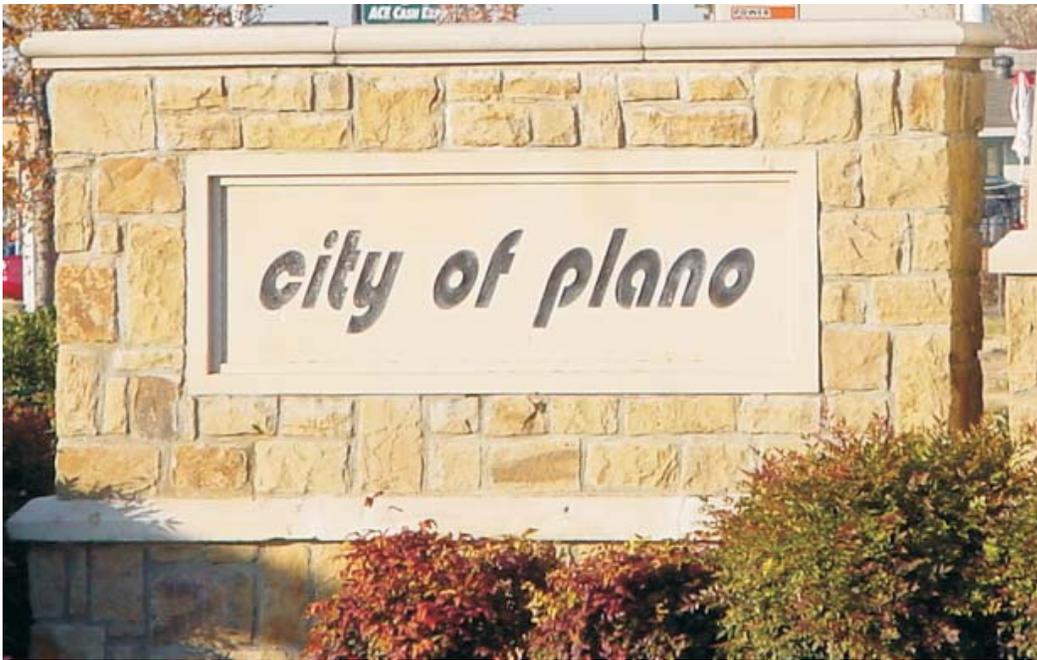


City of Plano COMPREHENSIVE PLAN

INTRODUCTORY CHAPTER

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Introduction

Purpose

The Comprehensive Plan is a long-range guide for the future growth, development, and redevelopment of the city. It provides a general vision for Plano's future and plays an important role in the city's decision-making process. Although the plan focuses on the community's physical environment, it is also closely tied to socio-economic factors.

This document is designed to meet the needs of a wide range of users. It is expected that this document will be used by the city's elected and appointed officials and staff, property owners, developers and citizens alike.

The Land Use and Thoroughfare Maps are integral parts of the Comprehensive Plan. These maps prescribe the land use and transportation patterns for the city. The maps, along with the stated objectives, strategies, and policy statements, outline how Plano will continue to achieve its long-term vision. The city has adopted development regulations by

ordinance in order to implement the vision of the Comprehensive Plan, including zoning, subdivision regulations and thoroughfare standards. Proposals in the Comprehensive Plan often lead to special studies and programs, as well.

General Description of Plano

Location

Plano is a city of approximately 243,500 people located about 20 miles north of downtown Dallas, and covers approximately 72 square miles. Located in Collin and Denton counties, Plano is bounded by the cities of Dallas, Richardson, Carrollton, The Town of Hebron, The Colony, Frisco, Allen, Parker and Murphy. It is served by four major regional expressways: U. S. 75 (North Central Expressway), the Dallas North Tollway, President George Bush Turnpike (S. H. 190), and S. H. 121. It is approximately 25 miles from the Dallas/Fort Worth International Airport.

Physical Form

The city's geographic characteristics include rolling prairie bisected intermittently by major drainage basins, such as Rowlett Creek, Spring Creek and White Rock Creek. These creeks are significant physical features and have influenced both the development patterns of the city and the preservation of open space.

Throughout its growth, neighborhoods, primarily consisting of single-family houses, have been the city's basic building blocks. These neighborhoods, which integrate residential uses of various densities, are defined by a grid of arterials. Neighborhood and regional commercial uses are generally located where the major arterials intersect. The system of expressways that serve the city have generated major employment and commercial corridors, consisting of major retail, high intensity non-residential and manufacturing-related uses. The city has also implemented a well-designed, easily accessible system of parks, trails and open spaces to enhance the quality of life in Plano.

Relation to Region

The Comprehensive Plan recognizes the influence of the overall Dallas-Fort Worth region on Plano's growth, development and quality of life. It emphasizes the need for continued regional coordination on issues such as transportation, economic development, water supply/conservation, wastewater treatment, and air quality. Plano is integrally involved in regional organizations including North Central Texas Council of Governments (NCTCOG), Dallas Area Rapid Transit (DART) and the North Texas Municipal Water District (NTMWD). Plano also coordinates with adjacent communities to ensure land use compatibility, roadway connections, and alignment of hike and bike trails.

As the region continues to grow, environmental issues including air and water quality, and water conservation will have to be addressed collectively. As one of the larger, more developed cities within the region, Plano should assume a leadership role in addressing these issues.

Demographics

Plano has grown from a population of 3,695 in 1960 to more than 243,500 today. It has been one of the fastest growing cities in the United States. Recently, Plano was named by *Money Magazine* as the best city to live in with a population greater than 100,000, west of the Mississippi River. As Plano matures, the age and ethnicity characteristics of Plano's population are expected to have a significant impact on the planning process. The 2000 Census revealed that almost 11,000 of Plano's residents are 65 years of age or older. This age category is expected to exceed 49,000 by 2025. Plano's median age increased between 1990 and 2000 from 31 to 34.1 years.

The 2000 census data indicates significant growth in the minority population in Plano. The Hispanic and Asian sectors grew noticeably in numbers and proportion of the city's population. The White population now represents approximately 73% of Plano's population, compared with almost 85% in 1990.

Major Themes

The Comprehensive Plan is organized around three major themes - *Livable City*, *City of Organized Development*, and *City in Transition*. Within each element specific key factors are used to discuss the major themes in more detail. By using these major themes, the plan will continue to be a relevant, visionary document that the city has relied on during the years of growth.

Livable City

A livable city effectively combines the activities of residence, work, education, culture and leisure in a high quality environment. The Comprehensive Plan describes the desired interrelationship of these activities to create a strong sense of community and promote interaction among its residents. Plano is a neighborhood-oriented community. The Comprehensive Plan recommends cohesive and



Shawnee Park

inclusive neighborhoods with good internal circulation for both automobiles and pedestrians. Activity centers and gathering places are also important factors in the creation of a livable city. They provide opportunities for people to interact and participate in special events and activities. The Comprehensive Plan promotes the continued development of activity centers and gathering places to reinforce Plano's image and identity, while fostering social interaction.

During its years of growth, Plano has carefully cultivated a reputation as a city that provides an excellent quality of life for its residents. Given Plano's proximity and access to Dallas and other employment centers, it is expected that the city will continue to be a highly desirable place to live and

work. Plano residents have access to a wide range of employment, recreational, cultural and other opportunities within the Metroplex. Additionally, Plano has the benefit of mass transit and an established system of thoroughfares, which make it a desirable location for residences and businesses.

City of Organized Development

The Comprehensive Plan's ten functional elements reflect the diversity of factors and interests involved in Plano's planning and development. Ongoing coordination between the departments/divisions responsible for these functional areas is essential to the overall success of the Comprehensive Plan. The plan provides a program to monitor the development of public facilities and infrastructure. This program significantly strengthens the coordination and timing of various public improvements.

Beyond the necessary internal coordination is the growing need for Plano to work closely with other cities within the region. Plano's emergence as a major

employment center, regionally and nationally, may be directly attributed to several regional factors. Plano has benefited from its proximity to the Dallas/Fort Worth International Airport, a system of regional expressways, post-secondary educational opportunities, and a variety of choices for residential and recreational activities.

Moreover, the Comprehensive Plan outlines land use, transportation and other strategies which guide the city's decision making process. The land use and transportation elements are updated every two years. The other elements are generally updated on five-year intervals. This process allows for the introduction of new ideas as conditions and trends change over time.

Typical Plano neighborhoods consist primarily of single family homes with schools and parks on the interior and offices, stores, and apartments on the exterior where they have direct access to major thoroughfares. Plano's residential development was planned to create strong neighborhoods. However, as development trends emerge, other forms of development may provide viable options, particularly for infill and redevelopment. The city should be open to these concepts while recognizing that the typical residential neighborhood is the mainstay of the community.

The Comprehensive Plan is coordinated with the Capital Improvement Program (CIP) to provide for the city's infrastructure needs. The plan includes ongoing review and assessment of the CIP to ensure that its priorities are consistent with the Comprehensive Plan and current development trends.

City in Transition

Plano has been a city in transition for several decades. Over the last 40 years, it has evolved from a small farming community to a residential suburb to a major economic center. The city's evolution continues as it transitions from a growing to a maturing city. As Plano has grown in physical terms, so too has its prominence within the region. Plano is now a major regional employment center for the northern metropolitan area, with over 115,000 jobs. Business parks and corridors such as Legacy and the Research/Technology Crossroads provide ample opportunity for continued employment growth, a major asset in maintaining Plano's desirability as a place to live and work. It is estimated that the city will gain an additional 52,000 jobs in the next decade.

The growth and evolution of Plano also presents numerous challenges and opportunities. Development of large properties now gives way to

infill and redevelopment. Although generally on smaller tracts, these types of development are usually more challenging because of the wide array of issues that must be addressed.

As the city continues to mature, there are other issues that must be addressed to ensure Plano's long-term sustainability. Infrastructure needs, city services, changing development trends, and demographic changes must all be closely monitored to preserve and enhance the quality of life that Plano residents have enjoyed over the years. Most - over 90 percent - of the property zoned for residential use in the city has been developed. However, only about 60 percent of the city's commercial property has been developed. Given the city's level of development, infill and redevelopment will gradually become the primary means of continued growth and regeneration for the city. The economics and resulting built environment of infill and redevelopment are likely to differ from traditional suburban development. This type of development is usually more compact, with higher densities and mixed uses. These types of clusters will not be appropriate throughout the city but, they may be viable alternatives when adjacent to mass transit facilities or in other locations where mixed use development is viable.

Plan Format

The Comprehensive Plan consists of an introductory chapter and ten elements each addressing a specific function of the city. The elements include maps, charts and illustrations where necessary to describe various issues. Each element is discussed in terms of the three major themes outlined above. The discussion includes description of key factors that affect each issue. Objectives and strategies are outlined within each element. These are intended to suggest a plan of action for addressing the key factors that contribute to, or affect the city's comprehensive planning issues.

Land Use

The Land Use Element of the Comprehensive Plan is intended to be a general guide for the development and use of all land within Plano. This element also provides a vision for the city's land use patterns. The Land Use Plan, included in this element, is a graphical representation of the city's vision regarding land use.

Transportation

The Transportation Element of the Comprehensive Plan guides the development of an integrated transportation system. It defines the existing and proposed transportation system and addresses long range local and regional requirements. The transportation network in Plano is a critical component of the city's development pattern. The Chapter's Thoroughfare Plan influences the placement of land use activities such as housing, employment, commercial, industrial and educational facilities. Plano's transportation system impacts quality of life issues such as the air quality, accessibility, place of work, place of residence and choice of transportation modes.

Urban Design

The Urban Design element of the Comprehensive Plan provides a foundation for urban design principles and practices in Plano. It integrates urban design considerations into Plano's development processes to create an attractive and meaningful physical environment that complements the functional organization of the city and reinforces a sense of "community." The urban design element also provides recommendations for strengthening Plano's image and identity as a major economic center in the northern Metroplex, and as a community of excellence in business, residence, education and leisure.

Housing

The Housing Element provides a guide for the development and redevelopment of housing resources in Plano. This element addresses Plano as a community of viable neighborhoods that emphasizes housing variety and opportunity. It also addresses housing in relation to employment opportunities and affordability.

Economic Development

The Economic Development Element of the Comprehensive Plan provides a general framework of policies and recommendations to guide the community's future economic growth. It is intended to define the role of economic development in the comprehensive planning process and its relationship to other elements of the Plan.

Public Services and Facilities

This element of the Comprehensive Plan addresses a wide range of services and facilities provided by the City of Plano. These services include police and fire protection, emergency medical services, library services, solid waste collection, and public buildings. The element not only identifies the existing services and facilities offered by the city, but also makes recommendations to ensure that services and facilities keep pace with the growth in population, employment, and visitors to the city.

Education

The Education Element of the Comprehensive Plan addresses the need for the city to provide a wide range of educational opportunities. Discussion includes programs and services, and facility siting and planning. Additionally, this element outlines a general format for maintaining a relationship between the city, Plano Independent School District (PISD) and other education providers particularly

as it relates to information sharing.

Parks and Recreation

The Parks and Recreation Element of the Comprehensive Plan identifies the major trends and issues affecting parks and recreation. This element includes a Master Plan for parks, which identifies existing properties and establishes general locations for future acquisitions. The Master Plan also identifies the location of existing and proposed recreation facilities including pools, tennis centers, recreation centers, senior centers, and golf courses.

Utilities

The Utilities Element of the Comprehensive Plan addresses these major areas 1) Water, 2) Sanitary Sewer (Wastewater), and 3) Storm Water Management. It also includes a brief discussion of private utilities such as telephone, electricity, gas and cable television. The element identifies strategies to address the provision of utilities.

Technology

The Technology Element addresses Plano's status, as a "City of Choice" for residence, employment, and business location. It outlines the process of enabling the community to utilize the opportunities afforded by technological advances. This includes applications of advances in technology for the enhancement of 1) quality of life, 2) competitive business advantages/economic development, and 3) efficient communications.

Policy Statements

Throughout the various elements of the Comprehensive Plan, references will be made to policy statements. These policy statements are intended to offer more detailed discussion on selected topics, as well as to provide specific guidance for decision makers when considering matters relating to Plano's growth, development, and redevelopment.



LAND USE ELEMENT

City of Plano COMPREHENSIVE PLAN

LAND USE ELEMENT

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Plate 1: Land Use Plan

APPENDIX

Land Use Categories

The Land Use Element and Plan establish categories of land use for the city as well as the general pattern in which these will occur. Unlike the zoning map, it is not parcel specific. The map, together with the policies of the plan, is used to determine the appropriate zoning classifications for individual tracts of land.

Residential

Neighborhoods

The City seeks attractive, inclusive and cohesive residential neighborhoods with a mix of housing opportunities. Low, medium and high-density residential uses are not individually designated. Specific proposals regarding housing are included in the Housing Element of the Comprehensive Plan.

Non-Neighborhood

With few large tracts left for residential development, many infill and redevelopment opportunities may not fit the traditional neighborhood context. Because of this, some residential development may occur in non-neighborhood settings such as in mixed-use developments and specialized housing complexes.

Service and Production

Downtown Business Government Center

Downtown Plano is becoming a 24-hour mixed-use community. Housing, shops, restaurants, cultural facilities and government offices comprise the major uses. Infill and redevelopment projects should be compatible with the historic character of the area. Urban density and transit-oriented design is encouraged.

General Commercial

General Commercial areas are intended to provide a wide range of retail, service, office, light production and research and development uses. Residential adjacency standards must be considered when general commercial areas are near residential areas.

Major Corridor Development

This designation applies to three areas that are served by major expressway facilities: the Dallas North Tollway Corridor, President George Bush Turnpike, and the S.H. 121, Corridor. Development in these corridors is expected to

include a mix of commercial, office, and technical production uses. Floor area ratios (FAR) should range from 0.4:1 to 1:1, and heights should be limited by proximity to residential areas. Residential development is generally not appropriate within these corridors, although residential development may be considered along the southern edge of the S.H. 121 corridor. This corridor is wider than the others, but residential uses should not be closer than 1200 feet south of the future center line of S.H. 121.

Freeway Commercial

The Freeway Commercial category is intended to define the unique character of the U.S. 75 corridor. This corridor includes major retail development including Collin Creek Mall, along with general commercial, entertainment, lodging and office uses. Basic components of the category include 1:1 floor area ratios and a 20 story maximum height limit. Lower FAR's and maximum heights are recommended for areas located within 500 feet of residential areas.

Major Commercial

Major commercial centers may include malls and large shopping centers anchored by department stores, along with specialty shops, restaurants, theaters, offices and other uses. These centers serve both a local and regional population, and are located along regional thoroughfares. Major commercial centers usually contain 500,000 square feet plus of floor area on sites of 50 acres or more. Multi-story buildings with an overall FAR of up to 1:1 may be appropriate in conjunction with retail development.

Community Commercial

Community commercial centers generally serve a neighborhood area of three to five miles, and include department or discount stores, grocery stores, specialty shops and restaurants along with office uses. These centers are located on sites 15 to 35 acres in size along regional expressways or at intersections of major arterial streets. Typical FAR's are less than 0.4:1. Two or three corners may be developed at intersections designated as community commercial centers on the land use plan.

Neighborhood Commercial

Neighborhood commercial centers are intended to serve adjacent residential neighborhoods, and include grocery stores, drugstores and small retail and service uses. These centers serve a one to one and one-half mile radius and contain 100,000 to 150,000 square feet of floor area (at a rate of 30 square feet per resident of the service area). They require a site of 10 to 15 acres, and development intensity less than 0.3:1 FAR.

Neighborhood commercial centers are located at the intersections of major arterial streets. One or two corners may develop with commercial uses at intersections designated as a neighborhood commercial center on the Land Use Plan, based on the size and population of the service area.

The population of some areas of Plano will not support a typical neighborhood commercial center, and smaller neighborhood convenience centers may be appropriate for such areas. Neighborhood convenience centers contain a convenience store with gas pumps and small shops, with total retail space less than 25,000 square feet. Sites are less than five acres, yet they are larger than a single corner convenience store. Neighborhood commercial centers provide an option for partially developed retail corners where there is little chance of additional retail development, and the remainder property is being converted to another use.

Office

The office categories include a variety of employment uses, including office towers, medical centers, corporate campuses and small neighborhood offices. There are three categories of office development designated on the Land Use Plan – High Intensity Office, Medium Intensity Office and Low Intensity Office. High Intensity Office should include offices with FAR's up to 1:1 and building heights up to 12 stories. Medium Intensity Office areas should include development up to 0.75:1 FAR and eight story building heights. Low Intensity Office development serves local needs and heights are typically less than four stories with FAR's less than 0.4:1.

Light Industrial

The light industrial category includes a variety of industries such as research facilities, assembly or production operations, warehousing and associated administrative offices. Industrial development is limited to a 0.5:1 FAR and a maximum building height of four stories. Light industrial and associated development is appropriate in areas with access to the arterial street system and, where possible, access to the railroad system. Light industrial development is most appropriate in industrial parks or other suitable planned settings.

Research/Technology Center (RT)

The Research/Technology Center area provides for low-density office, research and development facilities, and limited assembly operations. It is intended to attract high technology businesses similar to those currently in operation south of the President George Bush Turnpike. This area is intended to accommodate multiple users in a campus environment. Warehousing is planned to serve a supporting role in the RT area. Warehousing should generally be an accessory use to limited assembly operation and office/showroom facilities.

Public and Semi Public (PSP)

The public and semi-public category includes a wide range of public and private uses such as colleges and universities, public and private schools, golf courses, country clubs and large private open spaces. Locations should be provided for institutional and public uses that are appropriate for the intensity and character of each.

Parks and Recreation (P)

The parks and recreation category includes major public open spaces as well as parks and recreation facilities serving the community. Included are floodplain areas to be preserved such as major parks, linear parks, athletic complexes and City-owned golf courses.

Special Areas

There are several major transportation and land use corridors throughout the City. The four primary corridors are: U.S. 75, Plano Parkway/President George Bush Turnpike, Dallas North Tollway and S.H. 121. Spring Creek Parkway and Preston Road serve as secondary corridors. Legacy and Spring Creekwalk are two other unique land use areas in Plano. Highly visible, these corridors serve as activity centers within the City.

2 Land Use

2.1 Introduction



Figure 1 - Legacy Town Center

Purpose

This Land Use Element analyzes land use and development patterns occurring in the City today, provides a general guide for the development and use of all land within the City of Plano, and establishes a vision for the City's future land use patterns. This text is supported by the Land Use Plan, which provides a graphical representation of the City's objectives regarding land use.

Major Issues

As Plano continues its transition from a developing to a developed city and from an outer tier to a first tier suburb, policies and land uses must be adapted to address these changing conditions. Despite the fact that much of Plano's residential land has been developed, there are a number of

issues related to land use that warrants policy discussion. The Dallas-Forth Worth Metroplex is projected to continue to grow quite rapidly - adding three million people by 2030. Much of this growth will likely take place in cities on the urban fringe. However, Plano should play a leadership role in assuming some of this growth and searching for strategies that can help mitigate impacts, such as road congestion and air and water pollution, as well as to improve the quality of life for Plano's citizens. This will require housing outside of traditional neighborhood areas, redevelopment, urban centers and new and likely denser housing types. It is essential to accommodate this growth while retaining Plano's basic development pattern and character.

Preserving suitable, well located land for economic development is important to Plano's long term viability. Although it may seem expedient to convert land currently undeveloped and zoned for nonresidential use for residential development, properties in major corridors and employment centers should generally be reserved for employment generating uses. The limited availability of undeveloped land will require that its future development is carefully aligned with the City's economic development objectives.

This document addresses ways that Plano can maintain and enhance its position in the region as well as adapt to changing conditions. Striking a balance between competing demands and accommodating some of the population growth projected for the region will be a challenge for the City. This document addresses ways that Plano can maintain and enhance its position in the region as well as adapt to changing conditions. Plano's ability to effectively address infill development and redevelopment will also become increasingly important.

MAJOR THEMES

Three major themes are used throughout the Comprehensive Plan: Livable City, City of Organized Development, and City in Transition. These themes are used here to organize land use strategies according to various goals. The first theme, "LivableCity", addresses issues that impact the sustainability of the city as it relates to Plano remaining an attractive place to live and work. "City of Organized Development" considers existing and future land use patterns. "City in Transition" focuses on the changing regional context, technology and similar influences on Plano's future. These

themes are used to analyze current and future land use needs for the city based on current conditions and trends.

Theme I - Livable City

Quality of life is one of the top priorities of the City of Plano's planning efforts. A careful balance of land use activities helps create a sustainable physical environment which, in turn, enhances the daily lives of those who live and work in Plano. This theme establishes ways in which the city will maintain its livability by effectively integrating daily activities - residence, work, education, culture and leisure - into a diverse environment.

Theme II - City of Organized Development

Plano has experienced significant growth over the past three decades but today that growth is leveling off. The City has relied on a comprehensive planning strategy, supported by the future land use plan, to guide this growth and its physical arrangement. This ongoing process of assessing needs, setting objectives, implementing programs and monitoring progress has resulted in an organized land use pattern. This section examines how existing and future development patterns can be used to further enhance the community.

Theme III – City in Transition

For many years Plano has been a “developing” community and its planning efforts have been primarily focused on addressing issues related to this new growth. Now that the majority of the City’s development and infrastructure is in place, infill development, redevelopment and revitalization are becoming the City’s primary opportunities for new development. In its new role as an inner tier suburb, the City is also seeing new types of development, including mixed use and higher density projects such as LegacyTownCenter. This theme examines factors contributing to and resulting from the transition to a maturing city.

Key Factors

Key factors have been identified for each of the major themes. The discussion of these factors in each section will further explain the major themes as well as provide a basis for the objectives and strategies outlined for each theme.

2.2 Theme I - Livable City

Regional and Local Changes

As noted earlier, Plano is located in one of the fastest growing regions and counties in the country. The population of the DFW area is projected to grow by three million by 2030. Collin County, with Plano and rapidly developing cities such as Allen, Frisco, and McKinney, is going to be home to a major portion of this growth. Between 1990 and 2000, Collin County increased in population by over eight percent annually, reaching a total of 491,675 persons.

Forecasts for Collin County project more than 1.1 million residents by 2030.

Despite the limited availability of raw land, Plano’s location and multitude of assets - including the availability of mass transit, proximity to post-secondary educational institutions and abundant employment opportunities - will continue to make it a very desirable place to live and work. As regional growth and development proceeds Plano must continue to work with neighboring cities to address land use, transportation, environmental issues and other matters of mutual concern.

Mobility

Quality of life is heavily influenced by the level of local and regional mobility. For many years Plano has benefited from a very efficient roadway system that has made it easy to travel within the City and to make connections to other cities in the region. Projected local and regional growth, coupled with limited opportunities to expand the roadway system, will place increase interdependence between land use and transportation.

Expanded employment opportunities through economic development can actually have a positive impact on mobility. More Plano residents can travel shorter distances to and from work and wide array of shopping, dining, and entertainment establishments. Persons living in other cities and working in Plano can also travel in the opposite direction of the primary traffic flow during peak hours.

Environmental Impacts

The City of Plano values the environment and actively seeks ways to enhance the quality of life by improving air quality as well as protecting and conserving water resources. Air pollution comes from many sources including factories, power plants, dry cleaners, cars, buses, trucks and even windblown dust and wildfires. Because it is diffused, air quality is a concern that impacts all residents in the DFW region. This pollution can threaten the health of human beings, trees, lakes, crops, and animals, as well as damage the ozone layer and buildings. Under the Clean Air Act, the Environmental Protection Agency (EPA) regulates air pollution for the region as a whole.

Water pollution impacts the use of water for drinking, household needs, recreation, fishing, transportation and commerce. Because of this, water quality is a concern shared by many cities in the Metroplex. Water quality is affected by the design and layout of development. Plano's Zoning and Subdivision Ordinances have recently been updated to include storm water management practices and additional updates may be necessary in the future.

Water is supplied to Plano and many other cities in the region by the North Texas Municipal Water District (NTMWD). However, each city is responsible for implementing its own policies governing local water consumption. Contracts with the water district are often structured so that cities must commit to purchasing a set amount of water, which provides little financial incentive for water conservation. At the same time, NTMWD must have a dependable return on investment in order to meet the current and future needs of the

cities it serves. The district must cover the costs of its fixed assets and develop new water resources for its growing customer base. This would not be possible with fluctuating revenues. Therefore, NTMWD and its member cities will need to continue exploring alternatives that encourage water conservation without inhibiting system maintenance, upgrades, and capacity increases.

The availability of natural resources will have an increased impact on the ability of the region and individual cities to support livability. It will become increasingly incumbent upon the City of Plano to facilitate the efficient use of water, energy, and other critical resources. The availability of natural resources also impacts building design and construction materials. Properly formulated codes and ordinances can support the use of energy efficient and sustainable development and construction practices while promoting quality and cost effectiveness.

Objectives for Theme I – Livable City

- **Objective A.1** Provide for local land use strategies that reflect changing regional and local trends and conditions.
- **Objective A.2** Continue to implement development policies that ensure the protection of the environment and the supply of essential resources.

Strategies for Theme I – Livable City

- **Strategy A.1** Regularly monitor, review, and update the Comprehensive Plan, Zoning Ordinance, and related documents to ensure their effectiveness in meeting

the needs of the community. Update the Land Use and Transportation Elements every three years.

- **Strategy A.2** Where possible, zone property and configure development to provide complementary uses and to foster good connections between them using a combination of streets, trails, and sidewalks for vehicular, pedestrian, and bicycle circulation.
- **Strategy A.3** Regularly monitor development and building regulations to ensure that they provide for the efficient use of natural resources and promote environmental quality. When possible, incorporate sustainable building and design practices into development regulations.
- **Strategy A.4** Continue to work with adjacent cities and regional agencies to develop land use patterns that promote enhanced regional mobility.

2.3 Theme II - City of Organized Development

Local Context

Today, much of the residentially zoned land in Plano is developed and there are few large undeveloped properties of any type remaining in the City. As Plano matures, the focus of development is shifting towards infill tracts that have been passed over for development for various reasons, as well as the redevelopment of under-performing and obsolete properties.

Careful consideration should be given to compatibility when new uses are being introduced into developed areas. This is

especially true when nonresidential uses are developed in close proximity to residential uses. The City currently has zoning standards for certain types of activities when placed in proximity to residential districts (residential adjacency standards). These standards should be monitored regularly to ensure that they provide the desired guidance for infill development.

Land Use Absorption

Plano experienced development at an extremely rapid pace during the 1970s, 1980s and 1990s. Today, over 95 percent of the land zoned for residential use in the City has been developed. Further residential development is expected over the next few years, albeit at a slower rate. Retail and office development typically trail residential because these uses are generally dependent on the number of households within a certain distance. Plano still has a significant amount of nonresidential land available for development. In fact, only about 60 percent of “Commercial” land has been developed to date. As this land is absorbed, it will be important to monitor any shifts in the land use mix as this information will be a key indicator of the need for City services including the provision of parks and open space. (The Land Use Absorption Table can be found in the appendix).

Variety of Land Uses Opportunities

A community’s land use system should accommodate a wide range of opportunities for its existing and future residents. Sometimes, efforts to create more pleasant and appealing surroundings can result in a narrow range of land uses that actually detract from the “Livable City” concept. For

example, opportunities for persons of various ages and life styles to live in a community can be hampered by limited the range of housing types permitted in a city. In addition, residents require the availability of a broad range of services. Some of these services, such as automobile repair, are less than attractive and appealing than others and there is a tendency to reduce or isolate their locations.

Plano's Zoning Ordinance and Atlas generally provides for a broad range of residential and nonresidential uses. The ordinance also includes development standards that reduce the impacts of certain uses on their surroundings. The Residential Adjacency Standards are a good example of this approach. As Plano reaches full development, there will be more situations in which uses that traditional considered to be less desirable, are more desirable uses. It will be important for the City to find ways to enhance the transitions between uses as opposed to reducing the opportunities for uses that are necessary to serve the needs of Plano residents.

Balanced, Consistent Zoning*

Plano's land use pattern is generally organized around a system of major, east-west and north-south thoroughfares spaced at one mile intervals. Each one square mile of land area has developed as a neighborhood with low density single-family housing surrounding an elementary school and city park. The outer edges of the neighborhoods often include higher density housing with direct access to the major thoroughfares. Most of the corners of the intersections of the thoroughfares are zoned for retail uses.

(This typical neighborhood format is described in more detail in the Housing Element.)

Although this arrangement is very efficient and easy to navigate, it has contributed to a zoning imbalance. The City currently has more land zoned for retail and office uses than is likely to be supported by the market over time. Much of this land is located at major intersections. In the past, all four corners at many of these intersections were zoned for some form of retail or commercial use. This resulted in the development of almost 60 square feet of retail per capita (approximately three times the national average). As new retail centers are developed in surrounding cities, this amount of retail can no longer be fully supported and some retail facilities have become vacant or underused. It is unlikely that the City will need to rezone additional property for retail use unless a certain market area is clearly lacking locations for shopping and service facilities.

Economic conditions and the development market trends sometimes change quickly, resulting in an imbalance in the amount of land for a given use. Periodic monitoring of development activity and the zoning classifications of remaining undeveloped properties assists the City in projecting and preparing for future land use needs. It will be necessary to convert some of the undeveloped or under-producing retail properties to other uses. While residential development may be difficult to accommodate because of the limited size of these parcels (as defined in the Housing Element), it may be possible to create mixed-use environments including mutually supportive uses such as residential and neighborhood retail or office.

As Plano matures, some zoning imbalances are becoming more apparent. As the supply of undeveloped land diminishes, properties that were previously overlooked are being considered for development. Many of these properties will require rezoning to accommodate development supported by the market. Some of these sites, because of their size, shape, location, and/or access will not be well suited for their proposed uses. The City will have to make difficult decisions regarding the long-term use of these “leftover” tracts.

**Please refer to Policy Statement No. 2.0 for detailed strategies on addressing this issue.*

Coordination with Public Infrastructure, Facilities and Services

Plano’s development pattern is carefully intertwined with its system of public infrastructure, facilities and services. As noted previously, most neighborhoods are organized around an elementary school and neighborhood park.

The City has also made a concerted effort to acquire flood plains and adjacent properties to create an elaborate system of greenbelts, hike and bike trails, and parks of various sizes and types. Other facilities such as libraries, recreation centers, fire stations, and police stations are carefully located to serve efficient, effective service to Plano residents and businesses. (For more information, see the Parks and Recreation and Public Services and Facilities Elements.)



Figure 2 - Clearview Park -
Example of neighborhood park

Changes to the City’s development pattern can impact to the public sector’s ability to provide the level of services that its citizens have come to expect. They can even affect health safety, and welfare. For instance, adding residential units to an area may impact the ability of the Police and Fire Departments to provide adequate and timely emergency services. Similar issues arise in regard to roadways, utilities, and related public infrastructure. High intensity nonresidential uses typically generate more traffic trips than low intensity residential areas. On the other hand residential uses sometimes have a greater impact on utility requirements like sanitary sewer. (See Utilities Element.) Therefore, land use and development decisions must be carefully coordinated with the public sector’s ability to provide public infrastructure, facilities and services in an orderly and timely fashion.

Continuous Planning Process

The City's planning program is necessarily an ongoing and cyclical process of assessing needs, setting goals, implementing programs, and monitoring progress. The Land Use and Transportation Elements are regularly updated. An extensive effort to identify and prioritize key issues is an integral part of the plan revision process, as is community participation and regional coordination. This effort includes public meetings to solicit concerns and ideas from the citizens. Modifications to the Land Use Element often lead to changes in development review procedures, zoning, and other City policies. The Zoning Ordinance, Subdivision Ordinance, Master Facilities Plan, and the Community Investment Program (CIP) are examples of "next step" documents and are critical to the success of the City's planning and development process. The Comprehensive Plan should continue to be utilized for general guidance for policy formulation in these areas.

Objectives for Theme II – City of Organized Development

- **Objective B.1** Ensure that the provision of City infrastructure, facilities and services is coordinated with development and maintained or modified as needed to meet required service levels and the needs of a changing population.
- **Objective B.2** Provide for a balanced and efficient arrangement of Plano's land resources to accommodate housing, employment, shopping, entertainment, and recreation.
- **Objective B.3** Ensure land use compatibility by grouping complementary land use activities, especially those that are mutually supportive, and continuing to implement policies that minimize the impact of potentially incompatible activities.

Strategies for Theme II – City of Organized Development

- **Strategy B.1** Maintain the Master Facilities Plan as the interdepartmental guide to coordinate the planning, development and redevelopment of City of Plano facilities in concert with changing community needs and expectations. Coordinate the Community Investment Program (CIP) process with the objectives in the Master Facilities Plan.
- **Strategy B.2** Annually formulate and update a five-year CIP based on the Comprehensive Plan. Review annual updates to the CIP with the Planning & Zoning Commission.
- **Strategy B.3** Consider requests for rezoning areas planned or zoned for nonresidential use to residential districts based on the guidelines included in Policy Statement 2.0.
- **Strategy B.4** Use Plano's Comprehensive Plan, particularly the Land Use Plan, and related policies,

to guide the zoning of properties in a manner that minimizes incompatibilities between uses.

- **Strategy B.5** Regularly meet with City departments and other local government entities to ensure development and redevelopment within the City can be supported with the necessary facilities and services
- **Strategy B.6** Make amendments to the Zoning Ordinance (text and atlas) based on the strategies of the Comprehensive Plan. This consideration should include evaluation of the following:
 - Intent of the plan in its entirety;
 - Physical character of the property affected;
 - Adequacy of public facilities (existing and proposed); and
 - Relationship to adjacent land uses (existing and proposed).

For detailed description of land use categories and distribution of land by zoning designation, please refer to the 'Appendix'.

2.4 Theme III - City in Transition

Cities evolve over time and as they do new challenges and opportunities emerge. Plano developed very rapidly during the 1970s, 1980s and 1990s. Today that growth is slowing and the City is challenged with some aging and dated development.



Figure 3 - Abandoned anchor within retail center

The City also has an overabundance of retail development that, in some cases, is struggling. The long-term vitality of the City will depend on its ability to address issues such as these in a timely and appropriate manner.

In 1998, the City initiated a Neighborhood Planning Program focused on older, at-risk neighborhoods. This program creates partnerships with residents to develop strategies for improving and sustaining their neighborhoods. Another project that is helping the City gracefully evolve is the enhancement of downtown Plano and the older neighborhoods surrounding it. This example is illustrative of both historic preservation and redevelopment. The original business core and the Haggard Park neighborhood have been designated as Heritage Resource Districts. Compatible mixed-use projects, Eastside Village I and II, have been developed alongside older downtown structures. New single-family homes have also been constructed in Haggard Park and in the Douglass Community. These neighborhood planning and revitalization efforts have contributed to extensive improvements to the downtown and surrounding neighborhoods. These range from investment in infrastructure to

loans and grants for the rehabilitation of private homes. Funds for the latter often originate from federal programs. While these exact strategies are not appropriate for all areas of Plano, the City should continue to ensure that policies and regulations support redevelopment efforts.

The City's workforce housing initiative focuses additional attention on the need to preserve and enhance Plano's older housing stock and neighborhoods, in addition to creating viable housing options within a reasonable driving distance of Plano's employment centers. The relationship between land uses should be balanced and mutually supportive. Plano's housing stock must be varied enough to support a broad range of income levels and household preferences. This will help to ensure that the supply of housing continues to accommodate the needs of those employed by local businesses. Most of Plano's more affordable housing stock is comprised of older homes (25 years or older); these are not always compatible with the expectations of modern buyers. Further, these homes are typically less energy efficient than newer homes and more costly to maintain. It is important that Plano continue with proactive strategies to ensure the health of neighborhoods while providing for a wide range of housing options within the City.

Changing Demographics



Figure 4 - Plano businesses serve diverse populations

As the City matures, its population and employment characteristics are changing. Plano's population and employment are not only growing in number but also in diversity. Factors such as age, ethnicity, culture, and income directly impact the types of public and private services and facilities which a community must provide to its residents and workforce. The 2005 ACS data suggests continued significant growth among minority populations in Plano. Hispanic and Asian sectors have grown significantly in recent years.

The white population now represents approximately 65% of Plano's population compared to almost 85% in 1990. As Plano becomes a more diverse community of different backgrounds and cultures, it will need to offer a wider range of public and private services and programs. Joint efforts with the school districts and other entities will be necessary to celebrate and take advantage of Plano's diversity.

Plano's population is also aging; the population over age 65 was approximately 16,000 at the time of the 2005 American Community Survey (ACS) census and is expected to more than double by 2020 (to a projected 40,000 residents). This will have a impact on Plano's housing requirements and land use demands. Currently Plano's Zoning Ordinance provides for a range of senior housing options in several district categories. It also includes reduced requirements for parking, dwelling size, and similar accommodations based on the actual needs of senior residents. The City should also encourage the development of senior housing in urban centers which can provide a variety of services within walking distance.

Economic Development

In the 1980s Plano began to attract a number of corporate citizens and emerge as an employment center. Today, Plano has a significant amount of office development in the Legacy area, along U.S. Highway 75 and within the Plano Parkway/President George Bush Turnpike (S.H. 190) corridor (including the Research/Technology Crossroads area). There are about 125,000 jobs in Plano and recent employment data indicates that number is expected to grow to approximately 167,000 by 2025.

Plano's economy also has a significant retail and service sector component. New competition from retail development is emerging in outer tier suburbs and Plano is challenged with maintaining its retail market share. The Tri-City Retail study, completed in 2003, explored this issue in-depth and identified challenges such as municipal planning practices which led to retail over-zoning; rapidly changing retail

formats (nationally and regionally); and dramatic shifts in demographic characteristics, particularly age and ethnicity. Continued success of the City's retail sector will depend on its ability to address these issues appropriately.

Plano has four regional development corridors running through it or along its boundaries (S.H. 121, U.S. 75, the Bush Turnpike, and the Dallas North Tollway). These are generally comprised of the expressways themselves, two parallel arterial streets, and the land in between. Properties in these corridors tend to be highly visible, readily accessible, and suitable for many types of commercial uses. The resulting land areas are typically adequate to provide flexibility in the design and orientation of development and therefore a variety of uses are appropriate. However, the noise and traffic generated by major expressways are often not conducive to residential uses.



Figure 5 - Undeveloped land along Dallas North Tollway

Two other major areas (Legacy and Research/Technology Crossroads) in northwest in southeast Plano combine with the four regional development corridors to comprise Plano's primary bases for economic development. A significant

portion of Plano's undeveloped land also lies within these six areas. Because of this and the current demand for residential development, the City has fielded a number of requests to convert properties in these locations to residential use. It is important for the City to retain an adequate supply of undeveloped nonresidential land for future economic development opportunities. Therefore residential rezoning in these prime economic development bases is generally not recommended. Accommodating immediate development opportunities is not an adequate reason alone for rezoning nonresidential properties for residential purposes.

Development Trends

Changes in business operations and marketing approaches often affect development and land use patterns. This is particularly evident in the retail industry where major grocery, appliance, computer, discount department, and home improvement chains are building stores in locations where they can attract business from regional or community-wide service areas. In the past, this type of store typically anchored a small- to medium-sized neighborhood shopping center. Smaller retail stores and shops in these same centers often depend on anchor stores to attract customers. As these stores move to more regionally accessible locations, the resulting vacant spaces can be hard to fill. Creative strategies for filling these vacant "big-box" stores will be important to continued success of smaller retail centers. In some cases, the lack of demand and market saturation may make it necessary to redevelop these properties for different uses that cannot be accommodated by the current building configuration.

Another development trend that warrants discussion is the concept of "new urbanism." Proponents of new urbanism suggest that



Figure 6 - Legacy Town Center North

a return to more traditional forms of urban development could provide better living environments. Plano, like most suburbs, predominantly consists of a low-density, automobile-oriented development pattern. However, the success of urban centers in Downtown Plano and the Legacy Town Center has demonstrated that new urbanist concepts can be successfully incorporated into the City.

The Urban Centers Study states that development of additional urban centers may be appropriate in a few additional locations in Plano. These compact, mixed use environments can not only increase the variety of land uses within the City, but can support additional mass transit service and reduce automobile traffic. However, this style of development should not be used merely as a means of gaining additional density and zoning flexibility. This Study defines the key characteristics and design elements of urban centers and the site attributes that should be used in finding suitable locations for this form of development. True urban centers should provide opportunities for residence, employment, shopping, and entertainment in a pedestrian oriented neighborhood

environment. Such centers will typically require fifty acres or more to create a successful, balanced development.

The development community is increasingly interested in mixed-use developments. Plano currently has more retail uses that can be supported in the long-term and some existing retail centers are experiencing difficulties. In recent years, the City has received inquiries and some rezoning applications for mixed-use projects on properties that are currently zoned for nonresidential use. The inclusion of residential and nonresidential uses on the same site does not constitute mixed-use development. A typical in-line shopping center or big box store with parking in front and apartments in the rear connected by a street or driveway is more representative of two separate projects sharing a common property line. The proposed apartments or other forms of residence should be more than just “filler” for the portion of the property that cannot be marketed for retail use. Instead, the vehicular and pedestrian circulation systems, parking configuration, building layout, and architectural design should all be integrated in a manner that creates a single development project.

In some cases, the subject sites may be appropriate for urban center development in accordance with the criteria established in the Urban Centers Study. In other cases, the size, location, and other factors may make such sites appropriate for a condensed mixed-use development that does not result in a fully functional neighborhood like an urban center. Mixed-use development outside the context of an urban center should occur only when there is reasonable evidence to indicate that development of the site for nonresidential uses would not add to

current market saturation and the proposed uses are integrated into a cohesive development plan.

Plano is also becoming a major medical center within the Dallas/Fort Worth region. With three major hospitals and another under



Figure 7 - Presbyterian Hospital of Plano

construction, medical services are becoming a major component of the City's economy. This emerging trend will ensure that Plano's residents have access to excellent health care and expand the City's employment base.

Changing Technology

Technological advances have greatly impacted the design and development of cities over the decades. The most obvious example is the automobile, which has affected both the overall development of cities and the design of individual site plans and subdivision plats. Other technological advances have been more subtle.

Today, advances in telecommunications and information technology are reinventing the way we live, work, and play, making it possible for more Americans to work, shop, and even socialize at home. This in turn impacts the form of our cities and service needs. For example, the ability to telecommute allows residents to reduce trips to and from work and in turn, helps reduce traffic congestion and air pollution. These technological advances have facilitated an increased number of home-based businesses.

Home-based businesses could greatly benefit the viability of Plano's neighborhoods by increasing the "daytime population" and, in effect, helping deter crime. Plano should work to ensure that its codes and ordinances accommodate home-based businesses, without compromising the character and integrity of its neighborhoods. (The Technology Element of the Comprehensive Plan contains a more detailed description of this issue).

Objectives for Theme III – City in Transition

- **Objective C.1** Ensure continued vitality of existing residential neighborhoods throughout the City.

- **Objective C.2** Ensure that zoning and development regulations are consistent with changing land use needs
- **Objective C.3** Ensure development standards and zoning are consistent with city-wide goals established in other policy documents, such as sustainability, workforce housing, economic development and urban centers.
- **Objective C.4** Encourage continued growth of Plano's economy by supporting appropriate infill and redevelopment initiatives.

adversely impact the planned land use pattern for the surrounding area.

- p. A plan that provides for the integration of vehicular and pedestrian circulation systems, parking, building location, and architectural design into a cohesive development.

Strategies for Theme III – City in Transition

- **Strategy C.1** Utilize the Neighborhood Planning Program and other initiatives to facilitate the stabilization of existing neighborhoods. Continue to evaluate and update the program as needed to ensure its success as a planning tool.
- **Strategy C.2** Consider the use of creative and alternative suburban land use concepts, including mixed-use development in appropriate infill and redevelopment areas of the City. Review requests to rezone properties for mixed-use development in accordance with the following:
 - o. Finding that the conversion of nonresidential property for residential or another nonresidential use would not
- **Strategy C.3** Regularly monitor and report on changing population and employment characteristics to determine if public and private services and facilities are consistent with needs and expectations of the community. Make adjustments to applicable ordinances, policies, and programs as needed to address these changes.
- **Strategy C.4** Where appropriate, support opportunities and efforts to develop and redevelop properties in ways that are consistent with established policy goals, such as enhancing the local economy, providing jobs to Plano residents, and improving the City's tax base.
- **Strategy C.5** Work with developers to ensure that infill and redevelopment occur in appropriate locations. In particular, the location and design of urban centers should be consistent with the guidelines established by the Urban Centers Study.
- **Strategy C.6** Regularly monitor zoning, development and building regulations to ensure that they do not inadvertently deter redevelopment or prevent business relocation or expansion.

- **Strategy C.7** Preserve land for future employment generating opportunities, particularly within major development corridors and business parks..
- **Strategy C.8** Continue to identify and consider initiatives for Plano's existing urban centers in terms of their impact on the viability of these locations for residential, employment, entertainment and cultural activities.
- **Strategy C.9** Develop and implement specific initiatives to encourage infill and redevelopment. These initiatives should seek to promote land use compatibility and connectivity especially between residential and nonresidential uses.
- **Strategy C.10** Conduct periodic evaluations of the changing demographics, market trends, and regional influences and determine their potential impacts on infrastructure and facilities.
- **Strategy C.11** Monitor and evaluate growth in Plano's population and employment and changes in population characteristics to determine their impact on service and facility requirements.

2.5 2012 Interim Amendment Redevelopment and Undeveloped Land Policies

Since 2007, the Planning & Zoning Commission and City Council have been asked to consider approval of requests to rezone land located within the city's expressway corridors and major employment areas to allow for additional

residential development. City policies regarding undeveloped land in the Comprehensive Plan were written from 2004 to 2009 and encouraged preservation of land within the expressway corridors and major employment areas for economic development and employment opportunities. Since that time, numerous requests to rezone land for additional housing has challenged the relevance of the current policies and prompted a study starting in the fall of 2010 to determine if changes were necessary to the policies. The results of this study and discussions with the Council and the Commission produced six recommendations regarding undeveloped land and redevelopment. The recommendations with supporting explanations are found in the following text.

1. All residential rezoning requests should be evaluated to determine the impact on infrastructure, public safety response, school capacity, and access to and availability of amenities and services.
2. Isolated residential development should not be permitted; residential rezoning requests need to establish a complete new neighborhood or expand an existing neighborhood or an urban mixed-use center. Mid-rise multifamily development (5 to 12 stories) and special needs housing (i.e. senior housing) could be an exception if the surrounding land use is compatible.
3. The 1,200-foot setback for residential uses from the centerline of State Highway 121 should be retained, and applied to the Dallas North Tollway, State Highway 190/President Bush Turnpike, and U.S. Highway 75. Factors including topography, creeks,

vegetation, and existing development patterns should be considered in applying this standard.

districts where designated as appropriate in the Comprehensive Plan.

4. No new low-rise multifamily development less than five stories in height should be allowed south of Windhaven Parkway, along the Dallas North Tollway between Communications Parkway and Parkwood Boulevard. However, mid-rise multifamily development (5 to 12 stories) may be considered by specific use permit (SUP) in this corridor.
5. New multifamily zoning should require a minimum density of 40 dwelling units per acre on the project site. Phased development should have a minimum average density of 40 dwelling units per acre. However, no phase having less than 40 units per acre may be constructed, unless preceded by or concurrently built with a phase which maintains the minimum 40 dwelling units for the overall project. Additionally, mid-rise multifamily development and neighborhood mixed-use zoning districts could be exceptions to this minimum density requirement.
6. Establish two new zoning districts - an urban mixed-use district and neighborhood mixed-use district. An option to allow mid-rise residential buildings (5 to 12 stories) by specific use permit should be available in major corridors (State Highway 121, Dallas North Tollway, State Highway 190/President Bush Turnpike, and U.S. Highway 75) and in urban mixed-use

Land Use Absorption Table

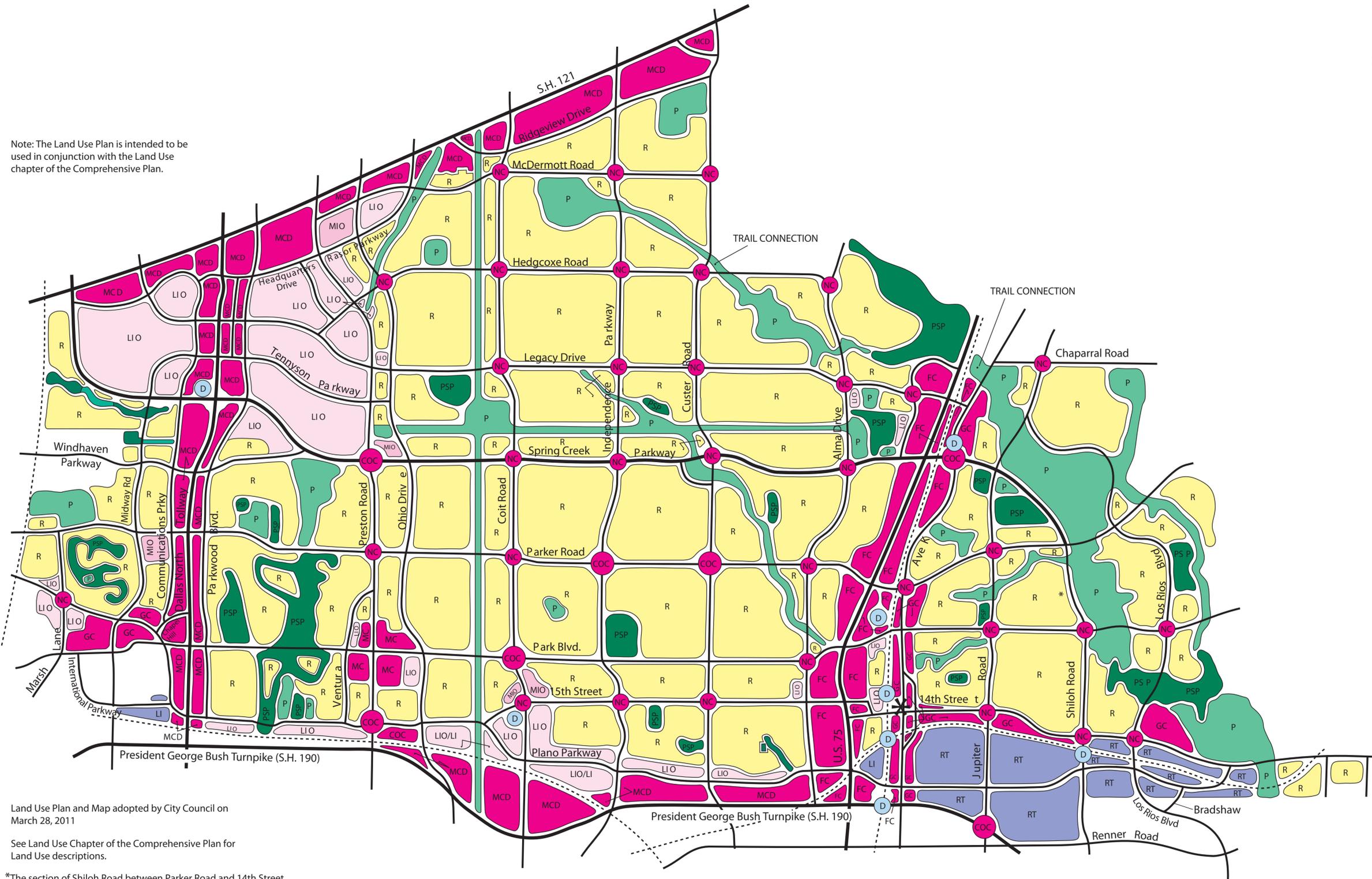
Zoning	Total Acres in Plano		Platted Acres		Improved Acres	
	Acres	Percent	Acres	Percent	Acres	Percent
Retail	1,592.4	3.4%	1,524.6	95.7%	1,296.1	81.4%
Retail/Office	1,256.2	2.7%	894.0	71.2%	653.2	52.0%
Office	1,251.9	2.7%	1,106.6	88.4%	757.8	60.5%
Light Commercial	347.5	0.8%	284.3	81.8%	260.7	75.0%
Commercial Employment	2,911.8	6.3%	1,909.6	65.6%	1,479.1	50.8%
Business Government	110.7	0.2%	108.2	97.7%	73.1	66.0%
Light Industrial	1,696.9	3.7%	1,364.5	80.4%	1,168.1	68.8%
Regional Employment	761.4	1.6%	376.4	49.4%	300.9	39.5%
Regional Commercial	1,022.3	2.2%	786.9	77.0%	673.6	65.9%
Central Business District	437.8	0.9%	400.4	91.5%	231.9	53.0%
Corridor Commercial	2,125.4	4.6%	1,821.8	85.7%	1,498.8	70.5%
Research/Technology	1,101.1	2.4%	651.3	59.1%	495.8	45.0%
	14,615.4	31.6%	11,228.4	76.8%	8,889.0	60.8%
Mixed-Use	141.6	0.3%	104.3	73.7%	49.4	34.9%
Single Family	25,709.0	55.6%	25,032.7	97.4%	23,039.9	89.6%
Multi-Family	2,461.7	5.3%	2,369.8	96.3%	2,221.8	90.3%
	28,170.7	60.9%	27,402.5	97.3%	25,261.7	89.7%
Agricultural	2,756.3	6.0%	1,887.9	68.5%	2,110.5	76.6%
City/Public Facilities	546.5	1.2%	546.4	100.0%	388.4	71.1%
TOTAL	46,230.4	100%	41,169.5	89.1%	36,699.0	79.4%

NOTES: Land Use Absorption Table as of April 2007

1. Right-of-way (ROW) is included in all zoning categories and counted as platted and improved land.
2. The Land Use Plan reflects the desired development pattern for the City. The Zoning Ordinance regulates what can be built on a particular parcel of land today.
3. The information in this table is based on zoning not use. Please note that because of allowed uses in zoning districts, the use of a property is not always indicative of the zoning. More information on the uses allowed in each zoning classifications is contained in the Zoning Ordinance.
4. Platted - refers to the official recording of a subdivision or addition, a prerequisite to obtaining a building permit.

CITY OF PLANO LAND USE PLAN

Note: The Land Use Plan is intended to be used in conjunction with the Land Use chapter of the Comprehensive Plan.



LEGEND

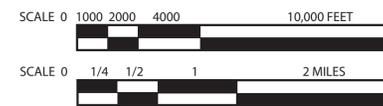
- R Residential
- LIO Low Intensity Office
- MIO Medium Intensity Office
- HIO High Intensity Office
- MC Major Commercial
- COC Community Commercial
- NC Neighborhood Commercial
- GC General Commercial
- FC Freeway Commercial
- MCD Major Corridor Development
- RT Research / Technology Center
- LI Light Industrial
- P Major Parks and Recreation
- PSP Major Public and Semi-Public
- D DART Facility
- * Business/Government Center (Historic Business District)

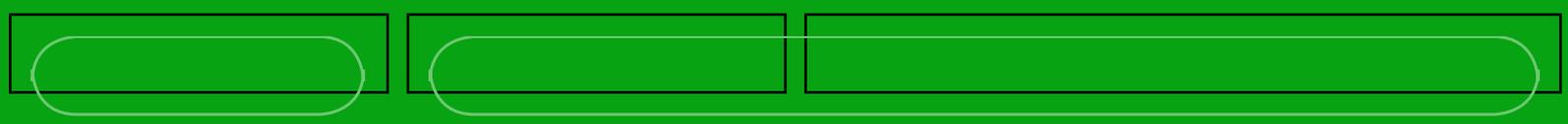
Land Use Plan and Map adopted by City Council on March 28, 2011

See Land Use Chapter of the Comprehensive Plan for Land Use descriptions.

*The section of Shiloh Road between Parker Road and 14th Street is subject to the design and development phasing plan defined in Resolution Number 98-2-23(R).

A Comprehensive Plan shall not constitute zoning regulations or establish zoning district boundaries.





City of Plano COMPREHENSIVE PLAN

TRANSPORTATION ELEMENT

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3 Transportation

3.1 Introduction



Spring Creek Parkway at Oak Point Nature Preserve

INTRODUCTION

Purpose

The Transportation Element of the Comprehensive Plan guides the development of an integrated transportation system over time. It defines the existing and proposed transportation system and addresses long range local and regional expectations. The transportation network in Plano is a critical component of the City's development pattern. It influences the placement of land uses such as housing, employment, commercial, industrial and educational facilities. Plano's transportation

system impacts quality of life issues such as air quality, accessibility and choice of transportation modes.

Critical Issues

Critical issues facing Plano's transportation system are regional population growth, air quality, increased traffic on expressways, increased through traffic, and roadway capacity implications. The Dallas-Forth Worth Metroplex continues to grow in population and the North Central Texas Council of Governments projects the region will add another 3 million people by 2030. More people in the area contribute to larger

numbers of automobiles using the regional roadway system. Increased traffic on regional expressways and local thoroughfares leads to travel delays due to congestion, produces more emissions and decreases the region's air quality.

Plano's internal roadway system is nearly complete and capacity improvements to regional roadways are quickly consumed by growth in outlying communities. Plano is not in a position to reduce congestion and increase roadway capacity by adding more lanes of pavement. Instead, the City must rely on approaches that reduce the level of vehicular travel on its roadways, particularly during peak hours. Mass transit, bicycle transportation, Transportation Demand Management (TDM), and other techniques will need to be promoted and utilized. Different land use concepts, such as mixed-use urban centers which combine employment, residences, and related services in pedestrian friendly environments, will be part of the long term solution for regional and local transportation issues.

MAJOR THEMES

The Transportation Element describes the City of Plano in terms of three major themes: Livable City, City of Organized Development and City in Transition. This element includes a description of factors relating to each of the themes, objectives and strategies defining the City's overall approach to transportation challenges and opportunities along with steps for implementation. The thoroughfare plan map and bicycle transportation plan map reflect existing and proposed street and bicycle trail patterns and are separate documents preceding the Transportation element text.

The "LivableCity" theme addresses issues that affect the City's ability to remain an attractive place to live and work. The "City of Organized Development" theme defines the key components of Plano's transportation system, their interrelationship, and the process for monitoring and enhancing their effectiveness. The "City in Transition" theme focuses on changing conditions and trends that may require changes in the way Plano addresses the provision of transportation services over time.

Theme I – Livable City

The City of Plano is an excellent place to live, work and enjoy life. Efforts to improve air quality, mass transit, bicycle transportation and access to Plano and other parts of the Dallas-Fort Worth Metroplex contribute to a livable city. This section provides options to address air quality, local and regional accessibility, and the current status and future trends of these factors.

Theme II – City of Organized Development

This section includes key transportation factors that have influenced the development of Plano over the past 40 years. The thoroughfare plan map displays the type, size, and placement of major roadways within the City. The relationship of land uses to various components of the thoroughfare system is defined under this theme. It also addresses efforts that make the thoroughfare system operate more safely and efficiently. This section stresses the significance of a multi-modal transportation system that facilitates mass transit, bicycle, and pedestrian use as well as automobiles.

Theme III – City in Transition

Within 40 years, Plano has transitioned from an agricultural center to a bedroom suburb to an employment center and from a growing community to a city approaching full development. The City has also transitioned from an outer tier suburb on the edge of the metropolitan “commuter shed” to a first tier suburb near the center of daily home-to-work trips. A major portion of Plano’s peak hour traffic results from people commuting to the City for work or passing through Plano to other major employment destinations in the region. Plano’s increased population and employment coupled with growth of neighboring cities reinforces the importance of cooperative planning activities with other communities in the North Dallas region.

Key Factors

Key factors have been identified for each of the major themes. The discussion of these factors in each section will further explain the major themes as well as provide a basis for the objectives and strategies outlined for each theme.

3.2 Theme I - Livable City

Air Quality

Clean air is critical to one’s health and quality of life. Air quality is becoming an increasingly important factor in the planning and development of local transportation systems. However, air quality concerns are typically driven by national efforts through federal legislation such as the Clean Air Act of 1990. This legislation established categories for the evaluation of total emission (pollution) levels for urbanized

areas. “Non-attainment areas” are metropolitan regions throughout the United States that exceed those standards. The Dallas-Fort Worth Metroplex region is a non-attainment area – specifically classified as “serious” in 1998 - in regard to ozone by the Environmental Protection Agency (EPA). The Texas Commission on Environmental Quality’s State Implementation Plan (SIP) for control of Ozone Air Pollution identified the major source of pollution in this area as emissions from motor vehicles. If this situation does not improve, the EPA could impose sanctions that would result in the loss of federal funding for major transportation projects.

This is a major regional issue that has been gaining more attention in the last few years as the Metroplex nears its air quality compliance deadline. Leaders from Plano and other cities have started to address air quality and transportation planning issues. A recent example of this effort is Plano joining other cities from across the Dallas region to address potential air pollution concerns resulting from proposed coal fueled electric generation plants. Plano should continue to work with other cities in the region to develop initiatives to improve air quality and retain federal funding needed to implement major transportation improvement projects, especially mass transit. Continued monitoring of legislation and enforcement policies will be necessary to understand measurement standards and mitigation actions. Plano should work to develop and maintain a multi-modal transportation system, including mass transit and bicycle transportation, to help improve the air quality of the Metroplex region.

The City has begun the process of replacing conventional gasoline engine vehicles in its fleet with energy-efficient hybrid vehicles. These vehicles have City logos and are visible throughout Plano. They demonstrate the City's efforts to improve air quality and reduce fuel consumption. Hybrid vehicles have proven to be a good investment for the City with high resale values and low maintenance and repair costs.

Transportation Demand Management



West Plano Transit Center

Transportation Demand Management (TDM) was a formal requirement in the original Clean Air Act Amendment of 1990 (CAAA) for non-attainment regions like the Dallas-Fort Worth Metroplex. The enforcement schedule was later amended and TDM measures became voluntary rather than mandatory. TDM includes strategies to effectively manage travel demands in a region to reduce pollution. Such strategies as the use of transit, carpooling, staggered work hours, and telecommuting reduce vehicle emissions, especially during peak hours. TDM also includes educational efforts to change the culture of single-passenger vehicle trips and inform employers and residents about different modes of transportation available in Plano.

The City of Plano should work with major employers to participate in TDM measures to reduce the number of cars using the roadway system and lead to improvement in air quality. The following are examples of ways to partner with the private sector with TDM initiatives.

- Offer incentives to local major employers to participate in Transportation Demand Management (TDM).
- Identify businesses that can function effectively on non-traditional work hours and encourage them to use flexible scheduling.
- Pursue DART subsidies for the purchase of vehicles for van pooling and establish a program to link prospective riders living and working in common geographic areas together. Provide incentives for persons to volunteer as van pool drivers.
- Provide media exposure and award programs for companies that participate in TDM measures.

Transit Oriented Development



Downtown Plano Station

Transit Oriented Development (TOD) is defined as a dense mix of land use activities such as residential, office, retail and entertainment located near a transit facility station. The most common forms of transit serving a TOD are light rail, commuter rail, bus rapid transit or a subway. The transit station may also be a facility where all four forms interface with local bus service and private vehicles. Residential use is often located above office and retail uses in the same building. TOD represents an alternative to the typical suburban, automobile – oriented development pattern in the Metroplex.

The densities of TODs are important because they allow a variety of uses to occur at one location, resulting in more compact development. They also increase transit ridership as a point of origin and destination. Persons residing in TODs can easily walk from homes to board a train or bus. People from outside the area can travel via bus or train to the TOD to shop or work. The EastsideVillage in downtown Plano is an excellent example of a TOD.

Parking requirements are lower in TODs because of availability of transit and other services within walking distance. Streets located within TODs or denser residential infill developments can have narrower widths and reduced building setbacks that tend to slow vehicles on the street and promote a pedestrian environment, similar to those standards typically found in the Business/Government zoning district regulations. More information along with objectives and strategies regarding transit-orientated development and urban centers are found in the Land Use Element of the Comprehensive Plan.

Regional Mobility

Mobility is a key component of the transportation system of a community. Plano is located in the heart of the North Dallas region and is accessible to cultural and employment opportunities throughout the area. The City is also a major employment center for the region with significant commercial and office development located at Legacy in northwest Plano, along the Dallas North Tollway, President George Bush Turnpike, S. H. 121 and U. S. 75. During non-peak periods, these roadways, along with mass transit services, provide transportation connections in less than an hour to most destinations around the Dallas-Fort Worth Metroplex. The City also has an extensive system of bicycle and walking trails that connect residential areas with recreational facilities. Work continues to coordinate trail connections from Plano to other cities in the Metroplex. These factors help make Plano a prime location for future business and residential development, contributing to the continued growth and prosperity of the City.

The availability of air transportation has contributed greatly to Plano's and the Metroplex region's growth as a major employment center. The region's location in the center of the country means that air travel times to major cities on the coasts is only two to three hours. Plano is served by two large commercial airports providing long distance domestic service, Dallas-Fort Worth International Airport (DFW) and Love Field. DFW also provides international flights. Corporate and private jet services are found at Addison Airport and Collin County Regional Airport in McKinney.

Objectives for Theme I – Livable City

Objective A.1 Promote regional efforts to improve air quality and address transportation issues in the Metroplex.

Objective A.2 Enhance the ease of access that Plano now enjoys in the region.

Objective A.3 Provide Plano residents with a variety of transportation options.

Objective A.4 Facilitate involvement of major employers in programs to reduce traffic congestion and improve air quality.

Strategies for Theme I – Livable City

Strategy A.1 Monitor federal legislation regarding air quality through regional efforts with the North Central Texas Council of Governments.

Strategy A.2 Work closely with federal, state, and regional agencies to provide for a range of transportation options to meet the changing needs of Plano residents.

Strategy A.3 Continue to facilitate the development of Transit Oriented Developments (TODS) such as those recommended in the Urban Centers Study.

Strategy A.4 Develop a public/private partnership with major employers to encourage participation in TDM programs.

Strategy A.5 Offer incentives to major employers in the City to participate in TDM programs such as positive media exposure for working to mitigate traffic congestion and improve air quality in the region.

3.3 Theme II - City of Organized Development

Expressway Corridors

Plano is served by four expressways – U. S. Highway 75 (U.S. 75), State Highway 121 (S.H. 121), the Dallas North Tollway and the President George Bush Turnpike. All four expressways provide access from Plano to other cities within the Metroplex and the nation. The issues facing these corridors are future development, continued growth of cities to the north, increased traffic and roadway construction.



U.S. 75 at Park Boulevard

Though most of the U.S. 75 corridor has been developed with retail and office uses, the other three corridors still have land available for additional development opportunities. The President George Bush Turnpike comprises most of Plano's southern border and provides access to the Research Technology employment area in southeast Plano.

The Dallas North Tollway travels through the western section of Plano and provides access to the Shops at Willow Bend Mall, numerous office buildings and retail centers along with the corporate campuses found in the Legacy and GranitePark developments near S.H. 121. There has been a shift in development patterns along the Tollway corridor as well. More mixed-use projects such as the one approved at the Parker Road interchange are beginning to appear. The LegacyTownCenter at the Legacy Drive interchange has experienced success and is expanding north towards S.H. 121.

S.H. 121 has the most undeveloped land adjacent to it. The highway has been expanded with the completion of three lane service roads in each direction. Interchanges at the Dallas North Tollway, Preston Road and Custer Road have been completed. Main lanes are under construction between the Tollway and Rasor Boulevard. The remainder of the main lanes will be constructed as a toll facility. One of the land use issues facing

the S.H. 121 corridor is the demand for residential development. Plano has attempted to provide a 1,200 foot setback from the S. H. 121 centerline for residential development. There have been development pressures to reduce the setback distance in recent years.

Surface Street System

The City of Plano has worked diligently over the past three decades to develop and maintain an extensive modern thoroughfare system. This system is characterized by a grid pattern of divided roadways interconnected with collector and local streets to provide access to commercial and residential properties throughout Plano. The Thoroughfare Plan map shows the general location and design standards of roadways and serves as a guide to the Community Investment Program (CIP) in regard to street construction (see Plate 1, Thoroughfare Plan map). As a result, Plano has an easily navigable roadway system.

The surface street system has several roadway types such as expressways, major and secondary thoroughfares, commercial and residential streets. Table 1 on the following page contains a general description of each category and the type of thoroughfares represented. The design standards (lane widths, right-of-way requirements, number of lanes and a typical cross-section) are shown on the reverse side of Plate 1.

TABLE 1

ROADWAY CLASSIFICATION AND THOROUGHFARE TYPE

Roadway Classification	Thoroughfare Type
<p>EXPRESSWAYS</p> <p>Intended to carry the highest proportion of traffic through the City at highest speeds and longest distances.</p>	<p>A, T</p> <p>Tollway, Turnpike, Freeway,</p>
<p>MAJOR THOROUGHFARES</p> <p>Intended to provide a balance of high through volume capacity and non-residential property access for the majority of trips with destinations inside the City.</p>	<p>B+, B, C</p> <p>Divided thoroughfares</p>
<p>SECONDARY THOROUGHFARES</p> <p>Intended to provide the opportunity for access and circulation of residential areas for a majority of trips with origins inside the City and to provide connections to major thoroughfares.</p>	<p>D, E+, E, F</p> <p>Includes divided and undivided thoroughfares and collector streets.</p>
<p>RESIDENTIAL STREETS</p> <p>Intended to provide direct access to all abutting residential land areas and connections to collector streets.</p>	<p>G, H</p> <p>Local streets</p>

Most of the roadway system in Plano is complete and has been constructed to the full width and design capacity. Some opportunities exist to add through lanes to meet design standards specified on the Thoroughfare Plan. Continued maintenance of the existing roadway system and keeping increased traffic flowing efficiently and safely through the City are challenges for the future as Plano transitions from building new streets to maximizing the roadway system already in place.

Local Accessibility

Access to Plano from the Metroplex and other areas is provided by expressways, surface street system and mass transit services. Cultural facilities, shopping areas, employment centers and residential neighborhoods are readily accessible via Plano’s roadway system.

Accessibility is more than just an issue of efficiency and mobility; it can also affect health and safety. For this reason, all commercial and residential subdivisions in the City are required to have at least two points of access. This allows an additional route into and out of the subdivision for emergency vehicles when an entrance is blocked or unavailable.

Sometimes, accessibility can create problems for a neighborhood. Cut-through traffic and speeding are concerns for some neighborhoods in Plano. The increased traffic becomes a nuisance and the excess speed poses safety concerns. As traffic volumes increase, more drivers will seek alternative routes to avoid busy intersections and neighborhood streets could become more desirable routes for through traffic.

The Transportation Advisory Committee, through the Safe Streets Program, works with neighborhoods to develop solutions to mitigate these problems. The first phase of addressing cut-through traffic and excess speed through residential neighborhoods is education and law enforcement. Most times, this is effective; however, if these solutions do not improve the situation, then physical changes to streets are made to slow down motorists and discourage “cut-through” traffic. Any proposals to modify streets must consider the impact on emergency vehicle access and response times before implementation.

Intersection Improvements

Many years ago, the City of Plano designated certain intersections as candidates for grade-separated interchanges on the Thoroughfare Plan map. The perceived benefit was that these facilities would improve traffic flow at major intersections as Plano and surrounding communities continued to grow. However, recent studies indicated that building grade-separated interchanges is not as cost-effective as at-grade improvements. In 2004, grade-separated overpasses were removed from the Thoroughfare Plan map with the exception of interchanges involved with regional expressways.

The intersection of Legacy Drive and Preston Road should be closely monitored over time as it is in close proximity to the S.H. 121 corridor and the corporate campuses within Legacy. Additional development in these two areas could have a significant impact on the operation of this intersection. Therefore, future traffic conditions may require re-evaluation to determine if a grade-separated interchange would be necessary, but only after all at-grade improvement options have been fully evaluated.

Most of the right-of-way has already been acquired to accommodate previously proposed grade-separated interchanges. Grade-separations are unlikely in the foreseeable future. However, it is difficult to account for various conditions that could change over time. The rights-of-way at these locations should be preserved and additional rights-of-way acquired, when necessary, to accommodate future traffic flow improvements at these locations. Loss of the rights-of-way could preclude the ability of future decision makers to fully address changing conditions. Some at-grade improvements could require extensive rights-of-way to operate safely and efficiently.

Exceptions to retaining rights-of-way should be considered for the intersections of Spring Creek Parkway and Jupiter Road, Spring Creek Parkway and Preston Road and at Plano Parkway and Coit Road. While originally planned and built as a Type A limited access service facility that could accommodate future capacity improvements, such as grade separations, the design standards for Spring Creek Parkway have been revised to provide uniform limited access without grade separations. Enhanced intersection

improvements can be provided at the intersection of Spring Creek Parkway and Jupiter Road within the existing 160 foot right-of-way. The proximity of the railroad crossing on Coit Road south of Plano Parkway and the “jug-handle” ramp design will make major improvements at this location infeasible.

The Transportation Engineering Division has completed evaluation of a “Median Left-Turn” design for three intersections. The intersections are located at Spring Creek Parkway and Coit Road, Plano Parkway and Preston Road and Legacy Drive at Preston Road. The “Median Left-Turn” design is an innovative approach to reduce stacking of vehicles making left turns and to improve overall flow at major intersections. The “Median Left-Turn” design will require the additional right-of-way originally reserved for grade separations. Final designs are underway with construction planned for 2008.

High Accident Location/High Accident Road Segment

The High Accident Location/High Accident Road Segment (HAL/HARS) program is used by the City of Plano’s Transportation Division to identify and develop solutions for roadway locations with a high number of vehicle collisions. The program also considers citizen complaints, maintenance and staff suggestions. This information is used to compare traffic safety and traffic flow characteristics of high accident locations. High accident locations that can be improved with low cost and quick solutions are addressed immediately. Locations that need more extensive, higher cost improvements are reviewed for consideration of placement on the Community Investment Program (CIP).

The HAL/HARS program also produces the annual traffic safety report on the effectiveness of roadway modifications and other traffic safety programs and practices.

Traffic Signal System

The City of Plano operates over 200 traffic signals using a wireless communications system. The system coordinates traffic signals to minimize stopping, which reduces fuel usage, and vehicle exhaust emissions. Timing of traffic signals at intersections has improved and enhanced coordination of traffic movement on Plano’s thoroughfare system. This is an example of a local initiative that contributes to improvement in air quality of the Metroplex region.

There are a large number of signalized intersections and a need to balance through traffic movement with access to and from neighborhoods and business centers. Due to these factors, signalization will not overcome traffic congestion. It is a valuable tool that supports the operation of Plano’s surface roadway system, but it cannot overcome conditions resulting from traffic volumes that exceed capacities.

Regional Transit System

Mass transit is a key factor in the provision of alternative transportation opportunities for Plano residents. Mass transit service in the form of buses and light rail is provided through the City’s membership in the Dallas Area Rapid Transit (DART). Both services

connect the City with major destination points and other transit systems in the Metroplex region.

Table 2 provides a description of scheduled DART Capital Improvement Projects from the 2030 Service Plan approved in October of 2006 that could impact Plano in the near future:

TABLE 2

PLANNED DART CAPITAL IMPROVEMENTS ASSOCIATED WITH PLANO

CAPITAL IMPROVEMENTS	NOTES	STATUS
High-Occupancy Vehicle Lane (HOV) along U.S. 75	LBJ Freeway to Bethany Road	Under Construction
North Cross-Town Corridor (Former Cottonbelt RR ROW)	Would connect Plano with DFW International Airport	Adopted in 2030 DART plan
Patron Parking Structure	Parker Road Station	Under Study

Source: Dallas Area Rapid Transit



Parker Road Transit Station

The City of Plano has been able to maximize its membership benefits in DART through various efforts, and ridership has grown significantly. The average daily ridership on DART facilities serving Plano has increased by almost 100% from 2,800 in 2000 to 5,565 in 2006 since the arrival

of light rail in 2002. Current bus service includes a route from downtown Plano along the K Avenue corridor to the Collin Creek Mall and businesses along U. S. 75. Other bus routes in Plano connect with Collin College’s Spring Creek campus and the East Plano area with the Plano Parkway, 15th Street and Parker Road corridors. The bus route then travels up Preston Road and serves the Legacy area. Another route presently serves the Dallas North Tollway corridor up to Parker Road and the Shops at Willow Bend Mall from the Medical Center of Plano at the Coit Road and 15th Street intersection. DART also has an on-call service for people with physical disabilities that make it difficult to use bus or light rail facilities. People can

call and schedule appointments for transportation services. Advance arrangements are necessary.

There are gaps in the transit system, particularly with east-west service. More attention should be focused on feeder routes to the light rail stations. The challenge in extending service further west in Plano is ridership. DART has recently determined that there is little demand for bus service west of Coit Road and north of Parker Road. DART periodically evaluates all routes and eliminates those with the low ridership.

The City of Plano also has another on-call transit service through a contract with Collin County Area Regional Transit (CCART). CCART provides curb to curb transportation services for people age 60 years and older. This service is called Senior Trans. There are two vehicles that provide service five days a week and three days a week respectively. People contact CCART and arrange for the transportation they need. This service is funded through the Parks and Recreation Department and is affiliated with the Collin County Committee on Aging. Under a separate grant, CCART also provides transportation for seniors to meals provided by the Collin County Committee on Aging during lunch time at the Plano Senior Center. An interdepartmental study of transportation and other services for Plano's growing senior population is currently underway and may provide other options that can be implemented in the future.

Bicycle Transportation System



Bike Trail at Arbor Hills Nature Preserve

The bicycle is considered a component of the multi-modal transportation system found within the City of Plano. As the City matures and neighboring communities continue to develop at a rapid pace, vehicular transportation within Plano will become more difficult. The bicycle could be a limited alternative transportation option for trips to employment centers, transit stations, shopping centers, educational institutions and cultural facilities. Recreational bicycle use is also very important. A quality recreational bicycle trail system is a major contributor to the overall quality of life of a community.

The City of Plano has an extensive bicycle transportation plan in place as indicated in the Bicycle Transportation Plan map (see Plate 2). The Bicycle Transportation Plan map shows the location and type of system available in Plano through a network of on-street routes and off-street trails. The system is divided into four categories: the Regional Veloweb (a regional network of the bicycle trails in the Metroplex), Major Routes, Secondary Routes, and Recreational Trails.

The Six Cities Trail Plan was adopted in October of 2001, and included the cities of Allen, Frisco, Garland, McKinney, Plano and Richardson. This plan includes interconnecting bicycle transportation plans for these six cities. The Six Cities Trail Plan would utilize the alignment along the Rowlett Creek corridor, the Bluebonnet Trail and Preston Ridge Trail to create a multi-city trail plan.

Continuing improvements and expansion of the bicycle trail system will be necessary. Access across barriers such as U.S. 75 and major thoroughfares is a concern for bicyclists in Plano. The City of Plano hired a consultant to study safe crossings of major thoroughfares in 2005. Recommendations from the study for collector street crossings were included in the 2005 bond election. Additional funding for implementation of the study recommendations for major thoroughfare crossing improvements will require a future bond election. The Engineering Department received grants to improve the crossing at 15th Street and U.S. 75 interchange and to build a bicycle/pedestrian bridge over U.S. 75 at Park Boulevard. More details about bicycle transportation in Plano can be found in Policy Statement 1.0 – Bicycle Transportation.

Objectives for Theme II – City of Organized Development

Objective B.1 Provide a local roadway system with safe and efficient cross-town and neighborhood circulation and access, in accordance with the Thoroughfare Plan.

Objective B.2 Enhance the efficiency of intersections to cope with increased traffic demand on the roadway system.

Objective B.3 Provide for the full operation of Plano's thoroughfare system through the completion of remaining capacity improvements.

Objective B.4 Promote the provision of a fiscally responsible, diversified transit system which addresses local and regional needs, and maximizes the benefits derived by Plano.

Objective B.5 Promote safe and accessible recreational and destination-oriented bicycle use.

Strategies for Theme II – City of Organized Development

Strategy B.1 Review and update the Transportation Element, including the Thoroughfare Plan map every three years.

Strategy B.2 Allow for amendments to the Thoroughfare Plan map between updates only when essential to the development of land and when supported by a study of local and system wide impacts of the proposed change.

Strategy B.3 Conduct an annual review of existing transportation facilities, particularly major intersections, and their performance and safety records to improve traffic capacity and safety.

Strategies B.4 Where possible, acquire rights-of-way for additional turn lanes at major intersections.

Strategy B.5 Through the development review process and Community Investment Program (CIP), provide safe, reliable street access for daily use and for emergencies to all developed properties.

Strategy B.6 Complete missing links of the thoroughfare system and develop roadways in accordance with design standards as indicated on the Thoroughfare Plan map and Thoroughfare Plan standards ordinance.

Strategy B.7 Maintain a close working relationship with DART and monitor its development of plans and programs to ensure Plano's transportation needs are properly understood and addressed.

Strategy B.8 Develop and maintain a system of bicycle routes and recreational trails for destination and recreational use that lead to cultural attractions and employment areas, mass transit facilities and residential neighborhoods.

3.4 Theme III - City in Transition

Increased Traffic Volumes

As is the case in most cities, Plano's biggest travel demand is by automobile. This demand has grown with the City as it has matured. A measurement of the growth of automobile travel in Plano is the average traffic count of selected major thoroughfares. Roadways were selected that traveled through the most populated areas of the City. Table 3 on the following page provides average traffic counts from all sections of the selected roadways from 2000 and 2006.

TABLE 3**AVERAGE WEEKDAY TRAFFIC COUNT OF SELECTED MAJOR THOROUGHFARES**

Source: City of Plano Transportation Division

Roadway	2000 Average	2006 Average	Change
Coit Road	34,312	37,967	10.7%
Custer Road	21,685	25,171	16.1%
K Avenue	21,541	20,365	-5.5%
Legacy Drive	32,094	32,774	2.1%
Park Boulevard	21,754	24,827	14.1%
Parker Road	28,325	26,863	-5.2%
Preston Road	42,605	44,445	4.3%
Spring Creek Parkway	24,177	25,783	6.6%

The data in Table 3 indicate that six of the eight roadways increased the average weekday traffic counts from 2000 to 2006. The greatest increases were for Coit Road, Custer Road and Park Boulevard. The Cities of Allen, Frisco and McKinney have experienced tremendous growth since the 2000 Census. The North Central Texas Council of Governments estimates that Allen's population has increased by 76 percent as compared with 173 percent for Frisco and 106 percent for McKinney. The highest growth areas of the three cities are located along the Coit Road and Custer Road corridors. Park Boulevard provides east – west access into Plano. The roadway begins near Murphy and Wylie. These cities have grown by 302 and 134 percent respectively. Continued population growth in Plano's neighboring cities will contribute to increased traffic on Plano's thoroughfares as more people travel through the city for employment opportunities

K Avenue and Parker Road have experienced decreases in average weekday traffic counts. The loss of traffic may be attributed to reduced capacity along K Avenue and the construction for additional lanes for Parker Road. Drivers are seeking alternative routes to avoid traffic congestion and construction delays. Traffic congestion is a problem on K Avenue at the Legacy Drive, Parker Road and Park Boulevard intersections. Most of the intersections will receive major lane modifications to mitigate congestion.

Improvements to Parker Road east of Plano have been completed; however, work is still underway on adding lanes from K Avenue to east of P Avenue. Reconfiguration of the interchange at Parker Road and U. S. 75 will begin during spring or summer of 2008 and will last about two years. When these

projects are completed, traffic volume should return and probably exceed counts from previous years.

High Congestion Areas

Several areas of the City are experiencing relatively high levels of traffic congestion. The five highest congestion locations are the Legacy area; the S. H. 121 corridor, the Dallas North Tollway corridor, and the U. S. 75 interchange locations at Parker Road and Spring Creek Parkway.

Heavy traffic concentration in the Legacy area results from the corporate employment centers situated along Legacy Drive. Both Legacy Drive and Spring Creek Parkway serve regional traffic needs by providing connections between Preston Road and S. H. 121. At the present time, Frito-Lay, Inc., Cadbury Schweppes, Electronic Data Systems Corporation, the J. C. Penney Co., Inc., Countrywide Financial Corporation, Ericsson, Inc. and other companies employ approximately 37,000 persons in Legacy. Traffic congestion in the area occurs primarily during weekday morning and evening peak hour periods. However, the entertainment and retail businesses in the Legacy Town Center attract quite a few people on the weekend as well. Much more development of land is possible in Legacy, yet the vast majority of the thoroughfare system serving it is in place. Therefore, continued monitoring of traffic volumes in the area and the introduction of TDM measures and mass transit services will be essential to maintaining its significance as a major destination and employment center.



State Highway 121 Expansion Project

S.H. 121 passes through one of the highest growth areas in the Metroplex. Development still continues in northern Plano and the Legacy area as well as in Allen, Frisco and McKinney. Traffic count data shows a 7.2 percent increase in automobiles using the highway between 2000 and 2004, the last year data was available from the Texas Department of Transportation (TxDOT). The construction of the service roads and interchanges at the Dallas North Tollway, Preston Road and Custer Road has improved traffic flow along the S.H. 121 corridor. The Regional Transportation Council has awarded the North Texas Tollway Authority (NTTA) the bid to construct and operate the main lanes of S.H. 121 as a tolled facility.

Continued office and retail development along with residential growth in cities such as Celina, Frisco and Prosper along the Dallas North Tollway corridor has increased congestion during peak weekday travel periods. Backups are now beginning to occur at the Parker Road Toll Plaza. This situation may worsen with the recent extension of the Tollway from S.H. 121 to U.S. 380.

In response to the congestion trends along U.S. 75, the City sponsored a corridor improvement study for all ramps except Legacy Drive within Plano and the Parker Road interchange. TxDOT is using the study recommendations to improve the ramp placement along the U.S. 75 corridor and reconfigure the interchange at Parker Road. Both TxDOT and DART are building High Occupancy Vehicle lanes from Interstate 635 in Dallas to Bethany Road in Allen. The purpose of the lanes is to provide optimum travel conditions for vehicles with two or more persons, hybrid vehicles, and motorcycles and to encourage more people to ride share instead of traveling alone in their cars.

Use of the President George Bush Turnpike has grown immensely since the roadway opened in 1998. The North Central Texas Council of Governments (NCTCOG) reported traffic count volumes at over 120,000 vehicles per day in 2004 at the Coit Road Toll Plaza. This figure is almost twice than the 63,000 vehicles per day projected by the North Texas Tollway Authority (NTTA) for the same year before the turnpike opened. Much development has occurred along the expressway corridor at Coit Road and in the Research/Technology Crossroads (RT) near Jupiter, Renner and Shiloh Roads. There is still a considerable amount of land available for development along the corridor and its utilization will increase traffic to even higher levels on the turnpike.

Commuting Patterns



U.S. 75 at President George Bush Turnpike

In 2006, the U.S. Census Bureau released detailed information regarding commuting patterns between cities. Tables 4 and 5 list the top ten cities where Plano workers commute for employment and where people live who travel into Plano for their jobs. Plano's commute pattern has mostly been north to south for the past several decades. Table 4 shows this trend continues with Dallas and Richardson as the leading destination cities for Plano workers. While the southbound commuting pattern remains significant, other trends have emerged. Plano workers are also traveling east and west to employment opportunities in Irving, Farmers Branch, Addison, Carrollton and Garland. For the second consecutive census, data indicates that more Plano residents are commuting to jobs within the city than traveling south to Dallas.

The growth of the Legacy area and development along the Dallas North Tollway, President George Bush Turnpike, and U. S. 75 corridors during the 1990s and early 2000s have created employment centers in Plano that attract people who live within the city and in neighboring communities. Statistics from U.S. Census

Bureau indicate over 62,000 people are coming into Plano to work each day while almost 71,000 residents leave daily for jobs located outside the City.

TABLE 4
TOP 10 COMMUTING DESTINATIONS FOR PLANO RESIDENTS
TRIP ORIGIN – PLANO

Work Trip Destination	Number	Percent
Plano	45,390	39.1%
Dallas	31,650	27.3%
Richardson	12,205	10.5%
Irving	3,570	3.1%
Farmers Branch	3,405	2.9%
Addison	3,035	2.6%
Carrollton	3,025	2.6%
McKinney	2,425	2.1%
Garland	2,110	1.8%
Allen	1,715	1.5%

Source: 2000 U. S. Census

Table 5 reveals some interesting trends. Almost 24,000 people are reversing the commuting patterns and traveling north from Dallas and Richardson to jobs in Plano. These reverse travel movements help mitigate peak hour patterns that typically result in greater southbound congestion in the morning and increased northbound traffic in the evening. Over 13,000 people commute to Plano from cities to the north such as Allen, Frisco and McKinney. The data from the U.S. Census Bureau indicates that many people make east-west commutes from neighboring cities as well. Over 12,000 people were coming to jobs in Plano from Carrollton, Garland, Lewisville, and Wylie. These emerging commuting patterns are expected to continue and must be considered in transportation planning efforts.

TABLE 5
TOP 10 PLACES OF ORIGIN FOR PLANO WORKERS
TRIP ORIGIN – OTHER CITIES

Place of Origin	Number	Percent
Plano	45,390	42.2%
Dallas	17,890	16.6%
Garland	6,100	5.7%
Allen	4,825	4.5%
Richardson	4,750	4.4%
McKinney	4,570	4.2%
Frisco	3,980	3.7%
Carrollton	3,075	2.9%
Wylie	1,545	1.4%
Lewisville	1,365	1.3%

Source: 2000 U. S. Census

Future Outlook for Transportation

It is no surprise that statistics on traffic volumes, commuting patterns and employment trends continue to document increased automobile traffic on Plano streets. With most of the thoroughfare system in place and no land available for expansion of the existing street system, the roadway service levels will continue to deteriorate and congestion at major intersections will increase. In response, other modes of transportation will need to be utilized more effectively. In particular, ridership on the mass transit system (particularly buses) must increase. Limited bus ridership has led to service changes and cutbacks in Plano. Light rail has proven to be a popular option for mass transit among Plano residents, but it is more expensive to construct due to acquisition of rights-of-way and the provision of new infrastructure. Buses use existing roadways and can be more easily allocated to meet the needs of the service area. Plano should

work with DART and other regional transit agencies to ensure coordination between bus routes, light rail transit origins and destinations, and major employment centers. The system should be easy to use, timely, and routed to desired destinations.

Plano is part of the Dallas-Fort Worth region where over 6.5 million people live. The North Central Texas Council of Governments (NCTCOG) is in the process of developing its Mobility 2035 Plan, a document which will identify transportation projects needed to accommodate an additional four million people expected to live in the region. The plan utilizes a multimodal approach to the region's transportation system through addressing expansion and improvement projects to the roadway system, mass transit and bicycle transportation.

Two modes of mass transportation are commuter rail and light rail provided by DART, Denton County Transit Authority, and the Fort Worth Transit Authority (the "T"). NCTCOG's Regional Rail Corridor Study includes over 250 miles of new rail service for the region within the Central, Northeast, and Southwest corridors.

A rail project which will serve Plano is the North-Cross Town Corridor, also known as the Cotton Belt. The railway line passes through southeast Plano near downtown and may eventually extend 52 miles from Wylie to Fort Worth. However, DART's service plan focuses on the eastern section of the Cotton Belt regional rail line which would connect Plano with the Dallas-Fort Worth International Airport and interface with DART's Green, Orange, and Red rail lines. There would be connections with two Northeast Corridor routes including the

proposed Burlington Northern Santa Fe (BNSF) commuter rail line with service to Frisco and Irving, and the Denton County Transit Authority's commuter rail line from Denton to Carrollton. Finally, service to downtown Fort Worth would be provided on the western half of the Cotton Belt by the Fort Worth Transit Authority from Dallas-Fort Worth International Airport.

The City of Plano has designated two locations for future stations along the Cotton Belt railway in Plano. The first station would be located at the existing crossing of the Cotton Belt and the DART Red line at 12th Street. This concept would provide an additional Red Line station serving Plano and it offers an economical opportunity to create a station complex serving passenger transfers between the Cotton Belt and the Red Line. The 12th Street station is a good location for connecting bus and shuttle service to surrounding employment centers and residential areas, provides access to affordable housing, and would further stimulate transit-oriented development near downtown Plano. The second station would be located in southeast Plano, at Shiloh Road and would serve an employment center with over 16,000 jobs within a two mile radius.

The Northwest Transit Center, which will be located south of Tennyson Drive at the Dallas North Tollway, is also part of DART's 2030 service plan. Construction on the project will begin in 2011 and will serve the Legacy area and western areas of the city with bus service. Bus Rapid Transit (BRT) could be another good option for DART to consider using in Plano. BRT operations provide service with limited stops between multiple destination points. It could use a separate lane in its own right-of-way or existing roadways. BRT service in Plano

could be operated from Legacy Town Center to the Northwest Transit Station and continue on to the Parker Road Transit Station.

Transportation Improvement Projects

Many issues face Plano in regards to the provision of a variety transportation service options. In light of limited financial resources and availability of land required for capacity improvements, it will be important that the City get the most from its investment on projects to improve transportation. An option to consider would be the development of criteria to prioritize transportation improvement projects. Here are some examples to consider:

- Ability to mitigate traffic impacts for the least amount of cost.
- Ability to improve the utilization of existing transportation facilities.
- Relationship to other City issues such as changing demographics, growing reverse commute, and new employment centers.
- Regional as well as local significance such as potential to improve air quality.
- Fostering public/private partnerships to solve common problems including those using private investment in long term transportation solutions. Examples include encouraging large employers to participate in TDM programs and private development of major transportation infrastructure improvements.
- Fostering coordination between efficient land use and transportation system investments.

The criteria listed above could help guide decisions for funding and implementing transportation improvement projects.

Traffic Impact Analysis

Plano has used Traffic Impact Analysis (TIAs) studies for many years to determine the impact of new development on the local roadway system. TIA studies typically show that new development generates more traffic and decreases level of service at intersections of major thoroughfares. Since there are very few options to improve capacity to accommodate increased traffic, the value of TIAs is questionable. A negative TIA finding does not provide the legal means to deny or delay development that conforms to zoning and subdivision regulations unless there are capacity enhancement options available. Using it as a development review tool tends to complicate rather than improve the review process, because the results often cannot be translated into specific actions. A consultant study on the use of TIAs for the City of Plano recommends that the City abandon TIAs in favor of a circulation plan for large development projects.

Regional Mobility

Plano's transportation system is strongly tied to the regional network of roadways, rail, and transit services within the Metroplex. The expenditure of federal, state and local funds for regional transportation improvements is guided by the "Regional Transportation Plan for North Central Texas" (currently called Mobility 2030) sponsored by NCTCOG. The current plan is required to justify federal funding for various roadways.

The Regional Transportation Plan is a long-term, comprehensive program that stresses participation of local governments, transit authorities and TxDOT. The plan addresses mitigation of transportation

problems along freeways and regional arterial roadways. In addition to roadway improvements, the plan addresses bus and rail transit service as well as high occupancy vehicle (HOV) systems for carpools and buses. Plano's transportation system must be consistent with that provided throughout the Metroplex in order to move traffic as efficiently as possible. Inconsistencies in the transportation system could result in untimely delays and worsening of air quality due to increased exhaust emissions from idling vehicles. The City of Plano participates fully in reviews and updates of the Regional Transportation Plan to ensure the document's consistency with the City's Thoroughfare Plan.

Plano is nearing full development, but neighboring cities continue to grow rapidly. To ensure regional mobility, it is important that the transportation system within Plano interconnects with those in neighboring cities. This is accomplished through coordination with officials from surrounding cities and comparing land use and transportation plans. Plans for roadway improvements and development projects that could impact traffic on streets should be shared and evaluated.

Emerging Technologies – Intelligent Transportation Systems (ITS)



Message Board along President George Bush Turnpike

Intelligent Transportation Systems (ITS) is a nationwide effort to link new communication, information, and mapping technologies to improve transportation mobility and efficiency. The U. S. Department of Transportation (USDOT) and the Intelligent Transportation Society of America (ITS AMERICA) are working with many organizations and companies at national and international levels to make ITS a reality. The City of Plano is currently participating with DART on an Integrated Corridor Management Project on U.S. 75. This project calls for coordination of transportation groups to keep traffic moving along the U.S. 75 corridor by sharing information with local governments, transportation service agencies, major employers, roadway and transit users.

The City and the region should continue to identify and incorporate ITS elements into transportation operations. ITS represents another way to better utilize the transportation capacity that is already in place.

Objectives for Theme III – City in Transition

Objective C.1 Coordinate with neighboring cities and regional transportation agencies on critical land use and transportation issues.

Objective C.2 Ensure that Plano's transportation system is consistent with that of the Metroplex region through review of regional and local plans.

Objective C.3 Employ innovative programs to reduce traffic congestion on regional expressways and the City's street system.

Objective C.4 Ensure quality mass transit services and interconnectivity with both local and regional destinations.

Objective C.5 Minimize the impact of new development and redevelopment on the operation of Plano's thoroughfare system.

Strategies Theme III – City in Transition

Strategy C.1 Coordinate with neighboring communities to explore regional transportation approaches that would improve traffic flow within and between jurisdictions.

Strategy C.2 Participate in the development and implementation of NCTCOG's Regional Transportation Plan and other regional coordination programs.

Strategy C.3 Work with DART to identify and implement new bus transit alternatives in Plano. In particular, explore the provision of bus rapid transit between Legacy and the Parker Road station.

Strategy C.4 Support DART's efforts to improve east-west transit service, including a connection to DFW International Airport, through the development of funding options and designation of the proposed station locations along the Cotton Belt corridor at 12th Street and at Shiloh Road within Plano.

Strategy C.5 Work with DART and other transportation service agencies to develop plans and programs to provide transportation services for the disabled and seniors.

Strategy C.6 Encourage expansion of DART services to new member cities using equitable funding policies.

Strategy C.7 Develop criteria to prioritize transportation improvement projects and programs that will receive funding from Plano's Community Investment Program (CIP).

Strategy C.8 Require developers to submit site circulation plans for major development projects to improve on-site circulation and vehicle access to and from the property.

2011 THOROUGHFARE PLAN MAP AMENDMENTS

The Thoroughfare Plan map displays the future plans for Plano's transportation system. Several changes are proposed for the 2011 update.

1. 12th Street DART Station

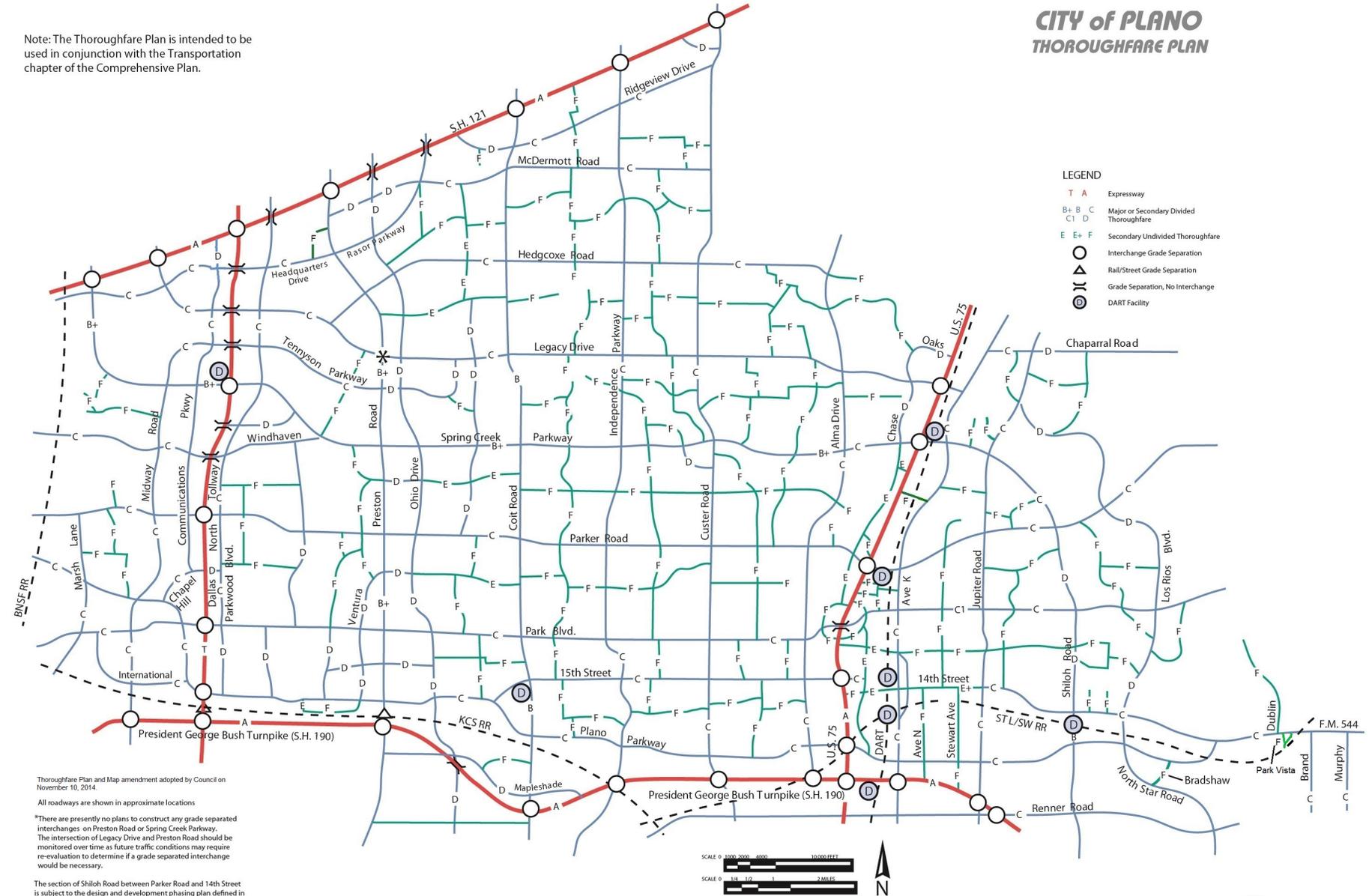
Place a DART facility symbol at the junction of the DART Red rail line and the St. Louis and Southwestern Railroad (Cotton Belt) identifying the 12th Street Station.

2. Shiloh Road DART Station

Place a DART facility symbol just west of Shiloh Road at the intersection with the St. Louis and Southwestern Railroad (Cotton Belt).

Note: The Thoroughfare Plan is intended to be used in conjunction with the Transportation chapter of the Comprehensive Plan.

CITY of PLANO THOROUGHFARE PLAN



- LEGEND**
- T A Expressway
 - B+ B C Major or Secondary Divided Thoroughfare
 - C1 D
 - E+ F Secondary Undivided Thoroughfare
 - Interchange Grade Separation
 - △ Rail/Street Grade Separation
 - ⊗ Grade Separation, No Interchange
 - Ⓧ DART Facility

Thoroughfare Plan and Map amendment adopted by Council on November 10, 2014.

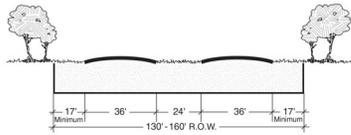
All roadways are shown in approximate locations.

*There are presently no plans to construct any grade separated interchanges on Preston Road or Spring Creek Parkway. The intersection of Legacy Drive and Preston Road should be monitored over time as future traffic conditions may require re-evaluation to determine if a grade separated interchange would be necessary.

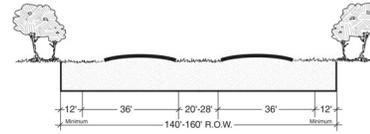
The section of Shiloh Road between Parker Road and 14th Street is subject to the design and development phasing plan defined in Resolution Number 98-2-23(R).



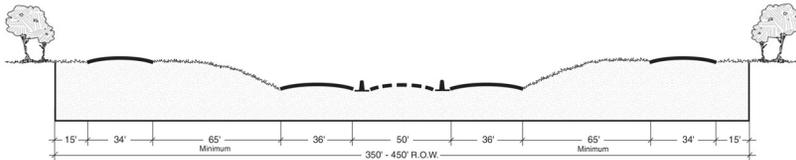
CITY of PLANO THOROUGHFARE CROSS-SECTIONS



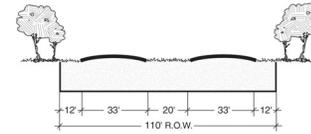
Type B
(M6DA)
Arterial - Regional



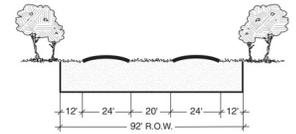
Type B+
(M6DA)
Arterial - Regional
With 12' Access Lanes



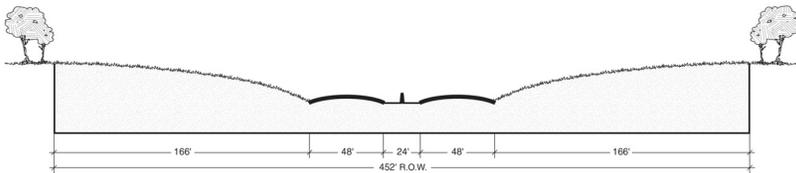
Type T
(E6DF)
Tollway - Regional



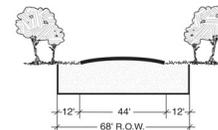
Type C
(M6D)
Major Thoroughfare



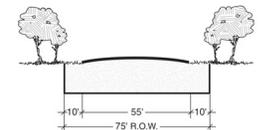
Type D
(S4D)
Secondary Thoroughfare



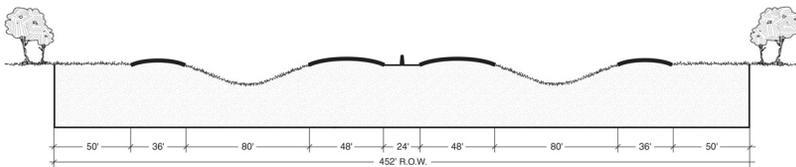
Type A
(E8DA)
Freeway - Regional



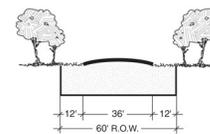
Type E
(S4U)
Secondary Thoroughfare



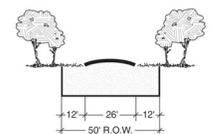
Type E+
(S5U)
Secondary Thoroughfare
With Center Left Turn Lane



Type A
(E8DF)
Freeway - Regional



Type F
(S2U)
Collector



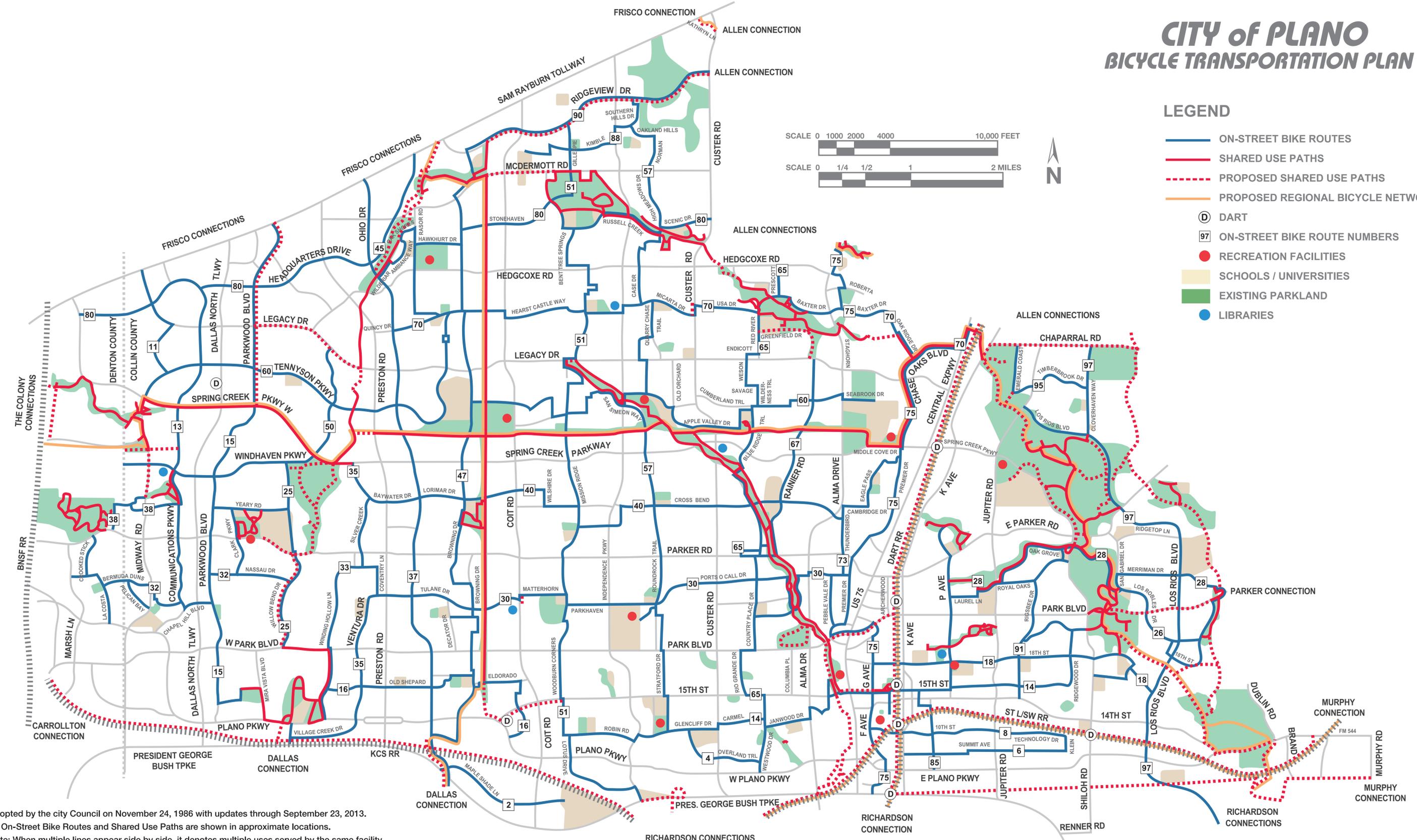
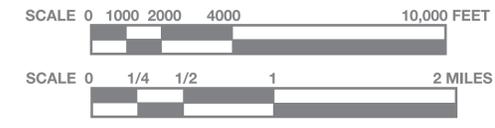
Type G
(R2U)
Residential / Local

For applicable cross-section dimensions, please refer to Thoroughfare Standards Ordinance.

CITY of PLANO BICYCLE TRANSPORTATION PLAN

LEGEND

- ON-STREET BIKE ROUTES
- SHARED USE PATHS
- - - PROPOSED SHARED USE PATHS
- PROPOSED REGIONAL BICYCLE NETWORK*
- D DART
- 97 ON-STREET BIKE ROUTE NUMBERS
- RECREATION FACILITIES
- SCHOOLS / UNIVERSITIES
- EXISTING PARKLAND
- LIBRARIES



Adopted by the city Council on November 24, 1986 with updates through September 23, 2013.
 All On-Street Bike Routes and Shared Use Paths are shown in approximate locations.
 Note: When multiple lines appear side by side, it denotes multiple uses served by the same facility.
 *North Central Texas Council of Governments Regional Veloweb

City of Plano COMPREHENSIVE PLAN

URBAN DESIGN ELEMENT

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PLATES

Plano Urban Design Features



Urban Design Element

Purpose

Urban design is the process of employing natural and manmade features of a city to create a cohesive, understandable, and attractive environment. The urban design process should enhance a community's quality of life by creating a positive emotional attachment between individuals and their surroundings. This emotional attachment to one's physical surroundings, in turn, strengthens one's sense of community.

The Urban Design Element provides a framework for incorporating good urban design into the ongoing growth, development, and redevelopment of Plano. It also addresses the importance of using the built environment to reinforce a “sense of place” and comfort level with our surroundings.

Major Themes

The Urban Design Element looks at Plano's urban design through three Major Themes - Livable

City, City of Organized Development, and City in Transition. It includes a description of factors affecting the themes, objectives and strategies for addressing each theme, and illustrations.

Livable City addresses Plano's image, identity, and character and how they are linked to its physical environment. City of Organized Development stresses the functional aspects of urban design. City in Transition focuses on the role of urban design in Plano's transition from a growing to a maturing city and the interrelationships of historic preservation, infill development, and redevelopment.

Theme I - Livable City

Key Factors

Image and identity

In Plano, a century of farming the rich soil of the area resulted in the removal of many of the original



Plano also has been resourceful in developing a system of greenbelts and hike and bike trails along major creeks and utility rights-of-way to provide pedestrian and bicycle connections between neighborhoods and other amenities. These linear parks already play a major role in the urban design of Plano and in the future should continue to be enhanced and promoted as one of the most important amenities Plano provides for its citizens.

Plano's image and identity is accented by manmade features such as Legacy in northwestern Plano with its lush corporate campuses and pedestrian-friendly town center. Plano has a reputation for high quality development and is home to a number of unique landmarks, gathering places and parks. However, the rapid growth of the entire north Dallas suburban area has resulted in large areas of homogeneous development. This lack of design variety creates anonymity within a Region, one community looks just like its neighbor, and it is difficult for people to know when they

Plano's image and identity is accented by manmade features such as Legacy in northwestern Plano with its lush corporate campuses and pedestrian friendly town center.

trees found on the prairie. Because of this, the remaining natural tree cover in the area is limited. This combined with the relatively flat terrain offer little relief from the built environment. To counterbalance this, Plano has made an assertive effort to plant trees and to acquire flood plains and other significant natural areas for its park and open space system. Bob Woodruff Park in eastern Plano and Arbor Hills Nature Preserve in western Plano are excellent examples of how such areas can be preserved and enhanced to complement the built environment and to provide opportunities for both active and passive escape from our busy lives.



Landmarks throughout Plano provide visual and symbolic interest.

have left one city and entered another.

Although most of Plano's land has been initially developed, the city will continue to change and evolve over time. Over the next few decades Plano can significantly enhance its visual character through urban design. Among the many opportunities are activity centers, park improvements, public buildings, signs, and public art.

Major activity areas and gathering places which promote regional recognition and interest could help distinguish Plano from other cities. They are also needed to increase interaction between people which, in turn, fosters a stronger sense of community and belonging. These places may be characterized by special architectural features, high intensity uses, or a particular function. Such places could also include major business centers, special districts, or neighborhoods which are clearly unique from others.

Over the years, Plano's public buildings have generally been used to present positive urban design precedents. The best examples of this are Plano's many fire stations and libraries. They are not standardized in appearance, but individually designed to complement their surroundings and present a positive image of the city. In addition, the city specifically designed a multi-use center in north central Plano that includes the Maribelle Davis Library, a police substation, and other city offices in a park-like setting.

Signs are another way that the public sector can set a positive urban design precedent. Signs are designed to be highly visible and the city is responsible for the provision of a wide variety of signs. The city should develop a sign catalog to enhance recognition of Plano. This catalog should be used to gradually implement a system of public signs for the city as new signs are installed and older signs are replaced. Signs should be effective while promoting a desirable and consistent image for Plano. This catalog would ensure that the signs for city buildings, street signs, directional signs,

monument signs, way-finding signs in the parks and others are distinct, of a consistent character, and lasting design.

The city recently adopted a policy requiring the expenditure of two per cent of the costs of new municipal facilities on public art. This will not only enrich the community's cultural experience, but will increase the distinctiveness of public buildings.

Sense of Community

A primary focus of the Urban Design element is the creation and promotion of a strong sense of community within Plano. A community consists of much more than the physical structures within it. It is important that people feel a sense of belonging with their surroundings. Attractive and vibrant focal points and gathering places are critical to this effort. Urban design efforts should focus on community gathering places, both city wide and neighborhood



Entryways and public signage can help to establish a sense of identity for the community.

scale, which provide opportunities for people to interact, create a sense of belonging, and foster a sense of community.

One opportunity to strengthen the assets of our community presents itself in Chisholm Trail. The trail, which winds through over five miles of neighborhoods, retail, and office developments, should be improved to play a more prominent role in the urban design of Plano.

A portion of the Chisholm Trail improvements is the Spring Creekwalk. This concept was originally envisioned as a unique mixed-use development on approximately 160 acres of land on the west side of U.S. Highway 75, between Collin Creek Mall and Park Boulevard. The public amenities area of this project would include special water features, terraces, walk-ways and open spaces in conjunction with surrounding offices, restaurants and retail shops to create a vibrant place for economic and social activity. A feature such as this would be visible and easily accessed from Central Expressway, and can become a unique symbol, distinguishing Plano from neighboring cities.

Objectives for Theme I - Livable City

- ▶ **Objective A.1** Continue to expand and enhance Plano's park system as a major urban design asset.
- ▶ **Objective A.2** Encourage visually distinctive yet functional private sector designs.
- ▶ **Objective A.3** Use new public facilities as opportunities to establish positive urban design precedents.
- ▶ **Objective A.4** Use both public and private development projects as opportunities to create gathering places.

Strategies for Theme I - Livable City

- ▶ **Strategy A.1** Review codes and ordinances to ensure that they do not unintentionally limit the potential for innovative, distinctive design.
- ▶ **Strategy A.2** Continue efforts to develop Oak Point Nature Preserve in northeast Plano along Rowlett Creek.
- ▶ **Strategy A.3** Continue to design public buildings that are functional, distinctive,

and appropriate for their surroundings.

- ▶ **Strategy A.4** Develop a sign catalog for use as a reference guide when designing city signage.
- ▶ **Strategy A.5** Establish zoning provisions for commercial development that encourage the creation of plazas, courtyards, and other attractive environments where people can congregate.
- ▶ **Strategy A.6** Develop a plan for enhancing Chisholm Trail as a major gathering place.

Theme II - City of Organized Development

Key Factors

Street pattern

Streets represent a significant feature of Plano's physical development. This extensive network of thoroughfares has been very well planned and built over the years. As a result, the system is extremely efficient and easy to navigate. The major thoroughfare system is primarily a grid network with simplified travel patterns. Land use activities are organized around the thoroughfare system. This pattern of development usually provides retail uses at intersections of major arterials and residential uses in between. However, the retail development at one intersection is typically indistinguishable from the next and is connected by continuous lengths of brick screening walls. This sameness over a large area detracts from the character that variety can bring to urban design.

Through the use of landscaping in medians and other public rights-of-ways, the city has been able to enhance the look of many of its thoroughfares. The aesthetic quality of thoroughfares contributes to the community's overall image. Because streets

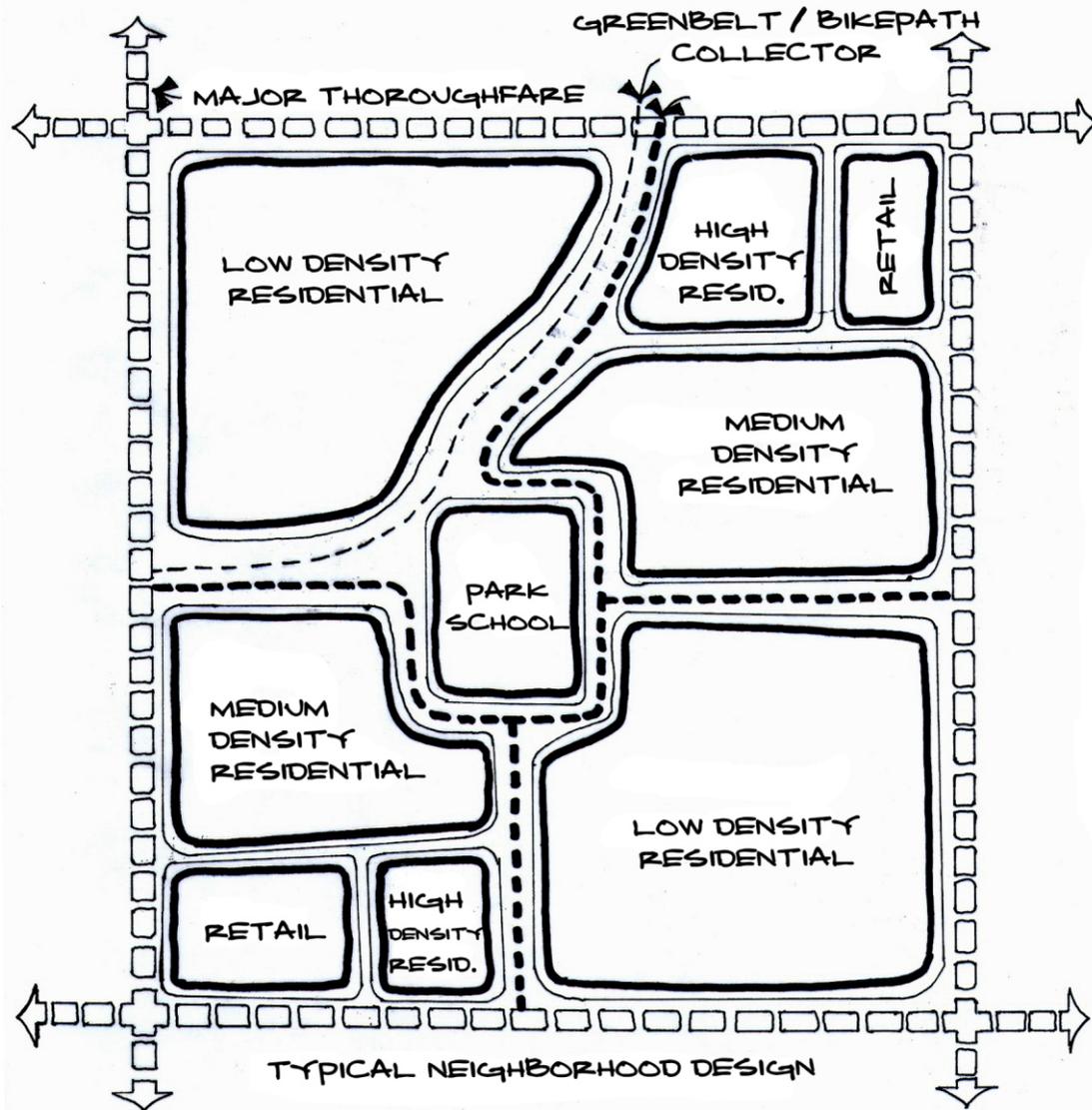
represent such a major part of the city's built environment, emphasis on the urban design component of thoroughfare design should continue. As Plano matures, the aesthetics of the street system will continue to grow in importance as its visual image will have a strong impact on the way that the city is perceived.

Neighborhood Design

Neighborhoods are the primary building blocks of Plano. They are developed in relation to the city's grid system of major thoroughfares. They typically include low density single family homes on the interior with higher density housing and retail uses near major intersections. A collector street system

provides access to and from the interior of a neighborhood. The center of a neighborhood is usually anchored by an elementary school, a small park, or a combination of the two. A typical neighborhood park is functional and includes a small playground and playing fields, but it does not act as a neighborhood focal point and gathering place for all ages. Certain improvements could make these parks more attractive and inviting to the public such as small plazas and courtyards, increased landscaping, and shade trees. This might increase their usage and bring more people together for neighborhood activities.

Neighborhood schools also could become centers for neighborhood recreational and social activities.



This would require the city and school districts to jointly address security and safety measures when schools are used during off hours. This may involve test cases at one or two schools to ensure such programs can be successful and cost effective. Some high schools and middle schools are now being used on a larger scale for community-wide programs as opposed to neighborhood based activities.

Major Development Corridors

Three regional expressways currently pass through Plano or along its boundaries Central Expressway (U.S. 75), the Dallas North Tollway, and the President George Bush Turnpike (S.H. 190). In addition, S.H. 121 is designated as a future expressway. Preston Road, although it is not an expressway, also functions as a major development corridor since it is the primary major arterial connecting western Plano with Dallas.



Preston Road was the first major corridor for which special standards were established relating to frontage treatment along the roadway. Here the combination of low level, monument signs, landscape setbacks, and underground utilities create an attractive, uncluttered environment.

Major corridors present both challenges and opportunities for the city's continued development. Due to their regional accessibility and prominence, they are likely candidates for major office and retail development. Also, these regional roadways generate a significant amount of traffic noise which makes

them less attractive for residential development. These highly visible corridors provide an immediate image of Plano to those traveling into or through Plano. The development in these corridors has a significant impact on the development on either side of the corridor. In a number of cases, the adjacent uses are residential and are separated from the corridor development by a parallel roadway. The view from these roadways should not be a “back door” image comprised of loading docks, trash dumpsters, and outdoor storage. In recent years, the city has enacted new zoning and overlay districts to address these challenges. These include regulations relating to signage, power line placement, landscaping, screening, and height/setback ratios.

Due to the number of major corridors in Plano and the overall abundance of retail and office zoning, major development corridors may exceed the demand for these uses before the supply of land is utilized. This will result in efforts to find other uses for undeveloped properties. This process should be dealt with carefully to prevent disjointed development patterns and to provide reasonable compatibility in scale with existing development.

Site Design

City parking ordinances have typically stressed functionality for individual sites through the requirement of abundant off-street parking. In some cases, a reduction in parking requirements would allow developers greater flexibility in site design and provide for more landscaping while still assuring that adequate parking is provided. In particular, parking requirements should not be an impediment to infill and redevelopment opportunities.

Objectives for Theme II - City of Organized Development

- ▶ **Objective B.1** Reconcile the land use supply with reasonable uses that are consistent with demand and suitable for their surroundings.

- ▶ **Objective B.2** Strengthen neighborhoods by creating stronger focal points and gathering places within them.
- ▶ **Objective B.3** Continue to ensure that Plano's development corridors are attractive and inviting.
- ▶ **Objective B.4** Enhance the visual image along Plano's major thoroughfares.

Strategies for Theme II - City of Organized Development

- ▶ **Strategy B.1** Continue to consider zoning map and text changes that promote a wider range of compatible land uses for excess non-residential zoned properties. (See Land Use Element.)
- ▶ **Strategy B.2** Enhance neighborhood parks with attractive amenities that make them more appealing for passive activities.
- ▶ **Strategy B.3** Schedule special events at neighborhood parks and schools to bring residents together on a regular basis.
- ▶ **Strategy B.4** Continue to formulate and apply special development standards for major corridors and other economic development areas that include signage, landscaping, and/or other appropriate design elements.
- ▶ **Strategy B.5** Review city codes and ordinances to identify potential reductions in parking requirements so as not to unnecessarily inhibit infill and redevelopment efforts.

Theme III - City in Transition

Key Factors

Maturity

As Plano transitions from a growing to a maturing City, urban design will play a major role in its continued success as a community. As noted previously, Plano has experienced explosive growth in the last 45 years. As the availability of raw land for new development diminishes, residential developers are concentrating their attention on suburbs to the north. Plano has become an “inner ring” suburb. “Outer ring” suburbs such as Frisco, Allen, and McKinney are now experiencing explosive growth. As Plano's “newness” wears off, it will need to find other ways to attract and retain residents and businesses.

The City of Plano can take the lead by continuing to upgrade and/or replace its facilities and infrastructure on a regular basis. This type of reinvestment by the public sector is often necessary to stimulate private reinvestment. Property owners are less likely to maintain and improve their properties if public streets, bridges, parks, and buildings are in disrepair or out-of-date.

Major capital projects may actually provide opportunities to make urban design statements. For example, a street upgrade could include special signage and landscape treatments. Special materials could be used to “soften” and enhance the appearance of bridge abutments, retaining walls, and other components of roadway construction. Plano has an ongoing program for planting trees in the medians of major thoroughfares. This program should be continued as another way of improving the appearance of Plano's streetscape. Building expansions and upgrades and new construction projects can also provide opportunities to improve the visual character of Plano's many public facilities.

Screening walls are dominant in the streetscape of Plano and the maintenance of these walls will significantly impact the “face” of Plano. As these walls need to be repaired and replaced, it is often impossible to match the original design and materials. The city should develop a policy for the repair and replacement of these walls, including several style, material, and landscape options to ensure the streetscape is preserved or enhanced.



The Haggard Park neighborhood immediately, west of Downtown, was the first group of properties to be designated as a Heritage Resource District. Previously, only individual properties had been designated.

Preservation

A community's design quality is often enhanced by preserving and maintaining its physical links to the past. Older structures, neighborhoods, and business districts help us understand the social and design evolution of Plano. While Plano's examples of past eras are limited, it becomes all the more important that we protect them. The distinctiveness of historic structures will allow them to serve as landmarks and focal points for future generations.

As part of the Plano's Heritage Preservation Program, two districts and 30 individual properties have been given Heritage Resource designation. Once these properties are designated, their owners must request Certificates of Appropriateness (CAs) for any

changes to the structure or grounds. Owners of designated properties are also eligible for significant tax exemptions. These exemptions include all four local taxing entities and represent a significant incentive for property owners to renovate and maintain their properties.

Downtown Plano and the adjacent Haggard Park neighborhood have been identified as Heritage Resource Districts where the character and integrity of the built environment will be preserved. The zoning in the Douglass Community was recently modified to ensure that infill development is consistent with the character of the existing homes. Two other areas near downtown Plano have also been identified as possible Heritage Resource Districts.

Urban Centers and Mixed Use Development

Urban Centers are mixed-use, compact, pedestrian-friendly, higher density areas. These areas are designed to create a more socially interactive, pedestrian-oriented environment that accommodates residency, work, shopping, and leisure activities in one location. This is accomplished by increasing densities, mixing land uses, reducing parking requirements, and creating attractive and inviting open spaces. Success of these centers can often be enhanced when they are located near transit facilities.

Downtown Plano and Legacy Town Center are examples of existing, successful new urbanist style developments in Plano. Given the city's stage of development and current development trends, there may be additional opportunities to implement this style of development in Plano.

Only a few locations are suitable for development as

urban centers in Plano. These centers may be successful as infill and revitalization initiatives and may play a larger role in Plano's future. However, these centers should not be used merely as a means of gaining additional density and flexibility. A study is underway to outline the requirements for a successful urban center and to establish the future role of urban centers in Plano.



Activity centers help to promote a sense of community by providing places for interaction. These typically occur in a mixed-use area that integrates a range of uses and activities which compliment and support one another.

Private Amenities

Many subdivisions in Plano contain private amenities such as landscaping, open space, water features, and recreational facilities. These amenities contribute to the visual quality of the city's neighborhoods and overall quality of life. The maintenance of these amenities is the responsibility of the homeowners associations (HOA's). However, in recent years a number of HOA's have struggled to meet their obligation. As Plano matures the burden and quality of maintenance will be a growing issue. The city should review codes and ordinances in light of this problem to reexamine the regulatory requirements for such amenities.

Objectives for Theme III - City in Transition

- ▶ **Objective C.1** Continue to improve and enhance the appearance of Plano's thoroughfare system through streetscape improvements.
- ▶ **Objective C.2** Continue to ensure that Plano's codes, ordinances, and programs encourage and promote the long term preservation of links to Plano's past.
- ▶ **Objective C.3** Provide for the development of pedestrian-friendly, urban environments in appropriate locations.

Strategies for Theme III - City in Transition

- ▶ **Strategy C.1** When upgrading existing streets or building new roadways, incorporate special signage and landscape treatments where possible. Use special materials to soften and improve the appearance of bridge abutments, retaining walls, and other components of roadway construction.
- ▶ **Strategy C.2** Continue the city's median tree planting program to soften the appearance of Plano's major thoroughfares.
- ▶ **Strategy C.3** When upgrading, expanding, or building new public facilities use signage, landscaping, and related amenities to improve their visual appeal.
- ▶ **Strategy C.4** Develop a policy for the repair and replacement of screening walls along major thoroughfares, which establishes a standard range of style and material options.
- ▶ **Strategy C.5** Continue to provide for the designation of individual properties and districts as "Heritage Resources" to

preserve structures that are historically significant to Plano. Also, continue to establish appropriate design guidelines for each district and review improvements to those properties in accordance with them.

- ▶ **Strategy C.6** Continue to offer tax incentives to owners of historic properties who restore and maintain them.
- ▶ **Strategy C.7** Identify appropriate locations for mixed-use urban centers and develop appropriate standards for their design and development. These standards should focus on the character and scale of such developments to ensure that they create vibrant, pedestrian-oriented places.
- ▶ **Strategy C.8** Review Plano's codes and ordinances as they relate to private amenities and their potential impact on future city resources.

Urban Design Framework and Terminology

Plano and most other cities are formed around a basic framework of urban design attributes. When properly organized and presented, these attributes create an attractive, comfortable, and functional environment. They include:

Place

A place is an area or location that can be distinguished from others by its own unique characteristics or attributes. Place can apply to a whole community, a neighborhood, or even smaller areas. The distinction may result from a particular type of activity or function, an architectural or development style, or the level of intensity of a development. Downtown Plano exemplifies all three. It is an area where festivals, concerts, and other special events occur. Many of its older buildings represent architectural characteristics from the 1890's through the 1930's. Finally, it

provides a human scale environment that emphasizes the pedestrian over the automobile unlike the low density suburban surroundings that occur in most of Plano.

Linkage

Linkages connect places. A linkage may be a physical connection between places, such as a path or a corridor, or it may be a visual or merely perceived connection. The design and treatment of development and other features along a linkage should in some way relate to the places it connects.

Paths

Paths are the basic routes of travel or movement between places such as streets, sidewalks, transit lines, and hike/bike trails. Plano's hike/bike trail system is an excellent example of paths used as a design component. They have the potential to provide a continuous pedestrian linkage within the community, and to establish a system of open space "windows" that provide relief from the man-made environment.

Corridors

Heavily traveled linkages with development along either side that is integrally associated with their identity are called corridors. Corridors are significant in Plano because of the large number of regional thoroughfares passing through and along the perimeter of the city. Expressways that provide important regional linkages for Plano include U.S. Highway 75, the Dallas North Tollway, State Highway 190, and State Highway 121. Corridors may also be established along major arterials. For example, Plano Parkway, Spring Creek Parkway and Preston Road provide important cross-town linkages. Corridors provide excellent opportunities to establish and strengthen Plano's image and identity. The city has implemented special overlay zoning districts along many of its development corridors to encourage the effective use of

landscaping, signage, and other elements that shape one's image of the community.

Landmarks/Focal Points

Landmarks and focal points give places visual and symbolic interest. They provide a vivid mental image, or memory, of a place. Landmarks and focal points have varying levels of impact and significance. For example, a high-rise building may be a readily identifiable landmark to an entire region, while a small neighborhood park can serve the purpose for the residential area that immediately surrounds it. A landmark is a distinctive object, or a closely associated group of objects, that establishes a point of reference and is often used to define routes of travel within a region, community or neighborhood. Landmarks and focal points should be well known to residents and easily identified by visitors and travelers. Well-known, prominent landmarks in Plano include the Bank of America building (the tallest building in the city), the High Point Park/Clark Field athletic complex and other major park facilities, the three senior high schools, Collin Creek Mall, the Legacy development, the Plano Centre/Collin County Community College area and Downtown Plano.

Entryway

Entryways are identifiable characteristics or features that establish a sense of “arrival” into a community or place. They should be designed to attract or encourage one to enter a specific place. Entryways are particularly important for cities because they are the first indications to visitors or travelers that they have progressed from one community into another. They establish an immediate image or impression of a place for other design elements to maintain or reinforce as one travels through that place. Entryways can be elaborate approaches or portals, or they can take the form of simple signage and landscape features. In any event, entryways symbolize or mark entry into a particular community or place.

For the most part, Plano lacks identifiable entryways but progress is being made, particularly in response to the Eastern Plano Streetscape Plan. Current entryway features are located:

- ▶ Along Coit Road, north of S.H. 190;
- ▶ Along the northbound service road of U.S. 75 at 13th and 15th Streets; and
- ▶ At the intersection of K Avenue and Parker Road.

Edge

Edges define and designate places. They physically and/or visually separate one place from another, or they provide a transition between two places that prevents one from overwhelming the other or detracting from it. Edges can create a feeling of "enclosure" by defining the limits of a space physically or visually, or they can enhance a sense of "place."



This screening wall, typical of many in Plano, offers an abrupt separation between a busy thoroughfare and the residential neighborhood beyond it. As a practical matter, the wall screens the headlights of cars in alleys from those on major streets.

Edges are described as "soft" or "hard" depending on the severity of the break or separation. Hard edges are usually abrupt separations or boundaries such as bridges, railroad rights-of-way, major thoroughfares and walls. Plano's neighborhoods are often defined by hard edges in the form of masonry screening walls lining its major thoroughfares.



This is an example of using trees, shrubbery, and distance to “soften” the transition from a major thoroughfare to an adjacent residential subdivision.

Hard edges are often a viable treatment where the difference in uses and/or limited area of separation requires a strong boundary. In many cases these hard edges such as screening walls along a major thoroughfare hide or dominate other key design elements.

Soft edges generally take the form of transitions and buffers providing a more gradual break between uses and areas. These can include an intermediate intensity of development, such as multi-family residences, that buffer a low density, single-family neighborhood from the high levels of activity in a major shopping center or the high traffic volumes on a freeway. Landscaped buffers can often provide a softer transition between uses.

Streetscape Amenities

Streetscape fixtures and amenities are special details and components that are part of the overall character of a city, and within the immediate view of Pedestrians and passengers in vehicles. They can be used to accent linkages and provide them with continuity. Effective use of streetscape amenities is necessary to heighten the impact of edge treatment or development along a corridor. They can also add definition and interest to places. Streetscape amenities are often overlooked in the design

process. However, they play a major role in the image and livability of a community because they are at a more human scale and therefore more visible to travelers and passers-by than other design elements. Streetscape amenities may include lighting, signage, street furniture, decorative paving patterns, bridge railings and abutments, utility structures, sidewalks and landscaped features.

Downtown Plano is an excellent example of the effective use of streetscape amenities including brick streets, special pavement accents at intersections, brick sidewalks, period light posts, sidewalk planting strips, and benches. These treatments add to the unique character of downtown Plano, which is already defined by its distinctive architecture.

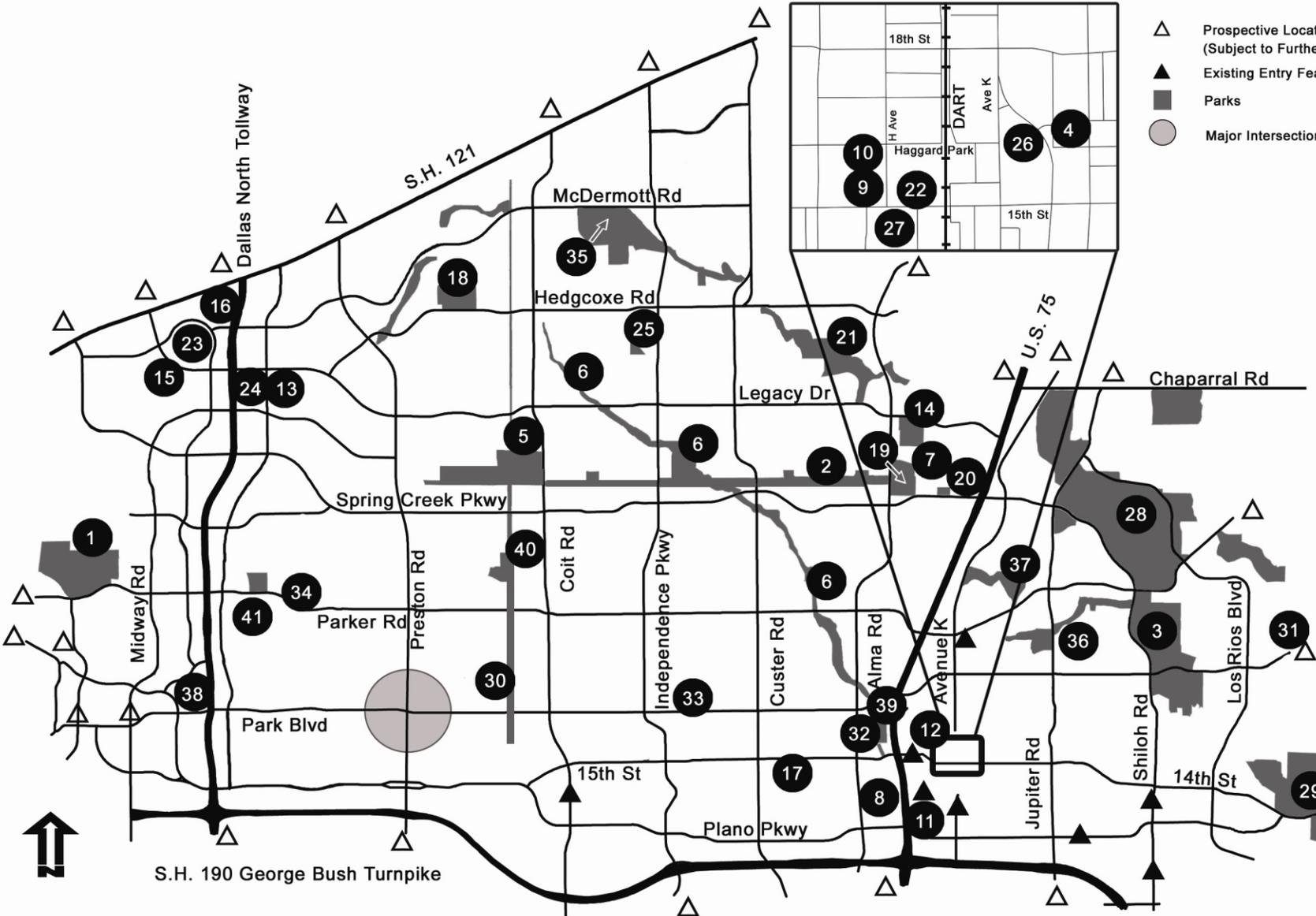


Legacy Town Center and downtown Plano offer excellent examples of the use of streetscape amenities to accentuate an environment and make it more inviting. The use of brick sidewalks, older era lighting fixtures, and landscaping is attractive and consistent with the pedestrian character of the area.

Plano Urban Design Features

- △ Prospective Location For An Entry Feature (Subject to Further Study)
- ▲ Existing Entry Feature
- Parks
- Major Intersection Development

- 1 Arbor Hills Nature Preserve
- 2 Bluebonnet Trail
- 3 Bob Woodruff Park
- 4 Carpenter House
- 5 Carpenter Recreation Center
- 6 Chisholm Trail
- 7 Clark Stadium
- 8 Collin Creek Mall
- 9 Courtyard Theatre
- 10 Cox Building
- 11 Douglass Community (including Plano African American Museum)
- 12 Downtown Plano
- 13 EDS
- 14 Enfield Park
- 15 Frito-Lay
- 16 Granite Park
- 17 Heritage Farmstead Museum of Plano
- 18 Heritage Yards at Plano
- 19 Highpoint
- 20 Highpoint Tennis Center
- 21 Hoblitzelle Park
- 22 Interurban Museum
- 23 J.C. Penney
- 24 Legacy Town Center
- 25 Maribelle Davis Library Complex
- 26 Municipice Center
- 27 Municipice Courts
- 28 Oak Point Park and Nature Preserve
- 29 Pecan Hollow Golf Course
- 30 Preston Ridge Trail
- 31 Plano East Senior High School
- 32 Plano Senior Center
- 33 Plano Senior High School
- 34 Plano West Senior High School
- 35 Russell Creek Park
- 36 Santa Fe Trail
- 37 Shawnee Park
- 38 Shops at Willow Bend
- 39 Spring Creek Walk
- 40 Wells House
- 41 Windhaven Park



City of Plano COMPREHENSIVE PLAN

HOUSING ELEMENT

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Housing Element

Introduction

The Housing Element of the Comprehensive Plan guides development, maintenance, and redevelopment of housing resources in Plano. The Housing Element portrays the city as a community of viable neighborhoods that emphasizes housing variety and opportunity. The impact of changing demographics on the provision of housing is highlighted.

The Housing Element is closely tied to the other elements of the Comprehensive Plan. All of the elements touch on factors that contribute to the quality of life of residential neighborhoods found within the city. More in depth discussion regarding land use, transportation, public service delivery, and employment and education opportunities can be found in the other elements of the Comprehensive Plan.

Major Themes

The key factors and issues of the Housing Element are organized under the three major themes of the

Comprehensive Plan: Livable City, City of Organized Development, and City in Transition. Livable City refers to the key factors that people consider when choosing Plano as a place to live. City of Organized Development pertains to the spatial organization of residential neighborhoods within Plano. City in Transition focuses on how demographic shifts and the aging of Plano's residential neighborhoods will impact the existing housing stock and challenge the city to meet the changing needs of residents and to maintain viable neighborhoods.

Theme I - Livable City

A livable city is a place where people are attracted to the community through a variety of housing opportunities and a high-quality living environment. Nationally recognized municipal services, attractive neighborhoods, and employment and educational opportunities establish Plano's reputation as an excellent city in which to live.

**Theme II -
City of Organized Development**

The design of residential neighborhoods and the overall land use and circulation system will be presented in this theme. A description of Plano's typical neighborhood format is provided. However, not much land in Plano remains to accommodate typical neighborhoods. Alternative neighborhood formats to accommodate future housing needs are explored along with housing density.

Theme III - City in Transition

Changing demographics and growth in employment will create a continuing demand for new housing in Plano. The supply of land already zoned for new housing is low. Infill and redevelopment will be the opportunities for new residential development in the future. The aging of Plano's existing housing stock will pose a challenge to the attractiveness and stability of neighborhoods. Code enforcement, federal housing grants, and neighborhood planning are tools that can be used to preserve Plano's residential communities as they mature.

People can choose from typical single-family neighborhoods, garden apartments, townhouses, patio homes, and urban centers such as those found in the Legacy Town Center and the Eastside Village.

- ▶ **Educational Opportunities** - Educational opportunities are available for Plano residents of all ages. Private day care centers for children are located throughout the city along with early childhood centers provided by the Plano ISD. School age children are served by three quality public school districts and a number of private schools. Higher educational opportunities are available through Collin County Community College District, the University of Texas at Dallas, and by Southern Methodist University at its Legacy corporate campus.
- ▶ **Employment Opportunities** - Plano is a major employment center in the north Dallas region. As a result, many Plano residents are able to live and work within the city.

Theme I - Livable City

Key Factors

Variety of Opportunities

People choose a city to live in based on a variety of factors such as housing options, affordability of housing, educational and employment opportunities, services and amenities, and accessibility.



- ▶ **Housing Options** - There are a variety of housing options available within a wide range of prices and rental rates in Plano.

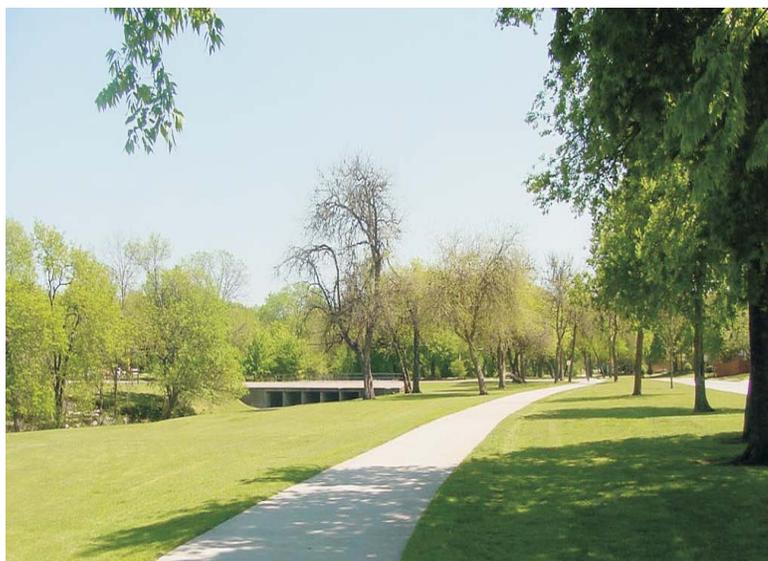
An elementary school in the center of a residential neighborhood - An example of a feature found in most Plano neighborhoods.

- ▶ **Home Occupations** - Home-based occupations are well represented in the city. The 2000 Census stated that 4.7% (5,585) of all employed people age 16 years and older in Plano worked at home. This number has probably grown much larger due to current economic conditions.
- ▶ **Services and Amenities** - Plano's large population and the high employment base provide the revenue to fund nationally-recognized municipal services and facilities. The city is also a major retail area with many shopping centers and a variety of restaurants.
- ▶ **Accessibility** - It is easy to get around in Plano. Businesses, services, amenities, and residential neighborhoods are accessible by Plano's street system. Many residents also have access to public transit and hike and bike trails. The transportation system interconnects the city with the region and provides access to various cultural facilities and employment centers located throughout the Dallas/Fort Worth metroplex.
- ▶ **Attractive Environment** - Plano is nationally recognized for its land use planning practices. Land use planning policies have led to the creation of well organized and attractive neighborhoods. Code enforcement, heritage preservation, and neighborhood planning efforts contribute to the continued viability of the city's residential neighborhoods.
- ▶ **Neighborhood Amenities** - Most of Plano's typical neighborhoods are served by an elementary school and a park facility located near the heart of the community. Some neighborhoods are linked together through linear parks and greenbelts situated along creeks. Although functional, many of the neighborhood parks could be made more attractive and serve a broader population with a wider variety of activities. This would enhance the high quality environment already offered by Plano's neighborhoods.

High-Quality Living Environment

When choosing a city as a place of residence, people consider the immediate surroundings and the quality of life the community offers such as:

- ▶ **Safe and Secure Environment** - Plano's neighborhoods are considered safe and relatively free of crime, and the city has one of the lowest crime rates in the State of Texas among cities with populations greater than 100,000 people. The city is served by fire and police departments that are nationally recognized for the quality of public safety services provided.



Chisholm Trail Park - A linear park connecting several residential neighborhoods within the city.

Objectives - Livable City

The objectives and strategies are listed in order of the key topics that are presented in the Housing Element of the Comprehensive Plan. There is no priority to the arrangement.

- ▶ **Objective A.1** Provide a variety of housing options for prospective Plano residents.
- ▶ **Objective A.2** Continue to provide a wide range of educational and employment opportunities as they are major considerations in choosing a city in which to live.
- ▶ **Objective A.3** Continue to provide quality public and private sector services and amenities.
- ▶ **Objective A.4** Provide safe, secure, and attractive living environments.

Strategies - Livable City

- ▶ **Strategy A.1** Review Plano's development Regulations to ensure that a variety of housing types and styles can be developed in Plano.
- ▶ **Strategy A.2** Continue programs for the recruitment and retention of businesses.
- ▶ **Strategy A.3** Maintain strong relationships with education providers and businesses to ensure that educational opportunities meet the needs of Plano's residents and employers through periodic meetings to share information and ideas.
- ▶ **Strategy A.4** Study and evaluate the efficiency and effectiveness of public

service delivery.

- ▶ **Strategy A.5** Continue neighborhood police, crime prevention, and public awareness programs to supplement safety in residential environments.
- ▶ **Strategy A.6** Maintain zoning and building codes and enforcement procedures to establish and maintain attractive neighborhoods.
- ▶ **Strategy A.7** Continue to improve neighborhood parks to ensure that they serve as focal points and gathering places.



A collector street leading into a residential neighborhood - A common component of the typical Plano neighborhood.

Theme II - City of Organized Development

Key Factors

Typical Neighborhood Format

Plano is characterized by a series of neighborhoods that serve as community “building blocks.” Table 1 describes the major components of the typical Plano neighborhood.

Table 1 - The Typical Neighborhood Concept

- ▶ Neighborhoods are generally one square mile in area bounded by arterial streets.
- ▶ Neighborhoods are comprised predominantly of low-density single-family residences within the interior and portions of the edges. Medium-density single-family and multifamily housing are typically found on the edge of a neighborhood at or near a major intersection.
- ▶ Retail and office developments are often found at the intersections of major arterial streets.
- ▶ Neighborhood parks and elementary schools are commonly placed near the center of the neighborhood.
- ▶ Collector streets provide access from the interior of the residential neighborhoods to the major arterial streets.
- ▶ Greenbelts and linear parks are used to provide bicycle and pedestrian connections between neighborhoods.
- ▶ Residences may be used for limited home occupations that do not negatively impact the neighborhood character.

The blending of individual subdivisions and public facilities into functional neighborhood settings is essential for the growth and development of the community. Creation of neighborhoods that offer a variety of housing types, yet are predominantly low density, is desirable to many residents. This neighborhood arrangement helps reduce congestion and noise associated with higher density forms of development. It also provides an opportunity for various housing types within the neighborhood setting instead of concentrations of each type in

separate areas of Plano.

This concept was the basis for residential development during Plano's time of rapid growth between 1970 and 2000 and should continue to be utilized where possible. However, very little land remains for the typical neighborhood development in Plano. It will be necessary to consider alternative appropriate designs for meeting the city's future housing needs.

Alternative Neighborhood Formats

The amount of land available for future residential development is limited. Much of it lies outside of typical neighborhood settings and is separated by major thoroughfares, natural features such as floodplains, and nonresidential development from existing neighborhoods.

There is an abundance of land zoned for nonresidential uses. Some of these properties are not in a prime location for development and lack the access and visibility required for commercial uses. A reasonable alternative use for these properties may include some form of medium- to high-density housing in an area that is not sized and configured



Legacy Town Center - A residential area developed using an alternative neighborhood format.

like a typical neighborhood project.

Instead of 600 acres or more, alternative format neighborhoods may contain 10 to 100 acres of land in irregular shapes, making innovative design critical for the development of functional, cohesive neighborhoods. An urban center is an example of development that might occur in an alternative neighborhood format without typical amenities like neighborhood parks and schools. Urban centers are likely to be pedestrian-oriented with higher density than typical neighborhoods.

A retirement housing development is another example of an alternative neighborhood built in a primarily nonresidential setting. It is important that these developments are located in proximity with amenities such as medical offices, pharmacies, and shopping centers.

Housing Density

It is important to encourage the dispersion of high-density developments throughout the city to ensure that this housing option is widely available as opposed to limiting it to specific locations. This concept is supported by the typical neighborhood design. The City of Plano has developed policies to avoid major concentrations of high-density housing except where pedestrian-oriented environments are being created. Retirement housing is also excluded from this policy because its impact on most public services such as traffic and schools is much less than typical garden apartments. Policy Statement No. 3.0

- Housing Density provides more detailed discussion and specific policies related to this issue.

Urban centers rely on density for success. There has to be a large enough population to help support the businesses located within the center. Greater density is also necessary to create a pedestrian-oriented environment and reduce the use of automobiles. Two examples of urban centers include the Legacy Town Center and the Eastside Village in downtown Plano. Both are designed with the concept of working, living, shopping, and recreating in the same location, with emphasis placed on pedestrian access. Legacy Town Center and the Eastside Village currently lack some of the basic services required by residents such as grocery stores and pharmacies. It will be important to encourage the development of these types of service businesses as urban centers continue to develop. Common characteristics of urban centers include:

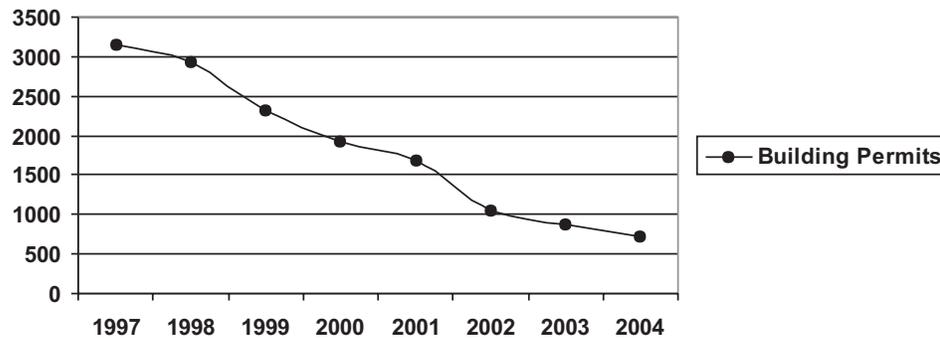
- ▶ Predominantly higher density housing.
- ▶ Mixed uses including residences, shops and restaurants, and employment operations.
- ▶ Little or no private yard.
- ▶ Seldom larger than one-quarter of a square mile - often less than 100 acres.
- ▶ Small areas of shared open space.
- ▶ No schools.

**TABLE 2
Single-Family versus Multifamily Housing, 2005**

Housing Type	Current		Future Estimate*	
Single-Family/Duplexes	67,029	71.7%	71,116	67.9%
Multifamily	25,800	27.6%	33,058	31.5%
Other**	611	0.7%	611	0.6%
Total	93,440		104,785	

Source: City of Plano
 *Future Estimate - These units could be built within the next five to ten years.
 **Other housing includes mobile homes, recreation vehicles, etc.

**Figure 1
Number of Building Permits Issued**



Source: City of Plano Building Inspections Department

- ▶ Intended as an interactive setting.

Table 2 estimates existing and future distributions of single-family and multifamily housing units within Plano. The future estimate is based on current zoning regulations. Even though the amount of undeveloped land area zoned for multifamily and single-family uses is about the same, the number of multifamily units estimated for the future is higher than that of single-family due to a greater number of units allowed per acre.

Objectives - City of Organized Development

- ▶ **Objective B.1** Provide for the continuation of the typical neighborhood format as the building block of residential developments in Plano where possible.
- ▶ **Objective B.2** Ensure that alternative neighborhood formats provide functional and appropriate environments for residential uses and activities.
- ▶ **Objective B.3** Disperse high density housing across the city in small concentrations, except for retirement housing and urban centers.

Strategies - City of Organized Development

- ▶ **Strategy B.1** Continue to use the typical

neighborhood design concepts where land mass and configuration permit.

- ▶ **Strategy B.2** Establish criteria for housing developed in alternative neighborhood formats. Use these criteria when evaluating rezoning requests.
- ▶ **Strategy B.3** Use Policy Statement 2.0 - Rezoning Property to Meet Demand - as a guide for consideration of changing the zoning from nonresidential to residential uses.
- ▶ **Strategy B.4** Continue to apply the housing density policies in Policy Statement 3.0 - Housing Density - when considering the appropriate concentrations of high-density housing.

Theme III - City in Transition

Key Factors

Housing Demand/Supply

Although Plano's housing is in high demand, the opportunities to build new homes on undeveloped land are diminishing. Only 4.8% of undeveloped land zoned for all types of residential uses remains.

**TABLE 3
AGE OF HOUSING UNITS**

Year Built	Units	Ratio to Total Units
2000s	7,706	8.3%
1990s	40,176	43.1%
1980s	23,808	25.5%
1970s	16,983	18.2%
1960s	3,619	3.9%
1950s	579	0.6%
1940s	244	0.3%
Before 1940	194	0.2%
TOTAL	93,309	100.1%

Sources: U. S. Census 2000 and City of Plano

Most of the housing stock within the city has already been built. The graph in Figure 1 is reflective of the diminishing supply of land for residential development. The number of permits issued for single-family housing has been decreasing from the all time high of 3,145 issued in 1997 to 729 in 2004. (See Figure 1.)

The Consolidated Plan, that governs the use of the city's federal grants for housing assistance, indicated that most of the city's housing stock is in good condition because of its young age. This finding is consistent with 2000 Census data. Almost 77% of Plano's housing stock has been constructed in the last 25 years. (See Table 3.) As the housing stock ages, maintenance and updating will be necessary to keep it competitive with new housing found in other cities. It will be important for the city to take a proactive role for Plano to retain its competitive "edge."

The federal grants that Plano receives are used to provide affordable housing for Plano residents. Community Development Block Grants (CDBG) and HOME Investment Partnerships Grant (HOME) assist low to moderate income households with home maintenance projects and first time homebuyers with closing costs on a mortgage. Sometimes the housing structures are dilapidated and are not feasible for rehabilitation. Funds are also used for the replacement of these structures. The City of Plano distributes CDBG grants to the Plano Housing Authority (PHA) to purchase and develop the land.

PHA also works with low income Plano residents in the provision of affordable housing. PHA distributes Section 8 rental housing vouchers for homes and apartments in Plano. They also have 55 affordable housing units dispersed throughout the city. PHA operates a family self-sufficiency program for households that want to leave public housing. It will build a housing structure and sell it to these families.



Habitat for Humanity House - An example of adding affordable housing in existing neighborhoods.

Infill and Redevelopment

As stated earlier in this document, infill refers to new development on a vacant property surrounded by existing development. Redevelopment refers to demolition and replacement of existing structures.

Infill and redevelopment will become the primary opportunities for new housing in the future for Plano. There are some small parcels of land within the city that for various reasons have yet to be developed. Existing development may become obsolete, thus providing the opportunity to replace it with new housing. It will be important to ensure that potential infill and redevelopment projects complement and enhance development already in place through the review of subdivision and zoning regulations and standards.

There is an abundance of land zoned for nonresidential uses in Plano. This was reflected in the Tri-City Retail Study completed in 2002 in conjunction with the cities of Carrollton and Richardson. The study recommended that Plano allow residential uses to occupy land zoned for retail uses. The City Council adopted a provision that would allow the consideration of residential uses within retail zoning districts on a case by case basis. For more detailed information on this topic, please refer to Policy Statement No. 2.0 - Rezoning Property to Meet Demand.

Some issues that could deter infill and redevelopment include:

- ▶ Size and configuration of prospective tracts of land.
- ▶ Land costs, particularly for properties that are currently zoned for nonresidential uses.
- ▶ Costs associated with redeveloping properties, such as demolition and utility upgrades and relocations.
- ▶ The existing zoning of a location does not

allow for residential use.

Some successful examples of infill, redevelopment, and rezoning of nonresidential land for residential purposes include:

- ▶ Constructing new housing units on vacant lots in the Douglass Community by the Plano Habitat for Humanity. The new units must meet design standards (i.e. setbacks, lot coverage, and front porches) that are consistent with the existing development in the area.
- ▶ Establishing the Eastside Village in downtown Plano - Certain properties in downtown Plano were redeveloped for townhouses, condominiums, and mixed use facilities that include residential, retail, and office uses.



Madison Estates at the southwest corner of 14th Street and Rigsbee Drive - A residential project built on land formerly zoned for commercial use.

- ▶ Rezoning land at the southwest corner of the Intersection of 14th Street and Rigsbee Drive for duplexes.
- ▶ Rezoning of land at the northeast corner of Legacy Drive and Custer Road for patio homes.

Housing/Jobs Imbalance

The City of Plano is a net importer of jobs. The North Central Texas Council of Governments (NCTCOG) estimated that there were 115,000 people employed in the city at the time of the 2000 Census. The U.S. Census Bureau reported that over 45,000 of these people lived in Plano. NCTCOG estimates that employment in Plano has increased to over 124,000 jobs in 2005. If the number of people who live and work in Plano kept pace with NCTCOG's 2005 estimated growth in employment, then more than 75,000 persons are commuting into the city for work.

There is an imbalance between the number of people employed in Plano and who live and work within the city. This typically occurs when the cost of housing and traveling to and from work exceed wages and benefits. When this happens, people could seek work elsewhere and Plano could begin to lose its competitive advantage as an employment center. In addition, longer commutes affect regional travel conditions and air quality. Some other issues to consider about housing/jobs imbalance include:

- ▶ Longer commutes in the face of increasing fuel prices, making it difficult for people to afford travel costs.
- ▶ Reductions in the available work force required to support businesses and industries, which could in turn lead to the relocation of these organizations to other cities.

Some ways to mitigate the housing/jobs imbalance include:

- ▶ Converting excess nonresidential properties to residential uses.
- ▶ Allowing for residential development in alternative neighborhood formats.
- ▶ Permitting density increases in the form of medium-density development (patio homes and townhouses) and urban centers.

Changing Demographics

A major issue that impacts housing demand and supply is changing demographics. A summary of the dramatic changes in Plano's population between the 1990 and 2000 Census is as follows:

- ▶ The overall population increased by 72.5%, one of the highest rates of growth in the nation among cities with populations exceeding 100,000 people.
- ▶ The median age of the population increased by three years and the percentage growth of age groups over 45 was two and a half times that of those under 45.
- ▶ The population became more diverse with the percentage of the minority population increasing to over 27% of the city's total population.
- ▶ The percentage of households in Plano with children under 18 decreased from 49.2% to 43.5%.

Tables 4 through 6 provide a record of the demographic changes from past censuses regarding total population, household size, age distribution, and household composition.

**TABLE 4
POPULATION AND HOUSEHOLD SIZE**

	1970	1980	1990	2000
Population	17,872	72,331	128,713	222,030
Households	5,131	22,220	44,352	80,875
Persons per Household	3.48	3.24	2.89	2.73
% of One and Two Person Households	34%	34%	45%	52%

Source: 1970, 1980, 1990 and 2000 Census
Note: Persons per household figures do not include people living in group quarters (i.e., dormitories, nursing homes, group homes, etc.).

**TABLE 5
AGE OF POPULATION: 1990 AND 2000**

Age in Years	1990	Percent	2000	Percent	% Change
0 to 20	44,095	34.3	70,596	31.8	+60.1
21 to 44	58,492	45.4	89,767	40.4	+53.5
45 to 64	21,549	16.7	50,756	22.9	+135.5
65+	4,577	3.6	10,911	4.9	+138.4
TOTAL	128,713	100.0	222,030	100.0	+72.5
Median Age	31.0		34.1		

Source: 1990 and 2000 U.S. Census

**TABLE 6
HOUSEHOLD COMPOSITION**

Households	1990	Percent	2000	Percent
With Children Present	21,837	49.2	35,143	43.5
Without Children Present	22,515	50.8	45,732	56.5
TOTAL	44,352	100.0	80,875	100.0

Source: 1990 and 2000 U.S. Census
Note: Children refers to people under 18 years of age.

The census data suggests that different housing types and neighborhoods may be needed to accommodate changing demographics. There is a general need to expand the housing stock despite limited land availability. Plano has an abundance of housing for traditional families. Yet there are not enough housing opportunities to accommodate an increasing demand of smaller households resulting from growth in the elderly population and households with no children present.

Special Housing Needs

Plano's changing demographics highlight the need for the city to become a full "life cycle" community. This will require a variety of housing options to address the various stages in the human life process along with the accommodation of different life styles. Some issues to consider include:



Evergreen at Plano - A retirement housing community built to meet the special needs of a maturing population.

- ▶ Allowing older people to comfortably age in place or find other suitable housing within Plano.
- ▶ Providing housing for people who have physical conditions that require special housing needs.
- ▶ Accommodating housing for different cultures where extended family households are more common.

Here are some ideas that could be used to address these issues:

- ▶ Assistance with home repair for older residents who need adjustments to existing homes to allow them to age in place.
- ▶ Expand housing opportunities for elderly residents who wish to move out of their homes and still live independent lives.
- ▶ Expand housing opportunities for older people requiring specialized care for conditions that affect their mental and physical acuity.
- ▶ Update current housing assistance programs and special needs housing to accommodate future needs.

- ▶ Provide for accessory housing units so that elderly persons might live in fully-functional units attached to main housing structures.

Neighborhood Stability

Typical neighborhoods are the “building blocks” of a community and as Plano matures it will be important to maintain neighborhood stability. Typical neighborhoods comprise almost 60% of the land area of the city. Most of Plano's population resides within the typical neighborhoods. The following impact neighborhood stability:

- ▶ By 2020, over 75% of the housing stock will be 20 to 50 years old (see Table 3).
- ▶ Aging of housing and level of maintenance and reinvestment in homes.
- ▶ Upkeep of privately-owned amenities such as entryway features, open space, and recreational facilities.



The Campise House located within the Haggard Park Historic District - An example of a new home fitting into a historic neighborhood.

A variety of city programs already in place will be crucial in aiding with the stability of mature neighborhoods. These programs are code enforcement, neighborhood services, and heritage

preservation. The Property Standards Department administers code enforcement for the City of Plano, including high grass and weeds, deteriorating exterior conditions of a housing structure, housing overcrowding, and outside storage. The Property Standards Department is studying ways to implement the first phase of a rental housing inspection program.

Some additional programs the city has to address neighborhood stability include:

- ▶ Targeted neighborhood planning.
- ▶ Federal assistance programs such as CDBG and HOME for housing rehabilitation and first time home buyers.
- ▶ Ongoing programs for maintenance and upkeep of public infrastructure through the Community Investment Program (CIP).

Objectives - City in Transition

- ▶ **Objective C.1** Continue to expand Plano's housing stock even as the availability of land decreases.
- ▶ **Objective C.2** Create new housing opportunities that compliment and support existing residential development.
- ▶ **Objective C.3** Provide for a wide range of housing opportunities including affordable housing to meet the needs of a changing population.
- ▶ **Objective C.4** Maintain and protect all of Plano's existing housing stock.

Strategies - City in Transition

- ▶ **Strategy C.1** Evaluate policies and ordinances to ensure they accommodate a

wide array of housing types, including those for persons with special needs. Make sure these policies are consistent with changing development trends.

- ▶ **Strategy C.2** Evaluate policies and ordinances to ensure that they do not discourage appropriate opportunities for infill housing and redevelopment.
- ▶ **Strategy C.3** Compare future requirements for special needs housing with current assistance programs and identify potential gaps.
- ▶ **Strategy C.4** Adjust property maintenance codes that support efforts to stabilize neighborhoods and provide safe housing.
- ▶ **Strategy C.5** The city should initiate a demonstration program as a first step in rental Housing inspection.



City of Plano COMPREHENSIVE PLAN

ECONOMIC DEVELOPMENT ELEMENT

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5 Economic Development

5.1 Introduction



Figure 1 - Legacy Town Center

INTRODUCTION

Purpose

The Economic Development Element of the Comprehensive Plan provides a general guide for decision makers regarding Plano's future economic growth. It is intended to define the role of economic development in the comprehensive planning process and its relationship to other elements of the Plan.

Critical Issues

Three critical issues currently impact economic development in Plano:

- Maintaining a diverse and expanding economy;

- Linking critical resources to business needs; and
- Preservation of land for future economic development opportunities.

Economic diversity is important for the financial strength and security of a city, county or region. There are many different types of businesses found in Plano. However, the City's economy should have enough diversity to withstand a downturn in one of the business sectors.

Another leading factor for economic success is to ensure that major businesses in Plano have the critical resources they need to operate successfully. These resources include a capable workforce, education and training providers specializing in skills desired by the

company, affordable housing nearby for employees, along with supportive services and suppliers.

Plano still has vacant land for future development. Most of this land is zoned for non-residential uses. The demand for housing in Plano remains strong and there is pressure to rezone nonresidential land to allow for more residential development. However, rezoning land to meet the immediate demand for housing may not be appropriate for long-term economic viability.

MAJOR THEMES

The Economic Development Element describes the City of Plano in terms of three major themes: Livable City, City of Organized Development, and City in Transition. This element includes a description of factors relating to each of the themes, objectives and strategies defining the City's overall approach to economic development.

Theme I – Livable City

One of the factors that contribute to Plano's excellent quality of life is the wide range of economic opportunities. The City of Plano is a major employment center in the North Dallas area of the Metroplex region. The North Central Texas Council of Governments estimates almost 130,000 people are employed within the City. The Livable City section will explore the various employment sectors found within Plano along with attributes that contribute to the City as a place good for business.

Theme II – City of Organized Development

This section examines the relationship between Plano's land use pattern and the local economy. The current and future business composition of Plano's major economic development areas is examined. This section also reviews public efforts to address the needs of the local businesses and expand the local economy

Theme III – City in Transition

Plano has changed tremendously during the last 50 years, increasing in population from just over 2,100 people in 1950 to over 260,000 in 2008. Though population growth is slowing, Plano continues to evolve as a community. The City's population is becoming older and more diverse. As Plano approaches full residential development, there is considerable land available for commercial development. However, continuing regional population growth is creating pressure to rezone nonresidential land for housing. Balancing the immediate demand for developable land with the need to accommodate long-term economic growth will be vital to Plano's future.

5.2 Theme I - Livable City

THEME I – LIVABLE CITY

Economic Opportunities

Plano is a part of the Dallas-Fort Worth Metroplex, a region known for its strong economy. The numerous employment opportunities found in the Metroplex attract people to the region from all over the world. The overall Dallas-Fort Worth economy is diverse; however, some sectors of the region's economy are concentrated in specific areas of the Metroplex. Plano is

located in the North Dallas part of the region where the primary economic sectors include information technology, telecommunications, software development, financial services, professional services, medical services, and retail.

Plano has a wide variety of businesses ranging from small companies to headquarters of major Fortune 500 corporations. Plano's economy is currently experiencing its most significant growth in the medical and financial fields. The "spin-off" potential from the development and expansion of large medical and financial facilities represents a major opportunity for strengthening the local economy.

There are numerous retail centers in Plano, ranging from regional malls to neighborhood retail centers at the intersections of major thoroughfares in the residential areas of the City. Government and education are very important sectors of Plano's economy as well.



Figure 2 - PISD Administration Building

The two largest government and education employers are the City of Plano and the Plano Independent School District (PISD). The City of Plano has more than 2,600 employees and provides numerous municipal services. PISD educates over 54,000 students and employs almost 7,000 people.

The business sector contributes to a strong tax base for the City including millions of dollars annually in sales tax revenues. The tax base makes it possible for municipal government to provide a wide variety of services at low cost to Plano residents and businesses.

Location of Plano

Plano's location within the strong business climate of the Dallas-Fort Worth Metroplex contributes to the economic vitality of the City. The City is close to employment and cultural opportunities in Dallas and the high growth communities of Collin County to the north. Plano is connected to the Metroplex region and nation by a variety of transportation options. U.S. Highway 75 travels from the heart of downtown Dallas northward into Oklahoma. The President George Bush Turnpike and State Highway 121 provide access for Plano residents to the Dallas-Fort Worth (DFW) International Airport. The Dallas North Tollway is another link for Plano connecting the City with Frisco and Prosper to the north and the Galleria, Love Field, and downtown Dallas to the south.



Figure 3 - Map of Dallas-Fort Worth Metroplex

In addition to the commercial airline operations at DFW and Love Field, the Addison Airport and the Collin County Regional Airport are located less than 30 minutes from Plano and accommodate corporate jet service. The City has mass transit links to local and regional destinations and employment centers through bus and light rail services operated by Dallas Area Rapid Transit (DART).

Educational Opportunities

Quality educational opportunities available to Plano residents are another important attribute for economic strength in the City. Access to high quality educational

opportunities is a major factor in attracting businesses composed of technical and professional workers. Plano is served by three public school districts. Most students attend PISD. Over 2,500 Plano school age children that live along the State Highway 121 corridor attend the Frisco ISD and a small number are within the Lewisville ISD service area in the western section of the City in Denton County.

There are several higher education opportunities in and near Plano. They include the University of Texas at Dallas (UTD), Southern Methodist University (SMU) and Collin College. UTD is a public

institution offering under graduate and graduate degree programs and is located across the President George Bush Turnpike in Richardson. UTD has 14,000 students and is a recognized research university through its long association with Texas Instruments. SMU has a campus in the Legacy area. It offers working professionals degree programs in business and a Masters degree in digital media and video game design. Collin College, with almost 45,000 students, offers continuing education, vocational training, and the first two years of university courses at two campuses in Plano. Collin College also provides cost-effective continuing education for adults already in the work force. This is particularly important due to a fast changing global economy and its impact on the skill requirements of employees.

Objectives for Theme I – Livable City

- **Objective A.1** Provide a diverse economy able to withstand periodic downturns in various sectors.
- **Objective A.2** Ensure a variety of transportation options for Plano residents with access to employment opportunities within the region.
- **Objective A.3** Maintain quality education opportunities for Plano residents.

Strategies for Theme I – Livable City

- **Strategy A.1** Identify and monitor employment opportunities within Plano.
- **Strategy A.2** Identify growing and emerging industries and compare their needs to Plano’s attributes and focus recruitment efforts accordingly.

- **Strategy A.3** Continue to work with transportation providers such as DART, Texas Department of Transportation, and North Texas Tollway Authority to provide transportation options and access to Plano.
- **Strategy A.4** Meet regularly with colleges, universities, and the public school districts to discuss employment trends and the development of programs to improve and enhance job skills of local residents.

5.3 Theme II - City of Organized Development

THEME II – CITY OF ORGANIZED DEVELOPMENT

Land Use Considerations

Transportation Corridors

Most of Plano’s economic activities take place along the major transportation corridors and within the two employment centers. Research/Technology Center is the Land Use Plan designation for southeast Plano where President George Bush Turnpike enters the City. Freeway Commercial is the land use recommendation along the U.S. Highway 75 corridor. The Major Corridor Commercial designation is found along the President George Bush Turnpike once it travels west of U.S. Highway 75 and along State Highway 121. The intent of the Research Technology Center recommendation is to promote office, research development, back office and light manufacturing facilities in southeast Plano. The Major Corridor and Freeway Commercial designations call for

office, supporting retail uses, and major regional retail centers such as shopping malls.

Existing Commercial Areas

Legacy

Legacy is a corporate business park located in northwest Plano near the intersection of the Dallas North Tollway and Legacy Drive. It is primarily comprised of large campus headquarters for several major corporations. Legacy Town Center is a successful mixed use development located in the heart of Legacy. Retail, restaurants, offices, entertainment uses, a hotel, and over 1,400 multifamily units and 120 for-sale townhouse units can be found in Legacy Town Center. Legacy Town Center is expanding northward from Legacy Drive towards Headquarters Drive and the State Highway 121 corridor. Granite Park, is a major office/retail development located immediately north of Legacy on State Highway 121 and the Dallas North Tollway that includes both single and multi-tenant facilities. The North Central Texas Council of Governments estimates that nearly 40,000 people worked in the Legacy/Granite Park area in 2005 (latest year estimates were available).

Research/Technology Crossroads District

The Research/Technology Center District (RT) is located in southeast Plano. The area is bound by 14th Street (F.M. 544) on the north, Rowlett Creek to the east, Renner Road and President George Bush Turnpike on the south and extends westward past Jupiter Road. Businesses in the RT district employ almost 14,000 people (NCTCOG – 2005 estimate).

The RT district was established in 1998 to create a unified development approach for 1,100 acres of land in southeastern Plano. The land originally was primarily zoned Light Industrial (LI). LI not only permits manufacturing and industrial uses, but it includes a broad range of activities such as warehousing, automotive, heavy commercial, and retail uses. The RT district was intended to create a cohesive employment center of primarily manufacturing and office uses in proximity to the Bush Turnpike corridor. Boundary adjustments and modifications to the allowed uses within the district are presently under consideration to ensure that the Crossroads maintains consistency with market and development conditions.

Dallas North Tollway Corridor

The Tollway corridor passes through a variety of land uses. Superstores, a regional mall, offices, entertainment establishments, and retail stores and shops are located along the expressway. An estimated 12,500 people are employed in businesses within the corridor south of Windhaven Parkway (NCTCOG – 2005 estimate). The Tollway passes through the heart of the Legacy area. Some of Plano's prime undeveloped land is found along the Tollway as well. The long range land use recommendations and zoning map propose nonresidential uses, and the corridor should be preserved for future economic development opportunities.

President George Bush Turnpike/Plano Parkway Corridor

This corridor follows along Plano's southern boundary. Office/warehouses, technology research, and development companies and manufacturing uses with railroad siding access to the Cottonbelt Railroad are found

at the eastern end of the corridor. Collin Creek Mall and a variety of restaurants and retail uses are located in the northwest quadrant of the interchange with U.S. Highway 75. As the Turnpike travels west towards Preston Road, the land uses transition to lower-density corporate campuses, manufacturing operations, and retail uses. The NCTCOG estimated 15,000 employees worked in businesses in this section of the Turnpike in 2005.



Figure 4 - Hotel along George Bush Turnpike

The largest amount of undeveloped land is located between the Turnpike and Plano Parkway, where the zoning allows office, limited retail, and industrial uses. The intent for this section of the corridor between Alma Drive and Coit Road was the development of high-intensity office buildings. To date, market demand has not supported the planned uses for this location along the corridor. From Ohio Drive westward towards the Dallas North Tollway, the Turnpike borders the Kansas City Southern Railroad, leaving no room for development adjacent to the expressway. In addition, there are no frontage roads west of Coit Road. Baylor Medical Center, restaurants, offices, automobile dealerships, and multifamily

residential are found along the Plano Parkway corridor from Coit Road to the Tollway.

U.S. Highway 75 Corridor

U.S. Highway 75 is an expressway that connects Plano to downtown Dallas. Unlike the Tollway and Turnpike which are regional expressways, U.S. Highway 75 is a national highway. The highway travels north beyond the Dallas area towards Tulsa and Kansas City and intersects Interstates 40 and 44 providing access to the northern and eastern regions of the United States.

The Land Use Plan recommendations and the zoning allow for a variety of retail and office uses along U. S. Highway 75. Collin Creek Mall and Downtown Plano are located near the southern entry into the City. Entertainment uses, retail big box developments, offices, restaurants, and hotels also combine to form a high-activity area corridor that employs over 17,000 people (NCTCOG – 2005 estimate). The retail competition for prime locations along U.S. Highway 75 is very strong. Several restaurants have recently relocated from older facilities near the 15th Street/Park Boulevard section of the corridor to larger, more modern facilities along the expressway between Parker Road and Spring Creek Parkway.

State Highway 121 Corridor

State Highway 121 is the northern boundary of the City of Plano from Spring Creek Parkway to Custer Road. The highway provides access from Plano to Fort Worth and the DFW International Airport to the west along with McKinney and U.S. Highway 75 to the east. The corridor is in transition from a two lane highway to a six

lane tollway with three lane service roads in each direction. At this time, the service roads are in place with interchanges at the Dallas North Tollway, Preston Road, and Custer Road.

Most of the land in Plano along State Highway 121 is undeveloped with a few exceptions. There are retail centers at intersections with Preston Road and Coit Road. The rest of the Plano side of the roadway remains unimproved as land owners await the construction of the main lanes. As a result, only 2,300 people had jobs along the corridor as of 2005. Most of the land is zoned to allow for retail and office development with a 1,200 foot setback guideline recommended for residential development in the Housing Element. Despite the recommended setback, there has been considerable interest in residential development within the corridor. Sometimes natural and manmade barriers like creeks and roadways make it necessary to deviate from the 1,200 foot guidelines to avoid creating odd-shaped tracts of land that are difficult to develop. Otherwise, residential intrusions into the corridor should be avoided to accommodate future economic development opportunities.

Economic Development Activities

Expanding and enhancing the local economy is primarily the responsibility of the Plano Economic Development Board (PEDB). Its mission is to:

- Identify and recruit businesses that will broaden and diversify the tax base;
- Create quality employment opportunities;

- Provide for a vibrant economy; and
- Promote a pro-business environment.

The PEDB staff, under direction from the Board of Trustees, implements a plan of work to accomplish its mission. The plan of work has three main programs: Outreach and Recruitment, Retention and Expansion; and Marketing and Redevelopment.

PEDB's staff conducts outreach and recruitment efforts both domestically and globally to company executives, site selectors, and the real estate community. To update its marketing efforts, PEDB is refining its "brand" and revising other marketing materials. PEDB reaches the real estate community with participation in events such as CoreNet for corporate facilities managers and North Texas Commercial Association of Realtors for commercial real estate brokers. PEDB is also active in regional marketing initiatives with participation in the four-city coalition of Collin County (Allen, Frisco, McKinney, and Plano) and the DFW Marketing team.

Incentives play an important role in attracting and retaining companies. Many of Plano's neighboring cities participate in the 4 A/B program, a state economic development sales tax that provides funding for large economic incentives. Although the State of Texas allows cities to increase local sales taxes to fund economic development activities, it also "caps" the total percentage of the sales tax rate. Plano is not able to participate in the 4 A/B program because it has reached the cap due to membership in DART. This is a common situation for cities across Texas that participate in regional transit authorities and creates a

disadvantage when competing with cities that are not members of transit organizations.

However, another Texas local government statute, Chapter 380 from the Texas Local Government Code, allows for cities to use money for economic development from other funding sources. The City passed a small property tax increase in 2006 that provides an incentive fund for economic development. The fund has greatly increased the PEDB's competitiveness for recruitment and retention projects.

Although Chapter 380 provides cities an alternative incentive option, sales taxes would be a more effective funding source as property taxes are an additional business cost. So far, efforts to amend state law to give member cities of regional transit authorities the opportunity to apply sales taxes to economic development activities have been unsuccessful. Plano and other cities belonging to transit authorities should continue pursuing legislative changes in this regard.

As Plano matures, Business Retention and Expansion (BRE) will become increasingly important. Building relationships with executives and brokers helps PEDB identify companies that are expanding in Plano or are likely to relocate. PEDB also operates programs that facilitate interaction between business leaders and public officials.

PEDB devotes considerable attention to recruiting businesses to Plano's Research/Technology Center district (RT) and surrounding industrial areas, stimulating redevelopment of aging retail centers and marketing to technology companies. PEDB networks with the broker community to communicate the assets of the area and to

recruit prospective companies. It is also active in trade shows targeting existing technologies such as electronics and semiconductor as well as emerging technologies such as nanotechnology. The PEDB also works closely with SMU's Guildhall to build a digital media industry cluster in Plano.

As neighboring cities grow and develop new shopping centers, retail has become a focus. The PEDB is active in the International Council of Shopping Centers (ICSC), attends retail trade shows and works with property owners to protect Plano's retail base. The PEDB continues to support retailers and local businesses to help find suitable redevelopment opportunities for under performing and vacant retail centers. Plano also has a retail incentive program which uses Tax Increment Financing (TIF) zones for downtown and the Shops at Willow Bend. City Council also can approve the use of Chapter 380 funds to provide infrastructure for major projects.

Land Use and Economic Issues

Preservation of Land for Future Economic Development

Over 20% (9,500 acres) of land in Plano is undeveloped. Almost 70% of this land is zoned for commercial uses such as office and retail, and most of the land is located along the major expressway corridors and within the City's employment centers. As mentioned under the Critical Issues subchapter, the demand for housing is still quite strong in Plano, and there is pressure from the development community to rezone land to allow for additional residential development. Some areas zoned for

nonresidential uses may be appropriate for housing and should be considered for residential development.



Figure 5 - Vacant land along George Bush Turnpike corridor

However, rezoning requests must be carefully examined to ensure that proposed locations are suitable for residential development and that Plano's economic viability is not being jeopardized in order to accommodate short-term demand. The availability of undeveloped "greenfield" sites is vital to encourage expansion and relocation of businesses. Therefore, the City should preserve land along the expressway corridors and in the employment centers for future economic development opportunities.

Mixed Use Development

Development projects that include both residential and commercial uses are generally inappropriate for the four major expressway corridors and the two major employment centers in Plano. Exceptions may be appropriate for urban center

projects such as Legacy Town Center that fully integrate a variety of uses into a pedestrian-oriented environment. The Urban Centers Study defines urban centers as "a form of development that integrates the components of modern life – housing, workplace, shopping, and recreation – into compact pedestrian oriented neighborhoods." Structures within urban centers should be flexible to adapt to changing uses over time. The study was adopted by the City Council in 2006 and provides specific recommendations for design and development of major mixed use projects. It recommends a minimum of 50 acres to adequately incorporate residential, employment, retail, and entertainment uses into a functional neighborhood environment.



Figure 6 - Fillmore Pub in Downtown Plano

It is generally recommended that mixed use projects proposed for these areas conform to the minimum development size. Smaller projects do not typically include enough households to provide viable support to the other uses in the development. In some

cases, proposed projects may actually be “multi-use” instead of “mixed use.” They do not integrate residential uses within the same buildings or blocks. In these cases residential and commercial uses may be part of the same site or project area, but they are physically and functionally separated from each other. Cross access may link the two uses, but the individual parts of the development are largely self-reliant entities.

Residential development in major expressway corridors or employment centers would be classified as “Alternative Neighborhood Settings” because they are different from the typical Plano neighborhood. These typical neighborhoods include approximately one square mile bounded by major, local thoroughfares with schools and park sites in the center and consist primarily of low-density residential subdivisions. Part B of the Infill Housing Policy Statement 4.0 provides guidance regarding residential development in alternative neighborhood formats. The policy statement and the Urban Centers Study should be referenced when evaluating requests for residential development within locations that are generally reserved for economic development.

Overabundance of Retail Zoning

Most intersections of major thoroughfares have retail zoning and development on all four corners. Developments at these intersections comprise the majority of Plano’s 19 million square feet of retail space (2007 Costar) and amounts to over 76.3 square feet per person, almost three times the regional figure.

The overabundance of retail development and changing market trends are creating difficulties. Some retail centers have empty storefronts and anchors. Some big box users have moved their stores to locations along regional expressways leaving large empty buildings behind. The Weitzman Group estimates that approximately 10% of the City’s retail space is vacant.

The overabundance of Retail zoning and development led to Plano forming a partnership with the cities of Carrollton and Richardson to study underperforming retail sites and develop near- and long-term recommendations. The study was completed in 2003 and named “Tri-City Retail Study.” In response to the study, Plano has broadened the uses allowed in Retail zoning and has been cautious in approving additional retail zoning requests.

Objectives for Theme II – City of Organized Development

- **Objective B.1** Ensure remaining undeveloped land is used to support the long-term economic viability of the community, including the preservation of major corridors and business parks for economic development.
- **Objective B.2** Retain and support Plano’s businesses.
- **Objective B.3** Attract new businesses that promote job growth and contribute to the city’s tax base.

Strategies for Theme II – City of Organized Development

- **Strategy B.1** Identify and market undeveloped land along major transportation corridors and within major business parks for nonresidential development.
- **Strategy B.2** When proposed, residential and a combination of mixed uses should be organized and designed in a mixed use format as recommended in the Urban Centers Study. The proposal should also comply with the guidelines set forth in Part B of the Infill Housing Policy Statement 4.0.
- **Strategy B.3** Residential components should be clearly integrated with uses within a mixed use development proposal. The proposal should comply with the guidelines set forth in the Infill Housing Policy Statement 4.0, Part B.
- **Strategy B.4** Stay informed on the latest business practices and development trends, compare them to current conditions in Plano, and adjust marketing approaches and applicable ordinances as needed.
- **Strategy B.5** Maintain a close relationship with Plano's businesses. Identify challenges and opportunities that they are facing and explore options that will accommodate expansion and retention.
- **Strategies B.6** Actively recruit new businesses to Plano that could provide services to existing companies and utilize talents of present workforce.
- **Strategy B.7** Continue to explore additional funding sources for economic development including changes to state laws related to sales taxes.

5.4 Theme III - City in Transition

THEME III – CITY IN TRANSITION

Changing Demographics



Figure 7 - Marvin Myers Conservancy - Senior Living facility

Plano's population is aging and becoming more diverse. The 2005 American Community Survey results from the U.S. Census Bureau stated that Plano's over-65 population has grown to include over 16,000 people, a 50% increase since the 2000 Census. The City's Asian and Hispanic populations have increased by 80% and 33% respectively since the 2000 Census. The Asian community now

comprises over 40,500 people, 16% of Plano's population as compared with 29,800 Hispanics at 12%.

Retirement for many older Plano residents may actually mark the beginning of a new career. Some may even start new businesses using pensions and Social Security as financial "safety nets" until the business is successful. Technology will allow many of these people to operate their business from home. This activity may cause a shift of the perception of residential areas as a place for business as single-family properties may serve two purposes. The diversification of Plano's population is beginning to create opportunities for ethnic-oriented retail operations. Some under performing shopping centers have already taken advantage of this market opportunity. It will be necessary for Plano's business community to continue to explore opportunities resulting from changing demographics and adapt accordingly.

Workforce Composition

The numbers of people in Plano employed in management, professional, and technical occupations has grown tremendously over the last 20 years. Workers in these occupations have increased by 132 % from 1990 to 2006. They comprise almost half of all employed people in Plano. Much of this has to do with the strong corporate presence in the City and the growing health care sector. The high percentage of professionals in Plano has contributed to 53% of adults having a college degree, more than double the percentage for the United States.

Growth in sales and office occupations has been strong at 49% since 1990. However, the share of jobs in this sector has been decreasing. In 2006, sales and office occupations comprised 29.2% of all jobs. Manufacturing and transportation occupations saw a decrease in percentage and numbers from the 1990 Census. The number of people employed in these occupations had declined further by 8.7% in 2006.

The greatest job growth in Plano was among those service occupations such as retail, hospitality, and restaurants. Many of these jobs within service occupations require semi skilled labor or people with few skills and pay lower wages with few if any benefits. The number of employees within service occupations increased by 180% from 1990 to 2006. This is probably due to the tremendous population growth of Plano and nearby cities during the past 16 years and the increased demand for retail services and goods.

Economic Diversity

A diverse economy is vital to the economic health of a city, region, state, or nation. A diverse economy enables a region to overcome downturns in an economic sector. Creating economic diversity is challenging. Similar businesses and related support services tend to cluster in the same general areas to create economies of scale and a common resource base. This is often a necessary business practice and should not be discouraged; however, recruitment efforts must be continually reviewed and evaluated to ensure that they remain broadly focused.

Though Plano seems to have a higher concentration of professional jobs than the nation and region, it is important to remember that the City's economy is not isolated; it is a smaller part of the Dallas-Fort Worth Metroplex. The distribution of jobs by occupation in the Metroplex mirrors that of the nation, meaning that the region's economy is diverse. However, it might be beneficial for Plano to consider seeking the guidance of a professional economist to help study economic diversity within the City. The last downturn between 2001 and 2004 was difficult for Plano as property values decreased, many residents were out of work, and revenues fell for municipalities.

An aging population in Plano and the North Texas region should stimulate growth in health care services within the City for many years. There has been an increase in the construction of long term care and independent living facilities during the last four years. However, opportunities for more construction are limited due to land availability. Even with over 1,500 new senior housing units permitted that could accommodate up to 3,000 people, there still appears to be a major gap between the demand for senior housing in Plano and available facilities as the City's over-65 population is estimated to reach 40,000 people by 2020. The real opportunity exists for businesses with services geared towards helping seniors age in place. Services such as transportation, nutrition, nursing care, and home maintenance will be needed. There are some private and public organizations that provide these services today, but keeping pace with demand will be a challenge.

Business Needs

Plano's workforce is diverse; however, PEDB has identified the need for electrical and mechanical engineers and technical support staff for financial service industries. Other occupations may face similar shortages due to retirement as well. The City should work with businesses through PEDB to develop innovative ideas to match employees with employers who need their skills.

Businesses coming to Plano seek affordable housing for their employees and good transportation access to and from their facilities. Affordable housing in Plano is in short supply. Many homes that are affordable are older and require maintenance and updating to meet current standards desired by prospective home buyers. New home buyers may have to choose between an older home in need of updating in Plano and an affordable new home with desired amenities 20 or 30 miles away. Such commutes cut down on productivity as people spend a couple of hours traveling from home to work. Commuting costs also affect employee salaries. Rising fuel costs for long distance commuting will become a major challenge for commuters in the near future.

Economic Future

Plano's economic future is bright due to its location in the Dallas-Fort Worth Metroplex and its transportation options, along with a well educated and highly trained workforce. One of the biggest economic engines for the future will be innovative businesses that spur entrepreneurship. Businesses that meet a specific service niche or "untapped" demand will have greater success. Plano's highly educated population represents great

potential for new business creation. There have been many spin-offs of businesses started by people who used to be employed with major technology companies in the area. Home-based businesses are likely to increase as well. The number of people working at home in Plano has tripled since the 1990 Census.

Innovative businesses may need assistance to grow and thrive. It will be important for support structures to be in place – ranging from business advice and financial resources to access to technological innovations required to share information, promote products, and conduct financial transactions. Fiber optic connections are available for most homes and businesses in Plano, but it will be essential to continue to provide the latest in communications connections to help the local economy keep pace with cities and regions.

Objectives for Theme III – City in Transition

- **Objective C.1** Adapt economic development efforts to changing regional and local demographics.
- **Objective C.2** Provide for a balance between employment opportunities and the skill sets and capabilities of the local workforce.
- **Objective C.3** Provide for a diversified local economy that can withstand downturns in individual market sectors.
- **Objective C.4** Develop knowledge and understanding of the resources required by local businesses.
- **Objective C.5** Attract new businesses that encourage job growth and will make significant contributions to Plano's tax base.
- **Objective C.6** Promote the formation and long-term success of new business opportunities.

Strategies for Theme III – City in Transition

- **Strategy C.1** Study Plano's resident population and monitor changing demographic trends and their potential impacts on market opportunities and workforce requirements.
- **Strategy C.2** Work with local businesses to determine their employment needs and when appropriate develop initiatives to address shortages.
- **Strategy C.3** Regularly compare the capabilities of the local workforce with the changing requirements of local business; identify gaps; and work with local education agencies to provide training as needed.
- **Strategy C.4** Conduct a study of the local economy to measure its diversity, identify its strengths and weaknesses, and develop approaches to enhance Plano's business composition.
- **Strategy C.5** Explore the possibility of creating employer-assisted housing program partnerships with local businesses to expand housing opportunities for employees within Plano.

- **Strategy C.6** Develop a clearinghouse for information on local organizations that provide support of small businesses in Plano.
- **Strategy C.7** Identify and evaluate local approaches to support the formation and development of new businesses that could become major contributors to the local economy. Determine what gaps exist in the current system of resources designed to help small businesses capitalize on innovation and market potential and consider ways to address those gaps at the local level.

City of Plano

COMPREHENSIVE PLAN

PUBLIC SERVICES AND FACILITIES ELEMENT

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Davis Library and Joint Use Facility

Public Services And Facilities

Purpose

The Public Services and Facilities Element of the Comprehensive Plan addresses the wide range of services and facilities provided by the City of Plano. These services include police and fire protection, emergency medical services, library services, solid waste collection, convention and visitors' bureau, animal services, cultural services and municipal buildings. The purpose of the element is to guide the development of public facilities and the provision of municipal services.

Major Themes

Theme I – Livable City

A livable city integrates a wide range of services and facilities to provide a high quality setting for its citizens. Many of these services and facilities

often go unnoticed but they help to protect and enrich the lives of residents, employees, and visitors alike. The Livable City section explores the relationship of Plano's widely recognized services and facilities to quality of life factors.

Theme II – City of Organized Development

The provision of a wide range of high quality public services and facilities requires a systematic approach that sets expectations, establishes priorities, and defines a process for implementation. The City of Organized Development section focuses on the framework for the delivery of city services and the provision of properly located and designed public facilities.

Theme III – City in Transition

Plano is undergoing the transition from a growing city to a maturing city. Over the past 40 years, the city has dedicated itself to keeping pace with the demands created by rapid residential and business development. As growth slows and financial resources level off, the city must still complete its facility system, update and maintain its existing facilities and adjust service delivery to meet the demands of a changing population. This section of the element will explore how changes in the city's population and development trends will impact service provision and facility requirements.

Theme I - Livable City

Municipal Services

The City of Plano has maintained an outstanding reputation for providing high quality services and facilities over the years while responding to explosive business and residential growth. From the safe, secure surroundings that the Police and Fire departments have helped create to the broad range of information and materials offered by Library Services to the recycling and collection services provided by the Environmental Waste Division, Plano offers a wide array of high quality services to its citizens.

It is important that the city keep citizens informed of the various services available to them so that they receive the full benefit of living in Plano. Persons from diverse cultures and backgrounds may lack awareness of services that improve and enhance their lives. It will be necessary for the city to continue to develop programs that familiarize citizens with public services and facilities and the proper ways to access them.

Environmental Management

A city's environmental management activities are often overlooked yet they are necessary for the long term sustainability of the community, region, and beyond. Plano is part of the growing north

Texas region that is expected to exceed nine million in population by the year 2030. This growth will no doubt tax the region's environmental resources and require regional problem solving efforts. It will also be necessary for each individual community to make a commitment to environmental management.

Corrective federal mandates have been introduced in the last 30 years to improve air and water quality in the United States. These mandates have been passed on to various regional metropolitan areas across the nation. Local cities within these regions are encouraged to take action to improve the environment and conserve the use of water and other valuable resources.

Plano's Environmental Waste Services (EWS) Division has already taken major steps to advance environmental quality while maintaining a high level of service. A major residential recycling program was implemented in 1991 and has been enhanced and expanded into a nationally recognized program to include household chemical collection and reuse, a regional composting program, and an online materials exchange program. Recycling decreases the amount of solid waste delivered to the local landfill facilities, saves resources, and provides a revenue source to help offset environmental programs. 24.3% of the solid waste stream is being converted via recycling. The goal is 40%. The commercial diversion rate for recycling is 19% while residential is over 34%.

Effective environmental management programs require the commitment and participation of the general public. In recognition of the need to increase public awareness of the importance of recycling and other environmental management techniques, the EWS Environmental Education and Community Outreach partners with Plano schools and non-profit organizations to introduce sound environmental concepts through interactive presentations, games, discovery boxes, and tours. The Environmental News and other literature educate our citizens about environmental issues.

Other ways that the City of Plano contributes to improving the environment locally include:

- ▶ Replacing or adapting vehicles in the city's fleet to reduce energy consumption and utilize cleaner fuels;
- ▶ Using construction techniques and building materials that improve energy efficiency and mitigate environmental issues; and
- ▶ Participating in inter-city efforts to address air quality and other environmental issues through coordinated, regional approaches (also see the Land Use and Transportation elements).

The city should continue replacing its entire vehicle fleet over time with more fuel efficient vehicles. This would reduce costs for fuel expenditures in future years and set a strong precedent for the community.

The City of Plano owns and operates 76 buildings including 1,233,961 square feet of space. It is also expected to construct as many as 10 buildings with an additional 200,210 square feet of space over the next ten years. Major renovations, upgrades, and repairs are also required to ensure Plano facilities continue to serve the public effectively and efficiently. This activity will provide the city with the opportunity to set a positive example by using environmentally sensitive design techniques and building materials when constructing new or renovating existing facilities. These facilities should use less energy for operations, last longer, and reduce long term public expenditures. By taking a leadership role in this effort, the city will be in a stronger position to encourage private sector development that is environmentally sensitive.

The Facilities Services Division has taken a proactive approach to ensure compliance with Senate Bill 5, adopted by the Texas State Legislature in 2002. Numerous projects including lighting retrofits for buildings and parking lots, heating, ventilation and air conditioning (HVAC) system replacements,

and roof replacements have been completed. The lighting retrofit program cost over \$200,000, but the city received an incentive payment from TXU for nearly \$40,000 and continues to reduce energy consumption costs. Roof and HVAC replacement at the Tri-City Police Academy will reduce energy consumption by 96,274 KWH per year. Other projects are expected to produce similar results. The division also conducts periodic energy audits of city facilities.

Other notable facilities maintenance actions include:

- ▶ Staff certification in refrigerant recycling;
- ▶ Establishment of a mold remediation program including staff certification; and
- ▶ Establishment of an environmental waste recycling program for City facilities through contracted custodial service providers.

The Facilities Services Division is currently leading the design effort for the Environmental Education Building, The Oak Point Nature Preserve Visitor Center, and the Oak Point Nature Preserve Retreat Center. These will be the first City facilities built in accordance with LEED (Leadership in Energy and Environmental Design) specifications. These specifications are derived from national standards to develop high performance and sustainable buildings that are energy efficient and environmentally friendly.

Culture

Cultural opportunities contribute to the quality of life of a city. A variety of cultural opportunities exist within the City of Plano as part of its extensive educational system (see Education Element), libraries, art facilities and heritage sites; however like most area suburbs, Plano residents rely on the major cultural facilities (i.e. - art museums, science museums, performing arts centers, and zoos) in Dallas and Fort Worth for cultural enrichment. The Metroplex facilities are generally accessible from Plano and increase its appeal to prospective residents and businesses. However, the expected magnitude



Old classroom in Cox Building

of growth in suburban areas is increasing the demand for additional cultural facilities within these communities. This may lead Plano and other suburban cities to consider providing more regional and sub-regional cultural facilities closer to home, such as the Collin County Center for Performing Arts.

Objectives for Theme I – Livable City

- ▶ **Objective A.1** Provide municipal services that enhance Plano’s health, safety, welfare, and quality of life.
- ▶ **Objective A.2** Where possible, use building materials and equipment for municipal facilities and services that are energy efficient and protect the environment.
- ▶ **Objective A.3** Increase public awareness about environmental issues.
- ▶ **Objective A.4** Use cultural amenities and facilities to enhance the city’s quality of life and attract people to Plano.

Strategies for Theme I – Livable City

- ▶ **Strategy A.1** Establish a cost-effective program for replacing city vehicles with those that operate on alternative fuels.

- ▶ **Strategy A.2** Expand Plano’s trash recycling program to include all commercial and residential properties in the city.
- ▶ **Strategy A.3** Develop educational materials and programs that can be used to inform the public on ways to improve the environment and conserve energy resources.
- ▶ **Strategy A.4** Evaluate the use of certain construction techniques or building materials to improve energy efficiency and mitigate potential environmental consequences during the design process for building or renovating public facilities.
- ▶ **Strategy A.5** Review current efforts to inform citizens about public facilities and services and develop a comprehensive promotional program.

Theme II - City Of Organized Development

Service Availability, Delivery and Facilities

Safety/Security

Plano’s reputation as a safe and secure community is the result of an organized system that includes the Fire, Police and Public Safety Communications Departments. Response time is critical when considering the effectiveness of safety and emergency



Fire truck at Fire Station 1

services and starts with the Public Safety Communications Department, which accepts emergency calls from the public and dispatches fire or police or other personnel to a wide range of emergencies and other requests for assistance.

Plano's Fire Rescue has a service target of responding to 90% of emergency calls within seven minutes. A key element in achieving this goal is fire station location planning. At this time, the city has ten strategically placed fire stations that house emergency personnel. The city monitors response times along with the number of requests for assistance to determine if coverage assignments require adjustment or if additional apparatus or stations are needed. Greater population in Plano and surrounding cities will increase traffic and could affect the ability of personnel and equipment to respond to emergencies in a timely fashion. An 11th fire station is under construction on Los Rios Boulevard, east of Jupiter Road to improve response times to the growing residential areas of northeast Plano. Future plans call for two additional stations to improve response times to emergency incidents in the central and northwestern sections of the city. Fire Station 12 will be built at the northwest corner of Coit Road and Parker Road and Fire Station 13 is planned for a location in the Legacy area on the west side of Corporate Drive north of Tennyson Parkway.

Police response times are more dependent upon having a full complement of personnel and vehicles for patrol purposes than on the location of stations. The Police Department disperses personnel out of its main station in Downtown Plano, the Joint Use Facility at the Maribelle Davis Library on Independence Parkway and the Assembly Point on Democracy Drive in Legacy. There are no plans at this time to add new facilities.

In response to the uncertainty of terrorism, natural disasters, and other potentially dangerous events, the city has recently established the Office of Homeland Security and is in the process of devel-

oping a "Hazard Mitigation Plan." This plan will assist the city with the mitigation of damages from potential man-made and natural disasters.

Both the Fire and Police departments provide educational programs to the public regarding crime and fire and injury prevention. They make presentations to school children and conduct seminars for adults. The Police also meet with local neighborhoods to assist residents in addressing crime prevention in their area through the Neighborhood Crime Watch program.

Educational and Reference Resources

Plano's libraries have been strategically located to maximize service throughout the city. The Library Services Department operates five full service libraries as opposed to providing one main location with branches offering limited services. The location of each library is within a residential neighborhood near a major thoroughfare and was carefully chosen to maximize coverage across the city. Considering the fact that Plano has a land area of over 72 square



W. O. Haggard Library

miles, this approach has proven to be an effective way of providing comprehensive services to meet a wide range of needs within the city. Service indicators are based on the number of patrons that visit each library. Patronage is fairly evenly distributed among the libraries indicating, that the five facilities are adequate to serve the city's population at this time.

Plano Centre

The Plano Centre is a multi-purpose facility that provides venues for a wide range of activities from conventions to exhibits, business meetings and wedding receptions. The facility is located at the southwest corner of Spring Creek Parkway and Jupiter Road across the street from Oak Point Recreation Center and Collin County Community College's Spring Creek Campus. It is also near Oak Point Nature Preserve, which includes an outdoor amphitheater. Despite its proximity to these significant facilities, Plano Centre has not been as successful in attracting major events as originally hoped. It lacks a major nearby hotel to house overnight convention and conference attendees. Efforts to date to place a hotel on adjacent property owned by the City of Plano have been unsuccessful. Its distance from U.S. 75 (approximately one-half mile) has been a concern to many potential hotel providers. The facility's size has also been identified as a limiting factor in attracting some major events.

The city will need to continue to evaluate opportunities to place complementary facilities near Plano Centre. A consultant study is underway at this time to identify factors that could benefit the long term success of the facility.

Tourism

The Plano Convention and Visitors Bureau promote tourism within the city. Tourism is an effective revenue generator for the city through fees for using public facilities. The city also receives additional tax revenues from local retailers, restaurants, and hotels that experience increased business.

Cultural Amenities

Most of Plano's cultural amenities are located in the historic center of the city. This serves the dual purpose of preserving the city's heritage and creating a primary cultural gathering place. The Haggard Park Historic District, the Interurban Railway Museum, Thornton House (Plano's African-American Museum), the Courtyard Theater and the



Douglass Community Mural

ArtCentre of Plano Theater are located in or near downtown Plano. The ArtCentre also includes an art gallery. Another cultural facility, the Heritage Farmstead Museum, is located approximately two miles west of downtown. These cultural amenities generally appeal to a local audience and are not well known outside of Plano. Plano currently uses funds generated by state taxes from overnight hotel and motel stays to help fund cultural groups and heritage preservation organizations that provide cultural activities and events.

Other Services and Facilities

The Environmental Waste Services (EWS) Division provides weekly collection of residential solid waste and yard trimmings, bi-weekly collection of recyclable materials, monthly collection of bulky wastes, and on-call collection of household chemicals. The city is divided into service zones that are regularly updated to maximize efficiency using a computerized modeling system. Solid waste is collected and taken to two "Transfer Stations" operated by the North Texas Municipal Water District, which is responsible for transporting the waste in larger quantities to a regional landfill. Yard trimmings, recyclables and most household chemicals are diverted to appropriate recycling facilities. This system has provided for efficient and cost effective service to Plano residents. Commercial solid waste removal services are provided by a private vendor contracted with the city.

The Health Department provides animal protective services from a central location adjacent to the City's Parkway Service Center. There are no plans at this time to add facilities in other locations. However, there are plans to expand the facility. It will be necessary to monitor the impact of Plano's population increases and demographic changes on pet ownership to ensure that current facilities can adequately address future needs. In addition to collecting and confining stray pets, the Animal Services Division also responds to concerns about wild and/or dangerous animals.

Five Year Service Plans

City departments with expanding operations and increasing facility requirements prepare five year service plans. These plans are used to determine future needs and facilities and operations. The service plans enable the departments to establish budget and service priorities to achieve the objectives listed in this element.

Objectives for Theme II – City of Organized Development

- ▶ **Objective B.1** Provide police protective services that make Plano a safe place to live and work.
- ▶ **Objective B.2** Coordinate efforts of different departments in the provision of basic municipal services.
- ▶ **Objective B.3** Maintain a level of operational readiness that will provide a timely and appropriate response for fire suppression, EMS and other emergencies.
- ▶ **Objective B.4** Mitigate damages from potential man-made and natural hazards through use of Plano's Hazard Mitigation Action Plan.
- ▶ **Objective B.5** Provide high quality library services to the residential and business communities of Plano.

- ▶ **Objective B.6** Increase the ability of Plano Centre to attract major conferences and conventions.
- ▶ **Objective B.7** Encourage the establishment of local cultural facilities and activities that enhance the sense of community.
- ▶ **Objective B.8** Deliver environmental waste services that are economically feasible and environmentally responsible.

Strategies for Theme II – City of Organized Development

- ▶ **Strategy B.1** Identify and utilize policing methods that proactively address crime and its root causes by working in concert with various civic organizations, neighborhood groups and the public.
- ▶ **Strategy B.2** Where possible, involve citizens directly through Neighborhood Crime Watch units and other programs aimed at improving safety and awareness of potentially threatening situations.
- ▶ **Strategy B.3** Use five-year service plans as a guide to the provision of municipal services specific to city departments.
- ▶ **Strategy B.4** Regularly monitor response effectiveness for fire suppression, EMS and other emergencies, and if necessary, identify adjustments to operations and resources that could improve performance levels.
- ▶ **Strategy B.5** Maintain a response time of seven minutes or less to 90% of all fire and emergency calls.
- ▶ **Strategy B.6** Complete the city's Hazard Mitigation Action Plan to eliminate and reduce negative effects of all disasters.
- ▶ **Strategy B.7** Provide a full array of quality library services ranging from audio, books and periodicals distribution to research and

technology services in conveniently located facilities across the city.

- ▶ **Strategy B.8** Explore the addition of complementary facilities on the Plano Centre site or surrounding properties that would enhance its ability to attract regional and national events.
- ▶ **Strategy B.9** Conduct a comprehensive study of the Plano Centre. The study should compare it with similar facilities. The future role of Plano Centre as a community facility should be determined and actions identified to ensure long term success.
- ▶ **Strategy B.10** Use “Hotel/Motel” tax funds to assist organizations that provide local cultural facilities and services.
- ▶ **Strategy B.11** Regularly review solid waste and recycling collection to improve efficiency and cost effectiveness.

Theme III – City In Transition

Changing Demographics

The composition of Plano’s population is changing and this could impact the provision of municipal services. The population is becoming older and more diverse as reflected by the following changes that occurred between the 1990 and 2000 Census:

- ▶ The percentage of people over age 45 increased (20 to 28 percent) while the percentage of the population less than 45 years decreased (80 to 72 percent).
- ▶ The median age of Plano residents increased from 31 to over 34 years.
- ▶ The percentage of people who identified themselves as belonging to a minority racial group or ethnicity almost doubled from 14.6 to 27.2 percent.
- ▶ The African-American or Black population grew by 110 percent.

- ▶ The Hispanic population increased by 179 percent.
- ▶ The Asian population grew by 351 percent.
- ▶ Percentage of people born in another nation increased from 7.5 to 17.1 percent.

These trends are consistent to what is happening in other suburban cities across the United States. Another significant demographic trend reflected in the 2000 Census involved immigration. Immigrants from around the world are now coming to metropolitan areas such as Dallas, Atlanta, and Phoenix as well as the traditional destinations like Chicago, Los Angeles and New York City. In addition, many immigrants now bypass central cities to live in the suburbs to take advantage of educational and employment opportunities found there. The increase in Plano’s foreign born population is consistent with this trend.

Some examples of changing service demands and requirements that could result from Plano’s demographic changes include:

- ▶ More library materials in Chinese and Spanish
- ▶ Request for multi lingual assistance
- ▶ More resources in audio format and larger print
- ▶ Additional athletic facilities to accommodate a wider range of sport activities
- ▶ Lighted street signs with larger fonts
- ▶ Increased demand for emergency medical services
- ▶ Increased use of city facilities to host celebrations of cultural events

The impact of demographic changes on municipal services should be monitored closely in the coming years.

Development Trends

In the past, the city has focused on constructing new facilities and expanding services to meet the needs of a fast growing community. Plano is nearing maturity and the growth rate is decreasing. There are very few large tracts of land remaining for development. The city must shift its attention to adding the “finishing touches” to its facilities and services.

The lack of available land will not only affect private development opportunities, but will also make it more difficult and costly for the city to find land appropriately located and the size required to accommodate public facilities. Therefore, the city will need to review its facility requirements and reserve land for future facilities before the remaining property is developed by the private sector.

Downtown Plano is an example of a new trend in land use known as “Transit Oriented Development” (TOD) which provides for a compact mixed use, pedestrian-oriented neighborhood focused around a transit facility. Significant public and private



Interurban Railway Museum

reinvestment in downtown Plano, the preservation of Plano’s original business district and the application of urban development standards have combined to revitalize this area. The city operates a number of public facilities in downtown Plano such as the Municipal Center, Municipal Center

South, the Police and Courts Building, the Interurban Railway Museum, Courtyard Theater and the Cox Building which it shares with the Plano Independent School District (PISD). The city also owns Haggard Park, parking lots, and some vacant tracts of land. The city must ensure that its various downtown properties are utilized in a manner that enhances the long term viability of Downtown Plano and maximizes the impact of public and private investment. It needs to evaluate its various downtown properties to determine how they will serve its long term needs and encourage private reinvestment in the area.

Changing Service and Facility Requirements

Changing demographics and development trends will affect the provision of public services and facilities. As Plano’s population characteristics change, the provision of municipal services will have to change. A growing elderly population decreases school enrollment and the need for certain types of recreational facilities while increasing the demand for facilities that are more accessible for those with diminished physical acuity. A growing international population means communication in languages other than English and the ability to interact with other cultures. The City of Plano is trying to respond to these changes by:

- ▶ Lighting street signs and enlarging lettering at major intersections.
- ▶ Providing books with larger type that is easier to read.
- ▶ Adding more books in audio format.
- ▶ Providing library materials in Chinese and Spanish.
- ▶ Using a pool of city employees that are familiar with languages and cultures of other nations to assist citizens accessing city services.

Adjusting facilities and services to changing demographics is an ongoing process that requires regular monitoring. Some neighborhoods currently have high percentages of households without children and require fewer active recreational facilities. However, these neighborhoods may eventually “turn over” to young families with children and service and facility provision will need to readjust accordingly. Facilities that house city services may need to change as well. There is growing demand for indoor meeting spaces in the libraries and recreation centers. The city and school districts should evaluate opportunities to share facilities to accommodate meetings and other neighborhood activities.

The Master Facilities Plan provides a detailed inventory of city facilities, a summary of proposed facilities, and a process for coordinating their development and utilization over time. It is intended to guide both long term planning and near term programming for developing budgets and capital investment schedules. It provides for an ongoing committee represented by staff members from the various departments that operate public facilities along with the Budget and Planning Departments. The committee evaluates the yearly Community Investment Program (CIP) and identifies potential projects for future bond referendums.

The Master Facilities Plan requires regular updating to address current conditions along with the changing needs of Plano as a maturing city. The ability of Plano’s facilities to meet the long term needs of its citizens will require periodic monitoring and evaluation. Most structures will require upgrading and modernizing to accommodate technological advances and the changing expectations of their users and customers. Others will require replacement or redevelopment if they “wear out” or cannot be adapted to changing requirements.

The magnitude of recent terrorist acts and natural disasters has forced the city to focus on public safety and welfare issues that exceed those

normally addressed by Police and Fire operations. The City of Plano has established a Homeland Security division to coordinate activities to address and mitigate the impact of these occurrences at the local level. With competing demands for public resources, there will be a significant challenge to provide this new service while maintaining the quality of fire and police services to which residents have become accustomed.

Financial Challenges

Over the past forty years, Plano’s explosive growth and development generated a steady stream of revenues from permitting fees, expanding property valuation, and retail sales. As the city matures, these funding sources may level off or even decline. At the same time, the city is faced with increased operational costs for aging facilities and infrastructure. Maturing cities like Plano must become innovative and willing to explore options for maintaining high service levels while the growth in revenues diminishes. One way to accomplish this could be by combining resources with other local governments to increase efficiencies and reduce expenditures. However, opportunities to share facilities and services with other entities will need to be examined carefully to ensure that the quality services Plano residents are accustomed to receiving are not diminished by the cost saving efforts.

Cultural Facilities

Like most suburban cities in the Dallas-Fort Worth Metroplex, Plano relies on the central cities to provide major cultural amenities such as art, science, and natural history museums; zoos, wildlife parks and botanical gardens. The continued growth of Plano and other suburban cities, coupled with increased demand on existing facilities, may create a demand for more cultural facilities in Collin County and surrounding areas.

This increased demand is likely to place the City of Plano in one of two roles relating to the provision



Interior of the Courtyard Theater

of future cultural facilities – “initiator” or “facilitator”. The city must carefully examine challenges and opportunities of proposed cultural facilities to determine involvement and role it should play.

As initiator, the city would lead the effort to plan, design, build and operate a cultural facility. In doing so, Plano must determine if the facility accomplishes city objectives and if the commitment of municipal resources and leadership are necessary to complete the project.

An example of a project in which the city was the initiator is the Courtyard Theater. The city leased the Cox Gymnasium from the Plano Independent School District in 1999 and provided funding for the restoration of the building. The historic exterior of the structure was maintained while the interior was restored to accommodate a performing arts center.

In the facilitator role, the city would evaluate a proposal from another organization (public or private); determine if it will meet objectives, compare its priority to other projects; and evaluate

the potential for partnering with the organization to complete the project. The city’s role could include the purchase of land or the provision of an existing city owned property for the facility while operation becomes the responsibility of the other organization.

An example of a project in which the city was the facilitator is the ArtCentre of Plano. The organization owns the property and operates the facility. The city provides funds for restoration of the building through Heritage Preservation grants and Cultural Affairs grants for programming.

When determining whether or not to participate in the provision of public facilities and the role that it should take in response to certain facility proposals, the city should consider the following:

1. In general, what types of cultural facilities is the city willing to support?
2. Where are the current and future gaps in the provision of cultural facilities?
3. Which types of cultural amenities are best served by regional, sub-regional or local facilities?
4. What is the demand and value to the community if the facility is provided?
5. What will the impact be without the facility?
6. What public and private funding options are available to support certain types of facilities?
7. Based on the above, should the city:
 - a. Support the facility?
 - b. If yes, as a facilitator or initiator?
 - c. Seek support from a local, sub regional or regional base?

Objectives for Theme III – City in Transition

- ▶ **Objective C.1** Adapt the provision of municipal services and facilities to a changing population.
- ▶ **Objective C.2** Provide for appropriately located and functional public facilities in response to the diminishing availability of appropriate sites for both public and private development.
- ▶ **Objective C.3** Utilize city-owned properties in Downtown Plano to enhance its role as a major focal point and gathering place for the community.
- ▶ **Objective C.4.** Establish a framework for upgrading and/or redeveloping city facilities over time.
- ▶ **Objective C.5** Define and regularly update Plano’s role and responsibility in the overall network of “Homeland Security”.
- ▶ **Objective C.6** Provide high quality city services despite leveling revenues.
- ▶ **Objective C.7** Define the role of the city in the provision and funding of cultural amenities available to Plano residents.

Strategies for Theme III – City in Transition

- ▶ **Strategy C.1** Study the needs of different cultures living in Plano and the possible impacts on municipal service content and delivery and make adjustments where appropriate.
- ▶ **Strategy C.2** Study the impacts of an aging population on the content and delivery of municipal services.

- ▶ **Strategy C.3** Update the Master Facilities Plan on a periodic basis and use it to prioritize and schedule projects for the Community Investment Program (CIP).
- ▶ **Strategy C.4** Evaluate city-owned properties in Downtown Plano to determine how they can be utilized to accommodate city services and support private redevelopment and reinvestment in the area.
- ▶ **Strategy C.5** Develop a comprehensive program for updating, renovating, and if necessary, replacing municipal facilities over time. This should include a comprehensive inventory of these facilities, dates of construction and “life expectancy”.
- ▶ **Strategy C.6** Update Plano’s Emergency Management Plan to improve preparedness, response and recovery efforts from a disaster.
- ▶ **Strategy C.7** Establish a process for identifying alternative resources for funding facility improvements and municipal services.
- ▶ **Strategy C.8** Consider opportunities of sharing facilities and service delivery with other entities that could improve efficiency without compromising the quality Plano residents expect.
- ▶ **Strategy C.9** Develop a policy framework that can be consistently applied to requests for the city’s involvement in the development and operation of cultural facilities.

City of Plano COMPREHENSIVE PLAN

EDUCATION ELEMENT

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EDUCATION ELEMENT

INTRODUCTION

Much of the growth in urban development of the north Dallas region was tied to the emergence of the high technology industry from the existing companies engaged in work on national defense contracts and research. High technology companies are reliant on an well-educated work force that can adapt quickly to the ever-changing demands of the industry. This situation attracted thousands of professional men and women from all over the world to pursue employment in the business and high technology sectors of the local labor market.

A major factor in the consideration of a community for potential residential and business locations is the quality of educational opportunities provided to the residents. Education has always been an important component of the culture and expectations of the citizens of Plano. The quality educational opportunities found within the City have attracted many new residents and businesses.

MAJOR CONCEPTS

Creating Educational Opportunities

There is a wide range of educational opportunities available for people of all ages in Plano. However, the global economy is ever changing. The City must continue to encourage education service providers to establish new opportunities to provide people with the skills they need for the changing job market.

Adapting to Changing Demographics

The changing demographics of Plano, including age and ethnic distribution,

continue to shape our educational expectations. The distribution of potential school age children and adults of prime child rearing years is important to determine the future need of educational facilities serving young people. In areas of the City where the number of children and adults involved with schooling has declined, alternative uses for existing educational facilities may have to be considered. There may also be opportunities to modify the content and venue of educational services based on changing demographics and technology.

Facilities Siting and Planning

The Education Element provides a series of criteria for the placement of various types of educational facilities described in the Objectives and Policies section. These criteria will not only benefit school officials and their staff, but will also assist City officials and staff as well as developers in the provision of proper site locations for these facilities through the development process. Changes in technology, skill requirements and those being served by educational providers will also impact the location and nature of facilities.

Relationship between City and Education Providers

The relationship between the City of Plano and education providers is vital to the continued evolution of the community. Therefore, it is very important that the school districts serving Plano work with the City on maturity issues to ensure vital and active neighborhoods. It is also imperative that staffs from the City and the local education providers share information regarding economic development, land use development and demographics. By doing so, public service agencies can have more tools

necessary to deliver services that contribute to the high quality of life that the citizens of Plano have come to enjoy and expect.

CONDITIONS / TRENDS / ISSUES

Day Care

Day care centers are a vital part of Plano's educational process. They provide an opportunity to develop learning and social skills before children enter formal education. Day care centers perform a necessary service for working parents in today's economy and culture. Day care centers should typically be located in neighborhoods or employment centers where it is convenient for parents to drop off and pick up their children.

Independent School Districts

Public education in Texas is provided by Independent School Districts (ISDs). The ISDs are self-governing entities with taxing jurisdictions and boundaries that overlap city and county corporate limits. Local property taxes provide the major revenue source for the ISDs. The ISDs also receive state funding and are regulated and monitored by the State of Texas through the Texas Education Agency (TEA). A superintendent and elected members of the board from the school district service area manage the ISDs. Superintendents are hired by the school boards.

There are three public school districts that serve school age children that live within the City of Plano. The districts are Frisco, Lewisville and Plano. The three ISDs offer a wide variety of academic programs based on student abilities and needs. Students can choose to participate in numerous extracurricular activities ranging from athletics to the

performing arts. The TEA has designated all three public school districts as "Recognized" for the provision of high quality public education. Plate 1 is a map showing the location of district boundaries and schools serving Plano residents.

Local school systems are a major component of a successful community. This is especially true when potential residents have several cities to consider for their places of residence. Businesses also consider quality of life issues, including schools, when relocating.

Plano ISD's outstanding reputation has contributed immensely to the City's rapid growth and development since the early 1960s. Partnerships established between the Plano ISD and the City have enhanced the success of both entities. In recent years, Plano's rapid development has spread into Frisco ISD and Lewisville ISD service areas. These districts are highly regarded as well. Plano should continue to foster strong relationships with all three school districts, including the sharing of facilities whenever possible.

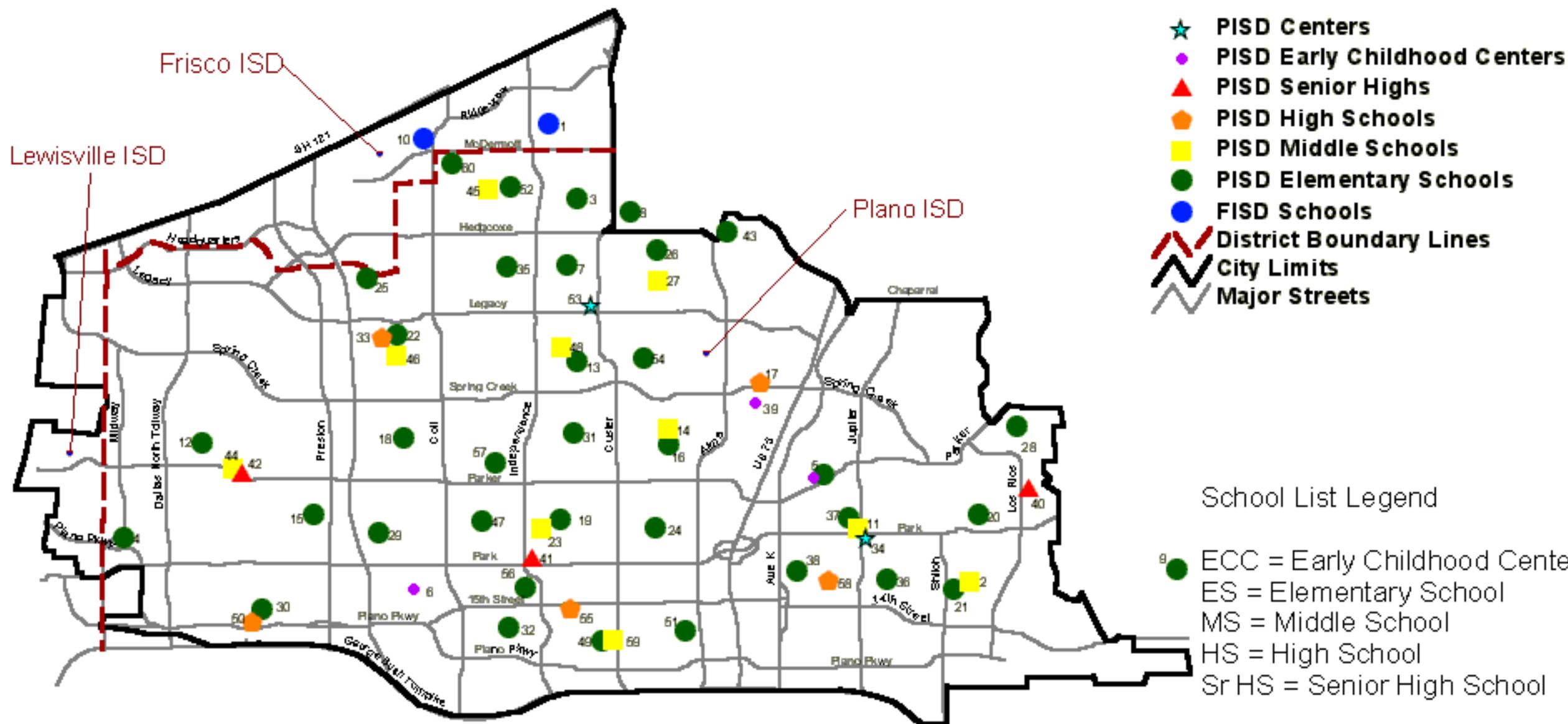
Private Schools

A variety of private schools are also available in Plano and nearby communities. They serve pre-school through high school aged children.

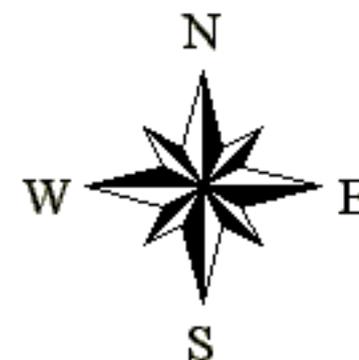
Higher Education

There are numerous private and public, two-year and four-year campuses available for higher education within a 50-mile radius of Plano. However, the focus of the Education Element shall be on the three colleges that are located within or near the City.

School District Map



- | | | | | |
|------------------|-------------------|--------------------|----------------------|-----------------------------|
| 1. Anderson ES | 13. Carlisle ES | 25. Haun ES | 37. Memorial ES | 49. Shepard ES |
| 2. Armstrong MS | 14. Carpenter MS | 26. Hedcoxe ES | 38. Mendenhall ES | 50. Shepton HS |
| 3. Andrews ES | 15. Centennial ES | 27. Hendrick MS | 39. Pearson ECC | 51. Sigler ES |
| 4. Barksdale ES | 16. Christie ES | 28. Hickey ES | 40. Plano East Sr HS | 52. Skaggs ES |
| 5. Barron ES | 17. Clark HS | 29. Hightower ES | 41. Plano Senior HS | 53. Special Programs Center |
| 6. Beaty ECC | 18. Daffron ES | 30. Huffman ES | 42. Plano West Sr HS | 54. Thomas ES |
| 7. Bethany ES | 19. Davis ES | 31. Hughston ES | 43. Rasor ES | 55. Vines HS |
| 8. Beverly ES | 20. Dooley ES | 32. Jackson ES | 44. Renner MS | 56. Weatherford ES |
| 9. Boggess ES | 21. Forman ES | 33. Jasper HS | 45. Rice MS | 57. Wells ES |
| 10. Borchardt ES | 22. Gullidge ES | 34. Jupiter Center | 46. Robinson MS | 58. Williams HS |
| 11. Bowman MS | 23. Haggard MS | 35. Mathews ES | 47. Saigling ES | 59. Wilson MS |
| 12. Brinker ES | 24. Harrington ES | 36. Meadows ES | 48. Schimelpfenig MS | 60. Wyatt ES |



Collin County Community College has two of its six sites located in the City of Plano. Southern Methodist University has an extension campus in the Legacy area in the northwest section of the City. The University of Texas at Dallas has a campus located near the Plano/Richardson corporate limits. This university is in the heart of the Telecomm Corridor. The University of North Texas offers upper division classes at the Collin County Community College District. Plate 2 shows a map of the location of colleges in the Plano area.

Collin County Community College

General Information

The Collin County Community College District (CCCCD) serves the residents of Collin and Rockwall Counties and the City of The Colony in Denton County. CCCCCD is a two-year tax supported public institution. CCCCCD has its own taxing district and receives funding from the State of Texas. Board members are elected at large from the district service area.

The college district has six locations: Spring Creek Campus in east Plano, Preston Ridge Campus in Frisco, Central Park Campus in McKinney, the Courtyard Center for Professional and Economic Development in west Plano, CCCCCD at Allen and the College Center at Rockwall. The focus of this discussion will be centered on the Spring Creek Campus and Courtyard Center located within the City.

The Spring Creek Campus (SCC) is located at the southeast corner of the Spring Creek Parkway and Jupiter Road intersection in the eastern part of Plano. The largest of the six locations, SCC

primarily offers associate degree programs. The Courtyard Center is located in the southeast corner of the Preston Road and Park Boulevard intersection in western Plano and is the location for the Continuing Education and Workforce Development Division.

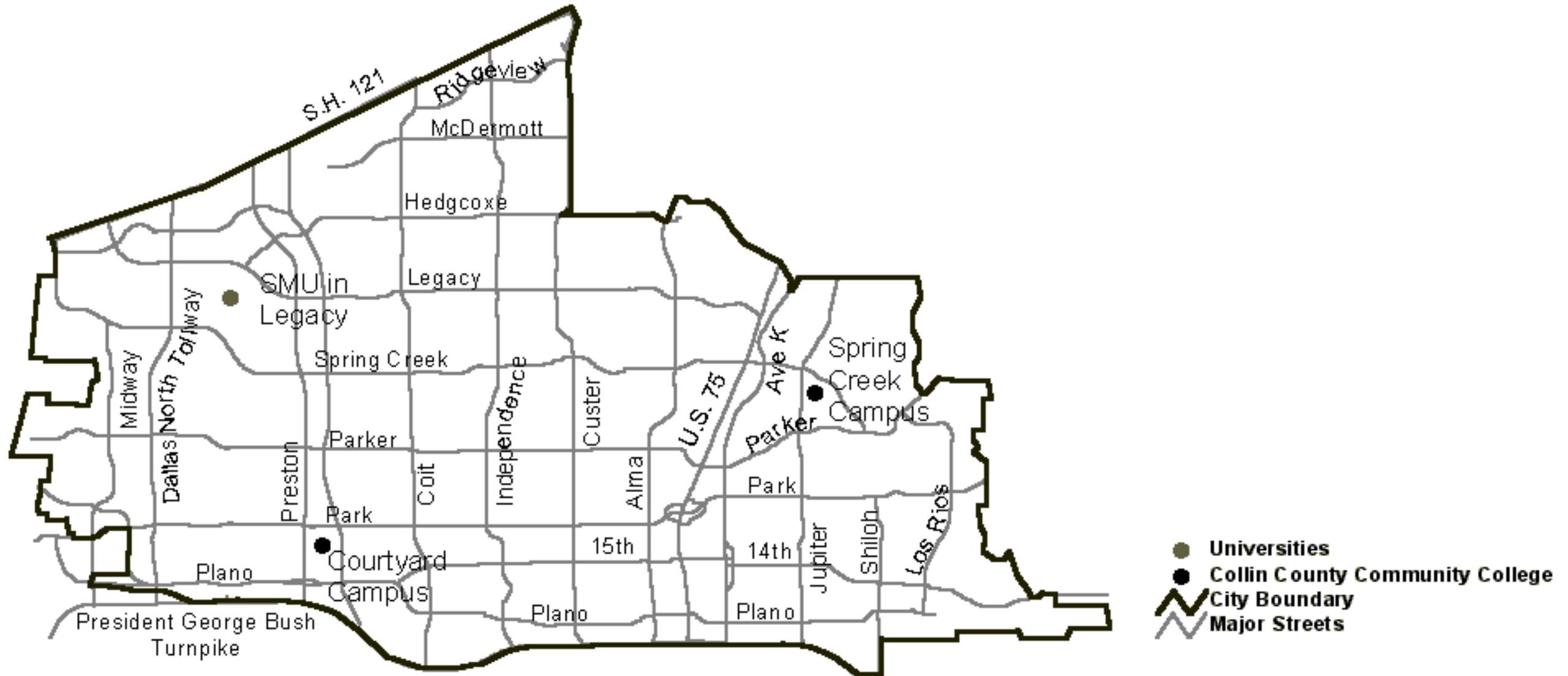
Course of Study

CCCCD offers over 100 degree and certificate programs. In addition, the district provides customized training and workforce development programs to business, industry and government. The college has received national recognition for their Learning Communities and Service Learning program, Theatre and Dance Repertory programs and for quality instruction.

Students have the opportunity of being admitted to CCCCCD and a major university simultaneously. Through this concurrent admissions program, students can take their freshman and sophomore courses at CCCCCD and upper division courses at a participating university, often reducing the time for earning a degree and eliminating obstacles encountered when transferring courses. Students have access to university events and libraries. To date, the University of North Texas (UNT), University of Texas at Dallas (UTD) and Southern Methodist University (SMU) hold concurrent agreements with CCCCCD. UNT also provides upper division courses on the CCCCCD campuses. CCCCCD offers concurrent enrollment opportunities to students at local ISDs where qualified high school students can begin working on college-level courses.

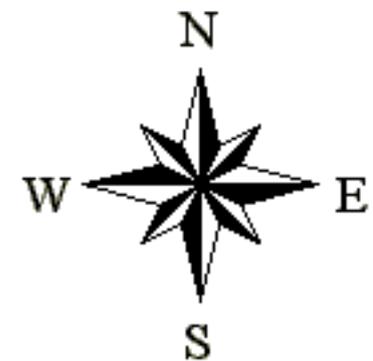
In response to the critical need for classroom teachers, CCCCCD became the first community college in the nation to

Higher Education Facilities Map



● University of Texas at Dallas

- Universities
- Collin County Community College
- ▬ City Boundary
- ▬ Major Streets



offer teacher certification. A unique agreement with Texas A&M University – Commerce awards a minimum of nine semester hours of graduate credit to students enrolled in CCCCD's Teacher Certificate Program. Texas A&M University – Commerce provides classes at CCCCD's Allen site.

In addition to core curricula, CCCCD provides extensive training in the health professions and public service careers, including nursing, emergency medical technician, fire service and law enforcement. These are critical employment needs considering the rapid growth of the area.

Certificates can be earned in a wide range of high-tech fields. CCCCD is one of six national Cisco Training Centers, serving the eight-state Southwest region. The college district has also partnered with Microsoft to begin offering advanced technology training through the Microsoft Information Technology Academy Program. CCCCD is one of 18 institutions of higher education in the nation to launch this concept.

Senior Adults can enroll in SAIL, Seniors Active in Learning, which offers classes and activities at reduced tuition rates.

Students

CCCCD serves more than 34,000 credit and continuing education students annually at its six locations or through distance learning. A total of 14,497 credit and 5,035 non-credit students were enrolled during the Fall 2001 Semester. This is an increase of 11.5 and 7 percent respectively over the same term last year.

Issues

Located in one of the fastest growing areas in the nation, CCCCD is committed to offering quality academics at affordable tuition rates. Keeping up with burgeoning enrollment and aging buildings has been a concern of college officials. Moreover, the Spring Creek Campus is operating at capacity. Additional classroom space is needed and deferred maintenance issues must be addressed.

Taxpayers recently approved a \$57 million bond referendum to meet the growing demand on the college's resources and facilities. The bond will finance major projects, including roof repairs; HVAC and cooling tower upgrades, repairs to parking lots and walkways and fire alarm upgrades. New construction will include additional classroom buildings, high-tech facilities and parking.

University of Texas at Dallas

General Information

The University of Texas at Dallas (UTD) is a state-supported facility of higher education. The campus is located in Richardson at the northwest corner of the intersection of Floyd Road and Campbell Road approximately 1.5 miles south of Plano, right in the heart of the Telecomm Corridor. The university offers degree programs at the bachelor's, master's and doctoral levels as well as certifications in specialized programs.

Courses of Study

UTD has a wide selection of courses for study. However, the close geographic proximity of the university to businesses engaged in high technology development and research has contributed to the

creation of the college as a leading educational center in North Texas for careers in computer science and engineering. The courses of study in the computer science and electrical engineering programs provide students an opportunity to gain skills for employment with firms located within the Telecomm Corridor. The university provides research opportunities through the Center for Information Technology and Management for area high technology companies in e-commerce and allows the firms to hire students to work on projects that provide them with real world work experience and have access to professors for advisory roles.

Students

Almost 11,000 students were enrolled at UTD during the 2001 Spring Semester, the latest time that statistics were available about the college. A total of 60 percent of the students were enrolled in courses of study dedicated to Business Management, Computer Science and Engineering. A total of 58 percent of the students were classified as undergraduate and 42 percent were enrolled in graduate studies at the university. Less than half of the student population (48 percent) was considered part time (enrolled in less than 12 semester hours). Most of these students are employed and are enrolled in courses to enhance their career opportunities.

Southern Methodist University

General Information

Southern Methodist University (SMU) is a private institution of higher education located in Dallas. SMU has an extension campus at the southeast corner of the intersection of Tennyson Parkway and Democracy Drive in northwest Plano.

This location is near the heart of a corporate headquarter campus development within the City called Legacy. Thus, the extension campus is known as SMU in Legacy. The extension campus is an institution dedicated to providing continuing educational opportunities for professionals and also provides conference services and facilities for the firms located in the Legacy area.

Course of Study

A student can pursue academic degree programs affiliated with SMU's Edwin C. Cox School of Business. This program at SMU in Legacy offers a Masters of Business Administration as well as courses for executive and management development. SMU in Legacy also has a School of Engineering and Applied Sciences that includes the Advanced Computer Education Center. Courses in liberal arts and life enhancement issues such as financial planning are also available at the extension center.

Students

Almost 2,000 students were enrolled in programs offered at the SMU in Legacy campus in 2001. A majority of the students came from the surrounding businesses located in the Legacy area. Most of the students were enrolled on a part time basis in courses centered on accounting, business, computer science and management.

Continuing Education

As noted, institutions of higher education such as Collin County Community College, the University of Texas at Dallas and SMU in Legacy provide instruction for continuing education in the area of career development and advancement.

However, the City of Plano has several programs to offer adults as well.

The Plano Public Library has a program entitled “Literacy for Life”. The purpose of the program is to teach adults not familiar with English how to read and speak the language proficiently. The course is offered at the Harrington Library.

The City of Plano Parks and Recreation Department also provides continuing educational opportunities for people of all ages. The programs are not necessarily aimed at career advancement, but most concentrate on recreational courses for people to either learn a new activity or to participate in athletic events sponsored by the City. Some of the programs offered concentrate on life issues while others provide residents with the opportunity to learn foreign languages and cultures. All of these courses are taught at the various recreation and community centers located throughout the City (see Plate 3).

Adapting to Changing Demographics

Demographic Attributes and Geography

Demographics are an important component of educational facilities and services planning. Information on the identity and location of students enables the education service providers to plan for programs that best suit the needs of their clients and to place facilities in close proximity to the population being served.

Tables on subsequent pages highlight key demographic data for the City as a whole, and for selected geographic areas (see Plate 4).

- Preschool age children = people under 5 years of age
- School age children = people aged 5 to 17 years
- Young adults = people aged 25 to 44 years, adults in their prime years of child rearing
- Race and ethnicity of the total population of the demographic study area

The six demographic study areas are defined as follows:

Plano ISD - East

All areas of the City east of US 75 within the Plano ISD.

Plano ISD – North Central

All areas of the City north of Spring Creek Parkway from Coit Road to US 75 within the Plano ISD.

Plano ISD – South Central

All areas of the City south of Spring Creek Parkway from Coit Road to US 75 within the Plano ISD.

Plano ISD - West

All areas of the City west of Coit Road within the Plano ISD.

Frisco ISD

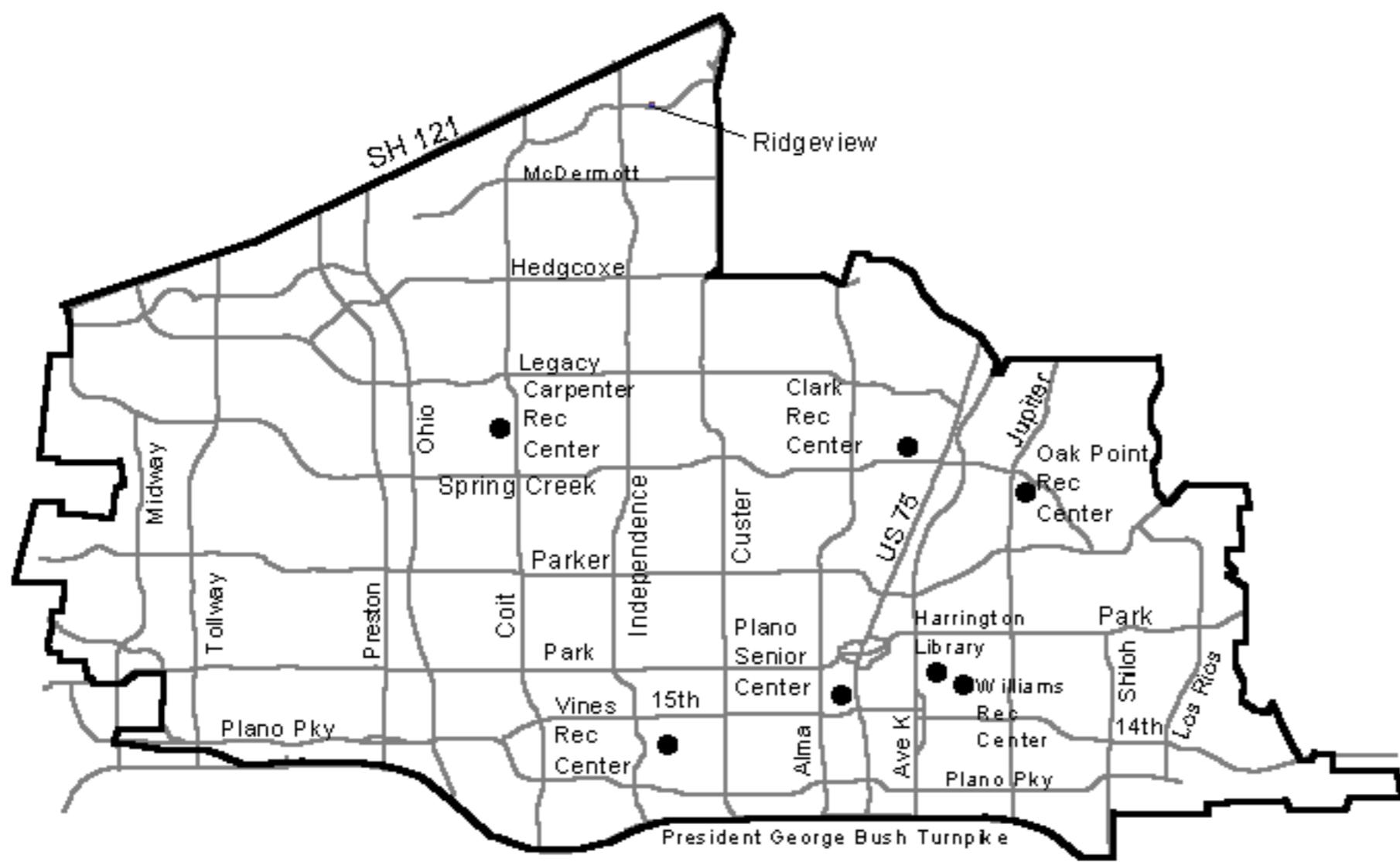
All areas of the City within the Frisco ISD service district.

Lewisville ISD

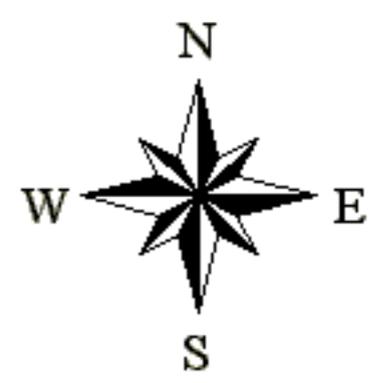
All areas of the City located in Denton County within the Lewisville ISD service district.

The four study areas of Plano within the Plano ISD service district were based on demographic information contained within census tract boundaries. The study areas do not follow school attendance zones

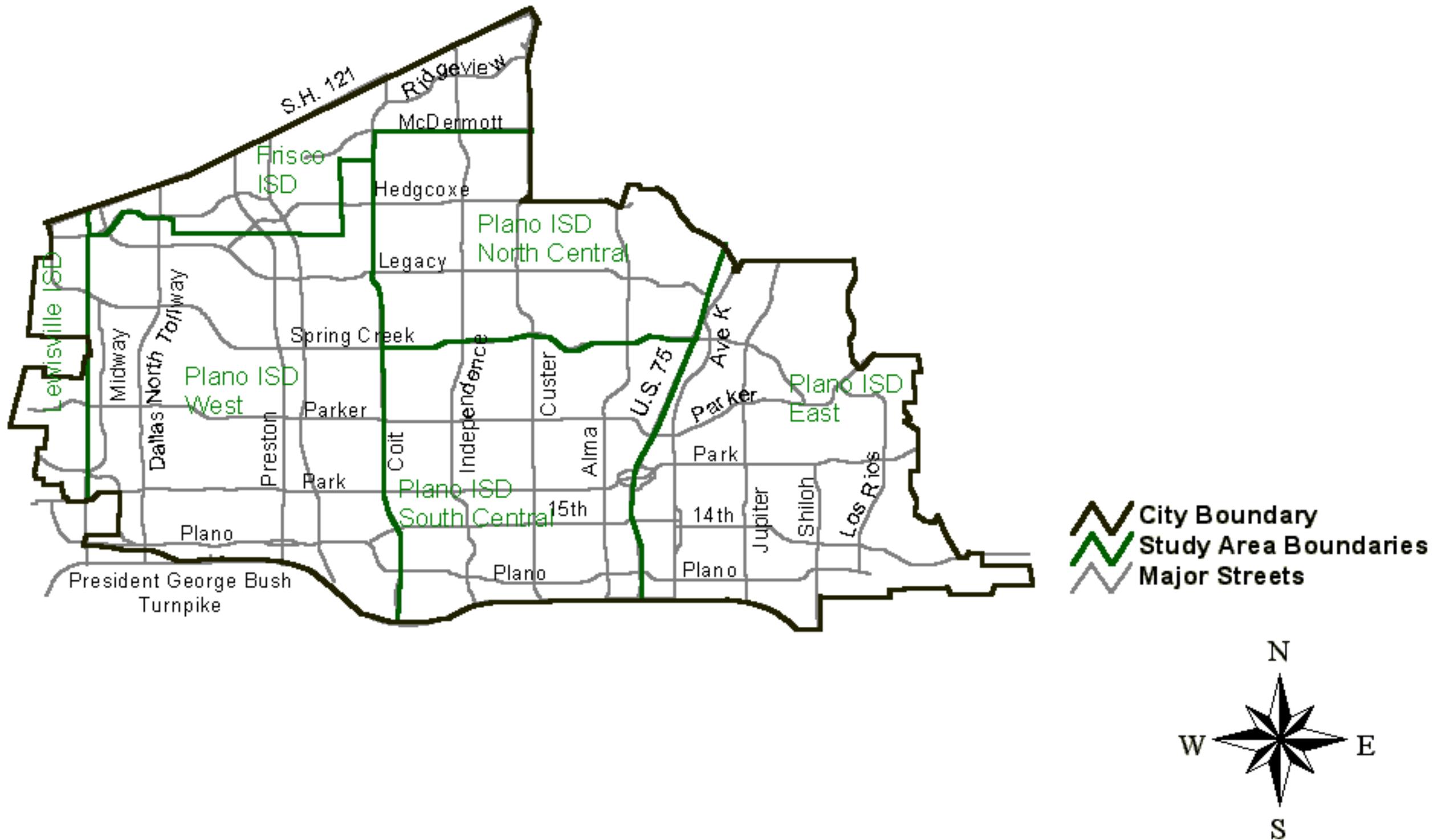
Recreation and Community Facilities Map



 **Facilities**
City Boundaries
Major Streets



Demographic Study Areas Map



since they change frequently and the zone boundaries do not follow easily definable features such as major streets.

Results

Tables 1, 2 and 3 provide the results of the age distributions between the 1990 and 2000 census within the six demographic study areas. Table 4 contains the racial and ethnic distribution of the study areas.

**Table 1
Distribution of
Pre School Age Children
1990 vs 2000**

Study Area	1990 Population	2000 Population	Percent Change
Plano ISD – East	2792	3012	+7.9%
Plano ISD – N Central	2798	5489	+96.2%
Plano ISD – S Central	4082	3734	-8.5%
Plano ISD – West	1386	4970	+258.6%
Frisco ISD	5	974	+19380.0%
Lewisville ISD	3	200	+6566.7%
City of Plano	11058	18379	+66.2%

Sources: 1990 and 2000 US Census

**Table 2
Distribution of
School Age Children
1990 vs 2000**

Study Area	1990 Population	2000 Population	Percent Change
Plano ISD – East	6293	7369	+17.1%
Plano ISD – N Central	5600	12943	+131.1%
Plano ISD – S Central	13083	11299	-13.6%
Plano ISD – West	3173	12396	+290.7%
Frisco ISD	15	1077	+7080.0%
Lewisville ISD	5	283	+5560.0%
City of Plano	28169	45367	+61.1%

Sources: 1990 and 2000 US Census

**Table 3
Distribution of
Young Adults
1990 vs 2000**

Study Area	1990 Population	2000 Population	Percent Change
Plano ISD – East	11573	13145	+13.6%
Plano ISD – N Central	12589	22475	+78.5%
Plano ISD – S Central	21100	17420	-17.4%
Plano ISD – West	7404	23126	+212.3%
Frisco ISD	28	4167	+14782.1%
Lewisville ISD	19	786	+4036.8%
City of Plano	52713	80616	+52.9%

Sources: 1990 and 2000 US Census

**Table 4
Ethnic and Racial Distribution
1990 vs 2000, In Percent**

Race/Eth	Plano ISD East		Plano ISD N Central		Plano ISD S Central		Plano ISD West		Frisco ISD		Lewisville ISD	
	90	00	90	00	90	00	90	00	90	00	90	00
Asian	1.6	4.0	5.3	13.4	3.9	7.4	6.1	13.7	1.4	10.9	15.0	2.9
Black	7.4	8.0	3.7	4.9	2.9	3.9	2.3	4.1	0.0	5.1	0.0	2.4
Hispanic	12.3	27.4	4.3	5.7	4.7	9.3	3.1	4.9	12.9	6.0	5.0	5.0
Native Am	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.0	0.3	0.0	0.0
Other race	0.1	0.2	0.0	0.2	0.0	0.1	0.1	0.2	0.0	0.3	0.0	0.0
White	78.1	58.4	86.4	73.7	88.1	77.5	88.2	75.3	85.7	75.9	80.0	88.8
Multi Race	NA	1.7	NA	1.8	NA	1.5	NA	1.5	NA	1.4	NA	0.9
1990 pop	30218		25916		56733		15806		70		40	
2000 pop	37407		57542		57459		59479		8003		2140	

Source: 1990 and 2000 US Census

Race/Eth = Race and Ethnicity

90 = 1990 Census

00 = 2000 Census

NA = Data was not collected for this category in the 1990 Census

This data indicates growth in the population of pre school and school age children as well as young adults in all areas of Plano within the Plano ISD service district except the South Central area. The South Central area is in a mature cycle in terms of age distribution. Growth was also quite strong in the areas

of Plano within the Frisco and Lewisville ISD service districts as well. All of the study area populations were more ethnically diverse in 2000 than in 1990 except for the section of Plano within the Lewisville ISD service district.

Future Trends

Discussion with staff from the three school districts has led to some estimation and speculation of future trends in student enrollment. Student enrollment in the South Central area of the Plano ISD may begin to see an increase as housing begins to turn over and younger families move into these neighborhoods by 2010. Age Distribution data for people under the age of five years is less than that of people aged 5 to 9 and 10 to 14 years in the North Central and West areas of the Plano ISD service area. This could lead to school enrollments peaking in these areas by 2005.

The number of people under the age of five years was larger than that of the other school age population groups in both the Frisco and the Lewisville ISD service areas within Plano. More Plano students within the Lewisville ISD service area are attending the schools within that district than in past years. Yet, the numbers are not large enough for a Lewisville ISD facility within Plano. The number of people under age five within the Frisco ISD service area of Plano was almost twice that of those aged 5 to 9 years and almost three times that of those aged 10 to 14 years. This factor, combined with the large number of adults aged 25 to 34 residing in this area indicates that demand for schools is quite strong and should probably peak by 2010 due to the fact that most of the residential development should have been completed in this section of Plano.

Facilities Siting and Planning

The Frisco ISD has two additional planned school sites in northern Plano. One site would serve elementary grades

while the other would be a middle school. The Plano ISD will be opening two preschool campuses as well as renovating an existing elementary school to serve low income and physically handicapped children. The purpose of the schools is to provide children with the academic and social skills required for a strong start with their education. The Plano ISD is also constructing three new elementary schools. All of these campuses should be open by August of 2002. A middle school will be built in the City of Murphy and should be open by August of 2003.

Relationship between City and Education Service Providers

It is important that the City of Plano and the education service providers have a positive working relationship. This relationship is not only important for information sharing concerning demographic and development data, but also for discussion of urban issues impacting the City. The same sharing of information is also important to CCCCD. The college could serve as a good forum for a consortium of leaders from the business, civic and education sectors to share information regarding changing skill requirements of the job market.

The education service providers and the City of Plano should continue to work together to address community maturation issues. A strong school system will attract people to reinvest in the more mature areas of the City when housing becomes available. This would help neighborhoods to remain healthy well into the future.

OBJECTIVES / POLICIES

Creating Educational Opportunities

Objective 1.100

Provide a wide range of educational opportunities for the citizens of Plano.

Policy 1.101 Continue to provide a wide range of opportunities for the pursuit of education through the school districts, colleges and other educational service providers.

Policy 1.102 Create a process for linking job requirements with educational providers through coordinated efforts of the Plano Economic Development Board, Collin County Community College District (CCCCD), the Independent School Districts (ISDs) and other agencies as required.

Adapting to Changing Demographics

Objective 2.100

Provide educational services that identify and respond to changing demographics of the City.

Policy 2.101 Create a committee composed of staff from the City, ISDs and CCCCCD to share demographic information and discuss changes in population on a semi-annual basis.

Policy 2.102 Assist school districts in identifying demographic attributes that could impact educational requirements such as the demand for ESL programs for both students and adults.

Relationship between City and Education Service Providers

Objective 3.100

Maintain a close relationship between the City of Plano, the ISDs serving City residents and CCCCCD.

Policy 3.101 Share information regarding development and demographics with the ISDs and CCCCCD.

Policy 3.102 Involve the ISDs and CCCCCD in the discussion of urban issues that could impact the delivery of educational services.

Policy 3.103 Consider the possibility of sharing facilities in areas of the City going through the cycle of fewer numbers of school children.

Facility Siting

The following objectives and policies are provided as guidelines for locating schools where they can safely and effectively serve the community. It should be noted that land availability, development patterns and other conditions must also be part of the site selection process.

Objective 4.100

Ensure that education service facilities are located in appropriate geographical areas.

Policy 4.101 Locate day care centers on arterials or collector streets easily and safely accessible to through traffic. Sites should be within or adjacent to residential areas, but at locations that will not adversely affect surrounding properties. Sites should be on streets of collector size or greater (Type "F" or above).

Policy 4.102 Place elementary schools within or adjacent to residential areas and at locations which are easily and safely accessible to local pedestrians and vehicular traffic. Facilities should be within walking distance of residential areas and at locations that will enhance surrounding properties. Sites should be on collector streets (Type “F” or above).

Policy 4.103 Locate middle schools within the residential neighborhoods being served, near neighborhood and community activity centers and easily and safely accessible to local and through traffic. Facilities should be included in service areas of one or more elementary schools. Sites should be located in close proximity to neighborhood and community centers and should serve as community activity centers themselves. These facilities and adjacent land uses should be mutually enhanced. Sites should be located on collector streets (Type “F” or above) with easy access to major thoroughfares (Type “C” or above).

Policy 4.104 Locate high schools near neighborhood and community activity centers and on sites that are easily and safely accessible. Facilities should include the service areas of one or more middle schools. These facilities and adjacent land uses should be mutually enhanced. Sites should be located on secondary thoroughfares (Type “E” or above) with easy access to major thoroughfares (Type “C” or above).

Policy 4.105 Locate senior high schools near neighborhood and community activity centers and on sites that are easily and safely accessible. Facilities should be situated so that they are adjacent to land uses that would be

mutually enhanced. Sites should be located on secondary thoroughfares (Type “E” or above) with easy access to major thoroughfares (Type “C” or above).

Objective 4.200

Provide vocational, special and adult education facilities in convenient locations near major activity centers.

Policy 4.201 Locate facilities on secondary thoroughfares (Type “E” or above) with ease of access to major thoroughfares (Type “C” or above), and readily accessible to service areas. The facilities should enhance adjacent land uses. Sites should be near or a part of community or neighborhood activity centers including parks, shopping centers or offices.

Objective 4.300

Provide higher educational facilities that can serve both the community and region, and which are in readily accessible central locations.

Policy 4.301 Place community colleges, colleges, universities, and similar institutions on sites that are safely accessible to through traffic, and should be directly accessible to major thoroughfares (Type “C” or above).

Policy 4.302 Ensure that sites have internal circulation systems that minimize impacts on surrounding land uses and traffic patterns. These sites should be near other high activity centers.

Policy 4.303 Plan sites to serve the anticipated student population based on future service areas. Adequate space should be provided for expansion and transition areas between these facilities and adjacent uses.

Objective 4.400

Provide for private educational facilities in locations that readily serve the neighborhood and community.

Policy 4.401 Locate private education facilities near the center of their service area on collector size streets or larger with ease of access to major thoroughfares. Sites should be near or a part of community or neighborhood activity centers including parks, shopping centers, and offices. The locations should enhance adjacent land uses.

Facility Planning

Objective 5.100

Provide for school system operations and regulations that are fiscally responsible and coordinated with those of other local and regional governmental entities.

Policy 5.101 Work with Intergovernmental agencies should be a continual process through:

- a. Sharing facilities for community activities and programs; and
- b. Scheduling facility maintenance, rehabilitation and construction in advance, and coordinating with other agencies and departments as is presently done through the Capital Improvements Program (CIP).

Policy 5.102 Establish a sound fiscal plan that provides for the community's educational needs by ensuring effective use of local funds through programming and project review and monitoring.

Policy 5.103 Use available federal and state resources for meeting local goals and objectives.

RECOMMENDATIONS

Creating Educational Opportunities

The City of Plano should encourage and support the provision of quality educational opportunities for the residents of the community. The City should meet with the education service providers on a semi-annual basis. The City and the education service providers should discuss changing business trends and identify specific needs within the community as well as job skills that will enable people to have employment in the ever-changing information technology economy.

Adapting to Changing Demographics

The City should involve the school districts with maturity issues to ensure that Plano continues to be a viable and attractive community for future residents. Both entities should continue to monitor the demographics of census geography to identify how Plano is changing over time. This information should be compared with data from the schools about the students to identify and review trends of changing demographics of the community to ensure that educational needs and issues are addressed.

Facilities Siting and Planning

The City should continue to ensure that education facilities are situated in areas close to their clients through the development review process. The City should work with the school districts to provide students safe access to the

schools. Campuses should be interconnected with the transportation system of the City.

Work with the education service providers to develop alternative uses for underutilized education facilities. The City should be flexible in the use of the facilities if declining enrollment trends change due to the cyclical housing turnover to younger families in mature areas of the community.

City of Plano COMPREHENSIVE PLAN

PARKS AND RECREATION ELEMENT

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Purpose

COMPREHENSIVE PLAN

PARKS AND RECREATION ELEMENT



Haggard Park

PURPOSE

The purpose of the Parks and Recreation Element is to provide a general, visionary document to guide decision makers regarding issues related to Parks and Recreation facilities. The element identifies the key factors, trends and issues affecting parks and recreation and establishes objectives and strategies to address them. It also includes a Master Plan for parks that identifies existing properties and facilities and general locations for future facilities.

Major Themes

MAJOR THEMES

Theme I – Livable City

The City of Plano is nationally recognized for the provision of excellent services and facilities. “Livable City” focuses on the attributes of the parks and recreation system that enhance the quality of life of the city.

Theme II – City of Organized Development

The Parks and Recreation Department has a wide range of properties and facilities throughout the city. The City of Organized Development section defines the components of Plano’s parks and recreation system and establishes a framework for its development.

Theme III – City in Transition

The City in Transition section is all about change. Most of the land in the city has been developed. The composition of Plano’s population is changing. This section of the element will explore how changes in the city’s population and development trends will impact service provision, facility requirements, funding, and property acquisition.

Theme I

THEME I – LIVABLE CITY

Recreational Opportunities

The City of Plano provides a wide range of active and passive recreational facilities for its residents. One can enjoy a scenic nature preserve; hike or bike along an extensive trail system; play in an organized athletic league; or work out in a weight room. Plano's parks and recreation facilities are designed to support active healthy lifestyles and enhance the community's visual appearance. The city should continue to explore options to acquire and develop park facilities that are in close proximity to residential areas. These facilities should be consistent with the park hierarchy described in Theme II.

Community Gathering Places

Social interaction is a critical consideration when developing a city. Parks and recreation facilities near residential areas provide a place for people to gather and interact in formal and informal settings. The recreation centers have rooms that can be used to host formal meetings for organizations. Water features, park benches, picnic areas and pavilions are amenities that can encourage informal social interaction. The city should emphasize the importance of parks and recreation facilities as "community building" tools that bring people together in a variety of settings.

Open Space

Abundant open space within a city enhances quality of life. Open spaces such as parks and natural areas provide relief from the built environment. Some of Plano's parks and natural areas offer scenic vistas for people traveling along the major travel routes of the city. Landscaped medians and right-of-ways often enhance and extend the feeling of open space in the community. Plano's nature preserves are a source of the city's heritage and a glimpse of how the area may have appeared before human settlement. They also provide an opportunity to connect with and learn about the natural environment and ecologically sensitive areas. Although opportunities are limited, the city should continue its efforts to acquire and utilize properties that preserve natural features and make them available to the community.



Oak Point Park and Nature Preserve

Parks as an Urban Design Component

The locations of park facilities in Plano have been incorporated into the urban design framework of the city. Linear parks preserve the city's natural areas adjacent to creek corridors and link schools, recreational facilities, and residential neighborhoods. Trails within linear parks connect with on-street bicycle routes and to trails in adjacent cities to serve as an alternative transportation network within the area. Parks located near schools in the heart of Plano's residential neighborhoods serve as community gathering places. Nature preserves protect the wooded areas of the city that are located within the floodplains of major creeks.

Objectives for Theme I - Livable City

- **Objective A.1** Encourage healthy lifestyles through the provision of recreation facilities and activities.
- **Objective A.2** Provide places for social interaction and community gatherings.
- **Objective A.3** Provide for relief from the built environment through the acquisition and maintenance of open areas and natural settings.

Strategies for Theme I - Livable City

- **Strategy A.1** Develop and maintain a comprehensive system of park, recreational, fitness, athletic, and sports facilities, and programs that keeps pace with the city's changing demographics.
- **Strategy A.2** Provide for indoor and outdoor facilities that support formal gatherings and organized events.
- **Strategy A.3** Design and locate park facilities that encourage informal gatherings. Elements such as water features, pavilions, seating areas and courtyards can help bring people together.
- **Strategy A.4** Provide open spaces, trails, and other facilities that support informal activities.
- **Strategy A.5** Provide park areas that create scenic vistas from major routes of travel in the city.

Theme II

THEME II – CITY OF ORGANIZED DEVELOPMENT

Park Hierarchy and System Planning

Plano's park and open space system consists of five classifications: neighborhood parks, linear parks, community parks, open space preserves, and special use areas. The city also has standards based on population that have been used to determine the amount of parkland, number of park facilities, athletic fields, and recreation facilities required to meet the demand of Plano's projected population.

Appendix A provides a listing of parks by classification. Appendix B is a general list of amenities found within the different classifications of parks.



Blue Ridge Park

Neighborhood Parks

A total of 31 neighborhood parks serve Plano's residential areas with a variety of passive and active recreational places. These parks are typically seven to ten acres in size and serve residential neighborhoods found throughout the city. This neighborhood setting is characterized by a land area of approximately one square mile bounded by six-lane divided thoroughfares with school and park sites near the center, low-density housing on the interior, medium- and high-density housing along the edges, and office and retail operations at the intersections of the major thoroughfares where they serve other neighborhoods, as well.

Wherever possible, neighborhood parks have been combined with elementary schools to maximize the use of both facilities. Combined neighborhood parks and schools provide for shared parking, ball fields, playgrounds and other facilities. This helps the parks better serve as gathering places for the residential neighborhoods.

Neighborhood parks can play an important role in urban design. They function as activity centers and focal points for neighborhoods (see Urban Design element). One of the issues for neighborhood parks is making these facilities more appealing. The Parks and Recreation Department is addressing this issue by continuing to plant large trees to improve shade throughout the park system and studying other ways to make the neighborhood parks more inviting and amenable to serve group activities.



Big Lake Park

Linear Parks

The city has 15 linear parks that serve as links between residential areas, schools, libraries and other park facilities. They also provide practical alternatives for land that would otherwise go unused. Linear Parks are located within creek corridors, major utility easements, street right-of-ways and rail corridors. They provide breaks in the urban development pattern, conserve ecologically unique areas, and provide long stretches of open space and recreational trails. Some greenbelts lack land outside of the flood plain. As a result, they are often unusable during rainy periods and their slopes limit recreational activities within them. Additional land, where possible, should be acquired along creek corridors to enhance the usability of linear parks.



Liberty Park Recreation Center

Community Parks

There are 23 community parks in Plano. They are usually 25 or more acres in size and generally serve a three mile radius or specific community needs. Community parks have active and passive recreational facilities and may also contain large passive open space areas suited to recreational trails and picnic areas beyond what is found in a neighborhood park. They also provide visual breaks in Plano's urban setting, particularly when located along major thoroughfares. Many community parks are contiguous to linear parks that connect them with residential neighborhoods. Community parks frequently contain major lighted athletic facilities used for scheduled leagues and tournaments. Community parks may also contain recreation centers and are usually located adjacent to senior high schools, high schools, and middle schools. As demand continues to grow for features such as dog parks, skate parks, and other emerging recreation activities, community parks will most likely be used to provide these services. New facilities will need to be carefully located and designed

so that they do not conflict with existing uses and facilities at a given park or adjacent development.



Observation Tower at Arbor Hills Nature Preserve

Open Space Preserves

Open space preserves serve active and passive recreational needs and provide for cultural activities as well. These facilities preserve ecologically sensitive areas and provide opportunities for interaction with the natural environment. Therefore, any improvements at these parks must be carefully integrated into the environment and intensive uses such as athletic facilities should not be included. Arbor Hills Nature Preserve in western Plano, along with Bob Woodruff Park, and Oak Point Park and Nature Preserve in eastern Plano serve as the three open space preserves within the city. In addition to public open spaces, Connemara, a private regional nature preserve, provides permanent open space in north central Plano.



Veteran's Memorial

Special Use Areas

Special Use Areas are varied and unique in size, use and design. These areas include facilities such as museums, cemeteries, memorials and urban plazas. This classification also includes parks that do not readily fit within the other park categories such as tennis centers and facilities located on school property. There are nine special use areas in Plano.



Pecan Hollow Golf Course

Golf Courses

The provision of municipal public golf courses is common with cities throughout the United States. The City of Plano has two golf courses: Pecan Hollow and Ridgeview Ranch. Pecan Hollow, an 18 hole course, is owned and operated by the city. Ridgeview Ranch Golf Course was built on city park land by a private developer and is operated under a long term lease agreement. This relationship allowed the city to provide a second 18 hole golf course to the public without incurring the initial expense of constructing the course.

Completion of the Parks System

Goals for parks and recreation facilities that were established at the beginning of Plano's rapid growth in the 1960's and 70's have been continuously updated and implemented. Accomplishing these goals has required an ongoing commitment from elected officials, appointed boards and commissions, city staff, and residents. Completion of the Plano's park system requires continued commitment of all the city's recreation stakeholders.

Through an ongoing process of community input and benchmarking against other cities around the country, Plano has established a general guideline of providing at least 15 acres of park land for every 1,000 residents. Neighboring cities and Collin County have adopted similar goals and this standard is consistent with best practices of cities around the country. As of January 1, 2013, Plano has a population of 264,910 residents and 4,002 acres of parkland, which meets the goal for acres of park land per 1,000 residents. The additional park sites and facilities included in the 2012 Park

Master Plan will be necessary to complete the city's park system and serve a projected population of 280,000 residents.

In the last five years, the city has completed acquisition of the 117 acre Windhaven Meadows Park and the 51 acre South Central Community Park Site. These two sites provide open space in previously underserved areas of the city. One large tract of land is required along Rowlett Creek in order to complete Plano's section of the regional Rowlett Creek Greenbelt. In addition, there are many small parcels of land needed in order to complete the city's trail system. Failure to acquire the land will result in gaps in the trail system and missed opportunities to connect to adjacent cities, in accordance with the Six Cities Trail Plan and the Collin County Regional Trail Plan.

Additional land may also be needed to serve new residential development in areas of the city previously zoned for other uses. Specific details of the proposed development and proximity to existing parks should be studied when the rezoning request is submitted to ensure new residents receive the same quality and availability of facilities as existing residents.

The Parks and Recreation Department shall identify and prioritize projects required to complete the city's park system. Projects receiving the highest priority should be considered for inclusion within the fiscal year budget proposals and future bond elections.

Plano residents approved a bond referendum in 2009, which provides \$48,650,000 in bond authority for park improvements and \$24,100,000 in bond authority for recreation center

improvements. Several of those projects have been delayed due to lack of funding to support the staffing, operation and maintenance of those facilities. In 2013, residents approved an additional bond referendum, which provides \$27,000,000 in bond authority for park improvements and \$12,500,000 in bond authority for recreation center improvements. Both of these programs include funding for new facilities as well as funding for renovation or expansion of existing facilities. The projects included in these bond referendums are listed in Appendix C.

In addition to completing land acquisitions and construction of major facilities, it will be important for Plano to move forward with finalizing the development of individual parks within the park system. Additional trees, shade structures, sidewalks, and other amenities are still needed in many parks throughout the city. Rapid growth in previous decades spread resources thin and many parks received only basic improvements. Tables 1 and 2 contain projections for additional park land and facilities, respectively.

Despite the city's best efforts to plan in advance for the long term recreational needs of the community, unexpected opportunities and challenges will arise. Flexibility will be critical as changing demographics and other trends place unexpected demands on Plano's recreational assets. The city should strongly consider opportunities that may arise to acquire land, buildings, or other facilities that will address new recreation demands or further the preservation of open space.

In contrast, the city may be asked to assume ownership and/or maintenance of private amenities such as swimming pools

and common areas in residential subdivisions. In most cases, these facilities are not appropriately designed, located, and sized to meet the requirements for public facilities. Although such facilities may be a financial burden to a homeowners' association, the city should not accept such donation merely to relieve another entity of a financial burden.

Objectives for Theme II - City of Organized Development

- **Objective B.1** Provide for a wide range of passive, active, formal and informal recreation activities in appropriate locations across the city.
- **Objective B.2** Use neighborhood parks as a focal point and activity centers for Plano's residential areas.
- **Objective B.3** Use linear parks to link key public and private activity centers with residential areas.

Strategies for Theme II - City of Organized Development

- **Strategy B.1** Develop and maintain a comprehensive program of parks and recreation facilities based on the park classification system and master plan that includes current facilities and approximate locations for future facilities.
- **Strategy B.2** Evaluate zoning changes that may affect the location and demand for parks and recreation facilities in areas not previously identified on the Park Master Plan.
- **Strategy B.3** Identify and prioritize projects required to complete the park system for inclusion in the Community Investment Program (CIP) fiscal year budget and future bond elections.
- **Strategy B.4** Prevent unnecessary demands on park and recreation resources by refusing private donations of open space or facilities that do not conform to the objectives and strategies of the Comprehensive Plan or address unanticipated gaps and shortages in the system.
- **Strategy B.5** Acquire remaining properties to complete the trail system within Plano and link with systems in other cities.
- **Strategy B.6** Strongly consider the acquisition of land, buildings, and other facilities not specifically identified in the Parks and Recreation Element, if they can meet changing needs of the city.

Park Land Projections

Table 1

Park Land Projections

	Current		Projected Needs for Build-out Population of 280,000	
	No.	Acres	No.	Acres
Open Space Preserves	3	1323.87	3	1,350.00
Community Parks	23	1280.05	24	1487.00
Golf Courses	2	461.06	2	461.06
Linear Parks	15	638.58	15	721.00
Neighborhood Parks	31	256.07	32	261.00
(Neighborhood Parks within	*(24)	*(168)	*(24)	*(168)
Special Use Parks	9	42.70	9	42.70
TOTAL	83	4,002.33	85	4,322.76

Current and projected park land acres exceed 15 acres per 1,000 population.

* These numbers are already included in totals for other parks.

Source: City of Plano Parks and Recreation Department

Park and Recreation Facility Projections

Table 2

Park and Recreation Facility Projections

Facility	Current	Projected Needs for Build-out Population of 280,000
<i>Amphitheaters</i>	1	1
<i>Athletic Fields:</i>		
<i>Ball Fields</i>	71	59
Cricket Pitches	7	12
Turf Sports Fields*	110	112
<i>Championship Youth Ball Parks</i>	1	1
<i>Dog Parks</i>	1	3
<i>Frisbee Golf Holes</i>	9	18
<i>Golf Courses:</i>		
No. of Holes	36	36
<i>Park Centers</i>	0	1
<i>Performance Venues</i>	2	2
<i>Playgrounds</i>	72	76
<i>Recreation Centers:</i>		
School-Based	0	0
Stand-Alone	5	5

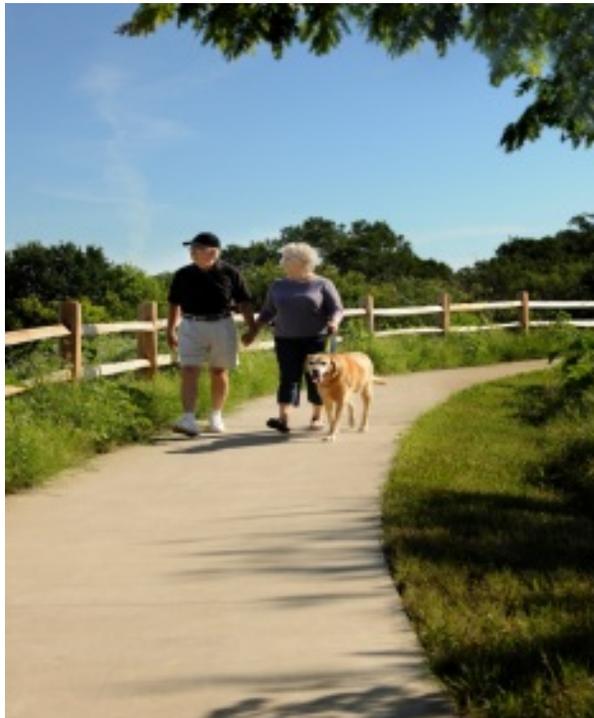
<i>Recreational Trail Miles</i>	70	95
<i>Reservation Pavilions</i>	11	14
<i>Sand Volleyball Courts</i>	8	14
<i>Senior Recreation Centers</i>	1	1
<i>Skate Parks</i>	0	2
<i>Outdoor Spray Grounds</i>	0	3
<i>Off-Road Bicycle Trails</i>	1	2
<i>Swimming Facilities:</i>		
Indoor	4	5
Outdoor	4	4
<i>Tennis Facilities:</i>		
Tennis Center Courts	21	21
School Courts Lighted	21	21
School Courts Unlighted	63	63

* Turf Sports fields are used for football, soccer, lacrosse, rugby, and other similar sports.

Source: City of Plano Parks and Recreation Department

Theme III

THEME III – CITY IN TRANSITION



Arbor Hills Nature Preserve

Changing Demographics

Demographic data for Plano from the U. S. Census Bureau indicates that the city's population continues to change. The percentage of the population that identified themselves as a member of a minority ethnicity or race has increased from 8.5% in 1980 to 41.6% in 2010. Foreign born populations are increasing in Plano and many American suburbs.

Many immigrants now move directly to the suburbs rather than central cities like Dallas to take advantage of the educational and

economic opportunities found there. Plano residents born outside of the United States increased from 7.5% in 1990 to 24.5% in 2010. Another national trend is an aging population. This trend is also on the rise in Plano where the median age increased from 27.4 years in 1980 to 37.2 years in 2010. It is projected that by 2020, over 45% of the city's residents could be over the age of 45 years.

The city shall continue to monitor demographic and social trends of its residents as they will affect the type of facilities and services the Parks and Recreation Department provides. Demographic data from the U.S. Census Bureau's American Community Survey is available for Plano on an annual basis, providing updated population characteristics between decennial censuses. It is also important to continue to learn about changing expectations and values of the city's population through local research.

Changing demographics have an impact on Parks and Recreation programming and facilities. Plano is now providing services and facilities that it did not consider in past decades. Cricket pitches have been added to athletic sites and table tennis and badminton have become popular activities at recreation centers. Passive outdoor spaces are often used for tai chi and other similar activities.

The existing Senior Recreation Center is experiencing overcrowding and additional space is needed for a growing number of older senior adults. At the same time, industry trends and research suggest aging baby boomers may not be ready to use the Senior Recreation Center for many years. Their preference to continue using the city's other recreation centers is creating a

demand for changing programming and equipment at these facilities to serve residents of all ages.



Cricket Pitch at Russell Creek Park

Many people who played youth soccer have now reached adulthood and created a demand for adult soccer opportunities. Changing lifestyles and family dynamics have significantly increased parking demands at athletics sites as parents, grandparents, and other family members may all drive in separate vehicles to watch children participate in sporting events.

Changing Recreation Needs

Demographics are not the only change that can affect recreational demands; local, regional, and national recreation trends continue to have an impact on requested activities and facilities. In the most recent community survey, residents identified outdoor special events and water sports as the activities they would most like to see added to Plano's parks and recreation programming. Participation in running events such as 5k and 10k races has increased

dramatically in recent years. Bicycling for exercise and recreation also continues to grow in popularity despite increased traffic and congestion on the city's roadways.

Many residents now expect high quality facilities for casual pickup games for outdoor sports such as soccer and football in the same way they have in the past for activities such as basketball or volleyball. Expectations for higher quality practice spaces have created additional demands on athletic facilities and practice areas in neighborhood parks. Demand for shade at playgrounds and over spectator seating at athletic facilities continues to grow along with the desire for additional skate parks, dog parks, spray grounds, BMX parks, fitness trails, off road bicycle trails, soft surface jogging trails, and spaces for fitness boot camps. Demands for multiuse trails near employment centers have also increased in recent years.

Another major trend that is affecting Plano's parks is the large number of non-residents using the city's athletic facilities. Over the last several decades, Plano has constructed many high quality athletic facilities to serve a growing number of youth sports participants within the city. In recent years, the percentage of non-resident users has increased dramatically. This may be attributed to rapid growth in neighboring cities and the inability of these communities to provide facilities for their residents along with the regional nature of many sports organizations and leagues.

Technology continues to change the way we live, work and play. Bicycle routes are now identified on Google Maps and community input forums are available on-line. Face Book, Twitter and other social media provide new opportunities for

communications with the public. Signs with Quick Response (QR) codes provide interactive data that can be accessed by cell phones and other mobile devices while meetings and classes can be attended without leaving the home or office. Parks and recreation facilities, programming and equipment will need to continuously adapt to technological innovations.

Parks and recreation facilities also contribute to quality of life through preservation of health. People of all ages tend to lead a more sedentary lifestyle than in past years. The provision of recreation facilities, parklands, and trails provides Plano residents an opportunity to embrace a healthier lifestyle through engaging in physical activities and exercise.

The Parks and Recreation Department shall research trends and participate in a variety of public feedback exercises to determine services and programs desired by city residents. These activities will be ongoing for the department to plan and fund modifications to services and facilities as customer demand changes. Alterations to facilities and programs should be assessed and prioritized to respond to the highest recreation demand.

Expansion versus Renovation and Maintenance

Plano has transitioned from rapid growth to a more established city. Although private development within the city has slowed, the parks system is still not complete. Slower growth and decreased revenues have made it difficult to fund the operating cost of new facilities. Major improvements still needed to meet the community's recreational demand include: development of two new community parks, an indoor pool, expansion

of the Senior Recreation Center, skate parks, additional dog parks, athletic facilities, recreational trails, and facilities at Oak Point Park and Nature Preserve.

A number of existing parks and recreation facilities have been in use for over 30 years and need maintenance and renovation. A few examples of some sites in need of updating in the near future include Carpenter Park, Jack Carter Pool, and High Point Tennis Center. The demand for new facilities and the need for renovation of existing facilities create a tension in funding priorities. It will be important for the city to continue to plan for the maintenance and renovation of existing assets while at the same time completing development of new facilities.

Maintenance and improvements of existing facilities shall be reviewed and prioritized for inclusion in the city's budget and future bond elections. Resident feedback should be a factor to identify facilities in need of updating and amenities necessary to improve existing facilities. Proposed improvements must be examined to determine if funding is available for staffing, operations, and future maintenance costs before projects are selected and recommended for fiscal year budgeting, future bond elections, and implementation.

Sharing/Privatization/Innovation

As Plano continues to mature, revenues may not be available to support new facilities and programs. It will be important to continue to look for opportunities to share facilities with other government agencies, non-profit organizations and private businesses. The city has shared facilities and land with Plano Independent School District (PISD) and Collin County has

provided funding for a number of park improvements within the City. Plano has also partnered with other recreation service vendors such as Plano Sports Authority (PSA) to construct two large indoor recreation facilities on public park land and the Boys and Girls Clubs, which now operates the Douglass Community Center.

The Parks and Recreation Department shall maintain an inventory of current services and compare the list with programs and activities offered by other public entities and private businesses in the city. The department will place emphasis on items that are deemed a part of its core business when determining what services should be added. This review will include: analysis of current market conditions, other providers or competition, and financial viability. From this assessment, a decision can be made as to investment in service provision, partnership with another agency to provide the service, or divesting of a service to ensure the most efficient use of limited resources in the future.

Parks and Recreation Tourism

Parks and recreation facilities have been recognized for many years for their potential to generate tourism, which provides significant economic benefits. There continues to be an interest in finding ways to use Plano's parks and recreation facilities to attract visitors to the city. The city currently hosts many regional and national athletic tournaments.

The Plano Balloon Festival at Oak Point Park and Nature Preserve attracts thousands of visitors each year. A large music festival is also being considered for Oak Point Park and Nature Preserve. Large running events such as half and full

marathons are also being discussed. These types of events have the potential to generate customers for local businesses and additional tax revenues for the city, create an identity for Plano as a destination place, contribute to its image as a good place to live, and attract new residents to the city.



Amphitheater at Oak Point Park and Nature Preserve

However, there are challenges in using park facilities for tourism such as major special events, national athletic tournaments and other potential revenue generating activities. First, the facility may require renovation to host a major event. More seating and parking to accommodate people may be required along with other facility improvements. Second, these facilities may not be available to taxpaying residents during some of these events.

The department shall evaluate the use of parks and recreation facilities for regional and national events and identify sites appropriate for particular activities. Potential revenues for the city shall be compared with the cost associated for upgrading the site and hosting the event. During the assessment process, the expenditures

required to provide the facilities and the potential loss of service for other citizens shall be considered.

Water Conservation and Sustainability

Recent droughts and disruptions to the public water supply have increased awareness of the need to conserve limited water resources. Continued growth in North Texas will intensify this issue in the future. The Parks and Recreation Department has begun to upgrade irrigation controls and systems to improve their efficiency.

Pecan Hollow Golf Course is using recycled water from the adjacent sewage treatment plant for irrigation, thereby eliminating the need to use the City's potable water supply. Alternative sources of water should be considered whenever possible and financially feasible. Collection of storm water runoff and the use of deep water wells have been considered and may provide some limited possibilities in this area.

Other alternatives, such as on-site recycling of black water, should be explored as population growth in the area will increase the amount of this resource available for reuse. More efficient use of the existing water sources is the most practical step available at this time. Continued rethinking of the types of plants, trees, and ground covers used in many parks also provides opportunities to reduce water consumption as new sites are developed or renovation occurs.

Significant improvements in energy efficiency have been made in the past five years at recreation centers, swimming pools, park structures, and with security and athletic field lighting. More sustainable

landscapes are being planned at parks, medians, and at public buildings. A program is being developed to begin recycling of the large volumes of litter that is generated at athletic fields and other park facilities.

Maintenance practices using Conservation Buffer Zone (CBZ) concepts in floodways and natural areas have been implemented to help reduce erosion and encourage native plant growth. The Parks and Recreation Department must continue to capitalize on evolving industry knowledge and sustainable practices in a fiscally responsible manner.

Objectives for Theme III - City in Transition

- **Objective C.1** Provide for park and recreation opportunities that reflect the diverse needs of the community.
- **Objective C.2** Ensure that a balance exists between the maintenance of existing facilities and system expansion.
- **Objective C.3** Ensure long term financial stability of the city's parks and recreation facilities.

Strategies for Theme III - City in Transition

- **Strategy C.1** Examine the impact of changing demographics and recreation needs on parks and recreation facilities and programming through research of trends and gathering public feedback.
- **Strategy C.2** Identify and prioritize the needs of existing facilities versus those of proposed facilities through the annual Community Investment Program (CIP) budget process. Long term operations and maintenance costs should be factored into both.
- **Strategy C.3** Improve efficiency and cost effectiveness of providing certain programs and facilities through privatization, public/private partnerships and joint operations with other public entities. Opportunities to combine resources and create regional facilities should be explored.
- **Strategy C.4** Evaluate current facilities in terms of hosting regional and national events which could attract visitors to the city and determine the costs required to complete the necessary improvements. Analyze the benefits derived from the proposed improvements and develop an operations plan to mitigate disruption of service during events.
- **Strategy C.5** Explore alternative water sources and more efficient use of existing water resources. Identify sustainable practices that can be

applied to the development, maintenance, and operation of parks and recreation facilities.

Appendix A

Appendix A – Park Facilities and Classification System

Neighborhood Parks	Acres	Community Parks	Acres
Arrowhead Park	6.84	Archgate Park (8)	49.26
Blue Ridge Park	5.02	Carpenter Park* (8)	106.73
Buckhorn Park	8.00	Cheyenne Park* (5)	24.78
Caddo Park	7.72	Enfield Park* (8)	50.00
Capstone Park	8.85	Harrington Park	16.08
Clearview Park	7.50	Heritage Yards at Plano* (8)	63.90
Copper Creek Park	4.00	High Point (North)	23.78
Coyote Creek Park	13.34	High Point (South)	31.63
Douglass Park Site	0.38	Hoblitzelle Park* (6)	147.66
Eldorado Park	6.87	Jack Carter Park* (8)	72.61
Evans Park	11.00	Liberty Park* (10)	17.00
Frank W. Beverly Park	10.34	Moore Park	119.50
Glen Meadows Park	2.91	Oak Point Center	23.92
Hackberry Park	5.00	Old Shepard Place Park	20.67
Hidden Meadow Park	6.78	Preston Meadow Park *(7)	22.85
Indian Creek Park	5.31	Russell Creek Park* (10)	192.19
Lt. Russell A. Steindam Park	8.29	Schell Park* (5)	31.37
Lone Star Park	8.27	Sgt. Mike McCreary Sports Field	4.77
Longhorn Park	7.00	Shawnee Park* (8)	43.87
Parkwood Green Park	4.13	South Central Community Park Site	51.10
Prairie Meadow Park	8.14	White Rock Community Park Site	117.30
W.H. "Buzz" Razor Park	6.28	Willowcreek Park* (8)	21.74
Ridgeview Park	7.56	Windhaven Park* (10)	27.34
Shoshoni Park	3.11	TOTAL	1,280.05
Steeplechase Park	18.75		
Stoney Hollow Park	31.02	City-Wide Open Space Preserves	Acres
Sunset Park	15.18	Arbor Hills Nature Preserve* (8)	201.12
Tejas Park	10.97	Bob Woodruff Park* (8) (8)	321.45
Timber Brook Park	8.57	Oak Point Park & Nature Preserve* (8)	801.30
Wagon Wheel Park	4.94	TOTAL	1,323.87
Westwood Park	4.00		
TOTAL	256.07	Special Use Facilities	Acres
		Bowman Cemetery	3.61
Linear Parks	Acres	Douglass Community Center (leased)	1.50
Big Lake Park* (3)	13.04	Haggard Park* (2)	6.43
Bluebonnet Trail	98.83	Heritage Farmstead Site	3.91

Chisholm Trail* (5)	84.09	High Point Tennis Center	6.75
Cottonwood Creek Greenbelt* (4)	84.53	Horseshoe Park* (7)	9.00
FM 544/Rowlett Creek Site	20.66	Memorial Park	8.50
Legacy Trail*	94.11	Plano Aquatic Center (leased site)	2.00
Overland Trail	7.00	Rowlinson Natatorium (leased site)	1.00
Preston Ridge Trail	87.58	TOTAL	42.70
Russell Creek Greenbelt Site	24.16		
Rustic Park	1.84	Golf Courses	Acres
Santa Fe Trail* (6)	19.02	Pecan Hollow Golf Course	258.98
Shady Brook Trail	43.79	Ridgeview Ranch Golf Club	202.08
Southeast Trail Site	5.91	TOTAL	461.06
Suncreek Park Site	13.64		
White Rock Trail Park	40.38		
TOTAL	638.58	TOTAL PARK ACRES	4,002.33

*Indicates that a neighborhood park is contained within the facility. The number of acres devoted to the neighborhood park(s) is indicated in parenthesis.

Appendix B

Appendix B Typical Park Features by Classification

Neighborhood Parks

- Service area – 1 square mile
- 7.5 to 10.0 acres in size
- Playground
- Picnic tables and shelters
- Unlighted athletic practice fields
- Multi-use courts
- Walking/jogging trails
- Park benches
- Adjacent to elementary schools where possible

Linear Parks

- No designated service area
- No standard size
- Recreational trails – 10 to 12 feet wide concrete
- Benches, picnic tables and drinking fountains
- Security lighting in selected locations
- May contain playgrounds and picnic shelters
- Link other parks, residential neighborhoods, schools, libraries and other facilities
- Connect to adjacent cities and to on-street bicycle routes
- Developed along creek corridors, utility easements, street right-of-ways, rail right-of-ways and other available land corridors

Community Parks

- Service area – varies, address specific community needs
- Over 25 acres in size
- Athletic facilities
- Swimming pools
- Recreation centers
- May contain dog parks, skate parks, spray grounds, disc golf courses, and other unique recreation facilities
- Passive open spaces areas
- Recreational trails
- Picnic areas with additional amenities
- May be adjacent to senior high schools, high schools and middle schools

Appendix B (continued)

Typical Park Features by Classification – Community Parks

- Connected to linear parks whenever possible
- Typically located on major thoroughfares

Open Space Preserves

- Serves the entire City
- Over 50 acres
- Located on major thoroughfares
- Focused on open space and natural resources
- May provide both indoor and outdoor facilities
- May support large community gatherings and outdoor festivals
- Uses and facilities that are not compatible with the environment are prohibited

Special Use Parks

- No specific size or service area
- Historic sites
- Cemeteries
- Memorials
- Facilities not located within parks
- Unique parks that do not readily fit within other park classifications

Golf Courses

- Public golf courses and associated facilities

Appendix C

Appendix C – Parks and Recreation Bond Authority Approved in 2009 and 2013

2009 Bond Program

Park Improvements \$48,650,000

- White Rock Creek Community Park Development- \$5,000,000
- Oak Point Park Development - \$5,000,000
- Trail Connections - \$4,000,000
- Athletic Field Renovations - \$5,000,000
- Park Improvements - \$3,000,000
- Land Acquisitions - \$15,250,000
- Athletic Field Improvements - \$3,000,000
- Arbor Hills Nature Preserve - \$400,000
- Pecan Hollow Golf Course - \$7,000,000
- Maintenance Facility Expansion - \$1,000,000

Recreation Centers \$24,100,000

- Aquatic Center Renovation - \$3,500,000
- Carpenter Park Recreation Center Expansion - \$6,000,000
- Senior Center/Wellness Center Expansion - \$7,500,000
- Oak Point Recreation Center Expansion - \$6,600,000
- Douglass Community Center - \$500,000

2013 Bond Program

Park Improvements \$27,000,000

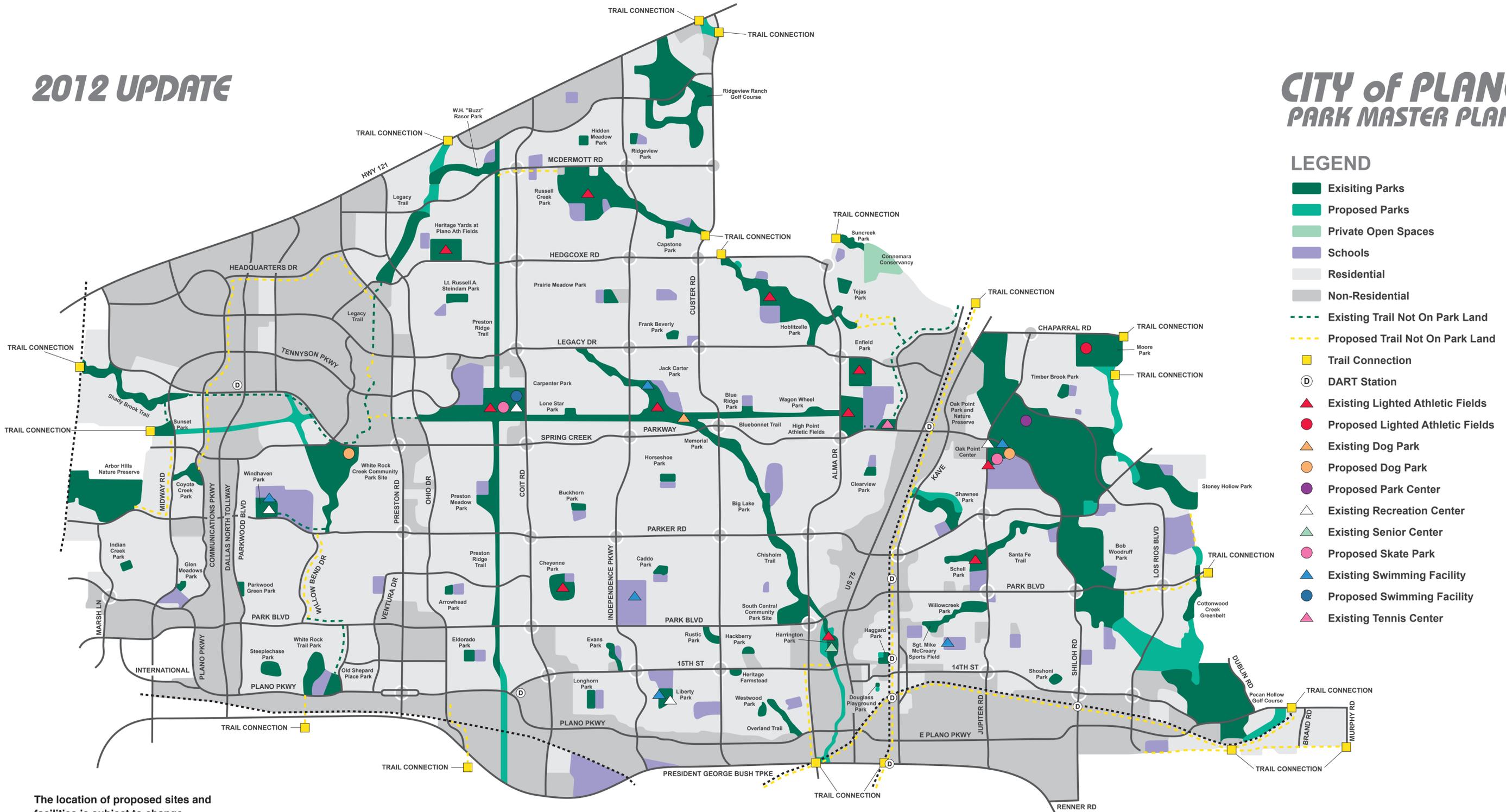
- Recreation trails - \$8,000,000
- Oak Point Park and Nature Preserve - \$6,000,000
- Park improvements - \$7,000,000
- Carpenter Park renovation - \$6,000,000

Recreation Center Improvements: \$12,500,000

- Jack Carter Pool renovations - \$7,500,000
- High Point Tennis Center renovations - \$2,500,000
- Liberty Park Recreation Center expansion and renovations - \$2,500,000

2012 UPDATE

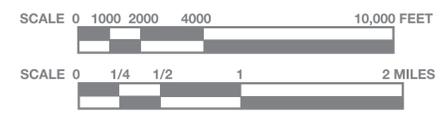
CITY OF PLANO PARK MASTER PLAN



LEGEND

- Existing Parks
- Proposed Parks
- Private Open Spaces
- Schools
- Residential
- Non-Residential
- Existing Trail Not On Park Land
- Proposed Trail Not On Park Land
- Trail Connection
- D DART Station
- Existing Lighted Athletic Fields
- Proposed Lighted Athletic Fields
- Existing Dog Park
- Proposed Dog Park
- Proposed Park Center
- Existing Recreation Center
- Existing Senior Center
- Proposed Skate Park
- Existing Swimming Facility
- Proposed Swimming Facility
- Existing Tennis Center

The location of proposed sites and facilities is subject to change.
Adopted by the City Council, March 6, 2012.



City of Plano

COMPREHENSIVE PLAN

UTILITIES ELEMENT

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Retention pond serving as a lake at Bob Woodruff Park

Comprehensive Plan Utilities Element

Purpose

The Utilities Element guides decision making regarding issues related to utility services and infrastructure. The element identifies the key factors, trends and issues affecting utilities and establishes objectives and strategies to address them.

Major Themes

Theme I – Livable City

“Livable City” focuses on the importance of access and safety of utilities such as water, sewer, communications and electricity that enhance the quality of life of the Plano residents. These services may sometimes be taken for granted and noticed only when they are lacking, but they are a necessary part of our daily lives.

Theme II – City of Organized Development

The City of Organized Development section identifies the utility services found in Plano, the type of services they provide and how the services are delivered. Current issues facing the provision of utility services are addressed as well.

Theme III – City in Transition

Plano is undergoing a change in development trends. The city is transitioning from a time of growth to full development. With 95% of water and sewer infrastructure in place, there will be less reliance on impact fees to fund new facilities. The city’s focus will shift from the provision of new facilities to the maintenance and replacement of the existing infrastructure. Changes in the energy utilities industry and Plano’s approach in addressing federal storm water mandates will also be presented in this section.

Theme I - Livable City

Utility Services

Utility services are a key factor in the quality of life of a city. The provision of potable water, the proper treatment of wastewater and an adequate storm water system contribute to the health, safety and welfare of the residents. Communications, electric and natural gas are essential necessities for homes and businesses. The City of Plano provides water, sewer and storm water services while private utilities offer communications and energy services.

Where possible, the City of Plano should encourage private utilities to provide residents and businesses the latest products and service options available. Innovation in technology could mean physical changes in how service is delivered to customers. This may require coordination efforts between the city and the private utility service providers when new service delivery technology replaces the current system within city rights-of-way.

Utility Rates

The City of Plano charges a fee for providing potable water, sewer (wastewater) and storm water services to residents and businesses. The revenues generated from the fees are used to cover the costs of providing utility services. It is important that the rates are competitive with other cities and yet cover the cost of service delivery. Table 1 contains an example of utility rates for water and sewer services for 10,000 gallons. The cities selected for the survey were either similar in size to Plano and or in close proximity to the city.

The findings from the survey indicated that Plano had the lowest rate for water and the highest rate for sewer services in the above example. When water and sewer services are added together for a billing statement, the city's rates are in the middle of group. This indicates that Plano's utility rates are comparable with other cities in the Metroplex.

Table 1 – Water and Sewer Rates for Selected Metroplex Cities 2005-2006 Fiscal Year (based on 3/4 inch meter)

CITY	WATER	SEWER	TOTAL
Allen	\$28.53	\$25.22	\$53.75
Arlington	\$34.25	\$28.75	\$63.00
Dallas	\$22.17	\$34.56	\$56.73
Frisco	\$28.01	\$22.26	\$50.27
Garland	\$29.02	\$27.54	\$56.56
McKinney	\$32.00	\$34.16	\$66.16
Mesquite	\$29.40	\$28.40	\$57.80
Plano	\$20.29	\$36.39	\$56.68
Richardson	\$28.95	\$20.89	\$49.84

Sources: Water and Sewer Rates from websites of all cities listed in Table.

The objective of wastewater treatment is to produce a clean effluent suitable for discharge back into the environment. Wastewater treatment incorporates physical, chemical and biological processes to treat and remove chemical and organic contaminants from sewage. One of the most costly processes is the removal of solid wastes from the water in the form of trash or sludge.

The Texas Public Utilities Commission (PUC) regulates the rates charged by private sector communication and electric utility service providers in the state. In Texas, electric generation, with the exception of electric cooperatives, is deregulated and operates as a free market while the wire infrastructure component remains regulated. The goal of the agency is to protect customers, foster competition and promote high quality infrastructure for utility service delivery. Quality infrastructure and utility services at affordable rates make Texas an attractive state for businesses. A private utility company must receive approval from the PUC before changing rates for service provision.

Objectives for Theme I – Livable City

- ▶ **Objective A.1** Provide for adequate public and private utility services to meet the need of city residents and businesses.
- ▶ **Objective A.2** Offer utility rates that are competitive with those in other cities throughout the region while covering the cost of service provision.

Strategies for Theme I – Livable City

- ▶ **Strategy A.1** Complete the water and sewer system so that there are no gaps in service delivery.
- ▶ **Strategy A.2** Work with private utility providers to ensure that ordinances and polices can accommodate innovative service technologies.
- ▶ **Strategy A.3** Monitor Plano’s water and sewer service rates to ensure competitiveness with other cities in the area.

Theme II - City Of Organized Development

Utility Service Providers

There are a variety of utility services within Plano. The city provides water and wastewater (sewer) services and storm water drainage through a system of underground pipes, above ground water towers, pumps and lift stations (used to transport water/sewer uphill), along with inlets and drains to collect and transport storm water runoff. Plano purchases water and wastewater treatment services from the North Texas Municipal Water District (NTMWD).

Since the deregulation of electric services, residents and businesses in areas of the city not served by CoServ (an electric cooperative) can choose from a variety of providers such as Green Mountain, Oncor and Reliant Energy for electricity. However, TXU Electric Delivery along with



TXU Electric substation with landscaping at 16th Street and Alma Drive

CoServ still provide the infrastructure (wires, poles, towers and under ground conduit) to deliver electricity to customers. Atmos Energy and CoServ provide natural gas services to Plano residents and businesses. Service delivery is similar to that of water by use of underground transmission and distribution pipes.

AT&T, Time-Warner, Grande Communications and Verizon are the most common among the numerous communication services providers. Telephone service is delivered in several formats; cellular service, voice over internet protocol (VOIP) and traditional service. Cellular service uses communication towers, electrical transmission towers and water towers to place antennas for service delivery. These facilities are located throughout the city. Land lines are serviced through fiber optic and copper wire cables along with cable television and internet services. Most of the services are delivered through subsurface cables. Aerial cables are co-located on utility poles.

Water Conservation

NTMWD provides water and wastewater treatment along with solid waste disposal services for 1.5 million people in over 60 cities and utility districts. Plano is one of thirteen member cities of NTMWD. Member cities have a “take or pay”

system for acquiring water. The maximum amount of water that has been delivered to the city in any one year becomes the minimum amount the city must “take or pay” for the next year. Sometimes, cities do not use all of the water assigned within the contract. If this is the case the city can receive a partial rebate on the unused water; however, the contractual minimum does not change. Though this system can make it difficult for cities to encourage residents to conserve water, it is kept in place to ensure that cities have adequate supply to meet consumer demand. Given recent concerns about water availability, especially during drought periods, and the importance of local and regional water resources, member cities should continue to evaluate the practicality of continuing the “take or pay” system.

Resources to supply the water needs of the Metroplex are an ongoing concern due to continued population growth of the region and weather extremes. Residents and businesses should be encouraged to conserve water where possible. About half of all water consumed is used for landscaping irrigation. Where possible, the use of native plants and those adapted to the North Texas region should be encouraged. Also, education and awareness programs are necessary to inform businesses and residents about the amount of water and practices necessary to sustain landscaping. Excessive watering can have a major impact on the supply.

Infrastructure Maintenance and Replacement

Most of Plano’s water, sewer and storm water infrastructure were constructed in the 1980s and 1990s. It is important to determine the useful lifespan of the utility infrastructure. A maintenance and replacement plan is necessary to repair existing facilities on a regular basis. The plan would help to reduce the cost of maintenance and replacement of utility infrastructure in three ways. First, the repairs would occur before the useful lifespan of the system expires. Service delivery could continue without major interruptions. Second, upgrading a

smaller portion of the system on a regular basis is much less expensive than trying to replace the entire system at once. Finally, older portions of the storm water infrastructure were installed using lesser criteria than those currently applied. New sections of the system with increased capacity could move storm water more efficiently and increase public safety by reducing overflow at inlets and flooding.

Private Utilities

The City of Plano allows private utility companies to locate service delivery facilities within the public rights-of-way. Some utilities are required to have a franchise agreement in order to provide services within the city for a fee. Plano has a Comprehensive Right-of-Way Management ordinance that regulates all construction within the city’s rights-of-way. The ordinance provides for consistency, ensures public safety and mitigates inconvenience in the use of alleyways, sidewalks and streets due to construction work within the city’s rights-of way.

Plano will need to stay abreast of service delivery innovations and impact on the Comprehensive Right-of-Way Management Ordinance. This will require continuous coordination efforts with private utility companies.



Infrastructure replacement near Cross Bend and Independence

Plano has also established development standards that are used to regulate the location of telecommunication towers. The purpose of the regulations is to enhance the ability of telecommunications companies to provide services safely and efficiently. The regulations also help to mitigate the aesthetic impact of the towers on the community.

Objectives for Theme II – City of Organized Development

- ▶ **Objective B.1** Provide and maintain safe, effective water, sewer and storm water systems with adequate capacities to serve the city's current and future needs.
- ▶ **Objective B.2** Systematically improve and replace the water, sewer and storm water infrastructure to ensure ongoing service.
- ▶ **Objective B.3** Encourage city residents and businesses to conserve water.
- ▶ **Objective B.4** Maintain a fair and equitable system of regulatory control over private utilities placed within the city's rights-of-way.

Strategies for Theme II – City of Organized Development

- ▶ **Strategy B.1** Develop and implement a planned maintenance schedule with a one to two year horizon for upgrading and maintaining the water, sewer and storm water system.
- ▶ **Strategy B.2** Educate property owners on how to conserve water and sustain landscaping by providing educational materials within utility bills and on the city's website. Also, provide seminars on sustainability practices.
- ▶ **Strategy B.3** Update the Right-of-Way Management Ordinance as needed to address service delivery innovations.

Theme III – City In Transition

Changing Development Trends

Less than 20% of all land in Plano is undeveloped. The percentage of undeveloped land zoned for residential uses is less than 5%. The Dallas-Fort Worth Metroplex is expected to grow by over 4 million people by 2030. There is an excess amount of land zoned for nonresidential uses and it is reasonable to



Housing on land formerly zoned for non-residential uses at Legacy and Custer

rezone some of it for residential development. Residential development on properties originally zoned for commercial uses will have the greatest impact on sanitary sewer (wastewater) capacity. Upgrades in certain locations may be necessary.

Water infrastructure is not affected in the same way. The water system has been designed to accommodate fire emergencies. As a result, the capacity of water systems exceeds use resulting from both residential and nonresidential development.

Impact Fees

Providing city services to new development can be expensive. The State of Texas allows cities to charge impact fees to developers to help offset some of the cost of constructing infrastructure to serve new developments. The City of Plano charges impact fees for water and sewer infrastruc-

ture. Texas state statutes require that revenue generated from the fees must be used towards the cost of building new infrastructure. It cannot be used to upgrade or replace an existing facility to serve new development. Plano's Impact Fee program was last updated in 2003 and the fees charged remained unchanged from the previous update completed in 1999. State statutes require that the program be updated again in 2008.

The statute requires that each city estimate future land use and intensity and then calculate the costs of new infrastructure needed to accommodate development. Cities cannot charge developers more than the maximum amount calculated to provide the necessary infrastructure. Plano does not charge the maximum fee since new development is expected to help pay for the improvements over time.

With the next update, the city should consider the relevancy of continuing the impact fee program beyond 2008. The reasoning behind the consideration is two-fold. First, nearly the entire water and sewer system is in place, with only 5% still left to construct. Second, the elimination of the impact fees program could be an economic development incentive for Plano. This could make the city more attractive for future development as Plano competes with growing cities that have impact fee programs in place.

Long Range Water Supply Plans

Future supply of water will become an increasingly important issue due to continued population growth and weather extremes. Member cities of the North Texas Municipal Water District (NTMWD) will need to work with the organization to ensure there is enough water to meet the region's needs.

The NTMWD has four projects underway to meet future water needs. The first two projects address short term demand. The first project was obtained in 2006 through the purchase of 18,000 acre-feet/year of water from the Greater Texoma Utility



Lake Lavon, principle source of water for NTMWD

Authority from Lake Texoma. The facilities and pipelines are in place for immediate use of the water. The second supply of water was obtained in October 2005. This plan involves 50,000 to 80,000 acre-feet/year of water from the Sabine River Authority. The water is from the upper Sabine River Basin that includes Lake Tawakoni and Lake Fork. Facilities and pipelines are under design and construction could begin in late 2006. This water supply should be available by 2008.

The second set of projects involves the submittal of applications for additional water resources in the near future. The first application is a water rights permit from the Texas Commission on Environmental Quality (TCEQ) and the United States Corps of Engineers. Approval of the permit is expected within the next 12 months. This would include an additional 113,000 acre-feet/year of water from Lake Texoma. The second application is for a water rights permit from TCEQ for the East Fork Reuse Project that will initially produce 80,000 acre-feet/year of water for NTMWD. This project involves the construction of a 1,800 acre wetland along the East Fork of the Trinity River in Kaufman County. Land has been acquired for the project while the permit process, design and construction are moving forward. Ultimately, the amount of water resulting from the East Fork Reuse project would be equal to that of Lake

Lavon and should be available in 2008 if the permit is approved.

Another issue impacting adequate water supply are delivery points. Plano has currently five delivery points for water entering the city's system. Additional delivery points should be considered, particularly in the western part of the city to address temporary system problems that may occur during an emergency. The city may need to consider an arrangement with another water source in an emergency situation where NTMWD is unable to provide water. If an emergency would occur, the city has 84 million gallons of water in storage tanks. Residents would be asked to stop all landscaping irrigation and conserve water until service is restored.

Storm Water Management

In 1990, the federal government mandated local communities to manage storm water runoff and improve the quality of discharged water entering the natural drainage system. Increased amounts of water are flowing into natural drainage areas due to more land covered by impervious surfaces. This includes roofs of structures and parking lot and roadway pavement that do not allow the ground to absorb water generated from a storm. The excess water collected from urban areas flows into inlets and storm drains that eventually empty into rivers and streams. The increased amount of water can cause flooding of low lying areas and erosion of stream banks.

Another issue of storm water runoff is pollution. The water collects oil, chemicals, fertilizer and pesticides from agricultural areas, landscaping, roof tops and pavement. All of these pollutants enter into the natural drainage system and negatively impact the quality of water in the streams. That same water eventually flows into area reservoirs and is used for drinking, bathing and preparing food.

The City of Plano has adopted a storm water management plan and has a permit with the Environ-

mental Protection Agency (EPA). Each year, the city provides a report to the Texas Commission on Environmental Quality (TCEQ) on its activities to manage storm water and improve water quality in creeks and lakes. This report is a requirement of the permit with EPA.

Plano is also working with the North Central Texas Council of Governments (NCTCOG) on a regional management plan for storm water. The city, in conjunction with other local jurisdictions, participated in the development of NCTCOG's development of the Integrated Storm Water Management Manual (ISWM). The manual addresses water quantity, water quality and stream bank erosion issues.

Erosion Control

Plano has an Erosion Control Ordinance. This regulation has been in existence since the early 1990s with the last update approved by City Council on June 1, 1998. The focus of the ordinance is to reduce and limit the amount of erosion and sedimentation resulting from construction activities. An erosion control plan is required for any land disturbing activity 5,000 square feet or greater in area within Plano. The plan shows the contractor how to control erosion /runoff from the construction site and is prepared in coordination with state permit requirements.



Erosion control along creek near Laurel and Peachtree

The Texas Pollutant Discharge Elimination System (TPDES) permit program is administered by the TCEQ through an agreement with EPA. The EPA still exercises oversight authority over the state and local jurisdictions on storm water issues. Larger construction sites also require state permit coverage and preparation of a Storm Water Pollution Prevention Plan (SW3P). This is for all construction sites greater than one acre in size. Sites over five acres must also submit a \$100 application fee to the TCEQ. The TPDES permit program is in place to ensure that sediment and chemicals used at construction sites such as concrete, paint, solvents and hydrated lime do not leave the area and get into the natural drainage system.

Private Utility Trends

More utility services are becoming deregulated due to the increased number of businesses providing similar services. The deregulation of utilities can lead to further research and development regarding type of services provided and innovations on service delivery.

An example of deregulation is telecommunications. The communications industry has been deregulated for some time. This has led to service delivery innovations such as wireless telephone services and the bundling of traditional land line telephone services with cable television and internet. The results are mixed. Plano has had to develop regulations involving the placement and height of cell towers to balance the need of such facilities with community design and aesthetics. On the positive side, the innovation of three communication services bundled into one conduit means fewer cables in the public rights-of-way along Plano's streets.

Energy Resources

As more nations industrialize and rely primarily on fossil fuels for energy resources, supplies are becoming scarcer. The result has been less fuel available for consumption at higher prices. This situation could impact future urban development



Wind power, example of an alternative energy resource

growth patterns in the Metroplex. Outward expansion may be severely impacted by rising transportation fuel costs.

Another issue regarding fossil fuels is the generation of electricity. The Metroplex already consumes more electricity than it can generate. There is a need for additional electric generating facilities. Most electricity is made through use of coal. This is a finite resource that when consumed, can cause air quality problems. The region is already considered a non attainment area for ozone pollution by the EPA.

It will be important for Plano to work with other cities in the Metroplex to develop solutions that would encourage residents to use alternative means of transportation that would reduce fuel costs, consumption of energy resources dependent on fossil fuels and improve air quality. Examples include the use of bicycle, walking, mass transit and hybrid vehicles for transportation and solar power, wind generation and geothermal energy for energy needs. Future studies are needed to determine potential innovative technologies that can harness these energy sources more efficiently. Though these alternative energy resources may never fully replace fossil fuels, they could help to slow down the use of these resources and improve air quality by decreasing reliance on them.

Objectives for Theme III – City in Transition

- ▶ **Objective C.1** Determine the desirability of continuing the Impact Fee program.
 - ▶ **Objective C.2** Ensure that Plano has the supply of water needed to meet long term needs.
 - ▶ **Objective C.3** Balance sanitary sewer capacity with long term land use requirements.
 - ▶ **Objective C.4.** Protect creeks, public and private property from the consequences of excess storm water runoff.
 - ▶ **Objective C.5** Ensure that the city has temporary water connections to address emergencies.
 - ▶ **Objective C.6** Meet the goals and objectives of Plano’s storm water management plan.
 - ▶ **Objective C.7** Continue participation in regional efforts to establish storm water best management practices
 - ▶ **Objective C.8** Promote multi-jurisdictional efforts aimed at providing for adequate long term energy supplies to serve the region and protect its natural environment.
 - ▶ **Objective C.9** Promote multi-jurisdictional efforts to meet EPA standards for air and water quality.
- ▶ **Strategy C.3** Work with other water supply systems to ensure alternative sources of water in emergency situations.
 - ▶ **Strategy C.4** Implement the city’s storm water management plan, monitor its effectiveness and refine as needed.
 - ▶ **Strategy C.5** Continue enforcement of Plano’s Erosion Control Ordinance.
 - ▶ **Strategy C.6** Provide annual reports of Plano’s storm water management to the regulating authorities.
 - ▶ **Strategy C.7** Continue participation in the development and implementation of NCTCOG’s Integrated Storm Water Manual.
 - ▶ **Strategy C.8** Work with other jurisdictions to study the impact of future growth on long term energy needs.
 - ▶ **Strategy C.9** Evaluate alternative transportation options for the Metroplex along with other cities and counties in the region to improve air quality.

Strategies for Theme III – City in Transition

- ▶ **Strategy C.1** Use the study of the water and wastewater system conducted at time of the impact fee update to determine desirability of continuation of the program.
- ▶ **Strategy C.2** Assess the ability of the sewer system to handle residential uses at locations rezoned for housing. Identify changes required to the existing system to accommodate residential uses.

City of Plano

COMPREHENSIVE PLAN

TECHNOLOGY ELEMENT

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City of Plano

COMPREHENSIVE PLAN

TECHNOLOGY ELEMENT

INTRODUCTION

Basic Premise

To enhance Plano's status as a "City of Choice" for residence, employment, and business location, the City of Plano should lead the process of enabling the community to utilize the opportunities afforded by technological advances. This must include applications of advances in technology for the enhancement of 1) quality of life, 2) competitive business advantages/economic development, and 3) efficient communications.

Relationship of Technology to Comprehensive Planning

Technological advances have frequently resulted in changes to the development patterns, transportation systems, and growth management policies of cities. One of the most obvious technological impacts came with the mass production of automobiles, which led to lower housing densities and suburbanization. Today, suburban sprawl, traffic congestion, and other factors are contributing to densification, mixed-use development, and increased dependence on modern mass transit systems.

Today's cities are also experiencing new challenges and opportunities presented by technological advances, particularly in the communications field. Adaptations to near- and long-term technological advances, some major and some subtle, will be necessary to

continue Plano's success as an outstanding place to live, work, and play. The Technology Chapter sets a basic framework for that to occur.

KEY FACTORS

Quality of Life

"Quality of Life" is often used by cities to define their overall goals or "missions." It is the cornerstone of the "Mission Statement" for the City of Plano. Quality of life implies that a community's residents have a variety of services, facilities, and opportunities available to them to enhance the way they live from day to day. Quality of life issues include services relating to basic sanitary facilities and operations, public safety, libraries, parks and recreation, cultural activities, and education. Services provided by the private sector such as retail stores and shops, movie theaters, and restaurants are also quality of life components. Mobility and accessibility by private vehicles, mass transit, and communications systems also play a major role in one's ability to function successfully in today's society.

There are also some within the community who do not use technological advances effectively, particularly in the area of communications. Their access may be impaired by lack of financial resources, limited knowledge and understanding of technological devices, unavailability of certain technologies where they live or work, or a lack of desire to use such services. These challenges must be noted when developing service programs and operations.

A critical component of Plano's quality of life has been the development and implementation of an effective planning program. This program starts with the Comprehensive Plan as the guide to growth development and redevelopment of the community. The plan has been effectively implemented through a series of regulatory measures, the Capital Improvements Program (CIP), and the Operating Budget. As a maturing city, Plano is facing issues such as infill development, redevelopment, and revitalization. Technological advances may very well enhance the City's ability to effectively accommodate and enhance these opportunities.

When applied properly, technological advances clearly enhance quality of life. Therefore a major concept of this element of the Comprehensive plan is enabling technology to contribute to and benefit the lives of Plano residents.

Business/Economic Development

Much of Plano's success as a community involves its ability to combine a strong economy with residential opportunities. Plano's location in the Dallas metropolitan area, its accessibility via major transportation routes, its skilled work force, and its quality of life have made it a major economic center. Its strong economy has also contributed to Plano's quality of life by providing job opportunities and by strengthening financial resources.

The ability of current and future Plano businesses to remain competitive in the market place will depend on their ability to utilize technological advances to improve their efficiency, product quality, and marketing programs. Much of Plano's future success as an economic center will depend on the ability of its business community to effectively incorporate technology into its operations.

Communications

Efficient and effective communications are at the forefront of our changing world. In recent years, technological advances in communications and information sharing have changed our abilities

and expectations to seek, generate, and receive information quickly and comprehensively. Such advances are likely to continue over the next decade and beyond. Cities that embrace communication enhancements via technological advances are likely to be more successful in meeting the needs of their communities. City rights-of-way will probably continue to provide the primary opportunities for installing technologically advanced communications systems.

Continued expansion of wireless operations will supplement such facilities, but it is not likely to totally replace them. The ability of providers and the City to work, over time, on the effective use of these rights-of-way will be a critical factor. The City will attempt to accommodate private communications facilities when doing so does not inhibit the ability to provide basic services within its rights-of-way.

Enhancing Plano's ability to communicate and share information with various individuals and groups will, in turn improve its effectiveness as a governmental entity. Technological advances should continue to provide numerous opportunities to inform and educate the citizens about issues that affect their daily lives. Communications technologies provide citizens with opportunities to interact effectively and efficiently with local governments. Citizens can provide input on various pending issues and challenges facing decision makers. The inconvenience of certain permitting processes and procedures can be mitigated through the effective use of communications.

Information sharing between Plano and public and private entities is important. This should be done in a manner that minimizes duplication of resources and protects proprietary data, public security, and individual privacy.

O B J E C T I V E S / S T R A T E G I E S

The following section builds on the description of

“Key Factors” to define the City’s technology-related objectives and the key approaches for meeting those objectives. Regular review and monitoring of their effectiveness, particularly in the fast-paced environment of technology change, will be necessary. The City Council, boards and commissions, and staff will use these objectives and strategies in program development and related decisions. They will also be useful to organizations, businesses, and residents in understanding the City’s philosophies and expectations.

The achievement of the objectives will require careful evaluation to ensure that the City’s resources and capabilities are properly used. While the City intends to be pro-active in encouraging the use of technological advances, it must primarily focus on core competencies and services.

Quality of Life

Objectives:

- Enhance the design, development, delivery, and access to public services through the cost-effective use of technological advances.
- Promote communications technology as a means for reducing traffic, improving air quality, and increasing productivity.
- Support reasonable options for those residents limited by circumstance to access technological advances.

Strategies:

- Monitor advances in technology; and employ them if the City can financially and functionally accommodate them.
- Include technological considerations when updating or evaluating the Comprehensive Plan, the Capital Improvements Program, the

Operating Budget and similar documents. Consider adjustments to these documents to ensure that they are consistent with changing technologies and do not unintentionally hamper their use.

- Work with employees to develop transportation management programs that include telecommuting as a means for reducing single occupant vehicular trips to and from work.
- Where feasible, make available public and private facilities and services to extend access to technological advances, primarily information and communication technologies, to residents that might not otherwise take advantage of these advances. For example, the Plano Library System currently makes personal computers with Internet access available to patrons. It also offers basic training on the use of related equipment and data. The emphasis of such programs should be on creating options as opposed to the City providing full service to every home or business in Plano.

Competitive Business Advantages Economic Development

Objectives:

- Ensure that City regulations afford businesses the opportunity to apply technological advances to their operations.
- Promote coordination between the local business community and public entities to share information and assess the impacts of technological advances on both sectors.
- Apply technology to supplement business recruitment and retention programs.
- Promote the development of employee training and education programs as technological advances impact work force requirements.

Strategies:

- Provide for codes and ordinances that enable businesses to gain efficiencies and economies of scale in the market place. This may involve periodic comparisons of technological advances and resulting changes in business activities to the applicability of current regulations. For example, technological advances could impact the design and layout of certain business facilities and the City may find it appropriate to refine development standards to account for such changes.
- Encourage activities that link business leaders with those in local governmental and educational institutions. This can be accomplished through existing venues such as the Plano Economic Development Board and joint forums with local business, governmental, and educational leaders. Technology will continue to change and affect the market place, the local economy, and public resources. Therefore, proactive coordination will be critical to the community's overall success in attracting and retaining businesses.
- Use technologies such as Geographic Information Systems (GIS) to develop interactive programs assisting business prospects with identifying suitable properties and lease spaces. This could include on-line demographic analyses for specified areas.
- Promote flexible regulations for home occupations that allow residents to take advantage of technological advances while protecting the character of residential neighborhoods.

Efficient and Effective Communications

Objectives:

- Accommodate the reasonable use of public rights-of-way for communications while providing for all required public services.

- Enhance the City's ability to share information and coordinate with various public and private organizations through the cost-effective use of technological advances.
- Enhance public participation in and contribution to the decision-making process through the cost-effective use of technological advances.

Strategies:

- Establish balanced and fair rights-of-way policies that preserve the City's ability to provide safe and efficient traffic movement, effective utility operations, and infrastructure maintenance along with opportunities for the placement and maintenance of communications services. Such policies should be monitored in accordance with technological advances and government regulations.
- Explore opportunities to employ technological advances as means for sharing information, data, and other resources between the City and public and private entities. Such programs should be carefully designed to ensure that "sensitive" data and information is protected and that security and individual rights to privacy are not compromised. Cost effectiveness and operational efficiencies for all participants should also be a part of any determination to implement these technological advances.
- Explore techniques such as visualization of development plans, on-line surveys, and on-line permit applications to improve participation and information sharing with the City. The Internet and/or other communications systems should provide information about upcoming meetings, pending projects and activities, and opportunities for citizens to express their views on certain matters. This would increase the public's understanding of how the City functions in one's day-to-day life and strengthen the sense of "community"

City of Plano COMPREHENSIVE PLAN

BICYCLE TRANSPORTATION POLICY STATEMENT 1.0

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Bicycle Transportation Plan



Bicycle Transportation

Policy Statement 1.0

Description

This policy statement provides a description of the bicycle transportation system in Plano along with the major issues affecting bicycle travel. City initiatives to address these issues as well as policies to guide decision makers in the implementation of the Bicycle Transportation Plan are included. The bicycle is considered a component of the multi-modal transportation system found within Plano. As the city matures and neighboring communities continue to develop at a rapid pace, vehicular transportation within Plano could become more congested.

The bicycle is a means of transportation for trips to employment centers, transit stations, schools, libraries, shopping, parks, and recreation facilities. Bicycle transportation can also assist in the region's mandate to improve air quality. Bicycling for recreation

is also important because a well-developed bicycle network is a significant contributor to the overall quality of life in a community.

This policy statement addresses the following objectives and strategies found in the Transportation Element of the Comprehensive Plan.

Objective A.1: Promote regional efforts to improve air quality and address transportation issues in the Metroplex.

Strategy A.2: Work closely with federal, state and regional agencies to provide for a range of transportation options to meet the changing needs of Plano residents.

Objective A.3: Provide Plano residents with a variety of transportation options.

Objective B.4: Promote safe and accessible recreational and destination oriented bicycle use.

Strategy B.8: Develop and maintain a system of bicycle routes and recreational trails for destination and recreational use that lead to cultural attractions and employment areas, mass transit facilities, and residential neighborhoods.

Strategy C.3: Participate in the development and implementation of the North Central Texas Council of Governments (NCTCOG) Regional Transportation Plan and other regional coordination programs.

Background

The City of Plano has a Bicycle Transportation Plan that identifies on-street bicycle routes and shared use paths. The plan was first approved by City Council in 1986 with updates in 1993 and 2001. Many of these facilities are in existence today while others are in the planning and engineering stages. There are three types of designations for bicycle facilities found on the Bicycle Transportation Plan Map:



Shared Use Path

Shared Use Paths

Shared use paths are paved, off-street paths. While they are an essential component of the bikeway network, these facilities are also used by roller skaters, skateboarders, kick scooters, walkers, runners, wheelchair users, people pushing baby strollers, and walking dogs. The majority of shared use paths are located within parkland, but some are also in the road rights-of-way and on private property via easement agreements. The

Bluebonnet, Chisholm, and Preston Ridge Trails are three existing shared use paths that cross major portions of the city. Future plans call for additions to these paths as well as new paths along the Rowlett Creek and White Rock Creek corridors.



On-Street Bicycle Route Directional Blade Signs

On-street Bicycle Routes

An on-street bicycle route is a road or a series of roads identified for bicycle use due to lower volumes of traffic, lower speed limits, or direct connection to neighboring cities' routes. On-street bicycle routes are identified for their strategic connections to shared use paths, schools, libraries, recreation centers, Dallas Area Rapid Transit (DART) bus and rail transit stops, shopping, and places of employment.

On-street bicycle routes have signage to show bicyclists how to navigate through the city primarily away from major thoroughfares. The signage also lets motorists know that bicyclists will be present on those routes.



North Central Texas Council of Governments Regional Bicycle Network Map

Regional Bicycle Network (Regional Veloweb)

This network, called the Regional Veloweb, is proposed by the North Central Texas Council of Governments (NCTCOG) and is intended to link bicycle networks from multiple cities throughout the Dallas-Fort Worth region. The Regional Veloweb is a 1,668 mile network of shared use paths and on-street bicycle routes that are being coordinated to provide bicycle connectivity in the region.

Plano's Bluebonnet and Preston Ridge Trails are designated as a part of the Regional Veloweb along with proposed bikeways adjacent to Rowlett Creek and the DART railroad rights of way that follow the Union Pacific and Cotton Belt Railroad alignments. These bikeways are also

identified in the Collin County Regional Trails Master Plan and a local regional bicycle network plan known as the Six Cities Trail Plan sponsored by the cities of Allen, Frisco, Garland, McKinney, Plano, and Richardson.

Analysis

One major issue regarding bicycle transportation in Plano is crossing the highway systems surrounding the city. U.S. Highway 75 and the Dallas North Tollway provide access to Plano from the rest of the Dallas-Fort Worth region. However, the expressways pose an east-west barrier to bicyclists due to heavy vehicular traffic and turning movements at major thoroughfare intersections with service roads. Likewise, the Sam Rayburn Tollway and the President George Bush Turnpike also make it difficult for bicyclists trying to connect between bikeways in Plano and adjacent cities to the north and south. In order for the Regional Veloweb to function and for Plano's bikeways to interconnect with those in neighboring cities, barrier issues must be addressed.

Another major issue for bicycle transportation in Plano is the available land space for shared use path construction. Paths are primarily built on parkland, and because parkland is limited, the reach of paths is limited. Recently, the city has added some paths in the road right of way, where possible. The city is also making trail connections across private lands and utility corridors that require owner consent and easement agreements. The process of obtaining easements with owners is often a very long one and can be costly.

City Initiatives

In 2012, the city implemented a project to install signage for the on-street bicycle routes. These bike routes span over 168 miles of roadway and are signed with approximately 2,600 signs.

Improvements for east-west connections of U.S. Highway 75 are underway. A project is currently in the engineering phase for bikeway improvements along 15th Street at U.S. Highway 75 to provide an improved connection from the southernmost point of Chisholm Trail along 15th Street under U.S. Highway 75 into downtown. Another project being engineered is bikeway improvements of the Park Boulevard overpass at U.S. Highway 75.



Intercity Bicycle Trail Connection with City of Allen. Plano Mayor Harry LaRosiliere and Allen Mayor Stephen Terrell.

A connection will be made from Chisholm Trail at Enterprise Drive along the overpass to the Parker Road DART station at Archerwood Lane. Recently, a shared use path connection was completed joining the cities of Plano and Allen, north of Legacy Drive, for a crossing under U.S. Highway 75 at Rowlett Creek. Plano installed the

bridge over Rowlett Creek, while the city of Allen installed the tunnel under the DART rail right-of-way.

Additionally, several improvements for north-south connections of the President George Bush Turnpike and the Sam Rayburn Tollway are in the planning phases. One project will connect Chisholm Trail south to Richardson at Alma Drive and the Bush Turnpike. Another project will connect Preston Ridge Trail south to Dallas at Ohio Drive and the Bush Turnpike. Finally, a third project will connect a portion of Plano to Allen and Frisco at Custer Road and the Sam Rayburn Tollway via Rowlett Creek. All three projects involve the acquisition of easements on private land to make the connections.

Policy Statements

The following is a list of policy statements that should be used for implementation of the Bicycle Transportation Plan as described above:

1. Develop and maintain an interconnected network of bikeways, made up of both on-street bicycle routes and shared use paths, as designated on the Bicycle Transportation Plan to provide access to transit, schools, libraries, parks, recreation facilities, shopping, employment, and other cities.
2. Develop and maintain a system of bikeways with appropriate signs, signalization, or grade-separations to ensure safe roadway crossings.

3. Develop and update educational materials that inform motorists and bicyclists about the city's Bicycle Transportation Network and its proper use on a regular basis.
4. Encourage employers to implement trip reduction programs and provide bicycle storage facilities and changing rooms for employees who commute to work by bicycle.
5. Encourage bicycling within the city with a bicycle network map and way finding signage.
6. Encourage the installation of adequate, safe and secure bicycle storage at transit facilities.
7. Designate a law enforcement liaison to the cycling community.
8. Implement enforcement of the Safe Passing Ordinance.
9. Study and evaluate the effectiveness of bikeway crossings of all roadways including highways, and where bikeways interconnect with neighborhoods, transit, education, recreational, commercial and cultural facilities and other bicycle facilities in surrounding cities.
10. Measure the amount of usage taking place on bikeways in the community.



Rezoning Property to Meet Demand

Policy Statement 2.0

Description

This policy paper provides guidance when considering requests to rezone properties. It addresses the following objectives as stated in the Land Use Element of the Comprehensive Plan:

- ▶ **Objective A.4** Provide for an economic base that generates jobs for current and future residents and revenue sources for public facilities, infrastructure, and services.
- ▶ **Objective B.3** Provide for a balanced and efficient arrangement of Plano's land resources that accommodates residency, employment, shopping, entertainment, and recreation.
- ▶ **Objective B.4** Ensure land use compatibility by grouping complimentary land use activities and creating transitions between conflicting activities.

This topic is particularly significant because of the ongoing imbalance between residential- and non-residential-zoned land in Plano. More land is zoned for retail, office, and industrial uses than is likely to develop. When zoned land exceeds demand, zoning imbalances occur and some owners of non-residential property may seek rezoning for residential uses. As Plano matures and property owners recognize this imbalance, the likelihood of rezoning requests increases. "Down-zoning" property from non-residential categories to residential categories is not always appropriate and criteria are needed to guide this process.

Background

Major factors leading to this zoning imbalance include:

Major Corridors

Major expressways and other heavily traveled regional thoroughfares often present opportunities for a variety of non-residential uses due to their regional accessibility and prominence. Plano currently has four such corridors: Central Expressway (U.S. 75), Preston Road (S.H. 289), the Dallas North Tollway, and President George Bush Turnpike (S.H. 190). S.H. 121 is also planned to become a regional expressway and its zoning reflects that condition. These major corridors are typically zoned for retail, restaurant, entertainment, and office uses. Office developments can often achieve major heights depending on height/setback ratios as measured from nearby residential districts. These major corridors contribute significantly to Plano's economy. They also buffer residential areas from noisy traffic. On the other hand, the existence of these corridors can saturate the market with non-residential properties. This reduces the likelihood of development for many of the non-residential properties away from major corridors.

Major Intersections

Plano's grid system of major thoroughfares provides for effective and efficient traffic circulation. It creates more than 50 major intersections at approximately one-mile intervals. Up until the mid-1980's, it was common to zone as many as four corners at each intersection for future shopping centers. Although these intersections seem to provide "perfect" locations for retail uses, market saturation has led to undeveloped sites, partially developed sites, and vacant or underused retail buildings. It is often difficult to develop traditional single-family subdivisions on these sites because of their size and shape limitations and the inability to incorporate these developments into established residential neighborhoods.

Disjointed Development Patterns

Disjointed development patterns often result when retail or office tracts are partially developed and the market will not support completion of original plans. This process often leaves pockets of land that are inappropriate for typical residential development.

Analysis

The above noted issues must be given serious consideration, but they should not preclude efforts to place residential development in areas previously reserved for non-residential uses. Plano's reputation as an economic center and its accessibility will continue to make the city a desirable place to live. As a result, there may be a greater demand for residential development, while the supply of residentially-zoned property decreases. It is also likely that greater densities will need to be achieved to make the conversion of properties from residential to non-residential zoning categories economically feasible. Otherwise, property owners will continue to hold these properties until a non-residential opportunity occurs. Often, this will mean the newer development will attract tenants away from an existing development and threaten its viability. This process, known as "cannibalization," simply moves businesses around without improving the local economy.

As land supply diminishes, properties once considered undesirable will be given greater consideration for new development. These properties may require rezoning or amendments to existing zoning categories to accommodate changing market conditions. The City of Plano will need to make difficult decisions regarding the long term use of these "left-over" tracts. Without careful consideration many of these properties may remain undeveloped and will be a constant source of apprehension for nearby homeowners, developers, and the city.

Policy Statements

Below is a policy statement with a series of criteria to guide consideration of requests to rezone properties or amend the use charts of the Zoning Ordinance in regard to underperforming retail properties.

Evaluate requests for text amendments or for rezoning non-residential properties for residential uses based on the following:

1. *A property must be physically appropriate (in terms of size, dimensions and shape) for residential use;*
2. *The area to be rezoned is an extension of a residential neighborhood and is not separated from the neighborhood by a thoroughfare of Type "C" or larger;*
3. *The area is not affected by adverse environmental conditions such as noise, light fumes, or related nuisances;*
4. *The proposed rezoning or text amendment conforms to the objectives and strategies of the Land Use and Housing Elements of the Comprehensive Plan;*
5. *The rezoning would not result in a shortage of land required for neighborhood retail or service uses;*
6. *The rezoning or text amendments would not jeopardize the land areas considered prime for future economic expansion;*
7. *The rezoning or text amendments would not result in residual tracts that are inconsistent with the Comprehensive Plan;*
8. *The resulting conversion to residential use would provide for an appropriate transition between residential and non-residential uses; and*
9. *The rezoning or text amendment is clearly consistent with the intent of reducing the overall impact of zoning imbalance on the city's Land Use System.*
10. *Consider the impact that the proposed rezoning would have on existing public service facilities (schools, parks, streets, etc.).*

City of Plano COMPREHENSIVE PLAN

HOUSING DENSITY POLICY STATEMENT 3.0

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Housing Density

Policy Statement 3.0

Description

This policy statement provides guidance regarding the density of housing in Plano. It addresses the following objective and strategy statements as found in the Housing Element of the Comprehensive Plan:

- 4 Objective B.3 - Disperse high-density housing across the city in small concentrations except for retirement housing and urban centers.
- 4 Strategy B.4 - Continue to apply the housing density policies in Policy Statement 3.0 - Housing Density when considering the appropriate concentrations of high-density housing.

Plano has developed housing policies that promote predominantly low-density residential neighborhoods while encouraging a mixture of housing

types. Current policies focus on limiting the concentration and proximity of apartment complexes to each other within neighborhoods and between contiguous neighborhoods, as found in the Multi-Family Task Force Study recommendations. These policies do not apply to denser pedestrian-oriented settings such as retirement housing, mixed use developments, and urban centers.

Background

Historical Perspective

The City of Plano has had policies regulating the distribution of high-density housing for many years. The goal is to distribute multifamily developments throughout the city to provide housing options in all residential neighborhoods. The first policy developed in 1981 allowed for ratios of different types of residential development within neighborhoods and along major development corridors. The ratio policy was ineffective because

developers inflated the density of single-family residential projects so that they could qualify for more apartments. The ratio policy regarding the distribution of high density housing was abandoned in 1986 for a new policy based on distance and numerical concentration and was included in the Comprehensive Plan.

Multi-Family Task Force Study

The Multi-Family Task Force was appointed by the City Council in February 1998. The mission of the task force was to study existing and projected multifamily housing in the city and the Metroplex region. The task force members were given the charge to evaluate the city's development policies as they affect the citywide balance of housing types, including the location and amount of multifamily housing in specific areas. This evaluation was to further the city's goals of developing sound neighborhoods and ensuring variety and affordability of housing types consistent with the needs of a diverse population.

Study Findings and Recommendations

The results of the task force study did reveal some interesting facts about multifamily developments. The number of school children generated per acre of multifamily development was about the same as that of single-family residential neighborhoods. Apartments tended to compare favorably with single-family development in terms of tax revenues and cost recovery fees during the first 10 to 15 years of the life of the complex. Apartment developments require fewer infrastructure improvements because the city is only responsible for maintaining water lines that connect to fire hydrants as opposed to the provision of miles of water and sewer lines along with street pavement to serve single-family neighborhoods. Since apartment complexes contain more units per acre, there is a likely increase in the demand of emergency services at one location. Apartment complexes also generate more vehicular trips per acre than single-family

developments. Therefore, major concentrations of multifamily units should be avoided by dispersing apartment complexes throughout the city.

The Multi-Family Task Force Study recommended that the distance and numerical concentration in the Comprehensive Plan be revised. The revised policy increased the distance requirements from 1,000 to 1,500 feet and reduced the number of apartment units from 750 to 500 that could be located within proximity of each other. A 1,200 foot setback was established for all residential development along the State Highway 121 corridor. The task force recommended that the city not increase the amount of land zoned for multifamily uses. The city should consider initiatives to increase the potential for less expensive owner-occupied housing such as patio homes and townhouses.

Analysis

The late 1990s was a time of tremendous growth of all types of residential development in Plano. The high demand for housing was a result of a strong economy adding many jobs to the Metroplex region. Since that time, there has been a significant drop in the construction of new homes and apartments within Plano. The decrease is due to changing economic conditions and the limited amount of land available for residential development. The Multi-Family Task Force Study has remained the primary driver of housing density policies.

The purpose of the high-density housing policy is to avoid large concentrations of garden apartments in one location. Garden apartments should be included within residential neighborhoods along with low-density single-family and medium-density housing such as townhouses and patio homes. This provides a variety of housing opportunities available in the residential neighborhoods throughout the city. The apartment residents would have access to needed goods and services found at the neighborhood centers located at the intersections of major thoroughfares.

Different options of housing choices will be important to accommodate the needs of the changing demographics of Plano's population.

Multifamily housing for the elderly and urban centers should be excluded from the high-density housing policy. Multifamily housing for the elderly is necessary to meet the needs of the aging population of Plano. This type of housing can range from independent living facilities to household care institutions. These facilities usually have less impact on surrounding residential development. They have reduced parking standards and generate less traffic as compared with traditional multifamily developments.

Urban centers are defined as a variety of land uses in a compact location that encourage pedestrian activity. Urban centers can be developed around transit stations and/or near major employment centers. Urban centers have high-density housing to allow for a large number of people to live within the development. This is important as a large population is required to support the businesses located within the development. Urban centers serve as gathering places and activity centers for the community. The household size and pedestrian orientation of urban centers tend to reduce the per-unit vehicular trips. This should in turn reduce the impact on local streets. Urban centers and multifamily housing for the elderly do not require much land. They are also good projects to consider for infill and redevelopment opportunities. However, it is important that service businesses for the residents be provided within these communities or within walking distance to the development.

Policy Statement

Below is a policy statement with a series of criteria to guide the development of high-density housing.

Develop new neighborhoods which are predominantly low- to medium-density housing, yet allow for a mixture of housing types and densities

based on the following policies:

- 1. Maintain low-density housing as the predominant land use in most neighborhoods;*
- 2. Locate medium- and high-density housing throughout the community based on access to major thoroughfares and mass transit opportunities;*
- 3. Distribute high-density housing on the periphery of a neighborhood so that no more than 500 units are located in any one complex or group of complexes with a recommended minimum 1,500 foot separation between developments. High-density housing policies are intended to ensure that minimum separations are maintained between multifamily developments. The dispersion policies should be considered, along with location policies and specific site conditions, in evaluating zoning and development requests;*
- 4. Consider concentrations in excess of 500 high-density units in the periphery of a single neighborhood, when a site's configuration and size limits its use. If a site's boundaries are established by floodplain, thoroughfare alignment, utility lines, or other barriers to development, it may be appropriate to identify a single use for the site. In such cases, it should be demonstrated that adherence to the maximum concentration size would create a residual tract that would be inappropriate for medium- or low-density residential development;*
- 5. Separate multifamily developments of three or more stories from single-family areas by a Type D thoroughfare (four lanes, divided) or greater or other significant physical feature;*
- 6. Policy Statements No. 3 and No. 5 do not apply to urban centers and multifamily housing developments for the elderly.*

City of Plano

COMPREHENSIVE PLAN

INFILL HOUSING

POLICY STATEMENT 4.0

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Village at Legacy – Example of Infill Housing Development

Infill Housing Policy Statement 4.0

The Housing Element of the Comprehensive plan states that infill housing will be the primary source for residential development in Plano in future years. This policy statement provides guidance for decision makers, developers, the public and staff.

The Infill Housing Policy Statement is divided into two sections. Part A includes a set of general guidelines that will apply to all infill housing projects under consideration in any area of the city. Part B includes additional considerations for residential development that falls outside of Plano's typical residential neighborhood format.

Part A – General Guidelines for Infill Housing

Description:

Part A of the policy statement establishes policies to guide decision makers determining when zoning

or rezoning of land for infill sites in general is appropriate. This section of the policy statement addresses the following objective and strategy statements found in the Housing Element of the Comprehensive Plan:

- ▶ **Objective A.1** Provide a variety of housing options for prospective Plano residents.
- ▶ **Objective C.1** Continue to expand Plano's housing stock even as the availability of land decreases.
- ▶ **Objective C.2** Create new housing opportunities that complement and support existing residential development.
- ▶ **Strategy C.2** Evaluate policies and ordinances to ensure that they do not discourage appropriate opportunities for infill housing and redevelopment.

Background:***Definition of Infill Housing***

Infill is defined as development that occurs on a vacant tract or redevelopment of an existing site surrounded by other improved properties. The development can be for non-residential or residential land uses. Infill housing is an example of a residential use that could be developed on an infill tract of land and the subject of this policy statement.

Historical Perspective

There are a variety of housing options available in Plano, ranging from traditional single-family detached homes to townhouses to garden apartments to denser townhouses and apartments found in the city's two urban centers: Eastside Village in downtown Plano and the Legacy Town Center. Despite the choices available to residents of the city, single-family detached units and garden apartments far outnumber other options. They have been the primary components of residential development and residential neighborhoods in Plano over the years.

Changing Demographics

Plano's population is changing. The median age of Plano residents increased from 31 to over 34 years between the 1990 and 2000 Censuses. The percentage of people age 45 years and over increased from 20 percent to 28 percent during that same time period. It is expected that some long time residents of Plano are or will be seeking smaller homes that require less maintenance. Yet, they do not want to leave their social network and places of familiarity.

Plano's population is also becoming more diverse. The percentage of people who identified themselves as a minority race or ethnicity increased from almost 15 percent to over 27 percent between 1990 and 2000. The minority population itself is much more diverse with strong representation of people who are African American or Black, Asian and Hispanic.

The Dallas Fort Worth Metroplex region is expected to add another 4.1 million people in the next 25 years. Plano's proximity to the new growth areas along with educational and employment opportunities and cultural amenities make the city an attractive place to live in the Metroplex.

More varieties of housing options in Plano's typical residential neighborhoods are needed to meet the housing demands of an aging and more diverse population along with the region's increased growth. Infill housing could help meet these housing needs.

Analysis:***Lack of Guidance for Infill Housing***

Some zoning requests for infill housing projects have met with success while others have failed. The city does not have any guidelines or policies to assist with the review of infill housing zoning requests. This policy statement attempts to address that.

Land Available for Residential Development

The amount of land available in Plano for new residential development is decreasing. The Land Use Absorption Table on page 2-7 in the Land Use Element of the Comprehensive Plan notes that less than five percent of vacant land zoned for residential development remains. Most of the vacant tracts of land that remain tend to be small (under 20 acres) and that for one reason or another have not been developed. Some tracts are zoned for non-residential uses while others have zoning that allows for residential development. This is the reason that infill housing is the primary component of future residential development in Plano.

Tri-City Retail Study Recommendations and Infill Housing

The Tri-City Retail Study completed by the cities of Carrollton, Plano and Richardson in 2002 noted that excessive retail zoning was a contributing factor to vacant and underproductive retail centers and the lack of development of many retail zoned properties. Some tracts zoned for non-residential

uses have remained undeveloped for many years. Plano has three times the retail per capita for the nation and it is unlikely that many of these tracts will be developed for commercial purposes. As part of its implementation of the recommendations of the study, the City of Plano amended the Zoning Ordinance to allow residential development within Retail zoning districts by Specific Use Permits (SUPs). This amendment has met with some success and has allowed for residential development to take place on vacant infill tracts.

Benefits of Infill Housing

Infill Housing could provide several benefits for people who live and work in Plano. The city is an employment center in the North Dallas region and a net importer of workers. Infill housing could provide residential opportunities for workers with jobs in the city, thus reducing commuting distances and time.

Infill housing could serve the new residents to the region who want to live close to employment and cultural opportunities. Additional housing will lead to more potential customers for the existing retail and office space, thus increasing sales tax revenues.

There are many Plano residents who desire a smaller home with less maintenance, yet want to remain in proximity to family, friends and familiar places. Independent living facilities for adults age 55 years and older are in great demand in Plano along with long term care housing. Infill housing could be used to meet these market demands for additional housing options in the city.

Policy Statements

The guidelines offered below are intended to assist with the consideration of rezoning proposals for residential infill projects. These guidelines cannot address all of the issues relating to a particular site and should not be considered the sole determinants of zoning decisions. However, they do provide a framework for evaluating infill proposals.

1. Adjacent or in close proximity to existing residential development.

The best tracts of land for infill housing are located next to existing residential developments. The residents of the new development would be able to take advantage of the amenities found in many of the neighborhoods in the city. They would be close to parks and schools on the interior areas of the neighborhood and to the service businesses located at the intersections of the major thoroughfares. Infill housing projects should add to the variety of housing options found in the existing residential neighborhoods throughout the city.

2. Site and configuration to support housing.

Infill housing areas need to be large enough to make a project viable. A site should have a minimum of 3.0 acres and generally be free of factors that could make development difficult such as steep grades and location within a floodplain.

3. Access to existing utilities.

One of the benefits of infill development is the use of existing infrastructure surrounding the property rather than the extension of expensive new lines into undeveloped areas. Some sites may have public utilities in place sized to serve only non-residential uses and may require some upgrades to accommodate residential development. The most common deficiency is sanitary sewer capacity.

4. Positive impact on future economic development.

The reduction of non-residential uses could have a positive impact on a larger scale. There will be one less shopping center or office complex that could be left vacant due to lack of market demand for such uses. Owner occupied housing units will contribute to the city's tax base and provide potential customers for existing retail centers.

Land located along Plano's major transportation corridors such as U.S. 75, the President George Bush Turnpike, the Dallas North Tollway and State

Highway 121 are the city's last prime locations for economic development and should be reserved for non-residential uses. Major employment centers such as Legacy in northwest Plano and the Research/Technology Crossroads in southeast Plano are also considered to be prime components of the city's economic development program.

5. Proximity to Parks.

Additional preference should be given to those locations that have a neighborhood park within a half mile of the proposed development.

Part B – Guidelines for Reviewing Alternative Neighborhood Proposals

Description:

Part B of the policy statement provides additional considerations for requests for rezoning or specific use permits (SUP's) for infill housing in locations that would not be part of Plano's typical neighborhood format. It addresses the following objective and strategy statements:

- ▶ **Objective B.2** Ensure that alternative neighborhood formats provide functional and appropriate environments for residential uses and activities.
- ▶ **Strategy B.2** Establish criteria for housing developed in alternative neighborhood formats. Use these criteria when evaluating rezoning requests.

Background:

Typical Neighborhood Format

The Housing Element of the Comprehensive Plan addresses the fact that not all of Plano's residential development can occur in a typical neighborhood setting. This neighborhood setting is characterized by a land area of approximately one square mile bounded by six-lane divided thoroughfares with school and parks site near the center, low-density housing on the interior, medium- and high-density

housing along the edges, and office and retail operations at the intersections of the major thoroughfares where they serve other neighborhoods, as well. (Table 1 of the Housing Element details the typical neighborhood concept.) So far, most of Plano's infill housing has occurred within its existing neighborhoods. For example, a 15 acre retail tract at the northeast corner of Custer Road and Legacy Drive was recently rezoned for patio homes. Since this development is occurring within a defined neighborhood bounded by four major thoroughfares, it will become part of a typical neighborhood environment.

Alternative Neighborhood Format

When residential development occurs in a location outside of a typical Plano neighborhood, the Housing Element indicates that it becomes part of an "alternative neighborhood format." As noted on Page 5-5 of the Housing Element of the Comprehensive Plan, much of the land needed for future residential development is unlikely to be found within Plano's typical neighborhoods. Sites outside of these settings should not be automatically accepted or excluded. An analysis follows which reviews issues and concerns relating to the creation of alternative neighborhoods, along with a set of guidelines to employ when evaluating requests for residential uses in locations outside of typical neighborhood settings. The guidelines are intended to ensure that residential developments occurring outside of the typical neighborhood format can still provide high quality living environments.

Analysis:

The following factors were used to develop guidelines evaluating rezoning or specific use permit requests for residential uses in alternative neighborhood formats:

Unit Count

Alternative neighborhood projects should have enough units to create a viable living environment. A small isolated group of homes or apartment units does not create a sense of belonging for its

residents nor does it facilitate the efficient provision of city services. An example would be varying a typical residential solid waste route to pick up trash at two residences within a commercial corridor. A small unit count is also unlikely to generate enough return on investment to make the project economically viable. Infill projects will typically need to be medium-(5-12 units per acre) or higher-(12+ units per acre) density housing to create enough units on these smaller leftover sites. Typical low-density housing developments (1-5 units per acre), built on small infill tracts, will not be economically viable. Any single-family developments, attached or detached, with common areas, recreational facilities, and special landscaping will require homeowners associations to maintain these amenities. These associations must have enough members for financial support over time. It is important that zoning changes for infill development result in successful projects.

Relationship to Surrounding Land Uses

An alternative neighborhood should be considered as an option for some but not all properties that have been previously planned or zoned for non-residential uses. Such developments should not be construed as mere afterthoughts. For example, it would be inappropriate to use a left-over tract of land in the middle of an industrial park for a housing project; however, housing incorporated into a well-planned mixed use development could be viewed differently. Pedestrian friendly environments which combine opportunities to live, work, and play in the same location are more appropriate than other types of residential development when located outside of the typical neighborhood environment.

Accessibility/Visibility

Alternative neighborhoods should have access to a major or secondary thoroughfare as do typical Plano neighborhoods. Residential neighborhoods may not require the same level of exposure that some commercial uses do, but they should not be isolated from a city's major travel routes.

Potential for Development of a Property as Currently Zoned

A property should not be rezoned to provide for residential development simply because a developer may be interested in it for that purpose. There should be strong evidence that non-residential development is unlikely to occur or would be unsuccessful due to market saturation and related conditions. An examination of recent development activity such as requests for building permits and occupancy in the area and the relative success of other developments should provide insight into the potential success of utilizing a property as it is currently zoned.

Major concerns should be raised when considering requests to convert properties in major economic development corridors to residential use. These corridors include U.S. 75, the Dallas North Tollway, the President George Bush Turnpike and State Highway 121, three of which currently operate as regional expressways while the fourth is planned to become an expressway. Perhaps State Highway 121 should be considered less of a near term candidate for residential use than the other corridors as it has not had the opportunity to function as an operational expressway. The traffic noise generated by these expressways may also make properties along them bad candidates for residential development.

Mixed use developments that include residential and non-residential uses in a pedestrian oriented environment may be appropriate for these major corridors. Also, undeveloped properties within these corridors lacking access to frontage roads may be candidates for residential development as well.

Special Needs Housing

Alternative neighborhoods may be appropriate for providing housing for those with special needs such as the elderly and persons with disabilities. The elderly component of Plano's population continues to increase and opportunities for providing housing in typical neighborhoods that meets its

needs are becoming more limited. A well designed retirement housing complex with special facilities and services can create a very suitable environment for its residents. The Housing Element of the Comprehensive Plan highlights the importance of continuing to find ways to increase the supply of housing for those with special needs and the use of alternative neighborhood formats is consistent with that intent. It also notes that special needs housing can benefit from having medical offices, pharmacies, shopping centers, and other service providers within walking distance. Therefore, certain non-residential districts may be well suited for special needs housing.

Policy Statements

The guidelines offered below should not be used as exact determinants of the appropriateness for creating alternative neighborhood settings in specific locations. Instead, they should be used as a starting point for considering individual requests.

Specific locations may sometimes present a unique set of issues and opportunities for residential development that cannot be fully addressed by these guidelines. In such cases, those special conditions should be clearly identified and evaluated.

The individual guidelines are as follows:

1. Townhouse (SF-A) and Patio Home (PH) projects or combination of projects should be able to provide a minimum of 25 units to create a substantial development as opposed to an isolated project with a few homes surrounded by non-residential uses. Housing for retirees or other persons with special needs should include a minimum of 50 units which could be built in phases to provide necessary services to accommodate the need of elderly tenants.
2. Alternative neighborhood development should not be within or immediately adjacent to a Light Industrial district (LI-1 or LI-2)

unless separated by a Type “E” or larger thoroughfare (as defined in the Transportation Element of the Comprehensive Plan).

3. Alternative neighborhood development should be adjacent to a Type “E” or larger thoroughfare (as defined in the Transportation Element of the Comprehensive Plan.)
4. There should be evidence of market saturation in the area that a non-residential property is located. This does not necessarily require an actual market analysis. Instead, evidence can include review of recent permit and occupancy data along with existing vacant or under utilized commercial buildings and/or an ample supply of undeveloped properties with similar zoning in the area. The area of consideration may vary depending on whether the property is part of a neighborhood-, community-, or region-serving development.
5. Alternative neighborhood development is generally inappropriate along expressways and in the major development corridors (U.S. 75, the Dallas North Tollway, the President George Bush Turnpike, and State Highway 121). Consideration may be given to mixed use proposals that will integrate residential and non-residential uses into a pedestrian oriented environment. Additional consideration may be given to sites that cannot be accessed from frontage roads. Residential development within 500 feet of the main lanes of an expressway should be arranged as carefully as possible to reduce the effects of traffic noise. Until State Highway 121 has been constructed as an expressway and there has been an opportunity to observe its potential to develop as currently zoned, zoning changes for residential development should be avoided.

Preference should be given to residential development that can be integrated into existing pedestrian oriented urban centers such as Downtown Plano or Legacy Town Center or other appropriate locations. Urban centers are more than just mixed use developments. They are typically 50 acres or more and provide opportunities for residence, work, shopping, and entertainment in a pedestrian setting. Urban centers are probably not going to develop within a typical neighborhood setting. They are more appropriate for alternative neighborhood formats.

6. Additional preference may be given to residential developments for persons with special needs as highlighted in the Housing Element of the Comprehensive Plan. Even greater preference should be given when such developments are within walking distance of medical offices, pharmacies, and/or grocery stores.

City of Plano COMPREHENSIVE PLAN

MIXED-USE POLICY STATEMENT 5.0

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Legacy Town Center

Mixed-Use Policy Statement

Policy Statement 5.0

Description

The intent of this policy statement is to define mixed-use development and its role in Plano. This includes both how this development form can be used to create large scale projects like urban centers and smaller scale mixed-use projects. The policy statement defines what is meant by the term “mixed-use” and describes the characteristics of appropriate locations. It also expounds upon the expected benefits of mixed-use projects and describes the key components necessary for creating those benefits. The policy statement includes guidelines which are consistent with the adopted 2012 interim amendment land use policies found in the Land Use Element of the Comprehensive Plan and the development standards of the Urban Mixed-Use (UMU) zoning district. All of this information is intended to provide guidance to developers and decisions makers considering mixed-use projects.

This policy statement also addresses the following objectives and strategies already in the Comprehensive Plan:

Land Use Element

Objective B.3 Ensure land use compatibility by grouping complementary land use activities, especially those that are mutually supportive, and continuing to implement policies that minimize the impact of potentially incompatible activities.

Strategy C.2 Consider the use of creative and alternative suburban land use concepts, including mixed-use development in appropriate infill and redevelopment areas of the City. Review requests to rezone properties for mixed-use development in accordance with the following:

Finding that the conversion of nonresidential property for residential or another nonresidential use would not adversely impact the planned land use pattern for the surrounding area.

A plan that provides for the integration of vehicular and pedestrian circulation systems, parking, building location, and architectural design into a cohesive development.

Strategy C.5 Work with developers to ensure that infill and redevelopment occur in appropriate locations. In particular, the location and design of urban centers should be consistent with the guidelines established by the Urban Centers Study.

Transportation Element

Objective A.3 Provide Plano residents with a variety of transportation options.

Strategy A.3 Continue to facilitate the development of Transit Oriented Developments (TODS) such as those recommended in the Urban Centers Study.

Housing Density Policy Statement 3.0 which provides guidance regarding the density of housing in Plano.

Background

Although not specifically called mixed-use, a mix of uses - work, home, and commerce - has been commonplace in communities throughout the United States and Europe. Prior to World War II, towns were, out of necessity, designed on a pedestrian scale. In many ways, the combination of uses all within walking distance of each other provided natural synergies that enhanced daily life. In fact, it wasn't until the "modern" zoning code, also referred to as Euclidian zoning, came into common use that land uses were so strictly separated. In doing so, many of the great synergies that come from mixing uses were lost. Mixed-use development can contribute to a variety of objectives, including housing provision, revitalized town centers and more sustainable urban environments. The benefits of mixed-use include:

- **Reducing auto dependence.** Mixed-use areas provide a variety of services and activities within a walkable distance of housing, allowing residents to conduct more of their daily activities without depending on automobiles. Reduced auto dependence especially provides greater independence for seniors and children who can often be marginalized simply because they cannot drive.
- **Increasing travel options.** Mixed-use areas, if well designed, can comfortably support pedestrian, bicycle, transit, and automobile traffic.

Analysis

As Plano begins to incorporate mixed-use into what historically has been a suburban land use pattern, it is important to define how and where this type of development fits within the city. Successful mixed-use projects can be created on many scales and in many locations - in an individual building, a series of buildings grouped together, or as a predominant characteristic across an urban area (urban center). Whatever the scale, there must be a readily identifiable mix of functions which jointly activate the urban form. The effect must be more than just an aesthetic one.

Policy Statements

The following guidelines are intended to assist with the evaluation of proposals for mixed-use projects. These guidelines cannot address all of the issues relating to a particular site and therefore are not the sole determinants of zoning decisions. However, they do provide a framework for evaluating mixed-use proposals. Also, within the City, there are a variety of environments where mixed-use projects can be successful from a neighborhood and corner store serving a neighborhood to a large urban center. This checklist addresses characteristics that generally are achievable in both small - and large-scale mixed-use projects and some specific considerations based on location. It may be possible to fulfill the intent of this policy statement without meeting every guideline.

- **Creating a local sense of place.** Although difficult to quantify, mixed-use areas can create a vibrant sense of place and community. This can be not just on a city-wide scale, but it can also be a tool that helps to differentiate neighborhoods. And, as mentioned above, by supporting pedestrian movement, these areas provide increased opportunities for neighbors to meet and interact. They also provide a wider variety in the types of environments to be found in the city, adding interest and diversity.
- **Creating areas that are active throughout the day.** A mix of uses eliminates the problems of residential areas that are largely unpopulated during the day, and commercial areas that are desolate after business hours. Mixed-use areas have populations and activities that take place throughout the day, making them more vibrant and safe.
- **Increasing housing options for diverse household types.** Mixed-use areas often have higher density housing types, such as apartments and townhouses, close to amenities and add to the variety of housing options available within the city which is especially important to meet the needs of an increasingly diverse population.

Mixed-Use Guidelines Checklist

Location and Context Sensitivity - The project must be sensitive to surrounding developments with regard to height, density, scale and character. Mixing land uses often means developing commercial uses next to or within residential areas. It can also mean developing housing at relatively high densities outside of a traditional neighborhood setting. This can raise concerns about traffic, parking, noise, building design, and other compatibility issues. The site layout and building design should mitigate these issues wherever possible.

Mixed-use projects can work in a variety of settings throughout the city. However, careful consideration must be given to the character of the area and surrounding land uses. The following areas of Plano (as described in the Land Use Element and the Future Land Use Map) are the most likely locations for mixed-use development. Considerations specific to these areas are noted below, followed by more general city-wide guidelines.

Neighborhood Centers

Designated on the Land Use Map as Neighborhood Commercial, Community Commercial, General Commercial and Major Commercial these areas are adjacent to the residential districts that they are intended to serve. They are typically located at major thoroughfare intersections, contain roughly 10-15 acres on each corner and include businesses such as grocery stores, drugstores and small retail and service uses. The center should be oriented to existing or planned pedestrian amenities, such as wide sidewalks, street tree cutouts, pedestrian-scale lighting, and street furnishings. These locations should also support transit stops, where applicable.

Urban Centers

These are large districts (25 acres to 200 acres) of mixed-use development provided at urban densities. They serve both a local and regional population and may include a wide-range of uses from office and commercial to residential. These areas generally have strong internal circulation

(transportation networks) and contain a variety of mutually supportive uses (such as restaurants, residential and office). Because these areas are large enough to form a distinct district, they can generally support higher density and higher intensity uses and may occur in a greenfield development setting or adjacent to an existing urban center. However, no more than two urban center districts should abut and exceed 200 acres collectively in size.

Major Corridors

Designated on the Future Land Use Map as Major Corridor Development and Freeway Commercial these areas are located along expressways. Uses in these areas can vary but will tend to be more auto-dependant than either neighborhood centers or urban centers. The character of these districts is focused on allowing office, commercial, and residential uses to be combined in a single development.

No residential development should occur within 1,200 feet of the centerline of the Dallas North Tollway, State Highway 121, State Highway 190/President George Bush Turnpike, and U.S. Highway 75. No new low-rise multifamily development less than five stories in height should be allowed south of Windhaven Parkway along the Dallas North Tollway between Communications Parkway and Parkwood Boulevard. Mid-rise multifamily development (5 to 12 stories) could be an exception if the surrounding land use is compatible. Regardless, mid-rise multifamily development should only be considered by specific use permit (SUP) within these corridors.

Mixed-Use Development, Location, Context, and Physical Design - When reviewing a mixed-use proposal, it is important to take into consideration the proposed uses and the context of the project with nearby existing development. The mixed-use project should complement surrounding development and should have sufficient access to adjacent roadways and/or transit centers. If the proposed development is located next to residential neighborhoods, there should be a transition area in terms of building heights and setbacks from the housing areas to

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the core of the mixed-use development project. Mixed-use developments should also be of sufficient size to establish itself as a complete new development, or expand an existing mixed-use development.

Buildings within proposed urban centers should be brought close to the street, and have on-street parking, wide sidewalks, street trees, and street furniture in order to create a safe, attractive, and comfortable public realm desired in a mixed-use development.

General Guidelines:

- *If they were to be considered alone, outside of a mixed-use setting, would each use (residential, office, retail etc.) be appropriate in this location? (Also, see residential development guidelines below.)*
- *Is the development a natural fit with the larger surrounding area? Is the project designed in such a way that it is well-integrated with adjacent land uses?*
- *Does the project connect to surrounding developments?*
- *How does the project relate to/impact surrounding development?*
- *Is the juxtaposition of uses complementary? For example, are lower density residential areas buffered from more intensive uses?*
- *Are transitions in building heights (setbacks) and densities provided, in order to avoid abrupt changes in scale, especially when adjacent to residential development?*
- *Does the mixed-use development comply with requirements for adequate public facilities and services?*

- *Does the mixed-use development have direct access to a regional expressway or major thoroughfare, bus center, or rail transit station?*
- *Is the development organized into blocks created by a grid of streets? A variety of street types and block sizes may be incorporated into the street grid including diagonal, off-set and angled streets; however, cul-de-sac and curvilinear streets should be prohibited.*

Note: In many locations, mixed-use development will be a departure from the existing development form. It is advised that early in the project development, proposals are discussed with neighborhood groups and other stakeholders. Where appropriate, the Planning Department can facilitate these efforts.

Multiple Uses/Integration of Uses - Land uses are mixed on-site or are mixed in combination with adjacent uses (existing or planned). The combining of land uses promotes easy access among service businesses, retail stores, and other amenities especially by pedestrians. Furthermore, it is important for urban centers to have a minimum of three use classes (or categories) to provide for a successful development. The use classes should be planned such that there is a primary use with supporting secondary and tertiary use classes. Additionally, the types of uses provided can impact the amount, function, and location of open space areas, the level of activity within the core of the district, parking needs, and affect the types of services provided by the developer and the city.

General Guidelines:

- *Are there a minimum of three use classes provided? Are the uses complementary/synergistic? For example, do the non-residential activities in the development enhance the livability of the residential parts?*
- *Are the uses in a fine grain either vertically and/or horizontally so that the complement of buildings and uses is well integrated?*

- *Are buildings tightly connected or grouped?*
- *If the development is phased, is the first phase sufficient to stand on its own as a mixed-use development?*
- *Are residential uses integrated within the development and not isolated, so that the range of amenities such as shops, restaurants and public spaces are available and easily accessible to residents?*

Density - Mixed-use development generally requires increased density, which allows for more compact development. Higher densities increase land-use efficiency and housing variety while reducing energy consumption and transportation costs. The mixed-use buildings that result can help strengthen or establish neighborhood character and encourage walking and bicycling.

To achieve a compact, walkable form, residential densities must be higher than the typical garden apartment or suburban townhouse development. Smaller block sizes will also result in higher densities, and higher densities increase land-use efficiencies. Apartments and townhouses at lower densities, with all surface parking and large open space areas, may be appropriate and desired at other locations within the city. While they can be designed to "look" urban with buildings brought up to the street and parking in the rear, this design may not contribute to the specialized urban form of a mixed-use development.

For urban mixed-use developments, multifamily uses shall have a minimum density of 40 dwelling units per acre on the project site. Phased development should have an average of 40 dwelling units per acre, and no phase of development should have less than 40 units per acre unless preceded by or built concurrently with another phase which averages out the project density at 40 dwelling units per acre. Mid-rise multifamily development and neighborhood mixed-use zoning districts could be exceptions to this minimum density requirement.

General Guidelines:

- *Is the site developed at an urban density rather than suburban? If multifamily uses are provided, will there be an average minimum density of 40 dwelling units per acre when all phases of the project are completed?*
- *Are the majority of buildings two to three stories or higher?*
- *Do the second story and higher floors contain useable space, instead of being included just for aesthetic effect?*
- *Does the site layout create clusters of buildings to promote a variety of transportation options (pedestrian, bike, automobile, mass transit etc)?*
- *Is the majority of the land area within each block used for buildings and not for surface parking, open space or landscaping?*

Pedestrian Orientation - All portions of the development are accessible by a direct, convenient, attractive, safe, and comfortable system of pedestrian facilities, and the development provides appropriate pedestrian amenities. The design of buildings supports a safe and attractive pedestrian environment.

General Guidelines:

- *Is the development sufficiently compact? Can people comfortably walk between major uses without being tempted to move their car?*
- *Does the physical design of the project and project amenities, such as street furniture, open spaces, landscaping, and parking create an attractive, inviting, and safe pedestrian environment?*
- *Do the physical arrangement and design of the buildings support the pedestrian environment?*

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- *Are there pedestrian walkways through sites, connecting entrances, buildings, and the public sidewalk? Do they form a comprehensive network?*
- *Are the street crossings, drives, and parking areas clearly marked?*
- *Are the sidewalks wide enough to accommodate pedestrians as well as street life (for example a sidewalk café)?*
- *Is landscaping or other buffering provided between parking lots and adjacent sidewalks or streets?*
- *Are the buildings close to the street? Do the buildings help define the street edge?*
- *Do the sidewalks include street furnishings such as street trees, space for outdoor seating, bus waiting areas, trash cans, newspaper vending machines, mail boxes, sidewalk displays, etc.?*

Connectivity - An interconnected street system provides linkages to local shopping, services, housing, and amenities, as well as linkages between adjacent developments. Streets that are disconnected isolate land uses and force all trips, whether by car, foot or bicycle, onto the arterial street system without regard for their ultimate destination. Blocks within a mixed-use development should not exceed 600 feet in length unless the area is the site for a hospital, school, or public space.

General Guidelines:

- *Is there a grid of streets with relatively short blocks and lots of intersections?*
- *Is the development part of a connected street system that serves not just vehicles but pedestrians and bicycles as well?*

- *Is the development connected to the surrounding areas?*
- *Are smaller block lengths and sizes provided in order to provide a tightly connected, pedestrian oriented development? Block sizes should not exceed three acres in size unless needed to accommodate institutional uses and open spaces. Additionally, block lengths should not exceed 600 feet in length.*
- *Is the project served by mass transit?*

Parking - Surface parking lots often cover more ground than the buildings they are intended to serve, particularly in suburban centers and commercial corridors. This unfortunate reality is often a barrier to building compact, pedestrian friendly places. No more than 25% of the parking for the entire development shall be provided in surface parking areas. Surface parking should be placed on the exterior of the overall development or on land that can be used as future development sites. Additionally, if surface parking lots are provided, the size of the parking lots should be limited (such as maximum of 300 spaces) to prevent vast parking areas being provided in the development. Parking may be provided along the internal streets serving the development.

General Guidelines:

- *Is parking designed in an urban form? Is no more than 25% of the parking in surface lots located around the exterior of the development and/or on land scheduled for future development phases of the project? Are good pedestrian connections provided between the surface parking and the development?*
- *Is on-street parking available on the majority of internal streets?*
- *Are the parking and vehicle drives located away from building entrances, and not between a building entrance and the street?*

- *Are street trees or landscaping provided between surface parking lots and the adjacent sidewalks?*
- *Does the project appear to take advantage of opportunities for shared parking? (“Shared parking” means that multiple uses share one or more parking facilities).*

Public Spaces - Public social contact shapes our personal identity, fosters learning and influences our social behavior. Creating public spaces where people have the opportunity to formally organize, such as for a public outdoor market or festival, or informally gather, such as to pursue leisure or social activity, are both necessary and desirable. For example, social greetings, conversations and passive contacts, where people simply see and hear other people, are those social activities that shape our personal identity. This type of activity is dependent on the presence of people in the same physical environment, whether it is a sidewalk or a public plaza. For this to be a positive experience, public spaces need to be safe, attractive, and comfortable. With growth and new development, public spaces must be protected and new spaces created to support the social and cultural fabric of our communities.

Open spaces should be provided to meet the needs of the uses within the development, including at appropriate sizes and scale comparable to the overall density of the development. A development with a large number of residential units may need more open space with a wider range of purposes (dog parks, smaller recreational areas, or gathering areas, for example). Open space may be in the form of courtyards, plazas, formal parks, water features, etc. However, an open space that is too large may fracture the cohesion of the development and serve as an impediment to pedestrians.

General Guidelines:

- *Does the arrangement of buildings, streets, and open space create public spaces?*
- *Does the arrangement of the open spaces fit within the overall street grid system?*

- *Does the development contain “place making” qualities that distinguish it from traditional development?*
- *Does the project provide public space that will realistically be used? For example, the “function” of a public space may include transportation, in the case of the sidewalk; or recreation and socialization, in the case of a plaza or park.*
- *Does the site design enhance and support the public space?*
- *Do the public spaces provide social and leisure activities similar to those provided by parks, schools and libraries in a traditional, suburban Plano neighborhood?*

Human Scale - Although the world is large, we perceive it piece by piece. In urban design, details count. Things look different close up walking at 2 mph than they do from behind a windshield at 30 mph. Everything seen and experienced from the sidewalk - building fronts, signs, lighting, open space should be designed for human interaction at a pedestrian’s perspective.

Building placement may also be used to create human-scale public spaces and provide opportunities for stores and restaurants to display merchandise and allow for inviting outdoor dining areas along the walkways. Buildings should have numerous door and window openings to create interest and provide a welcoming environment which draws people to the area instead of blank walls facing the street that discourage pedestrian activity.

General Guidelines:

- *Do the buildings contain windows and doors on all or most sides?*
- *Does the design of the street space include trees, light standards, benches and other amenities to give the development a human scale?*

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- *Are the building façades designed to a human-scale, for aesthetic appeal, pedestrian comfort, and compatibility with the design character of the district or neighborhood?*
- *Does the design reflect the context of its surroundings or create its own distinct look and identity? This does not mean that it needs to copy or mirror the architectural style of the surrounding buildings (unless that is critical to the historic character of an area).*

Elements to look at:

- *Existing architectural character of the neighborhood/district*
- *Continuity of the building sizes*
- *How the street-level and upper-level architectural detailing is treated*
- *Roof forms*
- *Rhythm of windows and doors*
- *General relationship of buildings to public spaces such as streets, plazas, other open space, and public parking*
- *Signage*

City Of Plano

COMPREHENSIVE PLAN

Glossary

Active Recreational Uses - Park facilities designed for vigorous physical activities including ball fields, basketball courts, tennis courts, swimming pools, etc.

Adequate Public Facilities - The provision of essential services including water, sewer, drainage and thoroughfares at the time of development, and the provision of other facilities in a timely manner. Provision of adequate public facilities is a major factor in review of zoning cases and site plans.

Apartment - Rental unit in a multi-family structure which has more than two units. Apartments are not individually owned.

Arterial Streets - Major thoroughfares in the City of Plano. Arterial streets include those classified as Type "C" (six-lane divided) and higher (AA, T, A, B+, B).

Assessed Valuation - The value of a city's taxable private property as determined by the local appraisal district.

Athletic Facilities - Facilities designed to accommodate active recreational activities including league play and tournaments. Such facilities may be equipped with lights for night games.

Automated Signal System - A system that would allow the Fire Department to control traffic signals along the route of vehicles traveling to an emergency or to a hospital.

Base Flood Elevation (BFE) - The elevation (above sea level) that storm water is expected to reach during a "100 year flood".

Basic Employment - Employment which involves the production of goods generally intended for markets beyond the local area. For the purpose of the Comprehensive Plan, all industrial employment is considered basic.

Bedroom-Based Density Standard - Controlling total density of an apartment project through limits on the number of bedrooms per acre. An all one-bedroom complex would be allowed more units per acre than an all three-bedroom complex in the same zoning district. This approach seeks to control the "people density" of an apartment complex.

Bedroom Community - A community predominantly composed of single-family homes which provides a place of residence for those who work in the central city of a metropolitan area.

Bike Path, Bike Route - See Class I Bike Path, or Class III Bike Route.

Bio-Technology - The application of biological science to industrial uses and processes.

Bond Election - A vote of the citizenry to authorize the issuance of bonds for specified capital improvements.

Buffers - The use of various treatments such as walls, berms, hedges, trees, or a combination of these to shield, screen or provide a transition between uses or between a use and a thoroughfare.

Build-Out - The projected point in time at which 90% of the City's residential land area will be developed, and remaining activity will take the form of infill development or redevelopment. Non-residential development activity is much more difficult to project, but it is anticipated that a significant amount of non-residential properties will remain undeveloped for several years after build-out. For purposes of the Comprehensive Plan, the year 2002 represents the approximate time that residential properties will be 90% developed, and the capacities of Plano's infrastructure are based on a 2010 design year.

Business Recruitment and Assistance Program - A program designed to attract new businesses to the community, retain existing firms, and accommodate their expansion plans.

Campus Office Development - A style of development characterized by low- and mid-rise buildings in a highly landscaped setting similar to that of many college campuses.

Capital Improvements Program (CIP) - A plan which schedules needed land acquisition, facility construction, and improvements by a city. The plan is generally prepared for a five-year time frame, and updated annually. The immediate one-year program becomes a city's capital budget for that fiscal year. Types of projects commonly included in a CIP are water and sewer lines, thoroughfares, drainage improvements, libraries, police and fire stations, parks, recreation areas, and other related public facilities.

Circulation Plan - A plan prepared at the time of zoning which shows general building locations, development intensities, and access in order to demonstrate that a parcel is suitable for the proposed use. Circulation plans are useful in planning median cuts and turn lanes, and in coordinating development with adjacent properties. They replace Concept Plans which were required under the old Zoning Ordinance.

Citizens' Fire Protection Master Planning Committee - A committee appointed by the City Council to assist staff in the preparation of the Master Plan for Fire Protection.

City Council - The City's primary policy-making body, composed of the Mayor and seven at-large elected members. The City Council has final authority on zoning cases and most development requests, and also acts on the resolution which adopts the Comprehensive Plan.

Class I Bike Path - A paved trail for bicycling that is located within one of the City's linkage parks or, if placed along a thoroughfare, is physically separated from the main roadway by a parkway or other appropriate barrier.

Class III Bike Route - A part of Plano's bikeway system that is included within the actual street paving and is designated by special signage. On identified higher volume roadways additional paving width is required to accommodate bicycle and vehicular traffic.

Cluster Housing - A subdivision design using reduced lot sizes and setbacks to group homes closer together while providing for areas of common open space and recreation.

Collector Streets - Includes undivided streets narrower than arterials, but wider than standard residential streets. These are roadways which collect traffic from within residential neighborhoods and distribute it onto the major thoroughfares.

Collin County Community College District (CCCCD) - The CCCCCD was established by the voters in 1985. It currently operates out of a temporary campus in McKinney, and other facilities in Plano and Collin County. A permanent campus is under construction in east Plano, and is scheduled to open in the Fall of 1988. Additional campuses are planned in west Plano and McKinney.

Community Development Block Grants (CDBG) - A program of the Federal government under which funds are given for community improvement projects in targeted low and moderate income areas.

Community Parks - Major parks designed to accommodate passive and active recreational needs of several neighborhoods. They are often combined with athletic facilities to provide a wide range of activities that cannot be offered at the neighborhood level.

Comprehensive Bikeway Plan - A plan, adopted 1985, which describes the City's proposed bikeway network.

Comprehensive Plan - An officially adopted, long range (20-30 years) guide for the future growth, development and redevelopment of a community. It should also provide a rational, objective basis for making land development decisions, help to justify decisions made, and provide a framework for evaluating capital improvements and related budgetary decisions.

Concept Plan - A schematic plan showing buildings, parking and vehicular circulation. Concept plans are useful in planning median cuts and turn lanes, and in coordinating development with adjacent properties. They have been replaced under the new Zoning Ordinance by Circulation Plans.

Condominium - Refers to a type of ownership of real property in which the interior of the unit is owned by an individual, but the exterior of the unit and all land is owned and managed in common with other residents of the homeowners or condominium association. Condominium projects may be comprised of town-houses, stacked multi-family units, duplexes, etc.

Conservation - Preventing or diminishing the effects of deterioration of commercial and residential areas. New uses and infill developments should not negatively impact the character of existing neighborhoods.

Corridor - Heavily traveled linkage and the development along either side that is integrally associated with its identity. Corridors are often created by regional thoroughfares, and provide an excellent opportunity to create a positive visual image of a community.

Cost-Sharing Policies - The City is responsible for reimbursing developers for a portion of improvements that are designed to serve the public as a whole or a large section of the City, and not

just future users or residents of a particular development. The City's share is generally based on a predetermined ratio of "oversize" participation (see Oversize Costs).

Crime Watch Areas - Designated neighborhoods or sections of the City where residents have been organized by the Police Department to monitor potential criminal activity within that area, distribute information on known criminal activity, and improve individual security and crime prevention.

Culvert - A structure that channels storm water under a roadway. Culverts are usually made of reinforced concrete and are generally used for small streams and channels.

Dallas Area Rapid Transit (DART) - The regional public transportation provider for Dallas and surrounding area suburbs, including Plano. DART operates crosstown bus service in Plano, and express bus service to downtown Dallas. DART will also construct and operate a light rail system connecting downtown Plano with Dallas.

Density - The average number of dwelling units per acre in a development. For the purposes of the Comprehensive Plan, densities are categorized as follows:

- Low Density - less than five units per acre
- Medium Density - five to twelve units per acre
- High Density - greater than twelve units per acre

(Also see Bedroom-Based Density Standard.)

"Development Policy Issue Paper" (1984) - An analysis prepared by the Planning Department for the City Council which identified key planning and development issues facing the City, and recommended a program for addressing them.

Dial-A-Ride - Demand responsive transit service where vans or taxis generally provide door-to-door service for patrons who call in for the service. Usually, the service is limited to elderly and handicapped riders.

Diamond Intersection - An intersection constructed to accommodate a future grade separated interchange by placing the main lanes of the higher volume roadway in the location of the future on- and off-ramps. The intent of this design is to leave space for the future overpass, and to minimize construction costs and time. A diamond intersection creates two points of connection between the two roadways and requires two sets of traffic signals, resulting in less efficient traffic flow while the temporary intersection is in place.

Downtown Core - A 300-400 acre area in the center of the Legacy (EDS) development that is planned for intense high-rise office and retail development similar to that of the downtown area of a major city.

Drainageway - A natural or man-made channel which carries storm water.

Durable Goods - Products which will last over a long time period such as equipment, machinery or cars.

Economic Development Information System - A coordinated data base which will assist economic development planning and recruitment programs.

Edge - An identifiable design break between places or different types of development (see Landscaped Edge).

Elementary School - In PISD, a school serving kindergarten (K) through the fifth grade (approximate ages 5 through 10).

Emergency Medical Services (EMS) - Plano's EMS system provides on-scene treatment and stabilization to victims of severe medical emergencies (including accidents, heart attacks, strokes, etc.) administered by highly trained personnel on Paramedic Engine Companies. Prehospital care is directed by a physician at HCA Medical Center of Plano via radio, and is followed by transportation to the closest appropriate hospital emergency facility in a Fire Department Mobile Intensive Care Unit (MICU).

Employment Base - The actual location and number of employees in a geographical area. This base includes employees who work in Plano, but do not necessarily reside in Plano.

Entryway - An identifiable characteristic or feature that establishes a sense of arrival into a community or place.

Escarpment - Steeply sloped areas of exposed rock and/or soils.

Essential Public Facilities - See Adequate Public Facilities.

Expressways - Includes roadways with controlled or limited access which handle regional traffic movements. Expressways include those streets classified as Type "T", "AA" and "A". These roadways may be developed with or without frontage roads.

Extra-Territorial Jurisdiction (ETJ) - That area outside a city's limits within which it may exercise subdivision control, and within which no other jurisdiction may annex land without the city's permission. Boundaries of the extraterritorial jurisdiction are set by Texas law, generally being a radius extending from the existing city limits, and varying in distance based on the city's size.

Facade Easement - A right granted to or sold by the owner of a building to a city or private group as an incentive for property owners to up-grade or maintain the facade of their building in its historic character. The city or private group also has the power to approve or deny any alterations to the facade.

Fare Box Recovery Ratios - The amount of operating costs which are paid for by transit riders' fares. DART has established a 40% fare box recovery ratio, meaning that 60% of the operating costs of the transit system will have to come from other revenue sources.

Federal Emergency Management Administration (FEMA) - The governmental agency whose responsibilities include coordination of the National Flood Insurance Program. Residents of cities qualifying for the program may purchase flood insurance. FEMA works with local governments to ensure that development and redevelopment meets federal criteria.

Federal 503 Small Business Program - A program of the Small Business Administration which provides financial assistance and loans to new and expanding small businesses.

Fire Flow - The amount of water required to extinguish a fire in a particular building while providing adequate protection to adjacent properties.

Five-Year Service and Facility Plans - Plans prepared at the department level which identify major facility construction and improvements, and new or expanded services the department needs or would like to undertake over a five-year period. The plans are an aid to Capital Improvements Programming and can serve as the basis for detailed yearly budget requests.

Flextime - Using staggered work hours to reduce traffic congestion in peak periods as well as to allow employees more flexibility in choosing their work hours.

Floodplain - That area of land lying below the Base Flood Elevation (see One Hundred Year Flood).

Floor Area Ratio (FAR) - A zoning regulation that limits the building floor area of a zoning district to a specific proportion of the lot size. For example, a 100,000 square foot site with a 1:1 FAR would allow a 100,000 square foot building, a 0.5:1 FAR would allow a 50,000 square foot building, and a 2:1 FAR would allow a 200,000 square foot building.

Focal Point - See Landmark.

Force Mains - Those pipes carrying effluent under pressure and against grade from a lift station back to gravity-flow trunk sewers.

Formsetting Elements - The critical components of a community's urban design which establish its image and identity. These elements typically include places, linkages, entryways, edges and streetscape fixtures.

Freeway - A limited access arterial roadway that is region serving, and characterized by on- and off-ramps at intervals of one mile or more.

Frontage Road - A roadway paralleling the main lanes of a major thoroughfare which serves facing lots without giving them direct access to the thoroughfare.

Full Life Cycle Community - A community which provides a range of housing opportunities to accommodate various age group and life-style needs.

Garden Home - See Patio Home.

Grade Separation - An interchange design in which two thoroughfares do not directly intersect one another. Instead, one thoroughfare crosses over or under the other. Access between the two roadways is generally provided by connecting loops or service roads.

Gravity Trunk Sewers - The base lines of the sanitary sewer system (generally 12 inches or greater in diameter) which receive the flow of effluent from several branch lines serving residential subdivisions and commercial developments along it. A gravity system is not dependent on lift stations or other artificial means of forcing flow uphill.

Grid Pattern - A pattern of development where neighborhoods are composed of a uniform system of rectangular blocks and continuous streets with a minimal number of curves, cul-de-sacs, and off-sets.

"Guide for Development of New Bicycle Facilities" (1981) - A set of guidelines prepared by the American Association of State Highway and Transportation Officials to assist state and local officials in the design of bicycle facilities.

Headway - The time lapse between the arrivals of transit vehicles such as buses or light rail trains. Head-ways are typically shorter in periods of high demand (5-20 minutes).

High School - In PISD, a school serving grades 9 and 10 (approximate ages 14 and 15). See also Senior High School.

Historic Landmark Committee (HLC) - The committee, appointed by the City Council, that is responsible for reviewing historic structure designations and for developing codes and ordinances devoted to historic preservation activities.

Historic Preservation Corporation - A proposed non-profit organization which would enable citizens and groups to give tax deductible contributions in support of preservation activities. The corporation would support preservation activities of the Historic Landmark Committee.

Homeowners Association - An organization formed by the residents of a particular neighborhood or subdivision to promote their best interests on matters relating to zoning, development, circulation, safety and the general welfare. In many instances, the establishment of a homeowners association is mandated by the deed and covenants of a sub-division to ensure long term maintenance of common areas and facilities.

Horizon Committee - A sixteen-member body composed of business, development and civic leaders that was established to review the City's land use codes, ordinances and practices, and to prepare a new Comprehensive Plan. The committee completed its work in the Fall of 1986.

Housing and Property Maintenance Codes - Ordinances which establish minimum standards of maintenance for property. Such ordinances cover plumbing, wiring, roofing, structural integrity, property appearance, etc.

Impervious Surface - A surface covered by a building, pavement or other structure that prevents water from penetrating into the soil.

Incentive Contracts - Contracts for roadway improvements which, in addition to penalty clauses for finishing a project late, include additional funds for each day a project is completed ahead of schedule.

Industrial Revenue Bonds (IRB) - See Industrial Review Board.

Industrial Review Board - An agency charged with reviewing applications for tax-exempt industrial revenue bonds to assist desirable businesses in a community. The lower interest rate of the tax-exempt issue makes the locating companies' development costs lower. In Plano, the North Texas Industrial Development Board serves as the Industrial Review Board.

Infill Areas - Undeveloped land areas surrounded by existing developed land.

Infiltration/Inflow - The penetration of water into the sanitary sewer system through damaged or defective pipes and joints, or the undetected connection of storm drains into sanitary sewers.

Infrastructure - See Public Infra-structure.

Inlet - An opening into the storm sewer system, typically located along the outside curb of a street.

Interceptors - Large lines located at or near the end of a sanitary sewer system which receive effluent from several collection lines.

Interchange - The access connection between two thoroughfares. Interchange typically refers to a grade separated condition in which one roadway crosses over another and access is provided by ramps and/or frontage roads to avoid signaling the main lanes of the more heavily traveled roadway.

Joint Utility Location Committee - A committee represented by the various utility entities to ensure a consistent and coordinated approach to the placement of utility lines and facilities throughout the City.

Key Rate - A standard established by the Texas State Board of Insurance for determining the applicable insurance charges for commercial property in various cities based on its fire protection and prevention capabilities. The key rate only affects the City's non-residential insurance charges.

Land Banking Program - The purchase and holding of land in locations well-suited for future development of a particular use.

Land Use Intensity - A general measurement of variation between uses based on the impacts of factors such as noise, emissions, lighting, hours of operation, traffic, population and/or employment, density of residential units, height and mass of structures, and visual compatibility.

Land Use Plan - A map and accompanying descriptions which serves as a general guide for the future land use pattern of the City.

Landfill - A large isolated area suitable for the burial of non-toxic solid wastes.

Landmark - A distinctive object or group of objects that establishes a point of reference; a focal point.

Landscaped Edge - A combination of berms, grass, trees, shrubs and other plant materials placed along the periphery of a development.

Large City Parks - Parks that serve the entire population of a city as opposed to a specific neighborhood or group of neighborhoods. Large city parks include facilities for a variety of activities with particular emphasis placed on natural features and environmental education. They represent the best opportunity to preserve and protect major areas of environmental significance.

Level Of Service (LOS) - A measure of congestion on the roadways. Level of Service is designated by the letters "A" through "F" with "A" being free-flowing traffic and "F" being stop-and-go conditions. Level of Service "E" is the theoretical capacity of the roadway. Level of Service capacities can be measured along roadway links or at individual intersections. The City of Plano desires an LOS of "D" (90% of capacity) or better during peak hours for its thoroughfare network.

Library Development Plan, Revised (October 1985) - A text and map out-lining the future growth and development of Plano's library system, including criteria for services and facilities.

Lift Station - A pumping facility designed to force wastewater flow against grade for sections of the collection system that cannot be served by a gravity flow system.

Light Rail System - A fixed-rail transit system similar to a trolley. Light rail systems are typically at-grade and rely on an overhead wire for power.

Linkage - A connection between places, including paths and corridors.

Linkage/Linear Parks - Narrow green-belts within or along floodplains, drainage channels, and power line easements that are generally unusable for other forms of development. Linkage parks are typically used for hike and bike trails and practice fields. They provide breaks in urban development patterns and connect with other parks in the City's system.

Local Development Corporation (LDC) - A corporation which encourages local business start-up and expansion. The efforts of an LDC are usually targeted to a specified geographic area and may include financial as well as technical assistance to businesses.

Local Street - See Residential Street.

Lot Coverage - The percentage of a lot's total area that is allowed to be covered by the first floor or foundation of a building. For example, if a building with a first floor of 30,000 square feet is placed on a 100,000 square foot lot, the lot coverage is 30%.

Major Earth-Moving Operations - Operations which typically involve the preparation of undeveloped or unimproved land for construction. These include changing or altering the natural grade of the site, removing existing vegetation, or adding or removing soil from the site.

Major Thoroughfares - Includes most six-lane divided roadways in the City of Plano, including streets classified as "B+", "B" and "C". Type "B+" and "B" roadways can carry significant amounts of regional traffic, whereas Type "C" thoroughfares are intended mainly for local traffic.

Manhole - An access point into a sewer or other underground utility to permit inspection and cleaning.

Master Plan - A term sometimes used synonymously with "Comprehensive Plan" to identify the overall plan for a City's (or other entity's) future development. The term also applies to the overall plans of certain departments or functional areas of the City for future facilities and operations. Five-year service plans are based on Master Plans.

MGD - Million gallons per day.

MICROTRIPS - A microcomputer-based traffic forecasting and analysis system. MICROTRIPS simulates the Urban Transportation Planning System (UTPS). Using population and employment data, it estimates the amount of traffic generated. That traffic is then assigned to the thoroughfare network so that areas of congestion and capacity problems may be pinpointed. MICROTRIPS will be used to evaluate the traffic impacts of large zoning cases and site plans.

Middle School - In PISD, a school serving grades six through eight (approximate ages 11 through 13).

Minimum Housing Code - An official set of standards for the maintenance of housing units in a safe, habitable condition.

Minimum Property Maintenance Code - A set of standards for the upkeep of structures and their surroundings in an orderly and presentable condition that, when viewed from the street or adjacent areas, does not detract from the general appearance of a neighborhood.

Monument Sign - A free-standing sign attached directly to the ground as opposed to being supported by one or more poles or other devices.

Mortgage-Backed Housing Bonds - A program by which the City, using its tax-exempt bonding authority, makes low interest loan money available, generally to first-time home buyers meeting certain income restrictions. The loans are usually issued through participating local financial institutions.

Multi-Family - Buildings which contain three or more dwelling units.

Neighborhood Conservation Program - A coordinated multi-faceted program which seeks to preserve homeowner and community investment in neighborhoods. The program monitors neighborhoods for evidence of either public or private facility deterioration, and develops strategies for arresting the decline.

Neighborhood Housing Density Policy - A policy no longer in effect which placed limits on the percentages of medium and high density housing units within a neighborhood.

Neighborhood Organization - See Homowners Association.

Neighborhood Parks - Small park facilities, typically 7.5 to 10 acres in size, designed to serve a single neighborhood of approximately one square mile in area. Neighborhood parks are situated within walking distance of the population, and access to them should not require the crossing of major thoroughfares.

Neighborhood Unit - The standard area of planning measurement for Plano. A neighborhood unit is generally bounded by arterial streets with residential uses located in the interior, and often having a park and school in the center. When higher density residential uses are included, they are located on the periphery of the neighborhood. Commercial uses are located at selected intersections. The neighborhood unit is the basis for several housing policies and for the City's data base system.

Non-Durable Goods - Products which have a limited lifetime such as clothing and household goods.

North Central Texas Council of Governments () - An organization representing local governments in a sixteen-county region that assists in area-wide planning, information gathering, and the general coordination of common goals and objectives.

North Central Texas Industrial Development Authority - A three-member body organized under the Texas Development Corporation Act of 1979 which can issue industrial revenue bonds on behalf of the City of Plano. The Plano Chamber of Commerce serves as its contact agency.

North Texas Industrial Development Board () - An agency which serves as the review body for requests for Industrial Revenue Bonds from companies interested in locating in Plano and other area cities (see Industrial Review Board).

North Texas Municipal Water District (NTMWD) - Organized in 1951, NTMWD is a non-profit, wholesale provider of water, wastewater treatment, and solid waste disposal to its 11 member cities which include Farmersville, Forney, Garland, Mesquite, McKinney, Plano, Princeton, Richardson, Rockwall, Royce City and Wylie.

Northeast Texas Library System () - One of ten geographic divisions in the State of Texas that is responsible for coordinating the sharing of information and materials between local library systems. NETLS is also responsible for distribution of state and federal funds for libraries.

Nursery School - Any facility offering care, supervision or education for children not of required school age (generally age 5 or under) or for school age children during hours in which they would not normally attend school.

On-Site Wastewater System - A system which typically includes septic tanks, cesspools and sewage pits. On-site wastewater systems are generally limited to large lot, rural residential developments where city services are unavailable, and where soil conditions are adequate to prevent contamination of ground water.

One Hundred Year Flood - A flood level which has a 1% chance of occurring in any one year, and which has been adopted by the Federal Emergency Management Agency (FEMA) as the basis for floodplain management.

"Open Space Plan for Collin County" - A comprehensive plan for the protection and preservation of key land and water resources in Collin County. The plan identifies areas of significant natural features, and recommends ways in which the various governmental entities can work together to integrate those features into the growth and development of the County.

Outfall Sewer - Connects the end of wastewater collection systems directly to the treatment facility.

Oversize Costs - The cost of infrastructure improvements that are larger than would normally be required to serve a specific development. For example, if a development is to front onto a proposed major thoroughfare, the developer would be responsible for funds necessary to build a standard collector street and the City would reimburse for the amount above that figure. The justification for

reimbursement is that the proposed major thoroughfare would benefit the community as a whole, in addition to the residents and users of the development itself.

- The existence of more land zoned for certain zoning categories than what will be required to meet projected demand for future land uses within those categories.

Pad Site - A single-user site for a building of 5,000 square feet or less, generally located in a corner shopping center or in a strip development along a freeway.

Paratransit - Forms of transit service other than traditional fixed-route bus or rapid rail. Paratransit includes taxi and shared-ride taxi service, dial-a-ride, carpool and vanpool programs among others.

Passive Recreational Uses - Park facilities designed for the casual, leisurely enjoyment of the user such as nature trails, picnic areas, etc.

Path - A basic route of travel or movement between places (see Link-age).

Patio or Garden Home - A type of single-family detached house on a smaller lot than traditional single-family development. The home may be centered on the lot, or one side yard may be reduced to zero to create a zero-lot-line home. Patio and garden homes are often constructed in a cluster arrangement permitting common open space areas.

Peak Hour - The four consecutive 15-minute periods having the highest traffic volumes. Peak hours (rush hours) also refer to the two- or three-hour time periods in the morning and evening when transit and automobile traffic is the greatest.

Performance Standards - Zoning and subdivision regulations that use measurable criteria to evaluate the resulting effects or characteristics of a particular use or development. Performance standards are commonly applied to industrial uses with limitations on noise, emission, and odor levels. They can be adapted to a variety of uses and development types as long as quantifiable impacts can be defined.

Permeable Surface - That portion of a lot that is capable of absorbing water.

Place - An area or location that is distinguished from others within a city by its function, architectural features, or intensity of development.

Planned Development Zoning (PD) - A designation applied to parcels which are to be developed as a unified whole. The PD designation requires submission of a Circulation Plan so that adequate access to the parcel and its component parts is pre-served. PD zoning is also used when more than one zoning district is combined (such as PD-Office/Retail or PD-Single-Family-7/Single-Family-9) or when the base standards of the Zoning Ordinance are varied (such as additional height and setback restrictions or limiting the number of allowed uses).

Planned Residential Development (PRD) - A development incorporating innovative housing types or preserving environmentally significant features. After detailed site plan re-view, property may be developed to the full density allowed by zoning. (For example, Single-Family-7 property normally develops at approximately 3.8 dwelling units per acre; under a PRD, density can be increased to 5.0

dwelling units per acre.) The developer, in effect, is allowed to gain the density normally allocated to streets and roads in exchange for achieving desired community objectives such as provision of affordable housing or preservation of environmentally significant areas. PRD's may also be developed without increasing the density.

Planning & Zoning Commission - An advisory body of eight members appointed by the City Council to make recommendations on zoning and development requests, comprehensive planning, and special studies and plans.

Plano Design Manual - The official standards of the City's Engineering Department for the preparation of construction drawings for streets, utilities and drainage systems.

Plano Developers Council - An organization of firms who own and/or develop properties in Plano which facilitates communication and coordination between the City and the development community on common concerns and issues.

Plano Economic Development Board, Inc. () - A committee formed by the City, the Plano Independent School District and the Chamber of Commerce to promote economic development efforts. The Comprehensive Plan suggests that the PEDB be the policy making body for economic development decisions, and be assisted by a small professional staff in its efforts.

Plano Homeowners Council - An organization consisting of representatives from the various homeowners associations in Plano that provides for the sharing of information and ideas between them. The Homeowners Council also coordinates with the City on matters relating to the growth and development of Plano.

Plano Independent School District () - The public school district serving most of Plano's geographic area. PISD provides instruction from Kindergarten through Grade 12. Other public school districts serving portions of Plano include Lewisville (LISD), Frisco (FISD), and Allen (AISD).

Plano Transit Study/"Plano Transit Element Working Paper on the Evaluation of Transit Potential and Concept Plan Development" - A preliminary analysis of public transportation issues prepared by and Associates in conjunction with the development of the Comprehensive Plan.

Plat - A survey of the boundary of a tract of land, subdivision or individual lot, dedicating all public rights-of-way and easements affecting the property. Plats must be approved by the Planning & Zoning Commission (see Subdivision).

Pole Signs - A free-standing sign generally mounted on a single pole and used to identify business operations.

Police Assembly Point - A location used only for the assembly and deployment of patrol personnel.

Police Headquarters Facility - The central station, or facility, which can accommodate the full range of police operations including general and administrative offices, communications center, prisoner detainment, walk-in service for the public, storage and maintenance of equipment, and assembly and deployment of patrol personnel.

Police Satellite Station - A police station that provides for assembly and deployment of patrol personnel, walk-in service for the public, and general offices.

Pre-School - See Nursery School.

Preservation - The restoration of a neighborhood or business area to its appearance at a certain point in time; generally used in conjunction with historic district and historic property designation. Areas designated for preservation have rigid property maintenance and appearance guidelines, and infill uses not in keeping with the prevalent architectural style should not be allowed.

Private Providers of Education - Educational facilities owned and/or operated by individuals, corporations, foundations, or non-profit organizations such as churches.

Public Hearing - A formal consideration of a zoning case or other related matter by the Planning & Zoning Commission or City Council in which time is set aside for concerned citizens to come forward and express their opinions on the proposal.

Public Infrastructure - Permanently installed facilities, generally placed underground or at-grade, which form the basis for the provision of City services. Typically included are thoroughfares, bridges, water and sanitary sewer lines, drainage channels, and storm sewers.

Redevelopment - The clearing of a blighted or severely deteriorated area and replacing it with new commercial or residential development.

Regional Thoroughfares - Includes roadways which handle significant amounts of through regional traffic, including Types "T", "AA", "A", "B+" and "B".

Residential Cell - See Neighborhood Unit.

Residential Streets - Includes Types "G" and "H" thoroughfares. Type "G" is the standard residential street in Plano, with a 50-foot right-of-way. Type "H" streets are intended for estate type development.

Response Time - The amount of time that expires from the receipt of a request for police, fire or emergency medical assistance until arrival upon the scene.

"Retail Corner Guidelines" - A set of design criteria, adopted by the City Council in October, 1985 to assist in the review of development proposals for retail centers.

Retail Employment - Employment which involves the selling of goods.

Retention/Detention System - Methods of slowing or containing storm runoff from one or more parcels of land during periods of heavy rainfall. Retention ponds hold water indefinitely, while detention ponds hold water briefly during a storm and release it at a predetermined rate to reduce runoff concentrations.

Retirement Housing - A specific housing type described in the Zoning Ordinance that is reserved for persons over age 55, and that includes special amenities for the elderly. Other projects targeted toward the senior citizen community may be developed under traditional zoning districts, however.

Revitalization - Upgrading a deteriorating or deteriorated neighborhood or commercial area. Various techniques are used in revitalization of an area, but usually existing structures are retained and existing infrastructure is upgraded.

Revolving Fund - A pool of loan funds which are used to restore and revitalize deteriorated or historic structures. Proceeds from the sale of structures and/or loan payments are returned to the fund so that it becomes a continual source of loan money.

Right-of-Way - The publicly owned space necessary to accommodate the construction and maintenance of a street and its associated facilities, including pavement, curbs, utilities, drainage facilities, sidewalks, medians, and parkways.

Sanitary Sewer - A pipe or series of pipes that transports effluent from individual homes and businesses to treatment facilities.

Screening Walls - Reinforced masonry walls, generally six to eight feet in height, used to separate certain types of uses from residential uses. Screening walls are also installed along major thoroughfares between the roadway and paralleling alleys and/or the rear yards of residential lots. They are mainly intended to decrease visual and noise impacts between uses.

Secondary Thoroughfare - A four-lane divided or undivided through street that provides local traffic an alternative route to major thorough-fares.

Sedimentation - The process by which soil and surface materials are removed by storm run-off and deposited downstream.

Senior High School - In PISD, a school serving grades 11 and 12 (approximate ages 16 and 17).

Service Employment - Employment in businesses that provide personal services. Most office employment in areas such as finance, insurance, and real estate is classified as service-related.

Setbacks - The distances away from lot lines, zoning district lines, or other specified boundaries that must be observed in the placement of buildings.

Shared-Ride Taxi Service - A service where patrons call a taxi for transportation to and from a fixed point, usually bus stops. The taxi may pick up and discharge other passengers during the trip.

Siltation - The build-up of debris and sediment in creeks and channels which reduces their flow capacities.

Single-Family Attached Unit - See Townhouse.

Single-Family Detached Unit - A dwelling which is designed for and occupied by not more than one household, surrounded by open space or yards, and which is not attached to any other dwelling by any means.

Site Plan - A detailed drawing of construction proposed on a site including information about the building footprint, utilities, topography, parking, access, etc. Site plans must be approved by staff or

by the Planning & Zoning Commission and the City Council before construction may begin on a tract.

SMSA (Standard Metropolitan Statistical Area) - The traditional urban component for detailed comparative analysis by the United States Bureau of the Census. SMSA's include cities of greater than 50,000 and surrounding communities that have a direct economic relationship to them. SMSA's have recently been re-placed by CMSA's (Consolidated Metropolitan Statistical Areas), which have geographical boundaries with more flexibility.

Solid Waste Transfer Station - A facility at which solid waste from local garbage collection vehicles is accumulated, compacted, placed on larger vehicles, and transported to landfill sites.

Special Purpose Park - A park providing for a single function or activity, either passive or active, with no specific service area. Examples include the Plano Municipal Golf Course and Haggard Park in downtown Plano.

Specific Use Permit (SUP) - The granting of a particular use on a site while maintaining its base zoning. In Plano's Zoning Ordinance, each district has a list of those uses allowed by right and those that may be permitted if determined appropriate following public hearings before the Planning & Zoning Commission and City Council. An example is the granting of an SUP for a child care center in a residentially zoned district.

Specification Standards - A system in which requirements for subdivision improvements or engineering design are specifically spelled out in design manuals, drawings, and ordinances, and in which substitutes are generally not accepted.

Spring Creek Parkway East Area Study - An evaluation, prepared by Kimley-Horn and Associates and by Harland Bartholomew and Associates, of alternative land use and transportation plans for an area in northeast Plano bounded by Spring Creek Parkway, Rowlett Creek, Bowman Branch, and Central Expressway (U.S. 75). The study included components such as a future DART terminal, a Collin County Community College campus, and a civic center.

Spring - A proposed mixed-use development to be located due north of Collin Creek Mall. The 160-acre site was designated by the Plano Horizon Committee during preparation of the City's Comprehensive Plan. Spring Creekwalk is proposed to stimulate economic activity, and to provide a special image and identity for Plano.

State Department of Highways and Public Transportation - An official department of the State of Texas, governed by the Texas Highway Commission, that is responsible for the construction and maintenance of designated State highways. It also has the responsibility for certain nationally designated roadways such as U.S. 75.

Storm Sewer - A drainage facility that collects and transports storm run-off underground to the main channels or tributaries of a water-shed.

Fixtures - Special details that are part of the overall character of a city, and are within the immediate view of pedestrians and passengers of vehicles. Examples include lighting, signage, street furniture, paving, sidewalks, etc.

Strip Commercial Development - Commercial development which is placed along the frontage of roadways in a manner unrelated to surrounding development, and which lacks adequate cross access. Strip commercial development is typified by portions of the Avenue K Corridor in Plano, and is contrasted with the preferred land use pattern of placing retail at intersections and within unified developments.

Structured Parking - A parking facility which is constructed above or below the surface elevation of a site through the use of man-made support and foundation structures.

Subdivision - The legal platting process of creating separate parcels for the purpose of sale or development. The term more commonly refers to a specific group of lots or home-sites established by the platting process and designated or advertised with a common name (see Plat).

Subdivision Ordinance - Local regulations establishing standards and procedures for the creation of building sites from larger or undeveloped tracts of land, and including provisions for the installation and cost allocation of streets, utilities, drainage facilities, and other necessary improvements.

Tax Abatement - A taxing unit grants full or partial tax exemptions to owners of property within a reinvestment zone as a stimulant to private development.

Tax Base - The total assessed value of all land and structures located within a city, school district or other jurisdiction.

Tax Incentives for Historic Preservation - A program developed to encourage restoration of historic structures by reducing taxes on the value of the improvements made to the structure, and/or reducing taxes on the value of the structure itself.

Tax Increment Financing - The financing of improvements in a re-investment zone through the increases in taxable value following enactment of the program.

Taxable Value - The tax base of a jurisdiction minus all exemptions for homesteads, non-profit organizations, etc.

Texas Employment Commission () - The state agency responsible for maintaining employment statistics and records, and for assisting persons seeking employment.

Texas Turnpike Authority (TTA) - The agency responsible for construction and maintenance of the State's self-financed, pay-for-travel roadways, including the Dallas North Tollway.

Thoroughfare Plan - A map of Plano's existing and future system of thoroughfares by type, prepared in conjunction with the Comprehensive Plan.

Thoroughfare Standards Ordinance - An officially adopted City document that identifies minimum requirements for the design and placement of roadways, sidewalks, and related public and private improvements.

Townhouse - A type of housing in which one- and two-story units are placed and attached side by side, but not stacked on top of one another. Units can be for rent or owned fee simple or as

condominiums. Plano's single-family attached district is designed for townhouses on individually platted lots with frontage on a public street.

Traffic Impact Analysis (TIA) - Study of the traffic to be generated by proposed developments. The effects of additional traffic on the thoroughfare system are measured against the system's capacity. TIA's are conducted for both zoning and site plan review. Applicants must conduct TIA's for developments meeting certain threshold traffic generation levels, while City staff conducts analyses for developments under the threshold. Mitigation measures are required for projects which overload the thoroughfare system.

"Transportation Element Technical Memorandum" - A preliminary analysis of Plano's transportation system prepared by Kimley-Horn and Associates (KHA) in conjunction with the development of the Comprehensive Plan.

Transportation Improvements Program (TIP) - A schedule of roadway construction and improvement projects ranked in order of priority and suggested year of construction. The TIP is developed for five-year intervals and is updated annually.

Transportation Systems Management (TSM) - The name given to a number of actions which may be taken to improve the transportation system at low cost (when compared to the alternative of new roadway construction or expansion). TSM actions can include more efficient traffic signalization, double left-turn lanes, free right-turn lanes, carpool and vanpool organizations, and flextime arrangements, among others.

2010 Design Year - See Build- Out.

Two-Feed Water System - The provision of more than one water line connection to a development to ensure that damage to one source of water would not leave the development unprotected in case of a fire emergency.

Unfunded Extensions - Portions of the Dallas Area Rapid Transit (DART) service plan that are not presently included in its long-range financial program. The unfunded extensions are included on the plan as potential routes if additional financial arrangements can be made.

Unit-Based Density Standard - Controlling total density of an apartment project through limits on the number of units per acre. An equal number of units per acre is allowed whether the complex is comprised of all one-bedroom units or all three-bedroom units.

University of Texas at Dallas (UTD) - Located in Richardson, UTD provides junior and senior level undergraduate instruction and a wide range of graduate programs. An engineering school was recently approved for the campus.

Urban Design - The process of ordering a community's natural and manmade features to establish its visual image and identity, while creating a development pattern which makes the community understandable to residents and visitors.