

Freeways and Major Regional Highways

Freeways and regional highways are high capacity facilities intended to carry high volumes of longer distance trips and are a regional supplement to the arterial system. They usually consist of limited or highly controlled access. These highways are under the jurisdiction of regional, state, or federal agencies. However, the City does have input regarding how these agencies design future improvements to these facilities.

The state and federal highway system served as the initial structuring element for the City's Thoroughfare Plan. Among these highway facilities are SH 121, US 75, US 380 and SH 5. Each facility provides McKinney linkage to other cities in the region, and each handles significant volumes of traffic.

Base Information

The City of McKinney's existing roadway system consists of two distinct city-wide functional systems: the regional highway network and the local arterial roadway network. The regional highway network is served by four different highways located within the McKinney extraterritorial jurisdiction (ETJ). These highways are SH 121, US 75, US 380 and SH 5. US 75 is currently a four-lane rural freeway with parallel frontage roads that runs north-south through the center of McKinney's ETJ. SH 121 is a six-lane divided tollway running east/west along the southern edge of the City. SH 121 continues along US 75 and then splits to the northeast from US 75 just north of the City's northern ETJ border. After the split, SH 121 becomes a two-lane state highway. US 380 is a six and four lane, two-way thoroughfare that runs east-west through the center of City's ETJ. US 380 provides a critical highway link between McKinney and the Denton urban area. Multiple signalized intersections are located along this facility. SH 5 is a four lane, two-way thoroughfare that runs north-south

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through the McKinney's ETJ. SH 5 runs along the east side of downtown McKinney and contains multiple signalized intersections. This facility has varying characteristics such that it functions as a principle arterial in some segments and a minor arterial in others.

The local arterial roadway network provides for vehicular movement within the City. The roadway arterial's right-of-way widths vary according to location and is anywhere between 85 and 130 feet. Several of the north/south arterials are characterized by the 130 foot right-of-way cross section referred to as the greenway arterial. This greenway arterial provides an aesthetic 44-foot landscaped median. Heavy north/south movements are provided by Custer Road, Stonebridge Drive, Ridge Road, Lake Forest Drive, and Hardin Boulevard. Major east/west movements are accommodated by McKinney Ranch Parkway, Eldorado Parkway, Virginia Parkway, and Wilmeth Road.

Heavy congestion currently occurs on McKinney's highways, particularly US 380 and SH 121. The average daily traffic (ADT) demand on US 380 east of US 75 is roughly 37,000 ADT. US 380 west of US 75 sees an approximate demand of 51,000 ADT. Average daily traffic on SH 121 east of US 75 has a demand of approximately 47,000 ADT. US 380 congestion is due to high retail and employment land uses along its corridor, while SH 121 is congested due to an increase in regional traffic resulting from neighboring developments. The interchanges along US 75 are areas of high congestion because they are points of access to the arterial systems for the 124,000 ADT using US 75 south of Eldorado Parkway. Several arterials within McKinney are also experiencing congestion during peak hours. These include Eldorado Parkway and Virginia Parkway.

Year 2030 traffic forecasts were developed for the major thoroughfares in McKinney. These traffic forecasts were based on the projected changes in employment and population described in this Comprehensive Plan.

Travel Demand Forecasting Model

To support the City of McKinney's Thoroughfare Plan development, year 2030 traffic forecasts were developed for the major thoroughfares in McKinney. These traffic forecasts were based on the projected changes in employment and population described in this Comprehensive Plan. Because past records of traffic growth rates are not sensitive to shifting distributions of population and employment, the only valid method for considering changes in future travel patterns is a travel demand-forecasting model. This travel demand model requires subdividing the entire area into traffic analysis zones, and then population and employment projections are allocated to these zones. This allocation produces traffic volume forecasts on roadway segments. The McKinney traffic forecasting model was developed using the TransCAD (version 4.5) travel demand forecasting system.

Zone Structure

The amount and type of vehicle travel is dependent on the land use input into the transportation forecasting model. Traffic survey zones (TSZ) are the land use analysis units of the model. All the land use data is incorporated into zones that vary in size from a few city blocks in the urban area to several miles in the rural area. Zones are combinations of either Census blocks or block groups. Zonal boundaries consist of major roadway thoroughfares and other natural or manmade dividers, such as streams and railroads, which limit the amount of crossings available for vehicles to use. The land use is described in terms of type, intensity and location. This data is used to estimate the number of trips that a typical household or business employee will produce and attract from/to each TSZ. Land use data is developed for the base year (2000), a mid-year (2030), and build-out with no definition of time (year).

McKinney's TSZs were developed based on Census block group geography re-

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ceived from the NCTCOG. For the McKinney model, the NCTCOG's TSZs were divided into smaller zones by arterial roadway locations and land use groupings. NCTCOG's TSZ data is developed for the regional area model and therefore, is generally too broad in scope for local city models. The demographic data contains such information as the number of households and basic, retail, and service employment levels that are currently contained within the TSZs. For the base year, each TSZ was coded with existing demographic data. The demographic data was determined through aerial photographs and City databases.

Building Existing Network

In developing a simulated transportation network for modeling, the roadway system is represented by a series of nodes and links. A node is the conceptual point along a roadway segment that traffic enters or exits the system. Links are the conceptual road alignment. Many links can make-up a local street. This representation is an attempt to quantify the street system for use in the traffic forecasting model. Inherent in the modeling effort is a simplification of the actual system of streets. For the McKinney model, highways, arterials, and major thoroughfares were identified through the City's Geographic Information System (GIS) database. This GIS data was loaded into the TransCAD software and coded for each roadway's existing characteristics. Data used in the model includes speed limits, number of lanes, and vehicle capacity available per lane.

Trip Generation

Trip generation is the procedure by which the amount of travel generated within each TSZ is estimated. Travel is estimated in the form of trip productions and trip attractions, and each is calculated by applying trip production and attraction rates to the land-use data variables in each TSZ. Typically, a trip production is associated with the home end of the trip (e.g., based upon the location of the household), while trip attractions are associated with the non-home end of the trip (based upon the location of employment).

Trip productions and attractions were estimated for four (4) different trip purposes: home-based work, home-based non-work, non-home-based, and other trips. These four types of trips are the majority of automobile trips produced in McKinney. The trip generation rates in the McKinney model are based on rates developed by the NCTCOG. Trip productions are stratified by household size and area type. Trip generation has been performed for the 2000 validation, 2030 mid-year, and the build-out time frame.

Trip Distribution

Trip distribution is the process by which the resulting trip productions and attractions are linked together to create travel flows between TSZs. Both the NCTCOG regional model and the McKinney subarea model are based on the mathematical relationship for the physical law of gravity. In fact, this type of distribution model is commonly called a gravity model. The gravity model distributes trips based upon the relative attractiveness of each zone and inversely to the distance between each zone. The trip distribution model has been calibrated based on the interzonal travel times from the 2000 simulation network and the use of nationally accepted gravity model friction factors. Trip distribution has been estimated for each of the four trip purposes in the model. The interzonal travel times from the 2030 network and the 2030 trip generation production and attractions have been used to develop 2030 vehicle trip tables by purpose.

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Traffic Assignment

The vehicle trip tables were then assigned to the simulation network. The assignment process accumulates the vehicle trips on each network link based upon the travel path taken for each origin-destination zone pair. Volume-delay algorithms consider the effect that roadway congestion has on the network links selected to complete the trip. For the base year 2000 validation, the model-estimated volumes from the network simulation were compared to the observed traffic counts for selected screenline locations.

Calibration and Validation

Model calibration and validation are regarded as the final stage to investigate if each model component adequately reproduces observed travel characteristics. This determines if the overall performance of the model is reasonable and matches the existing real base data. Calibration is the process of identifying the appropriate parameters for each stage of model development. Validation is a required step that ensures that the traffic forecasting model contains acceptable error margins and that it provides traffic volume estimates that are reasonably close to actual vehicle counts at specific locations. Once the validation of the 2000 travel demand model to the observed conditions was producing acceptable results, the year 2030 land use and network data were used to prepare 2030 highway assignments. The 2030 assignment results were prepared and analyzed to test different thoroughfare plan concepts and provide information in the development of the final recommended plan. Build-out results were also developed for the complete roadway network.

Volume-to-Capacity Analysis

The projected daily traffic volumes were compared to the vehicular carrying capacities of each roadway. This volume-to-capacity (V/C) ratio is used to determine the level of congestion on a roadway over a twenty-four hour period.

The V/C ratio is translated into a level of service (LOS) indicator for purposes of interpretation. The LOS indicators are A, B, C, D, E and F; where "A" is free-flow conditions with no congestion, and "F" is heavily congested. This assessment allows communities to "grade" their traffic networks. Most communities plan for a LOS of no better than "D". In previous Thoroughfare Plan updates, McKinney used a policy of LOS "C" or better, but no worse than "D".

The transportation model for the McKinney Comprehensive Plan of 2004 is based on the LOS of "D" or better. This LOS is commonly used by Metroplex cities, particularly the high growth cities of Collin County. This was done to balance community desires regarding, movement, impact on neighborhoods, cost, etc.

The Master Thoroughfare Plan set forth herein is the updated plan; it is accurate for areas currently under development pressures and areas within the City of McKinney's ETJ.

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8.3 Master Thoroughfare Plan

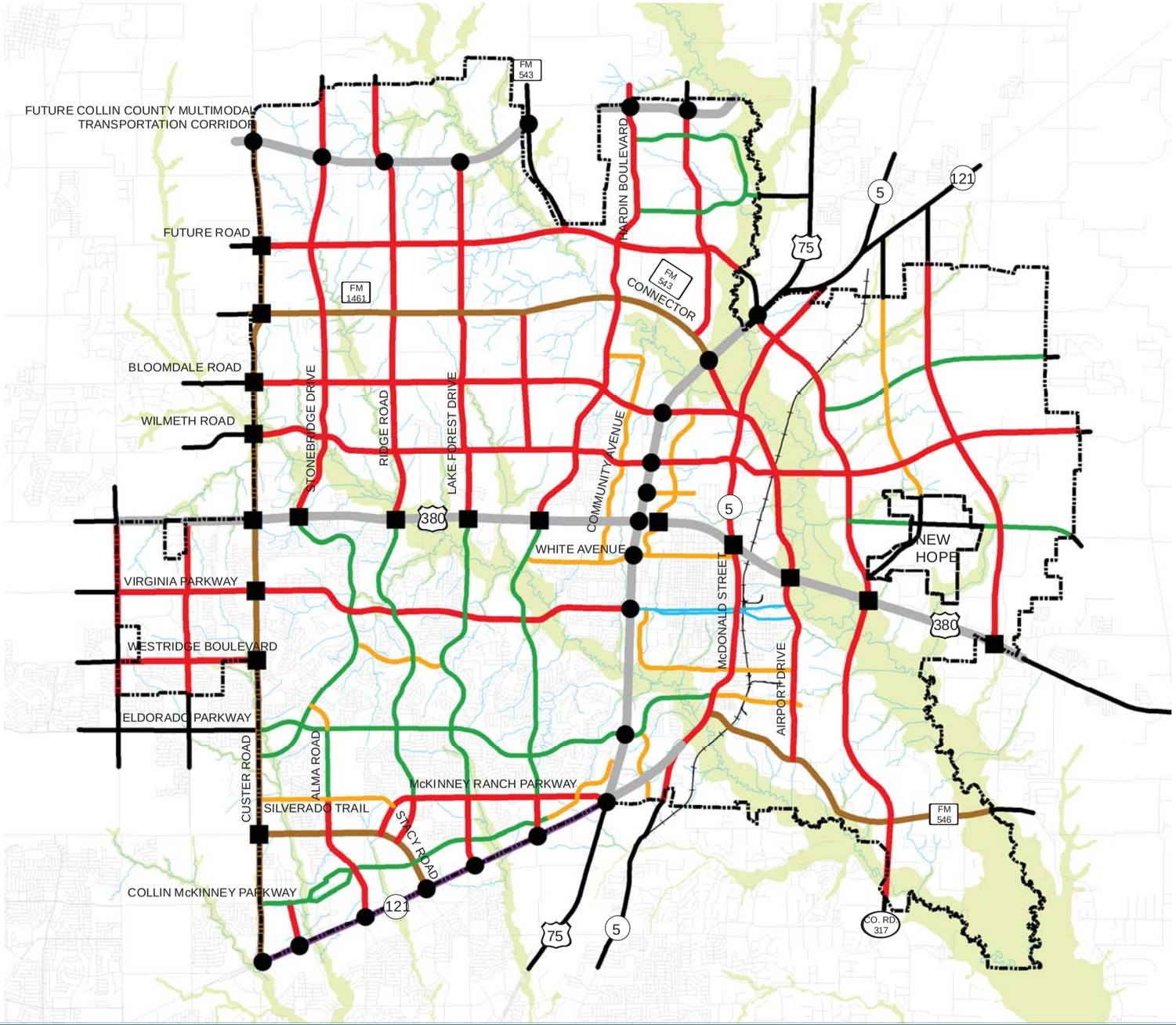
The Master Thoroughfare Plan (MTP) defines the network of future roads identified to handle the various levels of vehicular traffic. This document is a framework to plan and organize related land uses. The MTP set forth herein is the updated Plan; it is accurate for areas currently under development pressures and areas within the City of McKinney's ETJ.

The MTP map in Figure 8.2 illustrates the master thoroughfare system for McKinney. Completion of the system will occur over a period of time as the facilities are warranted, either as the adjacent lands develop or as may be required to accommodate special traffic movements through undeveloped sections.

The MTP provides generalized locations for thoroughfares. Alignments may shift as roads are engineered to accommodate flood plain areas and to meet sound engineering and urban planning principles. The system of thoroughfare alignments shown on the MTP have been coordinated with adjacent plans for the cities of Allen, Fairview, Prosper, Melissa, Frisco, and generally with the Collin County Thoroughfare Plan as well as with roadway plans from TxDOT and the NCTCOG.

Standards

Standards are needed to provide continuity throughout development of the thoroughfare system. Standards address a range of concerns from safety in operation to construction. The standards and criteria for all streets in McKinney are set forth in the City's Street Design Manual. The thoroughfare cross-section designs that are to be followed for future construction, as well as the roadway classifications, can be found in that manual. The following list is for informational purposes only. For a detailed description of thoroughfare design criteria, the McKinney Street Design Manual should be consulted.



CITY OF MCKINNEY

COMPREHENSIVE PLAN

MASTER THOROUGHFARE PLAN

- High Capacity at Grade Intersections
- Grade Separated Intersections
- Extraterritorial Jurisdiction (ETJ)
- Rail Lines
- Floodplain

Roadway Classifications

- Major Regional Highway / Multi-Modal
- Tollway
- Principal Arterial - 130' ROW (6 lanes)
- Major Arterial (6 lanes)
- Minor Arterial (4 lanes)
- Greenway Arterial (4 lanes)
- Town Thoroughfare
- Road By Others

* Original Adoption (Ordinance No. 2004-03-035)
* Amendment #1 (Ordinance No. 2005-10-133) Revised to reflect changes to Ridge Road and Stonebridge Drive north of Bloomdale Road.
* Amendment #2 (Ordinance No. 2010-01-001) Revised to reflect actual alignments of recently built roads, the Future Collin County Multimodal Transportation Corridor alignment, the Trinity Falls Municipal Utility District, assorted roadway classification changes, and boundary changes between McKinney, Fairview and Princeton.
* Amendment #3 (Ordinance No. 2012-11-160) Revised to reflect new Custer Rd. /Wilmeth Rd. Alignment.
* Amendment #4 (Ordinance No. 2013-07-070) Revised to reflect actual alignments of recently built roads, the Future Collin County Multimodal Transportation Corridor alignment, the Trinity Falls Municipal Utility District, Custer Rd. north of U.S. 380, Stonebridge Dr. north of U.S. 380, Hardin Blvd. north of U.S. 380, FM 546, and assorted roadway classification changes.

Source: City of McKinney GIS Department Data

16 July 2013

FIGURE 8.2

0 5,500 11,000 Feet

100 Acres

1 Square Mile

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Disclaimer: The Master Thoroughfare Plan provides generalized location for future thoroughfares. Alignments may shift as roads are engineered and designed to accomodate floodplain areas and to meet sound engineering and urban planning principles The roadway lines shown on the plan are not preceise (site specific) locations of future thoroughfares.

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Roadway Classifications

Principal Arterial, Divided ("P-6D") - Principal arterials have a minimum ROW width of 130 feet and an ultimate cross-section of six lanes. The pavement section consists of two 36-foot roadways with a 30-foot center median. The parkway area is intended to accommodate deceleration lanes into driveways and intersecting streets. There are traffic signals at all major intersections coordinated for progression during peak periods.

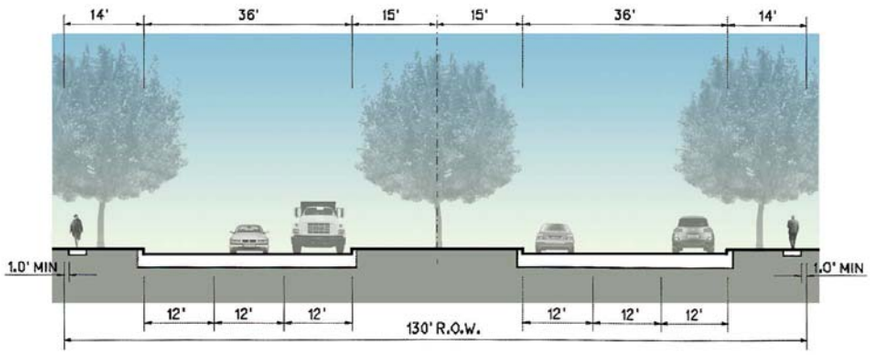

Figure 8.3: Principal Arterial Divided - Subregional

Major Arterial Divided ("M-6D") - The pavement section consists of two 36-foot wide roadways with a 20-foot center median. The standard ROW width is 120 feet, but may be increased at intersections. Median openings are spaced at significant intervals to reduce conflict between through-traffic and turning vehicles. The ultimate cross-section of a major arterial is six travel lanes.

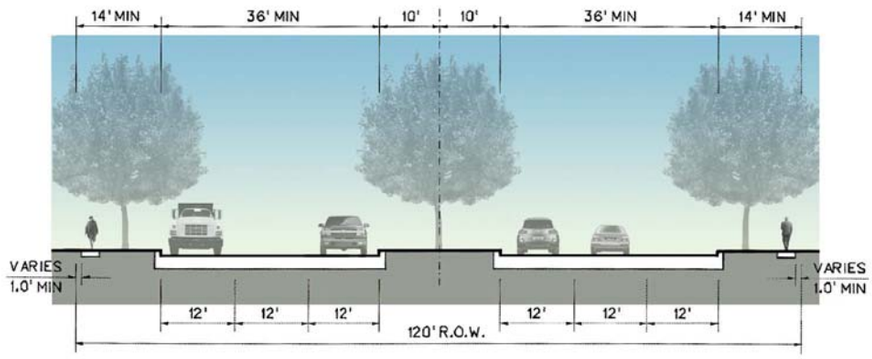

Figure 8.4: Major Arterial Divided - Local

EXHIBIT C

Greenway Arterial Divided ("G-4D") - The Greenway arterials have a minimum ROW width of 120 feet with an extra wide 44-foot center median to accommodate landscaping and street trees. The pavement section provides two 24-foot roadways separated by the extra wide landscaped median. The greenway arterial has four lanes of traffic.

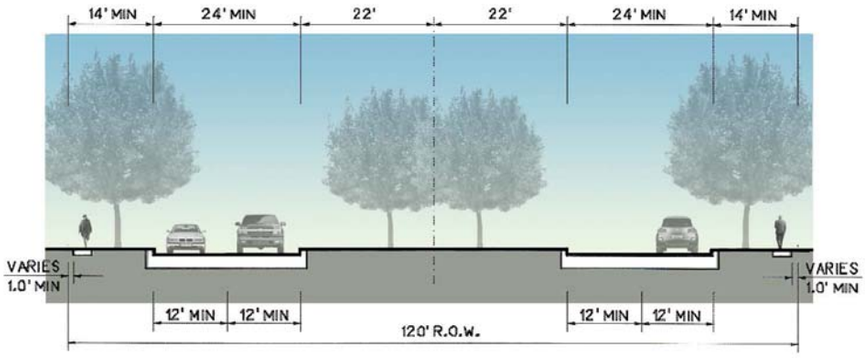

Figure 8.5: Greenway Arterial Divided

Minor Arterial Divided ("M-4D") - Minor arterials are a secondary thoroughfare used to move local traffic. They include two 24-foot wide pavement sections, divided by a 20-foot wide median. The minimum ROW is 100 feet. Minor arterials are intended to be a four-lane divided roadways.

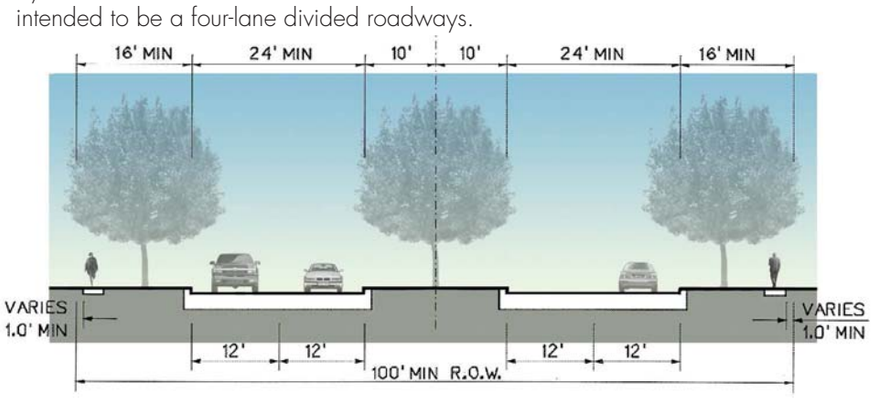

Figure 8.6: Minor Arterial Divided

Minor Arterial Undivided ("M-4D") - Minor arterials are a secondary thoroughfare used to move local traffic. Minor undivided arterials include two 22-foot wide pavement sections, with no median. The minimum ROW witdth is 80 feet.

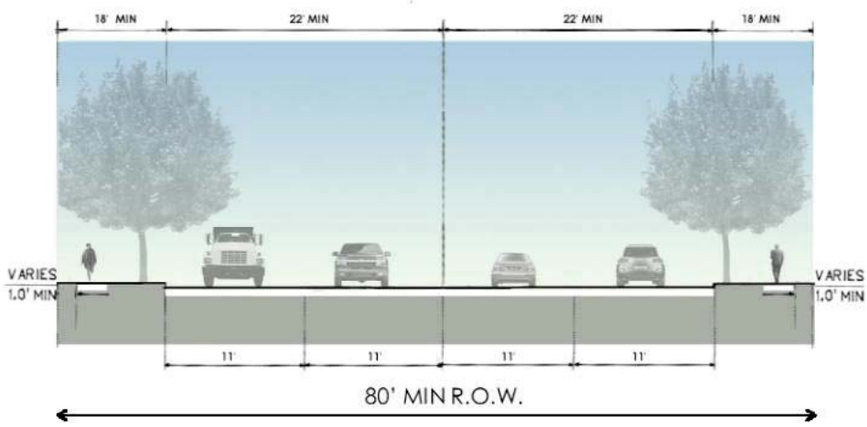

Figure 8.7: Minor Arterial Undivided

EXHIBIT C

Thoroughfare Recommendations

Freeways

Three freeway facilities are planned or existing in the McKinney ETJ. These are US 75, SH 121, and the future Collin County Multi-modal Transportation Corridor. As a regional facility, the north-south location of US 75 links the City to the center of the Dallas metropolitan area. This facility has interchanges with major east/west regional highways as well as access to the interior sections of the region. TxDOT has proposed to widen US 75 to eight lanes through McKinney, including intersection and ramp improvements as well.

SH 121 (Sam Rayburn Tollway) between US 75 and DFW Airport is a tollway maintained by the North Texas Tollway Authority (NTTA). SH 121 includes full access-controlled tollway main lanes, continuous frontage roads, and grade separated interchanges at key crossings. The communities along SH 121 have worked closely with TxDOT in planning this tollway. The ultimate tollway section from US 75 westward to DFW Airport gives McKinney significant access to all transportation nodes and major land use areas along this route. SH 121 is an important thoroughfare because its intersection with US 75 forms a primary entrance into McKinney. Therefore, urban design and landscape design considerations must be carefully evaluated for all developments along the SH 121 corridor.

The future multi-modal transportation corridor is still in the early planning stages, but a general location has been chosen in the far north section of McKinney's ETJ. This corridor will be the next limited access freeway north of SH 121 and is planned to extend from IH 35 in Denton County to IH 30 east of Dallas County. This future freeway corridor provides McKinney with an area for long term tax base development as well as increased east-west regional access.

Regional Highways

US 380 provides east/west regional access and will continue to carry high traffic volumes to and through the City. US 380 has recently been widened to accommodate this higher traffic volume. As traffic volumes continue to increase along this corridor, access management, TSM strategies, and grade separated intersections should be considered for implementation.

SH 5 traverses the central business district of the City paralleling US 75. Generally, north-south traffic destined for the center City in McKinney will use SH 5. North-south through-traffic generally stays on US 75. This facility has varying characteristics such that it functions as a principal arterial in some segments and a minor arterial in others. In late 2012, the City of McKinney (in partnership with the North Central Texas Council of Governments and Texas Department of Transportation) launched a corridor planning study for the portion of SH 5 within McKinney. The corridor planning study, know as the State Highway 5 Context Sensitive Transportaiton Study, is anticipated to be complete by 2014. Following formal approval of the State Highway 5 Context Sensitive Transportation Plan, amendments to the Comprehensive Plan may be necessary to incorporate relevant changes into the Plan.

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Arterials

The following describes many of the arterials in McKinney with future recommendations.

- Custer Road is a major north/south arterial carrying traffic continuously from western McKinney and eastern Frisco to Allen, Plano and Richardson to the south. Custer is designated as an ultimate six-lane principal arterial with 130 feet of ROW. Consideration should be given to preserve the mobility function of this facility in the future. Traffic projections show Custer carrying a significant amount of traffic attributable to the new growth planned for western McKinney.
- McKinney Ranch Parkway and Stacy Road carry east-west traffic to, from and through McKinney, connecting McKinney with Frisco to the west and Allen to the south. Stacy Road is designated as a six-lane principal arterial requiring 130 feet of ROW. McKinney Ranch Parkway is designated as a six-lane arterial with 120 feet of ROW.
- Collin McKinney Parkway is designated as a greenway arterial generally paralleling SH 121. This facility serves as the main arterial that generally bisects the Tollway Commercial module and the Urban Mix module.
- Virginia Parkway is designated as an east-west six-lane major arterial in the southwest part of the City. This facility will function to collect trafficdestined for US 75 or the McKinney central business district from the west-McKinney residential development and provide a high level of mobility.
- Stonebridge Drive is designated as a four-lane greenway arterial between US 380 and FM 720. North of US 380, it is anticipated that growth will produce the demand for this facility to be a six-lane major arterial.
- Ridge Road is a four-lane greenway arterial south of US 380, but is designated as a six-lane major arterial north of US 380.
- Lake Forest Drive is also a four-lane greenway arterial south of US 380 and a six-lane major arterial north of US 380.
- Hardin Boulevard is a four-lane greenway arterial south of US 380 and anticipated to be needed as a six-lane major arterial north of US 380.
- Eldorado Parkway is an east/west greenway arterial through the southwestern part of the City. This facility carries traffic from US 75 westward to residential areas in McKinney. However, it is also continuous with arterials in Frisco and to the west through the Colony and Little Elm. This roadway eventually connects to IH 35E via the Lewisville Lake Toll Bridge (opened in August 2009).
- Bloomdale Road is designated as a six-lane major arterial carrying east-west traffic across the northwest part of McKinney.
- Wilmeth Road is proposed to be a six-lane major arterial carrying east-west traffic parallel to and north of US 380.
- FM 546 is proposed to be a six-lane principal arterial carrying east-west traffic parallel to the southern ETJ boundary and to the south of the Collin County Regional Airport.
- FM 1461 and the FM 543 connector are designated as an east-west six-lane principal arterial in the northwest part of the City.

It is recommended that one of the east/west arterials (north of US 380 and west of US 75) be considered for special design treatments to facilitate higher vehicular capacities and speeds. This is in order to meet the anticipated travel demands attributable to the area's economic development and planned growth. One of the north/south arterials also in the northwest part of the City should be considered for these special design treatments to facilitate higher vehicular capacities and speeds.

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8.4 Traffic Related Design Details

Traffic related design and thoroughfare planning is the continual analysis of factors affecting the flow of traffic. Intersection design and traffic signal timing are as important to a street's capacity abilities as the number of lanes available. Through traffic volume and impact analysis, intersections can be designed to accommodate smooth traffic flow by indicating a need for free right turn movements or dual left turn lanes. Access between the thoroughfare and adjacent private property is important, particularly at intersections. This concern often indicates a need for an access ordinance with appropriate design standards.

Often, through improved intersection design, signal timing, or signage, safety at accident prone locations can be significantly improved. Points of high volume movement of through or turning traffic should be recorded and periodic study made of conditions to ascertain that all the identifiable features are being handled correctly.

Coordination between trail systems within the parks and greenbelts with pavement space on the road for bicycle use is an important element in the design of future thoroughfares. Allocation of space for bicycle use in the arterial system requires greater pavement width for those facilities where this use will occur; therefore, the bike system must be planned as accurately as possible to ensure that space and safety measures are incorporated into the initial roadway design and construction.

Medians

Medians provide a separation of travel lanes and a location for beautification. Numerous factors are involved in the design of medians. An important factor is the distance between median openings that allow for turning movements. The Street Design Manual allows for openings to be created at intersections with dedicated streets as well as at limited mid-block locations. The purpose of limiting the number of mid-block openings is to ensure safe, efficient traffic movements and to maintain the appropriate level of service along major thoroughfares by reducing the conflict between through-traffic and turning vehicles. The optimum spacing of median openings is defined in the McKinney Street Design Manual.

Intersections

The capacity of a major street is significantly influenced by the design and operation of signalized intersections. Number of lanes, sequence of movements, and signal timing each affect the number of vehicles which can be handled by an intersection of two major thoroughfares. The Street Design Manual provides for a right turn lane exclusive of the through-lanes. When volumes can be projected by traffic studies or can be anticipated to be greater than the volume which can be managed for a standard intersection design, right-of-way provisions should be made to accommodate a greater number of lanes.

The illustrations in the Street Design Manual show intersection designs for various sizes of thoroughfares that recognize the need for mandatory right turn lanes as well as a high number of left turn lanes. An important feature of the Manual is that the right turn lanes are given deceleration space in advance of the intersection and acceleration space for traffic leaving the intersection after the right turn. Another important feature of the manual is the dual left turn. This feature has the advantage of moving vehicles through the intersection in pairs, thus significantly improving the efficiency of operation. Vehicular storage for waiting vehicles in dual left turn lanes is doubled as compared to a conventional left turn lane.

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Grade Separations

Grade separations currently exist on US 75 and along SH 121. While the future Collin County Multi-modal Transportation Corridor is still in early planning stages, it is anticipated that it will eventually be constructed as a limited access freeway with grade separated intersections.

Other grade separations may be required as the City's urban area expands and the traffic demand at various thoroughfare intersections increases. Some cities choose to preserve the option of implementing arterial grade separations where it is anticipated that a significant amount of crossing traffic will occur. While not always immediately popular to consider, preserving the option for future generations provides additional solutions to solve future transportation problems. Where this type of intersection will not work, the crossing of two major thoroughfares should be given specific attention to reduce intersection delay and congestion, both of which contribute to poor air quality.

The City will use the Trans Plan transportation model to develop and test future development options. This will help in the understanding of need for high-capacity intersections and other elements. The City will use this model to coordinate better with NCTCOG over future projections and demand figures. Using this information, appropriate right-of-way can be acquired as development occurs.

In order to determine where such grade separations may possibly be needed, traffic demands can be analyzed using the Dallas-Fort Worth Regional Travel Model developed by NCTCOG or the new City of McKinney travel demand model. Travel models examine the relationship of land uses to the capacity of the thoroughfares. The data provided from a model provides a wealth of detailed information regarding future volume and capacity.

8.5 Other Transportation Modes

Means of transportation other than motor vehicles influence the City's development and will continue to impact future development. Some modes of transportation will relate either to personal needs or to needs for business services. As the city's urban area continues to gain population, new and expanded transportation services will be created or enhanced to meet the demands. Among these are the following:

Air Transportation

McKinney has operated a municipal airport for several years, but in recent years the importance of this facility has become increasingly greater to the City's service and economic base. The Collin County Regional Airport completed its Master Plan update in November 2004. The Master Plan focused on safety, security, and operational efficiencies.

The airport is one of five general aviation facilities located in the north Dallas County and Collin County area and is second in annual operations to the Addison Municipal Airport. An Airport Master Plan update and Environmental Assessment were completed in 1988, which set forth projections for the McKinney facility. The 7,000-foot runway permits the municipal airport to accommodate aircraft larger than those handled by a utility airport. As airspace becomes more congested for airports interior to the region, use of the airport can be expected to increase and be coupled with growth from personal and business operations conducted from the airport.

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NCTCOG prepared a study in 1984 which examined airport facilities for the DFW region. Anticipated updating of data in this study will make available information on both conventional airport facilities, as well as heliport. The 1984 study recommended heliports for the Dallas and Fort Worth central city areas, a mid-cities location, and a north Dallas facility but none in the vicinity of McKinney or southern Collin County.

To maintain input from communities, NCTCOG has an Air Transportation Advisory Committee, which has existed since the mid-seventies. This Committee provides technical assistance to staff in maintenance of the 1984 Plan other aviation needs and serves as a technical advisor to the Regional Transportation Council.

On-Street Bicycling

The On-Street Bicycling section has been created to serve as a link between the On-Strret Bicycle Transportation Master Plan and the Transportation Element of the Comprehensive Plan. The On-Street Bicycle Transportation Master Plan (Bicycle Master Plan) was adopted in 2012 and provides the City of McKinney with a policy framework which is needed for the implementation of networks, facilities, projects, and programs related to a safe and successful on-street bicycle network.

The Bicycle Master Plan sets forth the existing bicycling conditions within the City of McKinney, lays out the preferred network, facility types, wayfinding, routes and

Public Transit

Presently, bus service is the only form of public transportation between McKinney and other sections of the region. Prior to April 2013, bus service was provided within the City by Collin County Area Rural Transit (CCART) in the form of on-call/on-demand service and two fixed bus routes. In April 2013, City Council designated Texoma Area Paratransit Service (TAPS) as the provider of bus service within the City.

A Transit Needs Assessment and Planning Study for Collin County is presently underway by the North Central Texas Council of Governments to determine current and future transit needs for Collin County. The City of McKinney has participated as a stakeholder in this study process. It can be expected that, as population increases and other that impact private vehicular travel occur, the need and service of mass transportation will be met

After the 2000 Census, the City of McKinney was designated by the US Census Bureau as an Urbanized Area and began receiving urban transportation funds allocated by the Federal Transit Administration (FTA). Prior to April 2013, these funds were designated to CCART, as the designated-recipient, on an annual basis to help provide on-call/on-demand service and fixed bus route service. As of April 2013, TAPS is now the designated-recipient of these FTA funds.

Future public transportation service may be provided by Dallas Area Rapid Transit (DART). Currently, DART serves Dallas and 12 surrounding cities with more than 12,500 bus stops, 85 miles of light rail transit (LRT), 75 miles of HOV lanes, and paratransit service for the mobility impaired. DART and the Fort Worth Transportation Authority (the T) jointly operate 35 miles of commuter rail transit (the Trinity Railway Express or TRE), linking downtown Dallas and Fort Worth with stops throughout the mid-cities and DFW Airport.

DART light rail transit currently reaches as far north as Plano. DART has purchased

EXHIBIT C

the ROW for the railroad extending north from Plano, through McKinney. A city must designate a one-cent local sales tax to become a DART member city. Currently, the City of McKinney designates that one-cent sales tax towards the McKinney Economic Development Corporation (MEDC) and the McKinney Community Development Corporation (MCDC) and cannot increase the sales tax above the current level. Consideration with DART and/or other agencies is ongoing.

The North Central Texas Council of Governments iniitated the McKinney Corridor Conceptual Engineering and Funding Study in late 2008 to support future passenger rail service implementation from Plano to McKinney. The study was facilitated by conducting outreach with key stakeholders and providing an open forum to identify key issues, identify potential station locations, and examine alignment options. In addition, the study documents existing environmental conditions and identifies potential impacts. The study and associated final report was completed in the summer fo 2010 and provides a foundation for futureenvironmental documentation anticipated to be completed by the implementing transit agency and identifies possible funding strategies intended to expedite project implementation.

Freight Systems

Users desiring rail service and future rail transit opportunities do not currently work together. This is due to the fact that the railroad line running through McKinney is only a single track network. A single track can not carry both modes of movement for people and freight. Further detailed review will need to be completed to better understand these two rail services. Any rail planning will need to include DART, the freight service provider, Collin County, and the City of McKinney.

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Section 11: Urban Design

The Urban Design Element is based on the values and goals expressed by McKinney residents and businesses throughout the comprehensive plan process. Key to these values and goals is a strong desire to maintain a unique "McKinney Character" that citizens and visitors have come to appreciate and associate with McKinney. This desire to maintain and, with regard to new development, establish a distinctive community character includes such things as the proper utilization of our existing rolling terrain and wooded stream corridors, the preservation of historic downtown McKinney and the surrounding historic residential neighborhoods, and the distinct and readily identifiable districts, including Eldorado, Stonebridge Ranch, and Craig Ranch. The Urban Design Element is intended to help guide physical land use decisions in order to realize our community's values and goals.

To a great degree, this element establishes the physical land use vision as expressed by the community. This vision is expressed through the urban design elements and the module design treatments. The expression of this vision includes the basic urban form of new development, the treatment of gateways and portals; the look and feel of major transportation corridors; the utilization of creeks, lakes, floodplains, and open space; and land use transitions and buffers.

Urban design can best be described as the physical structures and artifacts that comprise a city.

11.1 Role of Urban Design

Urban design plays an important part in how people perceive a community and associate with it. Urban design can best be described as the physical structures and artifacts that comprise a city. These creations include buildings, roads, signs, street trees, sidewalks and much more. In McKinney the role of urban design is quite important. McKinney's neighborhoods east of US 75, near the downtown, have an urban design pattern that was built primarily between the 1930's and 1950's. This pattern of streets and homes establishes a pedestrian friendly environment. The suburban neighborhoods to the west of US 75 have an urban design pattern that creates efficient vehicular circulation.

The physical character, placement, juxtaposition, and choice of construction materials of physical elements within McKinney give citizens and visitors an understanding as to the values they hold dear. The urban design character of a place helps to define the values of the community. An additional aspect of urban design is the use of public, quasi-public and civic space. Public space includes places such as the sidewalks along the downtown square, city parks, plazas and church courtyards. McKinney's urban design character is one of a culturally rich community with historic roots, high-quality new and contemporary development, with quality public spaces.

11.2 Urban Design Plan

This Urban Design Plan identifies the framework of spaces and linkages that McKinney can achieve with the associated Future Land Use Plan. The plan (Figure 11.2) is a diagram defining future opportunities for "place making". The most important places and spaces are pedestrian environments that provide the setting for people to socialize and enjoy the character that is McKinney.

McKinney can achieve this vision for urban design. To achieve this vision, the community will need to begin by following the Future Land Use Plan in this Comprehensive Plan which includes these proposals for urban design spaces which build on

the quality and character that McKinney exhibits today. McKinney understands that future residents and employers will require that the community continues to increase its "quality of life" features through planning and design.

A. Urban Design Elements

The following urban design elements should be treated on a broad basis, working with the land use modules serving a citywide purpose for placemaking and wayfinding. These urban design concepts are proposed to enhance value and identity in McKinney. The urban design concepts are just concepts; further detailed planning and design must be completed for all items as McKinney defines their priority to move forward on implementation. These proposed urban design concepts work together with the Future Land Plan and other comprehensive plan elements to create a physical environment unique to McKinney. These elements, if implemented properly over time, can add to the economic development potential for the city.

1. City Gateways / Portals

City entrance gateways should be placed where natural waterways cross major highway corridors (see Figure 11.1). These entryways should express the natural beauty that is found in McKinney's wooded streams and rivers while creating a sense of arrival. They should help delineate one community from another as the traveler passes from a neighboring city into McKinney.

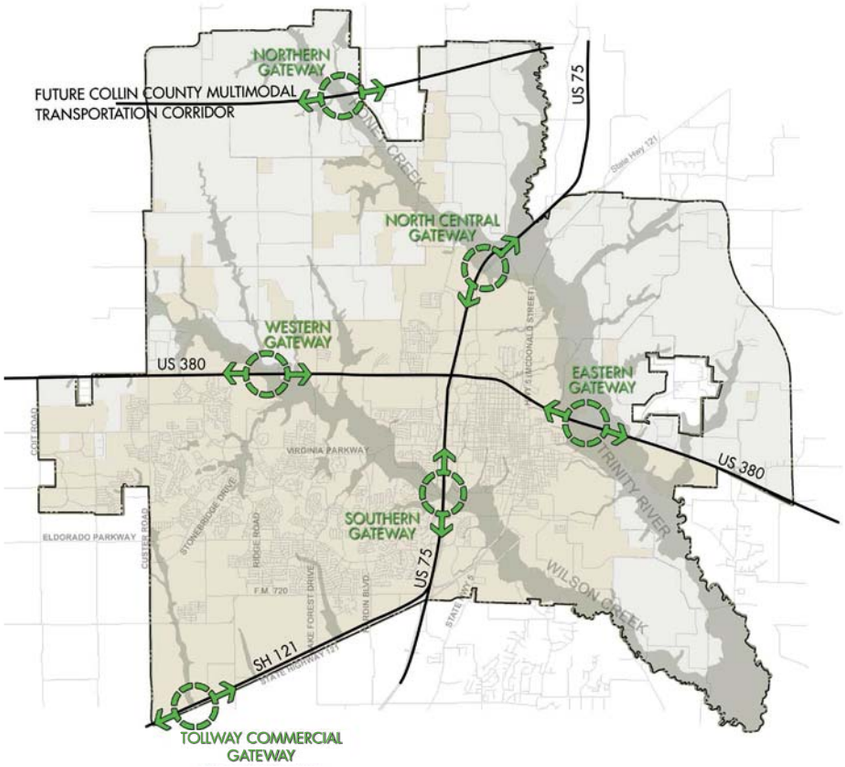
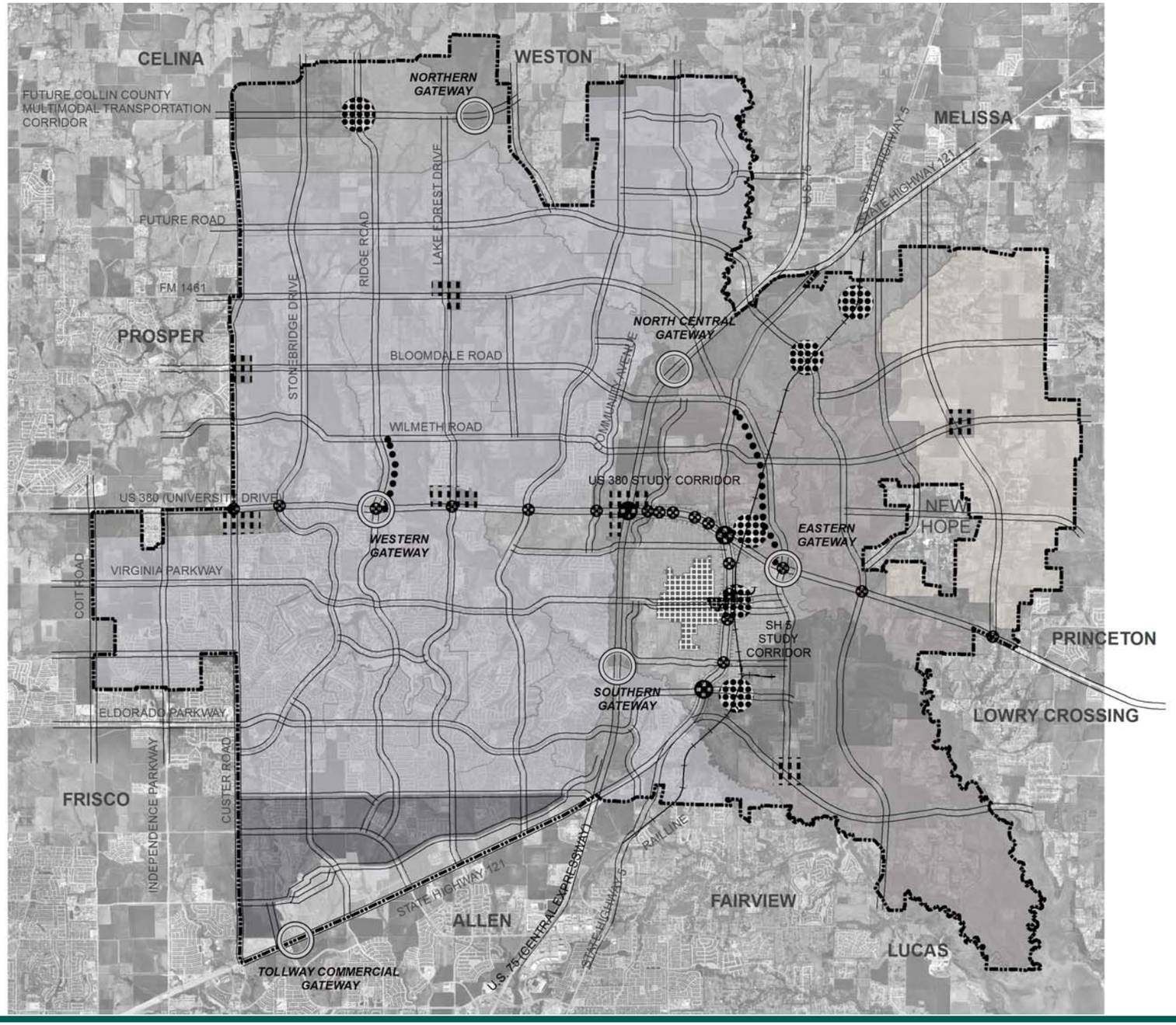


Figure 11.1: City Gateway/Portal Locations



CITY OF MCKINNEY
COMPREHENSIVE PLAN

URBAN DESIGN PLAN

Legend

- Extraterritorial Jurisdiction
- Rail
- Major Roads
- Intersection Study
- District Gateways
- Greenbelt Thoroughfare
- Historic Downtown
- Historic Residential
- Corridor Study
- Transit Village
- Community Village

* Original Adoption 03-22-2004 (Ordinance No. 2004-03-035)

* Amendment #1 01-05-2010 (Ordinance No. 2010-01-001) Revised to reflect boundary changes between McKinney, Fairview and Princeton as well as changes to the Master Thoroughfare Plan.

* Amendment #2 05-XX-2015 (Ordinance No. 2015-05-XXX) Revised to reflect changes to some District Gateway names and the removal of the Transit Village located at Collin McKinney Parkway and Alma Road.

Source: City of McKinney GIS Department Data

XX May 2015

FIGURE 11.2

0 5,500 11,000 Feet

1 Square Mile

100 Acres

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Urban design aspects to be addressed include:

- Location

  As previously mentioned, city gateways should be located at the confluence of natural streams and rivers with major highways. These crossings provide several natural amenities which signify the quality of life in McKinney, while serving as functional elements of the open space and trails systems. Already distinguishable by prevalent mature tree cover, these entry portals have an inherent natural beauty which can be highlighted with strategically placed manmade focal points.

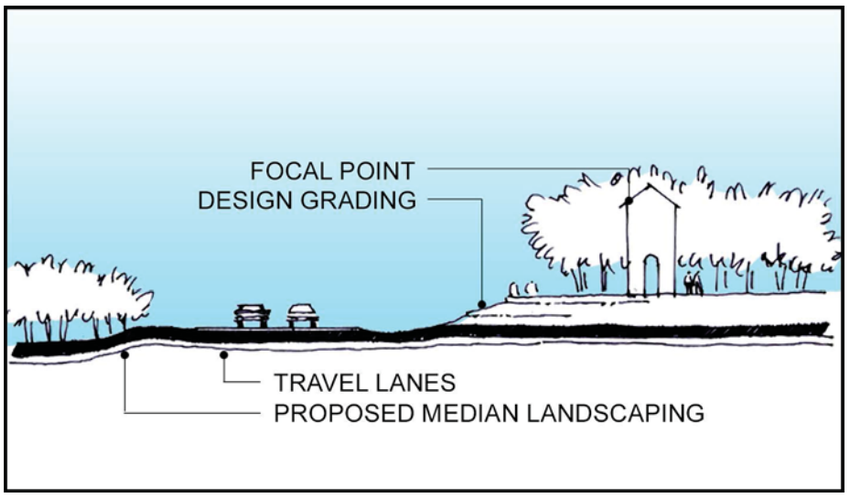

Figure 11.3: McKinney Gateway Concept

- Description / Character

  A single focal point placed within city gateways can be aesthetically pleasing as well as functional. The functional aspect includes features such as: pedestrian overlooks, trail place or event markers, or even a signature art piece. Design grading may be used to enhance the feel of the landscape, especially near the entry portal's focal point. This focal point should be constructed of brick or native stone and should reflect it's purpose and be carefully integrated into its surroundings. Vernacular or regional architecture should inform the focal point's design character, which should result in an architectural element which is sensitive to its context, rather than overpowering.

  City gateways offer natural opportunities for trails and other recreational opportunities. The inclusion of the human element to activate these spaces (an example is the Towne Lake and Wilson Creek corridor) brings another dimension to the gateways, further reflecting McKinney's quality of life attributes. Programming the space for meaningful human use is an integral part of establishing a desirable character.

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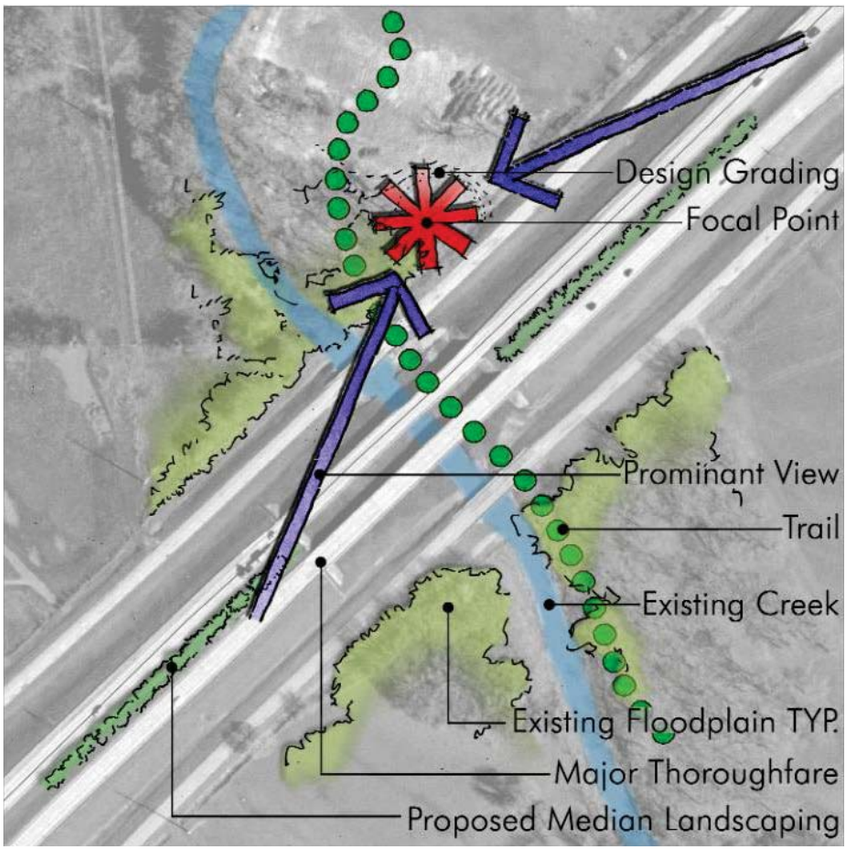

Figure 11.4: Prototypical McKinney Gateway Concept Plan

2. Corridors

State Highway 5 Corridor

One of the primary focuses of the Town Center Study was the State Highway 5 (McDonald Street) Corrider. The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions affecting the State Highway 5 Corridor.

State Highway 5 (McDonald Street) is a north/south corridor in McKinney. The study area along SH 5 between US 380 and Industrial Boulevard crosses the eastern edge of Downtown McKinney. Prior to the construction of the existing US 75 freeway, SH 5 was the main north/south highway through McKinney. The development along this corridor typically predated McKinney's first zoning ordinance (1969), so many of the landscaping, parking, and building set back standards typical of contemporary development were not provided. Some of the lots fronting onto State Highway 5 are shallow by current standards, further challenging the redevelopment opportunities along the corridor.

Existing land uses along the corridor include residential, commercial, and light industrial. There are several sites available for infill development along the corridor. To a certain degree, some of the unique character from the area results from these pre-zoning standards, and it may be to the City's advantage to play off this unique development pattern and preserve a snapshot of McKinney's history.

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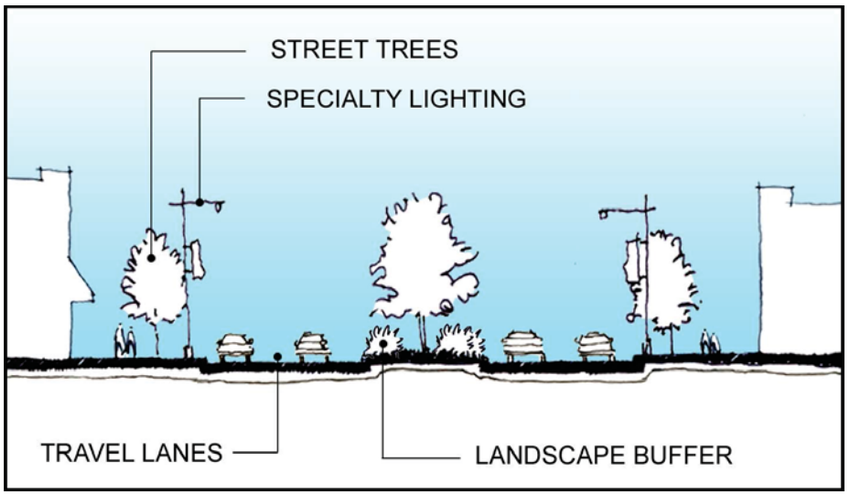

Figure 11.5: SH 5 Corridor Section (Conceptual)

Intersections

The intersection of State Highway 5 and Virginia and Louisiana Streets connects Historic Downtown McKinney with one of McKinney's oldest warehouse districts. Design treatments should complement the existing architectural style of downtown.

Streetscape

Pedestrian-scale street environment is encouraged along the corridor. Due to the unique constraints of the corridor, traditional methods of creating pedestrian-scale street environment may have limited applicability. However, in some areas it may be possible to provide landscape plantings to create pockets of separation from motor vehicles for pedestrians.

Building Relationships

Special consideration of urban form along State Highway 5 is appropriate. A detailed study is currently being made to identify those unique elements that may add value to the corridor that are not currently provided for within McKinney's development standards. By enhancing the unique nature of this pre-zoning commercial corridor, it may be possible to continue the revitalization that has been occurring along the corridor in a more strategic manner.

Just as the physical relationship of the buildings to the street create the quality of environment in Downtown McKinney, the physical relationship of the State Highway 5 corridor should be utilized as an asset, not a liability.

Reference the Town Center Study Phase 1 Report (2008) for more detailed urban design concepts related to intersections, streetscape and building relationships along the State Highway 5 corridor.

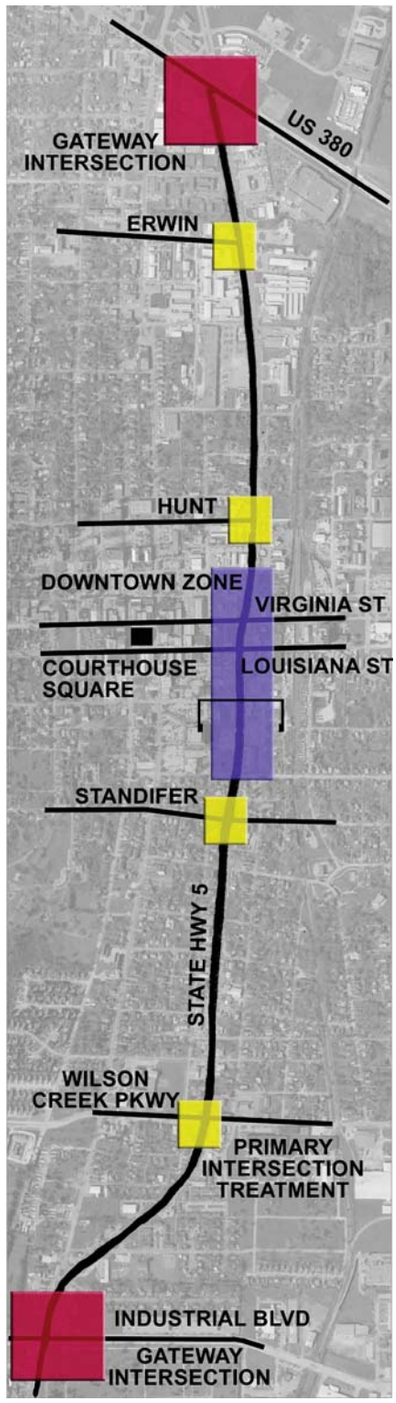

Figure 11.6: SH 5 Corridor Concept

US 380 Corridor

One of the primary focuses of the Town Center Study was the U.S. Highway 380 corridor (generally between Graves Street and State Highway 5). The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, proper-

EXHIBIT D

ty owners, and private developers when considering decisions involving issues (such as land use, circulation, and aesthetic improvements) affecting the U.S. Highway 380 corridor.

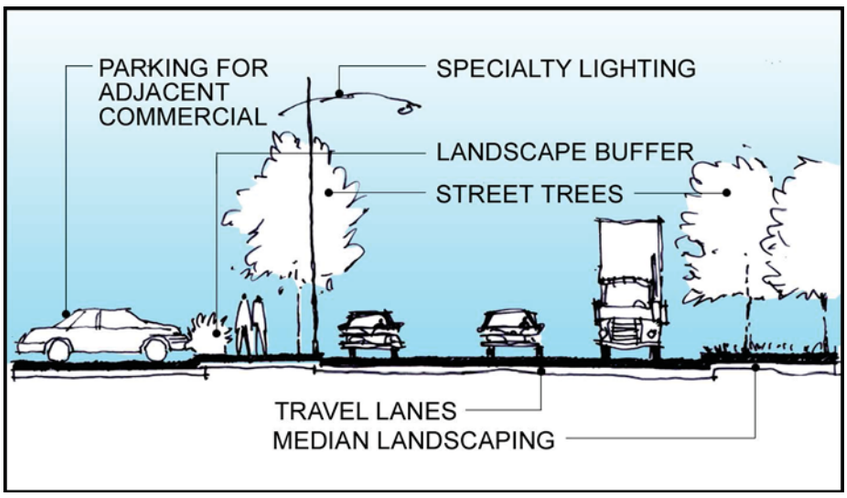

Figure 11.7: US 380 Corridor Section (Conceptual)

US 380 is a major east/west highway through McKinney that provides a connection to the western and eastern sections of the City of McKinney. It is a six-lane divided highway with land uses that include residential, office and regional commercial uses along the edges.

Corridor Sections

Five distinct sections of the US 380 Corridor exist. Each section should be reviewed for its unique strengths, while keeping an overall corridor theme and context in place.

- Trinity River Portal Section
- Town Center Section
- US 75 Commercial Core Section
- Wilson Creek Portal Section
- Western Section

Figure 11.8: US 380 Corridor Concept

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Intersections

Two key intersections have been identified for Community Village designation. Those intersections are at Custer Road and Lake Forest Drive. Community Villages are discussed in detail in the Land Use section of the Comprehensive Plan.

Streetscape

Landscaped medians should be created along the US 380 corridor (Figure 11.7). Concentrations of streetscape planting are recommended in the Town Center Module. Landscape street trees soften the highway aesthetically, while enhancing pedestrian safety.

Building Relationships

Future land uses along the corridor should allow a full range of commercial uses, while limiting residential uses. Special concern should be given to providing an appropriate transition between uses fronting the corridor and their adjacent uses. This is necessary to avoid those adjacent uses from being negatively impacted by the uses directly along the corridor which may be significantly more intensive. Height and massing controls should provide a compatible relationship to the adjacent residential neighborhoods.

Reference the Town Center Study Phase 1 Report (2008) for more detailed urban design concepts related to intersections, streetscape and building relationships along the section of the U.S. Highway 380 corridor within the Town Center Module.

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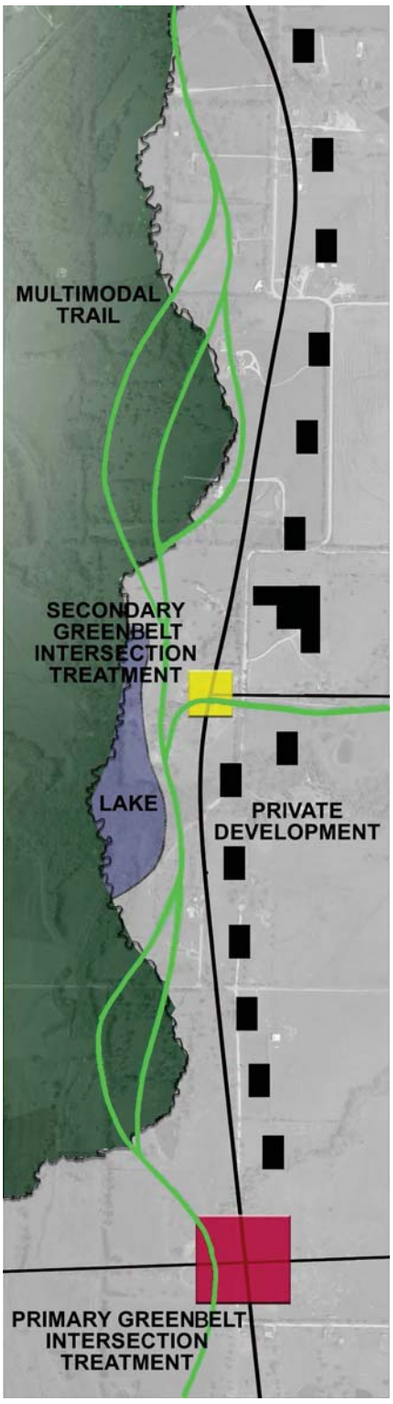

Figure 11.10: Greenbelt Thoroughfare Corridor Concept

Greenbelt Thoroughfares

The Greenbelt Thoroughfares are organized to take advantage of the creeks, floodplains, lakes, and open spaces that occur throughout the City of McKinney. Two Greenbelt Thoroughfares have been designated to occur north of US 380 along Ridge Road and Airport Drive.

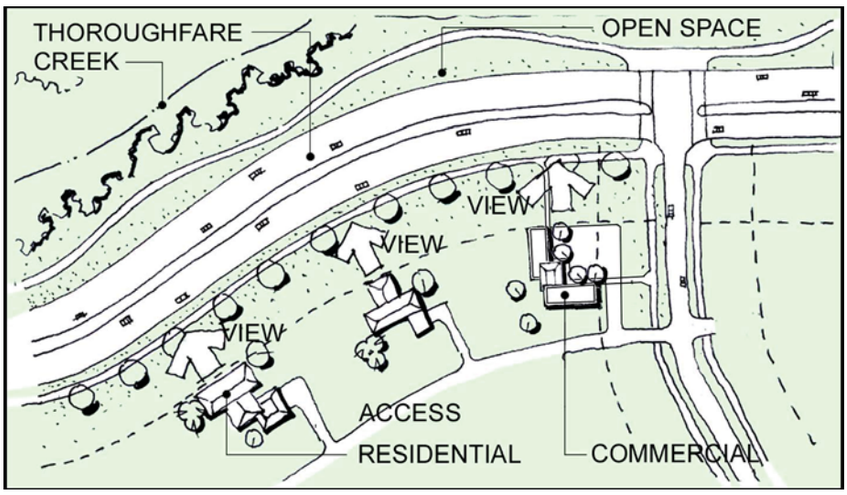

Figure 11.9: Prototypical Greenbelt Thoroughfare

Intersections

Greenbelt Thoroughfares are encouraged to utilize "T" intersections whereby views and access to the natural amenities can be heightened. Pedestrian trail access at grade should be provided at logical locations along Greenbelt Thoroughfares.

Streetscape

The streets designated as Greenbelt Thoroughfares are designed to include significant single-loaded roadway segments having development only along one side. Streetscape elements should differ between the developed side and greenbelt side. Enhanced pedestrian and bicycling facilities should be provided on the greenbelt side. Special consideration of hiking and biking activities, connections to existing trail networks, pedestrian furniture, trash receptacles, and lighting, as well as informal tree plantings should be made.

Building Relationships

Building orientation to take advantage of the natural open space is encouraged. Inward facing developments should be used if no practicable means of taking advantage of the open views is possible; in such cases, special/enhanced treatment of the rear and sides of the development should be provided to maintain an appropriate view from the public trails and the street.

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3. Creeks, Lakes, Floodplains, and Open Space

McKinney's natural elements, including creeks, lakes, floodplains, and open space, should be considered in the context of urban design. These elements influence the physical form of the developed environment and can enhance its value, if utilized in a thoughtful manner. McKinney currently requires buffers/screens as a part of their various development codes. The following buffers are recommended along with current requirements.

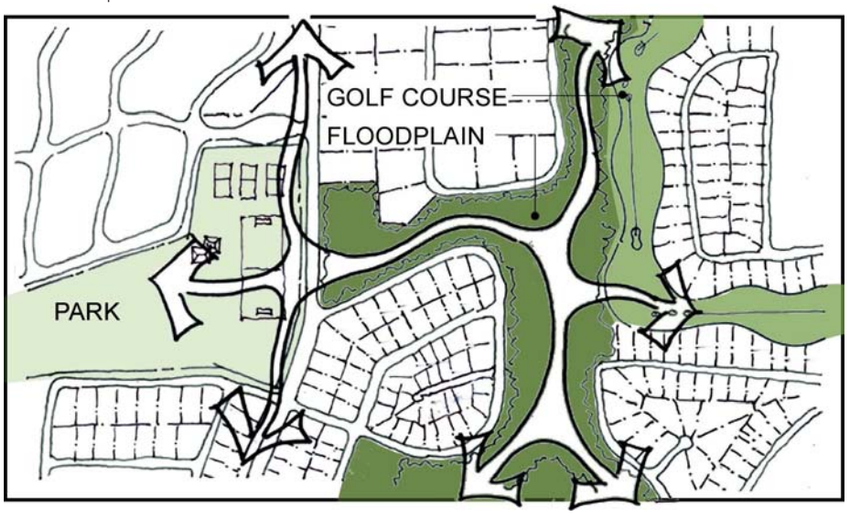

Figure 11.11: Prototypical Open Space Concept

Urban design elements to be addressed include:

- Development Frontage

  Developments adjacent to a creek, lake, floodplain, or open space should take advantage of the view of these areas and incorporate them into the design of the new development. In particular, when located along a road which separates the natural feature from the developed area (see also Greenbelt Thoroughfares), the development should look out across the road to the natural area. In doing so, the built environment can connect people with these natural areas rather than serving to further limit contact. Development, particularly residential, should not be oriented away from the road and natural element, leaving rear fences, alleys, or neighborhood walls adjacent to the road in this condition. Views from development should take advantage of the adjacent natural amenity.

  Setbacks, parking requirements (including parking location in relationship to structures), and landscape improvements for development along creeks, lakes, floodplains, and open space are governed by existing zoning regulations, but amendments should be considered to provide for site design which is sensitive to these natural amenities. Sidewalks should be present along developments with this frontage to accommodate pedestrian activity and connect to trail networks.

- Open Space Relationship

  Where possible, open spaces (creeks, lakes, floodplains, parks, or private open spaces) should be connected to form a network which allows for habitat protection and wildlife migration. Existing segmented open

spaces should be targeted for connection where possible. Open spaces may be connected through public lands, or through linear opportunities such as utility and rail easements or street right-of-way.

The resulting open space system sets the framework for alternative transportation options, such as trails. In addition, it can add to the value of individual properties, developments, and the community as a whole. By developing residential areas adjacent to open space, property values increase, and demands for these lots increase.

4. Buffers

Buffers serve an important purpose in urban design as they relate to the separation of inappropriate land uses. Buffers can take many forms: architectural buffers include walls, buildings, or other structural elements that form a visual barrier. Landscape buffers utilize trees, berms, shrubs, or grasses to form the barrier. Both architectural and landscape buffers are appropriate if conflicting land uses are in close proximity to one another. Open space buffers, on the other hand, are less visually dominating and are appropriate in circumstances where conflicting land uses are not in close proximity, (in other words, where the open space to separate the two uses is present and unaccounted for). Natural open space buffers can be subtle buffers which promote a more natural, less intense separation.

Urban design elements to be addressed include:

- Architectural buffers

  Architectural buffers are most appropriate when placed between buildings of conflicting land uses. Buffers such as walls, for example, can be used to effectively separate such uses in areas of low visibility. Such uses may also include screening waste or mechanical structures near buildings. However, architectural barriers should be avoided for use along a street without a high level of design consideration and accompanying landscape treatments to soften its appearance. Visible walls should be constructed of brick or stone. Wood fences should be avoided due to their limited life span.

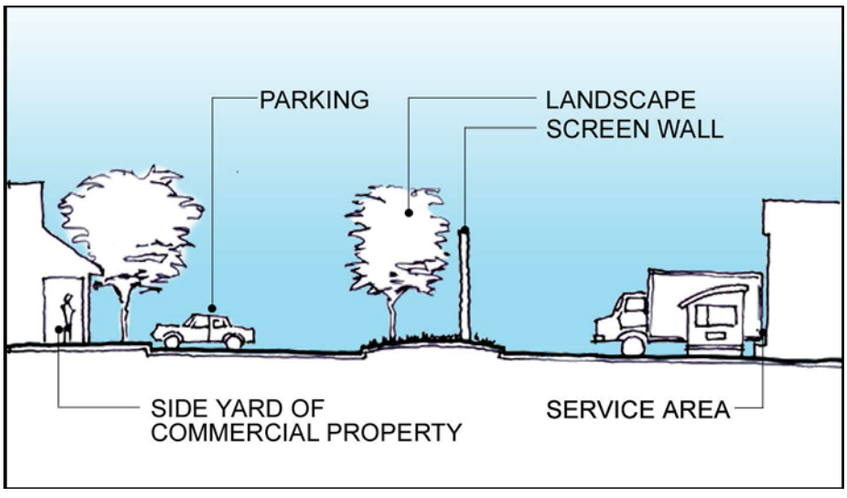

Figure 11.12: Prototypical Architectural Buffer

- Landscape buffers

  Landscape buffers, including trees, shrubs, and grasses, are appropriate when placed in areas of higher visibility. Landscape buffers should be used along long stretches of streets, given the softer appearance. Additionally, such uses may include screening parking areas from thoroughfares or screening smaller mechanical or utility boxes. They may also be used in conjunction with architectural buffers to soften their appearance.

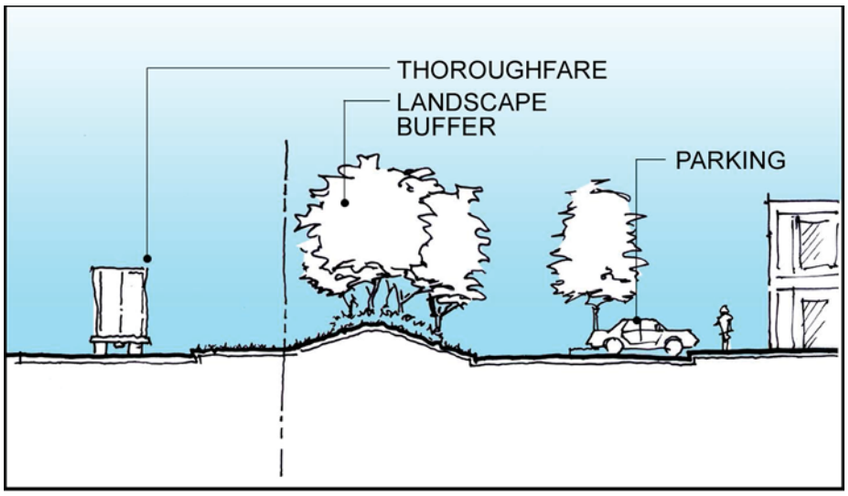

Figure 11.13: Prototypical Landscape Buffer

- Open space buffers

  Open space buffers are most appropriate to separate conflicting land uses which have a minimum of 30 feet between them. Such buffers may include vegetation, landscape, and/or trails or other pedestrian amenities.

  Buffers should be used to supplement sensitive site design to mitigate potential negative impacts rather serve as a substitute for sensitive site design. No buffer or screening device can ever entirely mitigate the negative impacts associated with uses of varying intensities. By considering these factors when beginning to lay out the site, rather than as an afterthought, uses can be made more compatible.

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B. Module Design Treatments

The following urban design treatments are specific to particular land use modules, based on a range of desired characteristics for each module.

1. Town Center Module

The Town Center Study Phase 1 Report (2008) serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions regarding urban design treatments within the Town Center Module.

The Town Center Module is a mix of traditional residential housing types with neighborhood and regional office, retail, and commercial uses. This Module contains a significant amount of community facilities such as government offices, churches, schools and parks. The core of the Town Center Module is the Downtown Commercial District, consisting of the historic town square surrounded by blocks of commercial structures and the City of McKinney's main municipal campus.

Ringing the core is the Historic Residential District, a mix of pre-World War II housing in a pre-automobile, traditional neighborhood pattern to form a strong sense of place. Surrounding this core are other neighborhoods and commercial districts. This outer zone is made up of residential units and commercial developments that catered to surrounding residential neighborhoods from the 1880's through today. This module, with its unique blend of land uses, relationships, and age of development, requires a planning document specific to itself. This area contains much of the physical fabric that people reference as "McKinney Character". The plan for the Town Center includes a much greater detail of analysis and recommendations.

Reference the Town Center Study Phase 1 Report (2008) for more detailed module design treatments related to building orientation, pedestrian environment, parking, and vehicular access in the Town Center Module.

A - Downtown Commercial District

Figure 11.14: McKinney Downtown Commercial District

Building Orientation

The Downtown Commercial District was developed before the automobile and reflects a pedestrian-oriented development pattern. The downtown served as

the Collin County seat, a center of agricultural trade and the area's retail hub. These primary land uses are still reflected today in the historic courthouse and the retail storefronts on and around the square. The multi-story grain mills by the railroad tracks still remain today and represent a significant redevelopment opportunity for the community.

While the businesses and wares have changed, this pedestrian-friendly commercial environment continues to draw customers to McKinney's downtown. Any redevelopment in the area should be sensitive to the historic land uses and building patterns, including following the Historic Design Guidelines if the property is zoned "historic." The dominate downtown building patterns and uses include:

- Retail, office, and mixed use buildings set closer to the street curb with little or no setbacks from the property line.
- Retail urban and office urban structures ranging between single-story and three stories in height.
- The retail, office, and mixed-use product support a street-level pedestrian-oriented environment.

Pedestrian Environment

The traditional building orientation and architectural detail were designed at the human scale, as opposed to the contemporary automobile-oriented development pattern that is typically found in retail developments along and west of US 75. Maintaining the prominence of the pedestrian-friendly environment, as well as the historically sensitive architectural treatment of new development, is critical in the downtown area. To help facilitate such development patterns, the following design treatments should be considered:

- Traditional window displays, entryways, and architectural decorative treatments around window displays and entryways.
- Wide sidewalks, building set-to lines, and careful attention to access location and design.

Parking

The Downtown Commercial District attracts shoppers from a wide region, in addition to surrounding neighborhoods. Both customer and employee parking is an important factor in the development of this module. In general, off street parking should not dominate the downtown area while maintaining convenient, efficient, and, to some degree, intuitive access. To achieve this, it is critical that the following design elements be considered:

- Surface parking lots should be located behind buildings or one to two blocks off the main square where possible.
- Parking structures require appropriate placement, scale, and design if utilized downtown. Parking structures should not dominate gateways into downtown but should be conveniently located one to two blocks off the square.
- A parking study of downtown is being conducted in order to determine the type, location, and timing of parking improvements.

Vehicular Access

The street patterns within the Downtown Commercial District are a traditional

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grid pattern typical of early community development. The grid pattern within the module features narrow streets and on-street parking.

- To maintain the pedestrian-oriented environment while still providing efficient vehicular access into and around the downtown area, special emphasis on minimizing pedestrian-vehicular conflicts is required.

B - Residential Historic District

Figure 11.15: Residential Historic Prototype

Building Orientation

The historic residential areas are made up of a mix of housing types, of varying styles and sizes, along with a smaller amount of medium density dwelling units. The building pattern is traditional, and many of the streets were laid out in the pre-automobile era prior to World War II. Maintaining this unique mix and relationship between residential dwelling units, street activity, and neighborhood cohesiveness is important in the historic residential area.

- The Historic Design Guidelines should be utilized for areas with a "historic" zoning designation.
- Lots sizes vary from block to block. As redevelopment occurs building massing should be consistent within each block (facades fronting each other).

Pedestrian Environment

The Residential Historic District should continue to emphasize its human scale design that creates a pedestrian-friendly environment. This treatment should be present in redevelopment projects when appropriate.

- Residential streets should incorporate sidewalks on both sides of street.
- The street grid network should be preserved in order to provide expanded choices in movement for both pedestrian and vehicular access.

Vehicular Access

The street patterns within the Residential Historic District are similar to the Down-

town Commercial District - a standard grid pattern typical of pre-automobile community development. This pattern should be continued with new and redevelopment projects within this area.

2. Transit Village Module

The Town Center Study Phase 1 Report serves as a policy guide for city officials, staff, property owners, and private developers when considering decisions regarding urban design treatments within the Transit Village Module generally located on the east side of McDonald Street (S.H. 5) near Louisiana Street, Virginia Street, and the DART rail right-of-way.

The Transit Village Module describes development based around a transit center and includes medium to high density residential, office, retail, and mixed-use projects. Each transit village is anticipated to have a different mix of uses with some composed of regional office and commercial uses and others with greater amounts of entertainment and commercial uses with varying degrees of residential uses. Each transit village can take on a character and style of its own, creating unique opportunities to address a variety of development patterns. These patterns may include interim park & ride facilities, mixed use facilities, employment centers, and traditional downtown-scale centers. True transit villages require the use of public transit, including light rail and bus, in addition to automobile, bicycle, and pedestrian access.

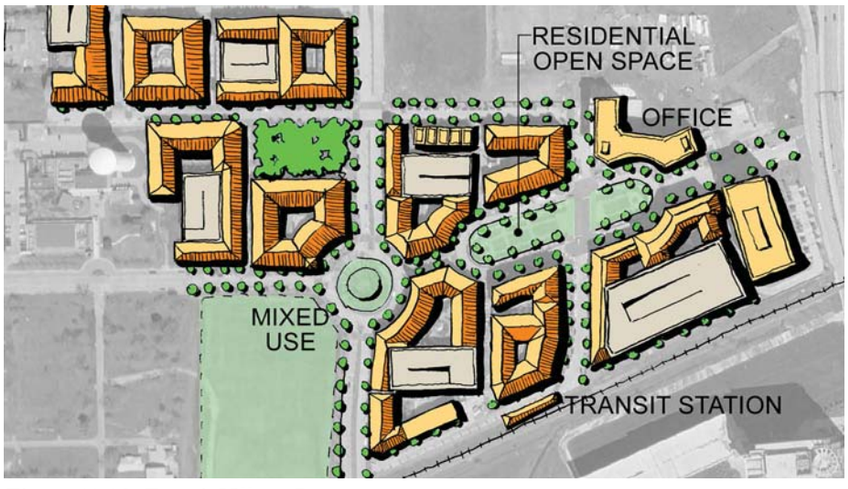

Figure 11.16: Transit Village Prototype

Transit Relationship

The Transit Village Module is geared toward the existence of a transit station serving local and regional commuters. To efficiently serve the transit station, the built environment of streets, sidewalks, buildings, and public spaces must be tailored to provide safe active surroundings and foster a pedestrian-friendly setting where walking and transit are a preferred means of mobility.

- The highest level of density within the Transit Village should be focused within a quarter-mile radius, or ten minute walk, from the transit station.
- To address the higher densities of the Transit Village, public plazas or parks should be interspersed within a quarter-mile radius of the transit station so that no building is more than 300 feet

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from such public plazas or parks. At least one significant and meaningful public space should be provided. Size, function, and prominence define the concept of significant and meaningful.
- Transit stations should be located with ample access to at least two major roadways serving the Transit Village.

Building Orientation

Within the Transit Village, buildings are developed primarily to serve the pedestrian needs of neighborhood residents, village employees, and visitors. Because of this pedestrian focus, building facades should properly address wide sidewalks and street-related activities. **Reference the Town Center Study Phase 1 Report for more detailed module design treatments related to building orientation, pedestrian environment, parking, and vehicular access in the Transit Village module generally located on the east side of McDonald Street near Louisiana Street, Virginia Street and the DART rail right-of-way.** Generally, the following treatments should be considered:

- Buildings with the greatest density need to be adjacent to the transit facility.
- A density cone sits over the transit village with buildings at the center having greatest density and lessening as you move to the perimeter developments.
- Buildings should utilize build-to lines, not contemporary setback lines.
- Buildings can be arranged to create a court or village pattern. These patterns provide a pedestrian scaled environment. This can be reinforced with landscape and lighting for identification.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Pedestrian Environment

The core of the Transit Village is the transit station; this hub is surrounded by a dense concentration of land uses which can include a combination of retail, office, entertainment, and residential developments. Key to making these various parts work together as an integrated whole is the design, including scale and functionality, of the Transit Village. Mixed uses, pedestrian access, activity nodes, and attention to architectural design differentiate a Transit Village from a simple commuter-oriented "park and ride" facility.

- Wide sidewalks, front entries, and street oriented commercial establishments should be emphasized.
- Walkways linking adjacent neighborhoods with this module need to be provided.
- Walkways must be provided on both sides of all streets.

Parking

While automobile movement should be secondary in design and importance to pedestrian movement, auto-oriented travel will still need to be properly accom-

modated. The following parking considerations should be utilized within Transit Village developments:

- Multi-level parking garages and surface parking lots should not front directly onto streets but should instead be located in the interior courtyard settings of building(s) when possible.
- On-street parallel parking should be considered for all local streets.
- On-street head-in parking should be considered only in limited circumstances.

Vehicular Access

Within the Transit Village Module, automobile movement should be secondary in design and importance to pedestrian movement.

3. Community Village Module

Community Villages are areas of concentrated development. Generally, a community village is a grouping of commercial uses serving a larger region. It includes a higher concentration of retail and lesser concentration of office, entertainment and community facilities. Some residential uses may be allowed when designed to minimize impacts from and to the primary commercial uses. But these will generally fill in around, rather than develop prior to, the commercial uses.

Figure 11.17: Community Village Corner Prototype

Building Orientation

Within the Community Village, buildings are developed primarily to serve the needs of shoppers and workers by providing a concentrated commercial environment.

- Unified architectural standards should be developed for each or all community villages. The standards should use high-quality building materials, provide architectural variety, while establishing a family of compatible standards.
- The uniform alignment of facades should be used to provide for a more planned appearance and character. In contrast, overly long building facades should incorporate offsets to prevent

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monotony.

- Buildings can be arranged to create a court or village pattern. These patterns provide a pedestrian scaled environment. This can be reinforced with landscape and lighting for identification.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of its broad market appeal, Community Village Modules will attract shoppers traveling from a wide area. Both customer and employee parking will be an important factor in the development of this module. Ample, convenient parking should be provided.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Pedestrian Environment

These concentrated commercial modules require a network of walkways for pedestrians, bicycles, and other modes to move between buildings.

- Walkways linking adjacent neighborhoods with this module needs to be provided.
- Walkways connecting adjacent buildings need to be provided.
- The network of walkways can be enhanced with landscaping and lighting to support safe and pleasant movement.

Vehicular Access

Convenient access should be provided. Fire lanes and cross access drives should be included to the front and rear of buildings.

- Heavily used access drives should be designed to reduce conflicts with vehicles backing out of parking spaces.
- Primary access drives can take the look and feel of a local street. These streets allow the user to circulate the village with a logical pattern allowing easy and safe access.
- Unified signage standards should be developed to define the comprehensive package of high-quality development standards for this module.

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4. Suburban Mix Module

The Suburban Mix Module is generally used for single-family residential development typically at a density of 3.0 to 3.4 dwelling units per acre, with supporting office and retail uses rounding out the typical module area. Medium density residential along with community facilities such as schools, parks and religious institutions are also included in the Suburban Mix Module. Opportunities to connect with the City of McKinney's trail network should be utilized if the module is located adjacent to the trail system.

Figure 11.18: Suburban Mix Prototype

A - Residential Single-Family

Building Orientation

The single-family residential housing units that dominate the Suburban Mix Module have a typical residential building pattern that is characterized by average front- and rear-yard setbacks, as well as minimum side-yard setbacks. Design of subdivisions should work with the natural features of the land such as topography, creeks, and scenic view. Engineering efficiency along with maximizing lot count should not be the primary consideration of subdivision design.

Another critical element in building orientation is the traffic patterns and levels within the module. Fronting homes on higher traffic roads can have an undesirable impact, whether real or perceived, on the quality of life of the residents. Poorly designed subdivisions that don't account for adequate use of collector streets, appropriate stacking at major roadways, and limiting cut-through traffic patterns often result in requests to the City for traffic calming measures. Subdivisions should be planned in a holistic manner that accounts for the overall area traffic patterns, neighborhood levels, and the like.

- Single-family housing units should side on residential collector streets and to back single family on major collector streets.
- Single loaded streets in residential subdivisions are desirable when adjacent to a park, floodplain, or greenbelt.

Design for Density

In order to achieve the density bonus for preferred design, the following features should be incorporated into the design of residential developments. To achieve

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the increase to 3.4 dwelling units/acre available for single-family residential, the items below should be used:

- Extremely large tracts should be broken down into smaller separate distinct neighborhoods or villages generally no larger than 50 acres or +/-175 lots.
- Curvilinear streets should be used rather than a modified grid pattern.
- Natural areas such as creeks and lakes should have single loaded streets adjacent to them.
- Usable open space should be centrally located throughout the neighborhood to serve as an amenity for all residents. These open areas should not serve as detention ponds.
- Culs-de-sac should not be perfectly round, rather they should be more elliptical (tear drop) and off center. A landscaped island is also desirable.
- Median features should be incorporated into street design, particularly at the entrance to neighborhoods.
- A mix of lot sizes and shapes should be included along a street frontage rather than a uniform lot size.
- Penetrating screen walls and allowing view corridors into neighborhoods from arterial streets via the use of landscape or metal fencing at the terminus of neighborhood culs-de-sac is desirable.

B - Commercial & Multi-Family

Building Orientation

Multi-family and commercial land uses should be oriented toward arterial roadways with secondary access on major collector roadways, not residential streets. The land use transition, including building height, architecture, landscaping, and site plan elements, is a significant element that can define the appropriateness of the site planning on the more intensive land uses when adjacent to single-family uses.

- Transitions are a design feature that includes: stepping building height away from residential, window orientation limits for second floor buildings, landscape buffers, living screens, and others.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of its market appeal, commercial development will attract shoppers traveling from adjacent neighborhoods. Both customer and employee parking will be an important factor in the development of this module.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.

- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

C - Residential and Commercial

Pedestrian Environment

The Suburban Mix Module is dominated by residential uses with a secondary mix of neighborhood supported commercial uses. To foster greater neighborhood organization and to develop stronger bonds to local amenities and commercial centers, pedestrian linkages must be put in place. The following design treatments should be considered in strengthening these connections.

- Suburban Mix Module residential streets should incorporate sidewalks on both sides of street where necessary to provide for increased pedestrian access.
- Sidewalks from residential streets should connect with sidewalks running alongside community collector roads and thoroughfares.
- For residential streets terminating at parks or greenbelts, pedestrian access to hike and bike trail systems should be provided where appropriate.
- To help facilitate other modes of travel and to connect with community amenities, interior sidewalks and crosswalks within commercial centers should link with adjacent thoroughfare sidewalks, residential street sidewalks, and trails within adjoining greenbelts and parks.
- Community facilities, such as schools, libraries, religious facilities, and fire stations, should link into adjoining greenbelt and park trails when possible.

5. Estate Mix Module

The Estate Mix Module is generally used for low density single-family residential on large lots, with a limited amount of other single-family residential and support office and retail uses. Community facilities such as schools, parks and religious institutions are also included in the Estate Mix Module. Medium densities and higher concentrations of residential or commercial land uses are generally incompatible with this module unless additional infrastructure capacity for thoroughfares, water/wastewater facilities, schools, parks, and the like are provided. Opportunities to connect with the City of McKinney's trail network should be utilized if the module is located adjacent to the trail system.

Building Orientation

Low density larger lot single-family residential housing is found in the Estate Mix Module. This type of residential building pattern is characterized by broad front and back-yard setbacks as well as sufficient side-yard setbacks.

- The limited commercial building patterns in this module should be sensitive to the rural atmosphere that the estate residential

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neighborhoods enjoy.

- Additional landscaping buffers, deeper setbacks, residential-scale architectural design, reduced signing levels, and lower lighting levels would be appropriate.

Pedestrian Environment

The Estate Mix Module is dominated by large lot residential uses with a limited mix of neighborhood supported commercial uses. The large size of residential lots, rural street character and infrequent commercial developments make pedestrian linkages less necessary. Even so, design should not ignore this feature.

6. Regional Commercial, Tollway Commercial, Regional Employment, Office Park, and Industrial Modules

The Regional Commercial Module is an area of large scale commercial development providing for retail and service uses on a regional level. Tollway Commercial includes a mix of commercial, office, and entertainment uses that have a strong regional draw. Residential uses within the Tollway Commercial Module are limited and shall generally be located no closer than 1,000 feet from State Highway 121 (Sam Rayburn Tollway). Regional employment is a large scale office and potentially light industrial / research development providing employment at a regional level. Office parks are characterized by the primary use, which are office parks. It also includes supporting retail and service uses. Industrial is development that includes manufacturing, office, distribution, warehouse, flex-warehouse as well as industrial uses with supporting retail and office uses.

Figure 11.19: Regional Commercial, Tollway Commercial, Regional Employment, Office Park, and Industrial Modules Prototype

Building Orientation

Within these modules, buildings should be oriented to be both accessible and identifiable from the streets.

- The "back" of buildings which generally include service areas, dumpsters, loading docks etc. should be the least visible side of the building and not diminish the view from natural areas.
- Where this is not possible, appropriate screening should be used to soften the view.

- When residential adjacency exists, appropriate transitions, buffers, and other design elements should be utilized by the more intensive use to minimize any negative impacts on the residential neighborhood.
- Parking garages need to be near the building they serve and not be adjacent to neighboring residential.
- Parking garages must have façades that do not show ramping in the façade design.

Parking

These modules anticipate large numbers of people traveling to these centers for working and shopping, with most arriving by car or truck.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Vehicular Access

Ample, convenient access should be provided within these modules. Where possible, direct and convenient access would be desirable from regional highways and major thoroughfares into the core of these modules.

- Internal drives should be designed to direct traffic to the destination by the use of landscaping along drives, eliminating parking backing into primary drives and textured paving.

7. Airport Industrial Module

The Airport Industrial Module is development focused around its proximity to the Collin County Regional Airport. It includes a range of industrial, office and support uses. Of note: all landscaping within this module needs to follow the Bird Mitigation Program for the airport. This program calls for specific plant species that do not attract birds to the area to reduce the potential for bird strike events near the airport.

Building Orientation

Within the module, buildings should be oriented to be both accessible and identifiable from the streets.

- The "back" of buildings which generally include service areas, dumpsters, loading docks etc. should be the least visible side of the building and not diminish the view from natural areas.
- When residential adjacency exists, appropriate transitions, buffers, and other design elements should be utilized by the more intensive use to minimize any negative impacts on the residential neighborhood.

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- Parking garages need to be near the building they serve and not be adjacent to neighboring residential.
- Parking garages must have façades that do not show ramping in the façade design.

Parking

These modules anticipate large numbers of people traveling to these centers for work, with most arriving by car or truck.

- Parking lots should be divided into smaller parking lots separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrian toward the primary entry to buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.

Vehicular Access

This module requires special access for emergency vehicles to Collin County Regional Airport. This access will be supported with access to and through the module. Where possible, direct and convenient access would be desirable from regional highways and major thoroughfares into the core of the module.

- Special access must be provided for security access to and from air-side developments on the airport.
- Land-side access for development such as hotels, car rental, support commercial, light industrial, etc will be provided in an efficient and safe manner.

8. Urban Mix Module

The Urban Mix Module is characterized by a primary mix of urban and traditional single-family detached residential housing types. Some medium and high density residential may be allowed in order to support nodes of urban residential/commercial development patterns. The Urban Mix Module also includes neighborhood office, retail and commercial uses, as well as some community facilities. Opportunities to connect with the City of McKinney's trail network should be utilized in locations adjacent to the trail system.

Building Orientation

A - Single Family Residential

Single-Family detached and single-family attached residential housing units should have a typical residential building pattern that is characterized by average front and rear-year setbacks, as well as minimum side-yard and/or end of row setbacks. Single-Family Urban Residential should utilize build-to lines with structures located in close proximity to the street offering opportunities for pedestrian interaction and a street pattern based on a modified grid pattern. Design of subdivisions should work with the natural features of the land such as topography, creeks, and scenic views. Engineering efficiency along with maximizing lot counts should not be the primary consideration of subdivision design.

Another critical element in building orientation is the traffic patterns and levels of service within the module. Fronting homes on higher traffic roads can have an undesirable impact, whether real or perceived, on the quality of life of the residents. Poorly designed subdivisions that don't account for adequate use of collector streets, appropriate stacking at intersections of major roadways, and limiting cut-through traffic patterns often result in requests to the City for traffic calming measures. Subdivisions should be planned in a holistic manner that accounts for the overall traffic patterns of the area, neighborhood traffic levels, and the like.

- Single-family housing units should be located on residential collector streets and should back or side on local collector streets.
- Single loaded streets in residential subdivisions are desirable when adjacent to a park, floodplain, greenbelt, or other natural features.

Design for Density

In order to achieve the density bonus for preferred design, the following features should be incorporated into the design of residential developments. To achieve the increase to 3.4 dwelling units/acre available for single-family residential, the items below should be used:

- Extremely large tracts should be broken down into smaller separate distinct neighborhoods or villages generally no larger than 50 acres or +/- 175 lots.
- Curvilinear streets should be used rather than a modified grid pattern.
- Natural areas such as creeks and lakes should have single loaded streets adjacent to them.
- Usable open space should be centrally located throughout the neighborhood to serve as an amenity for all residents. These open areas should not serve as detention ponds.
- Culs-de-sac should not be perfectly round, rather they should be more elliptical (tear drop) and off center. A landscaped island is also desirable.
- Median features should be incorporated into street design, particularly at the entrance to neighborhoods.
- A mix of lot sizes and shapes should be included along a street frontage rather than a uniform lot size.
- Penetrating screen walls and allowing view corridors into neighborhoods from arterial streets via the use of landscape or metal fencing that the terminus of neighborhood cul-de-sac is desirable.

B - Multi-Family Residential & Commercial

Multi-family and commercial land uses should be oriented toward arterial roadways with secondary access on local collector roadways, not residential streets. The land use transition, including building height, architecture, landscaping, and site plan elements, is a significant element that can define the appropriateness of the site planning on the more intensive land uses when adjacent to single-family uses.

EXHIBIT D

High Density Urban Residential should be constructed in an urban and pedestrian-oriented manner (structures in close proximity to the street with on-street parking or parking internal to the site with limited visibility from adjacent streets).

- Transitions are a design feature that includes, but is not limited to: stepping building heights away from residential, window orientation limits for second floor buildings, landscape buffers, living screens, and others.
- Exterior environments for dining and relaxing are vital for some land uses. These "outdoor rooms" can be designed with landscape or plaza hardscape materials.
- Service areas need to be located away from adjacent front door access points. Service courts can be defined on u-shaped buildings to contain trash and delivery products.

Parking

Because of market appeal commercial development will attract shoppers traveling from adjacent neighborhoods as well as those that migrate from the more regionally-scaled commercial uses along SH 121. Both customer and employee parking will be an important factor in the development of this module.

- Parking lots should be divided into smaller parking "gardens" separated by meaningful green landscaped corridors. The corridors can include pedestrian walkways leading to building entries.
- Parking and pedestrian walkways should be designed to serve as "visual compasses" directing pedestrians toward the primary entry of buildings.
- Parking lots should utilize landscaped walkways to provide safe pathways for those going from their cars to the buildings; and to allow pedestrians to go from building to building safely.
- Structured parking is encouraged for multi-family residential and vertical mixed use developments.

Pedestrian Environment

The Urban Mix Module is dominated by residential uses with a secondary mix of neighborhood supported commercial uses and community facilities. To foster greater neighborhood organization and to develop stronger bonds to local amenities and commercial centers, pedestrian linkages must be incorporated. The following design treatments should be considered in strengthening these connections.

- Urban Mix Module residential streets should incorporate sidewalks on both sides of the street. Additionally, Single-Family Urban Residential streets should provide pedestrian-oriented streetscapes characterized by street trees, pedestrian scaled lighting, and pedestrian seating defining and protecting the pedestrian realm between streets and building facades.
- Sidewalks from residential streets should connect with sidewalks running alongside community collector roads and thoroughfares providing access to neighborhood scaled commercial sites serving the immediate area.

EXHIBIT D

- For residential streets terminating at parks or greenbelts, pedestrian access to hike and bike trail systems should be provided where appropriate.
- To help facilitate other modes of travel and to connect with community amenities, interior sidewalks and crosswalks within commercial centers should link with adjacent thoroughfare sidewalks, residential street sidewalks, and trails within adjoining greenbelts and parks.
- Community facilities, such as schools, libraries, religious facilities, and fire stations, should link into adjoining greenbelt and park trails when possible.

EXHIBIT D

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EXHIBIT E

Multi-Family Policy in the City of McKinney

Note: If anything in this policy is in conflict with any code, regulation or other legal requirement, the code, regulation or other legal requirement supersedes this guide.

Prepared May 2015 by:
City of McKinney
Planning Department

EXHIBIT E

Multi-Family Guidelines

Multi-family developments serve an important function in McKinney. They function as:

1. Housing for young professionals not ready to buy a home.
2. Corporate housing.
3. Retirees.
4. Affordable housing for those who cannot meet the expense of home ownership.

While the City of McKinney recognizes the importance of multi-family land use, attention should be given to how it is developed. For this reason, the following are the design and location parameters that apply to multi-family developments in McKinney.

DESIGN AND LOCATION CRITERIA

Multi-family developments shall be subject to architectural standards as provided for in Section 146-139 of the Zoning Ordinance.

Multi-family uses should not be located in large, high-density concentrations and clusters, but rather dispersed in small groupings around the city in a balanced manner that provides a mix of uses and densities.

Apartment developments should generally be no greater in size than either 20 acres or 400 units and shall be located at major thoroughfare intersections rather than between intersections (i.e., not mid-block).

Multi-family uses shall be located on only one corner of a major intersection, unless they are constructed as part of a mixed-use vertical development.

New multi-family zoning shall not be located within 1,320 feet (one-quarter mile) of any other multi-family zoning district.

In each of the six planning sectors, the number of multi-family units generally should not exceed 10% of the total number of existing or estimated future residential housing units.

If the total estimated number of future residential multi-family units in a planning sector exceeds 10%, a new location should be proposed for rezoning. Staff will evaluate any new locations to determine whether a recommendation for an amendment to the future land use plan should be made.

Vertical mixed-use developments may be allowed even if multi-family housing in the sector exceeds 10% of the existing and zoned housing units, and shall not count towards the multi-family percentage. A vertical mixed-use area shall be defined as one with non-residential uses on the ground floor and in some cases lower floors, with residential uses on the upper floors. The City encourages the vertical mixing of rental units with other land uses.

Urban multi-family developments may also be allowed even if multi-family housing in the sector exceeds 10% of the existing and zoned housing units. For the purposes of this section, urban multi-family development shall mean a multi-family residential development which incorporates, at a minimum, the following urban design elements:

- structured and/or tuck-under garage parking for no less than 80% of the total required parking for the development;
- ground floor units adjacent to a public right-of-way are designed and constructed to permit commercial uses with a minimum 12 feet clear ceiling height;
- meaningful, centrally located internal open spaces (parks, plazas, courtyards, and squares) offering public gathering areas; and
- 10 foot wide public sidewalks adjacent to all public roadways.

EVALUATION METHOD FOR ZONING CHANGES

The primary goal of the multi-family policy is to provide the Planning and Zoning Commission and City Council with the needed information to make informed decisions about future multi-family zoning requests in the City of McKinney.

Planning staff will provide the Planning and Zoning Commission and City with an analysis and evaluation of the corresponding planning sector when multi-family zoning cases are considered.

Requests for changes to the existing zoning are filed with the Planning Department.

To change a property's zoning to multi-family, there is a five-step process:

1) Future Land Use Plan designation (FLUP)
2) Percentage of existing multi-family units
3) Percentage of future multi-family zoning to single family zoning
4) Determination of overall units based on FLUP designation
5) Meet design and location parameters

1) Future Land Use Plan (FLUP) designation

The FLUP will be used to determine if it is an appropriate land use. If the FLUP does not designate the subject property as multi-family, then the zoning request will be recommended for denial.

2) Percentage of existing multi-family units

Staff will consider the percentage of existing units in the corresponding planning sector to determine the appropriate balance of multi-family currently on the ground. If the percentage for that sector is more than 10% (except as otherwise provided herein for vertical mixed-use developments) then the zoning request will be recommended for denial.

3) Percentage of future multi-family zoning to single family zoning

Staff will consider the zoning in the corresponding planning sector to determine the appropriate mix that will occur in the future. If the percentage of future multi-family units

to total residential units is more than 10% (except as otherwise provided herein for vertical mixed-use developments), then the zoning request will be recommended for denial.

4) Determination of overall units based on FLUP designation
Staff will analyze the FLUP to show how many units the multi-family designations will yield and how many units the low-density single family designations will yield. An estimation will be made of the overall percentage of multi-family units based on FLUP designations by planning sector. If the percentage is greater than 10% (except as otherwise provided herein for vertical mixed-use developments), a recommendation may be made to review the FLUP for possible amendment to adjust it so that the overall multi-family percentage is 10% by planning sector.

5) Meet design and location criteria
If a zoning request meets all of the above criteria, then the final test would be meeting the other design and location criteria.

MULTI-FAMILY PLANNING SECTORS