THE CITY OF SAN ANGELO, TEXAS

San Angelo Comprehensive Plan

Adopted December 2003

prepared by

ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

Parks and Recreation

Community Facilities

TABLES

Parks and Recreation

Community Facilities

Downtown Enhancement

ILLUSTRATIONS

Annexation

Utilities

Community Facilities

Downtown Enhancement

INTRODUCTION

San Angelo is located in West Central Texas between the hill country to the southeast and the rolling plains to the northwest. This community of approximately 90,000 residents has a strong sense of history and provides for a variety of cultural and recreational opportunities. Three manmade reservoirs are located in the San Angelo region, and the Concho River spirals through the heart of the City. Due to its distinctive location and characteristics, San Angelo is commonly referred to as an "oasis" and faces unique challenges as it enters into the 21st century.

The San Angelo Comprehensive Plan is a 20-year master plan intended to serve as an official public document, adopted by the City Council, to guide policy decisions relating to the physical development of the community. In general, the plan indicates how the community desires to develop and redevelop over the course of the next twenty years. The comprehensive plan is a physical plan, it is long-range, it is comprehensive, and it is a statement of the goals, objectives and implementation actions of the local government. The comprehensive plan is a proactive tool that directs the City along a clear, yet challenging path of specific actions intended to achieve the desired results envisioned by citizens and the leadership of the community.

Through Chapter 219 of the Texas Local Government Code, the Texas Legislature provided the following guidance to cities maintaining long-range development plans:

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

State statutes enabling long-range urban planning by Texas cities also leave it up to these municipalities to determine what topics will be covered in their plans. Chapter 219 advises that a comprehensive plan may:

1. *Include but is not limited to provisions on land use, transportation, and public facilities;*

2. *Consist of a single plan or a coordinated set of plans organized by subject and geographic area; and*

3. *Be used to coordinate and guide the establishment of development regulations.*

DEVELOPMENT OF THE COMPREHENSIVE PLAN

Citizen involvement is the cornerstone of the comprehensive plan. Effective mechanisms for the involvement and debate of citizens were an essential part of the planning process. Through strong community involvement, the comprehensive plan incorporates the community's values in terms of quality of life, character and scale of development, urban form, aesthetic appeal, and how new development should be integrated with the existing and future city fabric. An extensive program of community meetings was carried out to insure that the needs of the community are met. These meetings included a citywide community forum, seven "community area" meetings held in different locations throughout the city, and an exposition at the San Angelo Museum of Fine Arts for six weeks at the end of 2001. Key person interviews were also conducted with elected and appointed city officials. Public hearings were held by the Planning Commission and City Council prior to adopting the plan. At each of these opportunities for public review, input from citizens in attendance was carefully documented and considered in the drafting of the final plan.

The process required to draft a comprehensive plan is often more valuable to the community than the plan itself, both for small and large cities, since the plan is ultimately only a snapshot in time. The planning process involves major community decisions about how much and where the city will grow, what the nature of that growth will be, and whether the community can afford to provide the necessary public services and facilities to support this growth. This can lead to charged discussions about what is "best" for the community and how everything from taxes to "quality of life" could be affected. The plan includes a vision with specific goals and objectives that assess the opportunities and challenges facing the City; identify important policies, strategies and actions to be taken; and, set priorities for an implementation program that emphasizes practical results.

The San Angelo Comprehensive Plan is the result of countless hours of consideration and input from the community's residents and leaders. Key participants in the development of the plan update included:

- The San Angelo Planning Commission, supported by the City's planning and management staff, who provided overall review and monitoring of the planning process and acted as a liaison between the City's Boards and Commissions and the Consultant Team;

- Key stakeholders and leaders in the community who offered their insight and suggestions;

- Local public and private agencies such as the San Angelo Chamber of Commerce, Angelo State University and Goodfellow Air Force Base; and,

- The Mayor and City Council who, as the City's ultimate decision-making officials, were involved at key stages to insure that the resulting plan would fulfill their expectations and requirements.

Frequent meetings between members of these groups and the planning consultant were held to discuss and develop the key aspects and direction of the plan. The Planning Commission was involved throughout the process to identify issues, discuss alternatives and solutions, and determine needs and priorities. They performed a key role in making decisions and choices that shaped the form and detail of the plan. As the City's chief governing body, the City Council adopts the Comprehensive Plan and directs city government to implement its policies and carry out its recommendations.

ABOUT THE SAN ANGELO COMPREHENSIVE PLAN

A comprehensive plan contains many components and serves numerous functions such as providing information, identifying existing conditions and characteristics, establishing goals and objectives and recommending implementation steps. The plan is the definitive source of information regarding existing and future conditions and characteristics of the community. A thorough understanding of the community's past, present, and future is needed to formulate realistic goals and objectives, workable policies, and effective action plans. The San Angelo Comprehensive Plan is organized into 12 individual plan elements:

- Chapter 1 Introduction;
- Chapter 2 Community Vision;
- Chapter 3 Demographics;

- Chapter 4   Environmental Resources and Analysis;

- Chapter 5   Transportation;

- Chapter 6   Land Use;

- Chapter 7   Annexation;

- Chapter 8   Utilities;

- Chapter 9   Parks & Recreation;

- Chapter 10 Community Facilities;

- Chapter 11 Downtown Enhancement; and,

- Chapter 12 Implementation.

THE IMPORTANCE OF PLANNING FOR THE FUTURE OF SAN ANGELO

Planning is the process of establishing goals and objectives, and determining the means by which these ends may be achieved. It is a dynamic process that must be continuously monitored and renewed as changes occur. A *Comprehensive Plan* is long-range and general, but focused on physical development, and comprehensive in relating physical development proposals to the basic policies of city government. The city's comprehensive plan must be flexible in responding to changing conditions and needs, yet steadfast in its vision and support for the community goals and objectives.

Local planning draws the attention of the local legislative body, appointed boards and commissions, and citizens to the community's major development problems and opportunities – whether they are physical, environmental, social, or economic. A plan gives elected and appointed officials, in particular, an opportunity to step back from their preoccupation with pressing, day-to-day issues and to clarify their ideas on the kind of community they are trying to create by their specific decisions. The planning process provides a chance to look broadly at programs a local government may initiate regarding housing, economic development, public infrastructure and services, natural and manmade hazards, and environmental protection, and how these relate to one another. A comprehensive plan represents a "big picture" of the community, one that can be related to the trends and interests of the broader region as well as the state.

Planning is often the most direct and efficient way to involve members of the general public in shaping the community they want. The process of plan preparation, with its attendant committee meetings, workshops, community forums, and public hearings, permits two-way communication between citizens and local government officials as to a vision of the community and the details of how that vision is to be achieved. In this respect, the plan is "a blueprint of values" that evolves over time. Local planning results in the adoption of a series of goals and policies that, ideally, should guide the local government in administering regulations like zoning and subdivision controls; in the location, financing, and sequencing of public improvements in the community; and, in guiding redevelopment efforts. In so doing, it may also provide a means of coordinating the actions of many different agencies within the local government itself. Apart from the local government perspective, local planning also has direct benefits to the private sector by

stating the City's intentions as to its physical development and infrastructure investment, which sends a signal to the private landowner.

There is a multitude of reasons why cities should plan. Among them are to:

+ Maximize community strengths and minimize community weaknesses;
+ Protect property rights and enhance property values;
+ Provide adequate public facilities and services;
+ Balance economic growth with quality-of-life issues; and,
+ Avoid unmanageable concentrations of population.

RELATIONSHIP BETWEEN PLANNING AND ZONING

The comprehensive plan should not be confused with zoning. The plan is a general guide for the long-range growth and development of the entire city. Zoning is a legal mechanism enacted by the City whereby specific parcels of land are classified as suitable for particular land uses. The plan provides the legal justification for development regulations but has no practical effect on its own in the absence of such regulations. As stated in Chapter 219 of the Texas Local Government Code, *a municipality may define, in its charter or by ordinance, the relationship between the comprehensive plan and development regulations and may provide standards for determining the consistency required between a plan and development regulations.* The San Angelo Comprehensive Plan provides the vision, goals, objectives and actions necessary to achieve the City's desired urban form over the long term. Zoning is a tool used by the City to influence and direct development on individual properties on a much shorter-term basis so that, taken together, these developments will result in the type of community that San Angelo desires.

A CONTINUOUS PLANNING PROCESS

The San Angelo Comprehensive Plan is a principal part of the City's overall planning process, which involves all facets of the community. The plan is only one important element of the city's current and long-range planning program. The plan represents an important step toward achieving the vision and desired goals of the community.

The plan is not considered to be a static document, but rather is the result of a continuing process to gather and evaluate data and make informed decisions based upon constantly changing conditions. As such, the plan is intended to be reviewed annually, and updated at periodic intervals to maintain its validity and applicability to current conditions and characteristics of the community. At a minimum, the plan should be updated every five years to ensure that it reflects the vision and direction of the community.

THE SAN ANGELO PLANNING AREA

Location

San Angelo is one of the largest cities in West Central Texas. It is also very near the geographic center of Texas. West Texas cities tend to be widely dispersed and San Angelo serves as the center of commerce, government, medicine, and religion for an expansive area. The nearest cities of significant size include Abilene, approximately 91 miles to the northeast, and Midland/Odessa, which is approximately 112 miles to the northwest. San Angelo is one of the largest cities in the United States that does not benefit from direct access to an Interstate Highway. U.S. and State Highways provide excellent access to the area from Interstate Highway 10 to the south and Interstate Highway 20 to the north. San Angelo's location within the State of Texas is shown in **Figure I-1**.

FIGURE I-1
LOCATION MAP – SAN ANGELO
San Angelo Comprehensive Plan
San Angelo, Texas

Source: Wilbur Smith Associates
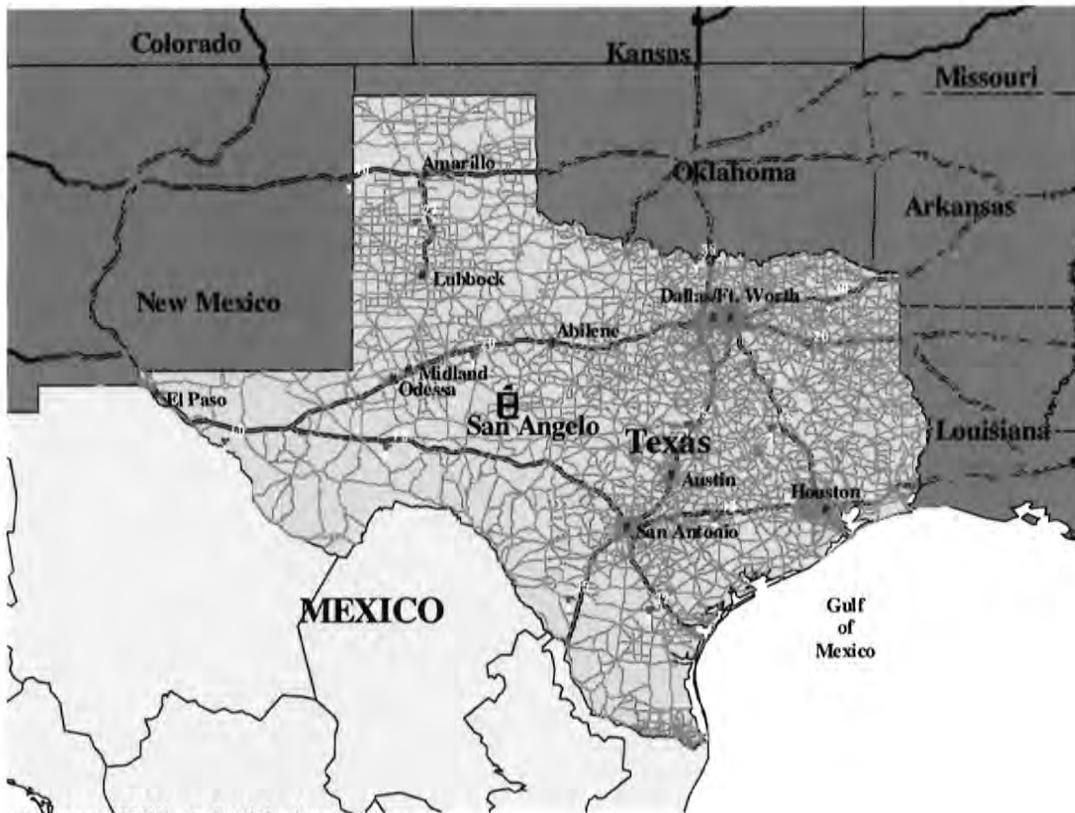
San Angelo is considered an "oasis" due to many unique physical characteristics that are not found in other West Texas cities. Most important are the numerous water features that include the Concho River and three major manmade reservoirs within or bordering San Angelo's City Limits. San Angelo sits at the confluence of three tributaries of the Concho River, which is the geographic focus of the urbanized area. Like other rivers in central areas of Texas, the Concho River is a geologically "young" river characterized by a narrow channel and relatively clear, sediment-free water. The Concho River, as well as the three reservoirs which are fed by tributaries of the Concho, provide a significant fresh water supply (a luxury that is very scarce in West Texas) and a multitude of recreational opportunities. San Angelo straddles the western edge of the Edwards Plateau (commonly referred to as the Texas Hill Country) and benefits from a gently rolling topography that adds significant beauty to the City and promotes natural drainage.

History

San Angelo was founded in the 1870s shortly after the establishment of Fort Concho. According to some historical accounts, the area was previously settled by a small scattering of pioneering cattle ranchers. The founder of the area's first trading post, Bartholomew J. DeWitt, named the town Santa Angela. During the 1880s, the U.S. Postal Service changed the name to San Angelo. After a flood destroyed the Tom Green County Courthouse in nearby Ben Ficklin, San Angelo was named as the County Seat.

The presence of the Concho River made the area "ideal" for settlement relative to other areas of the West Texas frontier. With the stable water supply and protection from Indians offered by Fort Concho, early San Angelo flourished. Primary industries during the 1800s were ranching, agriculture, and commerce generated by the soldiers stationed at Fort Concho. San Angelo's agricultural economy was diversified when sheep ranching was introduced to the area in 1877. San Angelo became an important stop on the early cattle trails and a center of shipping after the coming of the Santa Fe Railroad in 1888.

The presence of the railroad, water and a flourishing ranching industry led San Angelo to become one of the largest cattle markets in Texas and the largest sheep market in the United States. Discovery of oil in the San Angelo area in the 1920s led to a huge boom, highlighted by rapid population growth during that period.

San Angelo is one of the most important and diverse economies in West Texas. The City is home to a wide variety of industries whose products range from surgical equipment to automobile parts. Significant events in San Angelo's growth included the establishment of Angelo State University from its origin as a community college in the 1920s, Goodfellow Air Force Base in the 1940s, and the growth of General Telephone which made San Angelo one of its regional headquarters in the late 1980s.

San Angelo is the center of medicine and healthcare for the West Central Texas region. Since the establishment of the first military hospital at Fort Concho in the 1860s, numerous medical facilities serving all of West Texas located in the City. Establishment of the Community Medical Center in 1929 and the Shannon Medical Center in 1932 confirmed San Angelo as the most significant center of medical services in the region. The wide range of medical care facilities led to San Angelo becoming a retirement center, which is demonstrated by the City's large population aged 60 and over.

Angelo State University, the San Angelo Independent School District, and numerous churches throughout the City make San Angelo a center for education and religion for all of West Texas.

Study Area

The study area for the San Angelo Comprehensive Plan includes the incorporated city limits as well as areas extending approximately 1 mile outside the city limits. A map of the study area is presented in **Figure I-2**.

Community Areas

In order to create a plan that reflects the needs of San Angelo's neighborhoods, the Comprehensive Plan addresses seven planning areas, or "community areas". Each community area includes neighborhoods that are similar in their geographic location but include varying socio-economic and physical conditions. Boundaries of the community areas follow natural or man-made boundaries such as streams and roads. Neighborhoods are grouped based on the geographic areas in which they belong. The boundaries of the community areas adhere, where possible, to the geographic areas used by the U.S. Bureau of the Census for compiling statistics on the population. A map of the community areas is provided in **Figure I-3**.

The community areas allow the plan to focus on areas that have issues different than those shared by the community as a whole. Throughout the planning process, an intensive effort was made to acquire input from the citizens of these community areas on their vision for their neighborhoods.

San Angelo
Comprehensive
Plan

FIGURE I-2
STUDY AREA

Study Area
San Angelo Corporate Limit

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

1   0   1   Miles
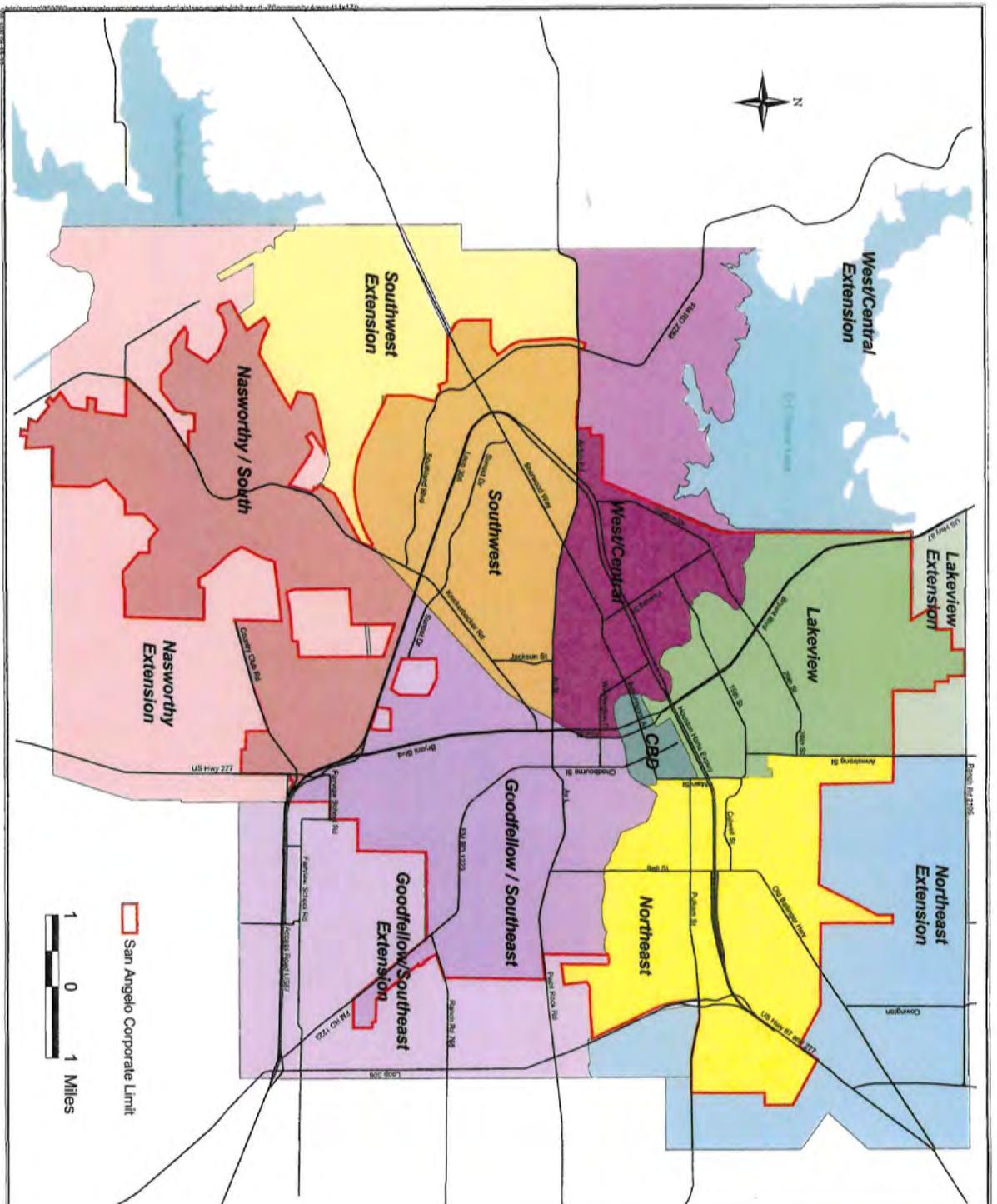
San Angelo Comprehensive Plan

FIGURE I-3
COMMUNITY AREAS

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

San Angelo Corporate Limit

1   0   1 Miles

West/Central
Extension

Southwest
Extension

Nasworthy / South

Nasworthy
Extension

Southwest

West/Central

CBD

Lakeview
Extension

Lakeview

Goodfellow / Southeast

Goodfellow/Southeast
Extension

Northeast

Northeast
Extension

VISION

"To have a vision means to look ahead: to imagine the future. Visioning is a process by which a community envisions its preferred future. A vision chronicles the hopes, dreams, and aspirations of a community and helps citizens agree on what they want their community to become"

- Michael Chandler

The Comprehensive Plan provides a statement about the community's goals and objectives for its physical development, the general distribution and location of land use and circulation, and other general guidelines for various plan elements. The plan provides an overall guide for future growth and development while allowing flexibility in its interpretation, enabling the plan to respond to new ideas and direction as the City progresses, changes and grows in the 21st Century.

The Comprehensive Plan begins with a vision, which is a broad statement of how the community views itself as it moves into the 21st Century. A vision for the community is an ideal and unique image of the future based on the community's values and aspirations. A set of community goals follows the vision with supportive objectives and actions to form the implementation framework and provide direction for the future growth and development of San Angelo. Each plan element has a series of goals and objectives, which is specific to the topic and consistent with the overall vision of the community.

Goals are the general ends toward which efforts are directed. A goal addresses issues by stating policy intention. Goals are both qualitative and quantifiable, but are not quantified. Goals stretch and challenge the imagination, but are realistic and achievable.

Objectives are clear targets for specific action. They mark interim steps toward achieving a long-range mission and goals. Linked directly to goals, objectives are measurable statements of intent. They emphasize the results of City actions at the end of a specific time period.

Actions are time-based quantifiable methods to achieve goals and objectives. Formulated from goals and objectives, an action is the means for transforming goals to outcomes, with the best use of resources. An action reflects budgetary and other resources.

DEVELOPING SAN ANGELO'S VISION

In 1995 the City of San Angelo conducted a "visioning" and goals identification process, called "Vision San Angelo", to develop community consensus on the goals and programs that were most important to citizens. Five hundred ideas were listed and grouped into six vision categories: Spirit of San Angelo, Economic Strengths, Water Resources, Quality of Life, Educational Opportunities and Governmental Services. Six task forces were then appointed to analyze the ideas. The Vision San Angelo document lists specific projects in each category in priority order, based on citizen input during the visioning process. The following is a summary of the Vision San Angelo document:

Vision 1: Spirit of San Angelo

Pride, Responsibility and Involvement

◆ Protect the Spirit of San Angelo for our children, families and future generations.

◆ Encourage and appreciate volunteerism.

◆ Promote awareness of cultural diversity.

◆ Maintain our spirit of cooperation.

◆ Inspire friendliness and hospitality.

Vision 2: Economic Strengths

Employment & Business Opportunity

◆ Support and strengthen local business and industry.

◆ Diversify economy through attracting new industry.

◆ Develop competitive wages and salaries.

◆ Continue downtown revitalization.

◆ Promote tourism industry.

◆ Continue support of Angelo State University (ASU), Goodfellow and other institutions.

◆ Develop opportunities for youth to work and stay in San Angelo.

Vision 3: Water Resources

River & Lakes

◆ Dredge Lake Nasworthy.

◆ Clean up Concho River System.

◆ Develop Twin Buttes Reservoir.

◆ Develop recreational opportunities for water resources.

Vision 4: Quality of Life

Parks, Recreation, History and Culture

◆ Create a master plan for sports activities, recreational and senior centers and parks.

◆ Preserve our heritage through historic preservation efforts.

◆ Promote public arts and cultural opportunities for youth.

◆ Continue effort to beautify the community.

Vision 5: Educational Opportunities

Primary, Technical and Higher Education

◆ Promote growth and development of ASU and other educational institutions.

◆ Create more opportunities for technical and vocational training.

♦ Prepare for the future by emphasizing academic excellence.

♦ Develop and promote access to technology and information for all citizens.

♦ Address funding challenges for education.

Vision 6: Governmental Services

City, County and Schools

♦ Increase public involvement in governmental affairs.

♦ Maintain strong public safety systems.

♦ Improve water quality.

♦ Develop and plan for drainage improvements.

♦ Develop efficient and effective traffic and transportation systems.

♦ Encourage cooperation and consolidation of local government services.

DEMOGRAPHICS

Knowing the basic characteristics of the population helps to determine how to plan for the growth and development of San Angelo. The analysis contained in this element of the Comprehensive Plan was used to help develop the community area land use plans and city-wide policies affecting the growth and development of San Angelo. Demographic conditions within San Angelo were examined at several geographic levels:

- Regional,
- City-wide;
- Community Area; and,
- Neighborhoods.

Population estimates and projections are included from the present to the year 2020.

The most recent citywide data cited in the Demographics element of this plan is taken from the 2000 Census. Population and housing data for smaller geographic areas (which together comprise the City of San Angelo) is not yet available from the 2000 Census. Also, no household income data is now available from the 2000 Census, even for the entire city. When reporting about household income or about the seven "community areas" which comprise the City of San Angelo, data cited in this Demographics element is taken from the 1990 Census.

Regional

City-Wide

Community Area
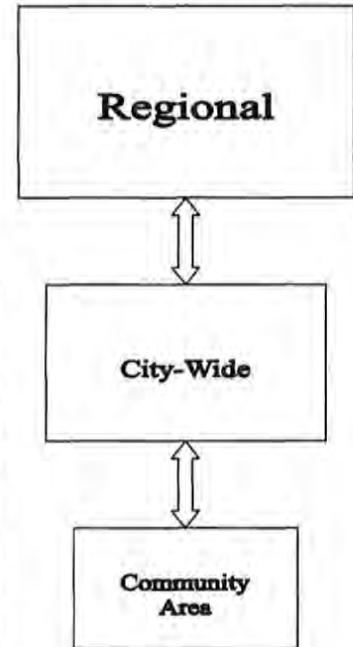
CITY-WIDE DEMOGRAPHICS

Included in the city-wide analysis are comparisons between San Angelo and the larger region in which it exists. Examining San Angelo within the context of the larger region provides a fuller understanding of the demographic forces affecting the City. Population, age, race, income, and household status are examined.

PAST AND PRESENT POPULATION TRENDS

Key Points

- Up to 1950, San Angelo's population growth was erratic and variable.

- Population growth in San Angelo during the second half of the century (post-1950) was relatively stable at an average ten-year rate of 11.4 percent. This is not far behind the United States' average ten-year growth rate of 13.2 percent for this same period.

- San Angelo ranks third among seven selected West Texas cities (from 25,000 to 200,000 persons) in terms of post-1950 ten-year median growth rates.

- Approximately 81 percent of Tom Green County's population growth since 1950 occurred within the City of San Angelo; as a result, population trends within the County and City are almost identical.

- Since 1950, the State of Texas grew an average of 10 percentage points faster, per decade, than Tom Green County.

- Since 1960, the City of San Angelo's share of total Tom Green County population dropped from 91 percent to 85 percent. This reverses a trend apparent during the first half of the 20th Century when the county's population gradually urbanized and become more concentrated inside San Angelo.

San Angelo Population

Table D-1 gives population figures and growth rates for San Angelo, Tom Green County, and the United States from 1900 to 2000. San Angelo's median growth rate (per decade) was about 14 percent during the period between 1910 (San Angelo was permanently incorporated in 1903) and 2000. Until 1950, San Angelo's growth was somewhat erratic. Between 1910 and 1920, there was actually a 3 percent drop in population. During the 1920s, San Angelo's population exploded by 152 percent due primarily to the discovery of oil in West Texas. However, the uncertainty and stagnation of the Great Depression put an end to this growth, resulting in a growth rate of only 2 percent during the decade of the 1930s. In still another drastic turnaround, the "Baby Boom" and establishment of a military air-training base (at San Angelo) in the 1940s led to a 102 percent population increase during that decade. By mid-century, the U.S. Census reported a population of 52,093 persons in San Angelo. The economic, political, and social turbulence of the first half of the 20th Century made San Angelo's population growth inconsistent and unpredictable.

The second half of the 20th Century brought more stability to the nation and to San Angelo. Population growth rates reflected this stability. Growth rates for the 1950s, 1960s, 1970s and 1980s hovered more closely to the overall median growth rate between ten-year Census counts. This relatively consistent and continuous growth began with a 13 percent increase in population during the 1950s, and then dropped slightly to an 9 percent increase during the 1960s. The growth rates of the 1970s and 1980s demonstrated a gradual acceleration. San Angelo grew by 15 percent between 1970 and 1980, and by 15 percent between 1980 and 1990. This growth came primarily during the economic boom of the late 1970s and early 1980s, when oil prices increased sharply. In summary, post-1950 data shows that, relative to the first half of the 20th Century, population change was much less erratic between 1950 and 2000. This is illustrated in **Figure D-1**.

TABLE D-1
COMPARISON OF LOCAL AND REGIONAL GROWTH RATES
San Angelo Comprehensive Plan
San Angelo, Texas

	San Angelo	10- Year Rate	Tom Green County	10-Year Rate	State of Texas	10-Year Rate	United States	10-Year Rate
1900	3,700		6,804		3,048,710		75,994,575	
1910	10,321	179%	17,882	163%	3,896,542	28%	91,972,266	21%
1920	10,050	-3%	15,210	-15%	4,663,228	20%	105,710,620	15%
1930	25,308	152%	36,033	137%	5,824,715	25%	122,775,046	16%
1940	25,802	2%	39,302	9%	6,414,824	10%	131,669,275	7%
1950	52,093	102%	58,929	50%	7,771,194	21%	151,325,790	15%
1960	58,815	13%	64,630	10%	9,579,677	23%	179,323,175	19%
1970	63,884	9%	71,047	10%	11,196,730	17%	203,302,031	13%
1980	73,240	15%	84,784	19%	14,229,191	27%	226,542,203	11%
1990	84,474	15%	98,458	16%	16,986,510	19%	248,709,873	10%
2000	88,439	5%	104,010	6%	20,851,820	23%	281,421,906	13%

Source: City of San Angelo Department of Planning and Community Development; U.S. Bureau of the Census

The distinct difference in growth rates prior to 1950 and those after 1950 is very important. The large population changes during the first half of the century were caused by very large-scale social, economic, and political events. These unique events are not likely to reoccur in the future. As a result, projections partially based on this time period will most likely be misleading. This is not to say that such large-scale events will not occur in the future, but to assume that they will would be unsound. Furthermore, such events may affect a smaller geographic area such as San Angelo much more than a larger one. For example, the West Texas oil boom had very little effect on the U.S. population. Therefore, making comparisons between San Angelo and larger geographic areas is difficult. Two techniques were used to formulate sound conclusions. First, particular statistical methods can help to reduce distortion caused by severe swings in growth rates. Another approach is to use only post-1950 data as a basis for projections and comparisons.

FIGURE D-1
SAN ANGELO'S POPULATION 1900 TO 2000
San Angelo Comprehensive Plan
San Angelo, Texas
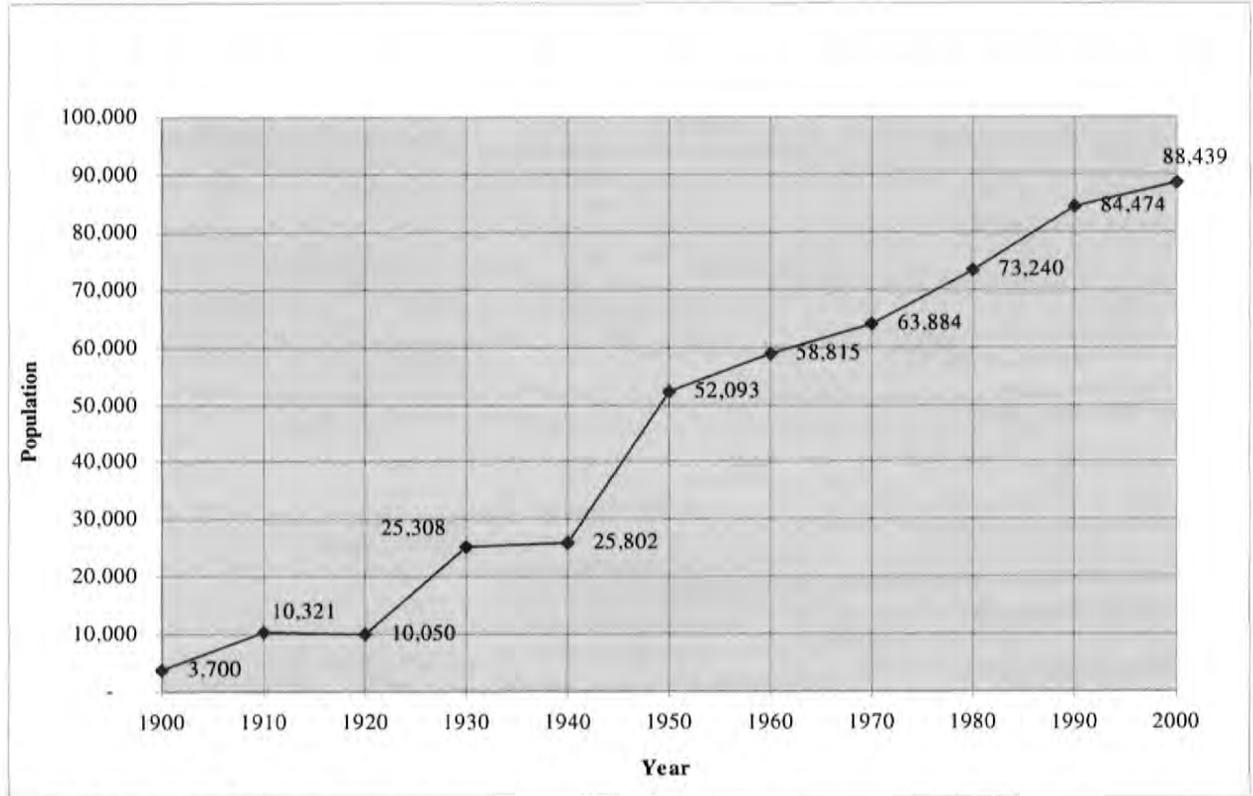
Source: U.S. Bureau of the Census

San Angelo and Other West Texas Cities

Due to the geographic similarity of other West Texas cities to San Angelo, it is appropriate to compare their populations. Table D-2 ranks selected West Texas cities based on their median growth rate since 1950.

TABLE D-2
MEDIAN GROWTH RATES AND POPULATION IN WEST TEXAS CITIES
San Angelo Comprehensive Plan
San Angelo, Texas

City	Post-1950 Median Growth Rate	2000 Population
Midland	23%	94,996
Lubbock	16%	199,564
San Angelo	**13%**	**88,439**
Amarillo	12%	173,627
Abilene	9%	115,930
Odessa	7%	90,943
Big Spring	-7%	25,233

Source: City of San Angelo Department of Planning and Community Development; U.S. Bureau of the Census

San Angelo and Tom Green County

It is important to note the special relationship between the City of San Angelo and Tom Green County. Since the 1940s, an average of 87.7 percent of the Tom Green County population was located within the City of San Angelo. Moreover, approximately 81 percent of the County's post-1950 growth occurred within San Angelo. As a result of these relationships, population trends within Tom Green County are relatively consistent with those for San Angelo.

Another statistic reveals an even stronger correlation between the San Angelo and Tom Green County populations. The County's post-1950 average growth rate was slightly higher than that of San Angelo. This means that a significant amount of population was added in the County, and the County was actually growing faster than the City. In fact, the ten-year median growth rate of areas in Tom Green County, but not within the incorporated limits of San Angelo, was 21.14 percent. Much of this growth was probably occurring as single-family residential sprawl in non-urbanized areas north and south of San Angelo. Many non-urban residents of Tom Green County are presumed to be employed in and commute to San Angelo. The city remains a strong focus of economic activity, even as the percentage of countywide population living in San Angelo has decreased slightly during the past 40 years.

Due to the parallel relationship between the populations of San Angelo and Tom Green County, it is reasonable to use Tom Green County for comparisons against larger areas. This offsets the effect of annexation of population into the City when comparing the San Angelo area with other geographic areas.

Tom Green County and State of Texas

Comparing Tom Green County's population with the entire Texas population reveals still more information about the study area. Census data shows that the population of Texas grew an average of 10 percentage points faster than that of Tom Green County since 1950. Tom Green County's share of Texas' population steadily decreased since 1950. In 1950, Tom Green County held about 0.76 percent of the Texas population, while in 2000 this figure dropped to 0.50 percent. Tom Green County's population has grown significantly (77 percent) since 1950. Still, it has not matched the more dramatic increase (168 percent) of population in Texas since 1950.

Tom Green County and United States

Examining the effects of the United States' population trends on Tom Green County offers still more insight into the population dynamics of San Angelo. From 1950-2000, population in Tom Green County increased at an overall rate slightly less than that of the United States: 77 percent versus 86 percent. During the 1970s and 1980s, though, Tom Green County's population actually grew faster than did the national population.

While it slowed in recent years due to economic conditions, the shift of the American population from the Northeast to the Southwest has no doubt contributed to the growth of Tom Green County. Other national trends may have also affected the County's population. Improvements in the areas of communication and transportation reduced the agglomeration benefits of larger cities and have allowed many firms to relocate into smaller urbanized areas such as San Angelo. Also, the general shift to a more service-oriented economy benefits cities such as San Angelo. The more "footloose" service firms are able to look more at the general quality of life in a potential location rather than at specific physical requirements. San Angelo starts with some significant pluses: a freestanding city set within its own hinterland of rangeland and farms, a location at the confluence of the winding Concho River system, historic neighborhoods adjoining downtown, art institutions and Angelo State University. Other examples of national phenomena that may influence San Angelo in the future include the North American Free Trade Agreement and the improvement of a major north-south highway corridor (Ports to Plains) through San Angelo. Local phenomena such as airport expansion, or the locating of a major industry in San Angelo are also possible in the future. Use of the Internet by some firms allows them to locate in remote areas and results in an economic boom for many cities which are geographically similar to San Angelo. The potential effects of these events on San Angelo's population could be significant.

AGE

Key Points

- San Angelo's median age of 32.8 years is somewhat lower than that for Tom Green County (33.8 years), but similar to that for other West Texas cities.

- The median age of San Angelo is 2.5 years lower than that of the United States.

- The median age of San Angelo is gradually increasing as the Baby Boom generation and their children age.

- Between 1970 and 2000, all age groups in San Angelo increased in terms of absolute numbers. However, the fastest growing age group has been among those aged 35-44 years. The slowest growing age group has been among those less than 25 years old.

- Overall, the school aged groups decreased in their *share of the total population* (they were fairly static in their absolute number) while the wage-earning and retired age groups increased slightly.

The age of San Angelo's inhabitants significantly impacts the city's development. Land use patterns, activity patterns, public facilities, recreation, schools, housing, transit, and other factors related to the physical development of the city are all affected by the variable of age. Therefore, this section looks at *past* and *current* age patterns for the City of San Angelo and compares them with data from other West Texas cities, Tom Green County, Texas, and the United States.

San Angelo as Compared to Other Regions

The median age for San Angelo (32.8 years) is somewhat lower than that for Tom Green County (33.8 years). This indicates that the "non-San Angelo" population within Tom Green County is significantly older than the City of San Angelo's population. On the other hand, San Angelo's median age is very close to the median age of geographically similar West Texas Cities and the State of Texas (32.3 years) as a whole. Finally, the median age of the Unites States (35.3 years) is 2.5 years higher than that of San Angelo.

Past and Present Trends

The median age of San Angelo steadily dropped from 27.8 years in 1950 until bottoming out in 1970 at 26.7 years. This trend toward a younger population was most likely due to the "baby boom" of the post-World War II era. After 1970, the median age increased once again. This post-1970 increase in the median age of San Angelo was probably due to the decline of the school aged and infant populations (in terms of their percentage of the total population), fairly significant growth among those aged 25 to 55 years, stability in the 55+ age groups, and the longer human life spans of the late 20th Century.

Population Changes by Age Group

Perhaps some of the most important data on the age of San Angelo's population is revealed in **Table D-3**. Emphasized in **Table D-3** are especially significant age groups such as the 5 to 17 year age group, which encompasses school aged children; the 18 to 54 year age group which includes most employed persons and tax base contributors; and finally, the 55+ age group, which includes most retired and elderly persons. The table also shows the growth of each age group of the City's population since 1970.

TABLE D-3
SIGNIFICANT AGE GROUPS
San Angelo Comprehensive Plan
San Angelo, Texas

Age Group	1970	%	1980	%	1990	%	2000	%
5 to 17 (School Aged)	16,000	25%	14,380	20%	15,985	20%	17,310	20%
18 to 54 (Tax Base)	30,073	47%	37,828	52%	44,201	52%	45,703	52%
55+ (Retired)	12,628	20%	15,453	21%	17,611	21%	19,187	22%

Source: City of San Angelo Department of Planning and Community Development; U.S. Bureau of the Census

All age groups between the ages of 18 and 54 experienced at least some growth between 1970 and 2000. The fastest growing of these age groups has been the 35 to 44 year age group; the slowest growing age group being among those aged less than 25 years. As a whole, the 18 to 54 age group grew by almost 26 percent between 1970 and 1980 and 17 percent between 1980 and 1990. Note also that the 18 to 54 year age group, despite its growth, maintained a fairly constant share of the San Angelo population. The 55+ age group grew steadily since 1970 also. In fact, this age group has shown a 52 percent increase since the 1970 Census, while overall population in San Angelo increased less than 39 percent since 1970. Like the 18 to 54 year age group, the 55+ age group seems to command an increasing share of the overall San Angelo population.

Notice the decrease in the number of school aged children between 1970 and 1980. This number then increased by 11.16 percent between 1980 and 1990, and by 8.29 percent between 1990 and 2000. The end result is school aged population that now represents a noticeably smaller percentage of San Angelo population than it did in 1970.

Changes in San Angelo's age structure were very similar to those in the U.S. and Texas. Of special note is the 18 to 24 year cohort, in San Angelo, which shrank by 6.53 percent during the 1980s and remained almost constant during the 1990s. Texas experienced a slightly lower decrease, while the U.S. saw a slightly larger decrease. This simply says that such declines were the result of smaller cohorts entering this age group and not a mass migration out of San Angelo by persons of this age. The extremely large increase in the size of San Angelo's 35 to 44 year age group was also consistent with state and national trends that highlight the baby boomer generation as it entered this age group.

INCOME

Key Points

- San Angelo's median household income in 1989 was $23,534 (income data for 1999 from the 2000 Census is not expected to be available until 2002).

- San Angelo's median household income ranked sixth among seven selected West Texas cities; however, the margin of difference between the cities is very small.

- 13.7 percent of San Angelo's families lived below the poverty level in 1989.

Income Distribution

In comprehensive planning, income data is necessary for housing needs analysis and the allocation of retail and commercial land uses. Comparing San Angelo's income data with that of similar cities in the West Texas region, Texas as a whole, and the U.S., explains why certain types of land uses may be more or less prevalent in San Angelo than in other areas.

Household income includes the income of the householder and all other persons 15 years old and over in the household, whether related to the householder or not. According the Bureau of the Census, "The householder is the person, or one of the persons, in whose name the home is owned, being bought, or rented."

Household Income: San Angelo, West Texas, Texas, and the United States

Figure D-2 is a breakdown of San Angelo's 30,785 households by income. The vast majority of San Angelo's households, or 85.6 percent, made below $50,000 per year in 1989. In fact, over half, 52.67 percent, made under $25,000 per year. About 8.3 percent of San Angelo's households made less than $5,000 per year. **Table D-4** compares the median household incomes of selected West Texas cities, Tom Green County, the State of Texas, and the United States. San Angelo's median household income was less than that of Tom Green County as a whole, Texas, and the United States; however, San Angelo's median household income, while on the low end of the list, was comparable to most other West Texas cities.

FIGURE D-2
HOUSEHOLD INCOME DISTRIBUTION, 1989
San Angelo Comprehensive Plan
San Angelo, Texas

Source: U.S. Bureau of the Census
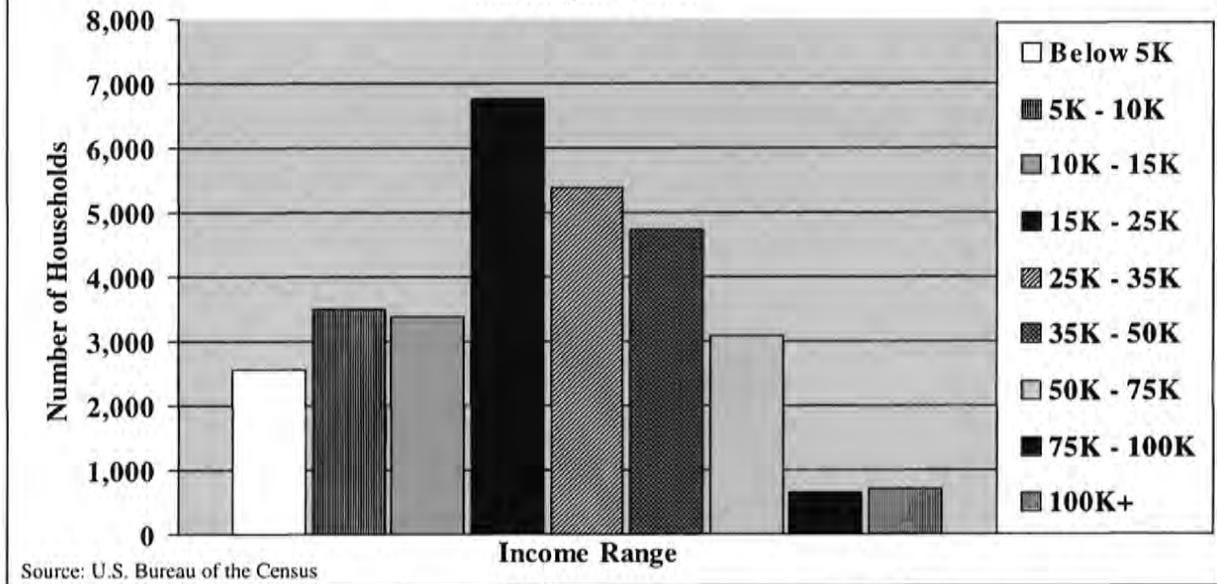
TABLE D-4
MEDIAN HOUSEHOLD INCOMES, 1989
San Angelo Comprehensive Plan
San Angelo, Texas

San Angelo	**$ 23,534**
Midland	$31,544
Amarillo	$24,915
Abilene	$24,725
Odessa	$24,346
Lubbock	$24,130
Big Spring	$21,298
Tom Green County	**$24,349**
Texas	**$27,016**
United States	**$30,056**

Source: City of San Angelo Department of Planning and Community Development, U.S. Bureau of the Census

Families Below the Poverty Level

In 1989, 13.7 percent of San Angelo's families lived below the poverty level (as defined by the U.S. Bureau of the Census), a figure slightly higher than the one for Tom Green County. The San Angelo percentage was also slightly higher than the median percentage of the selected West Texas cities, but lower than that for Texas as a whole. The United States as a whole had a lower percentage of poverty stricken families than San Angelo.

DIVERSITY

Key Points

- San Angelo was very similar to most other West Texas cities in terms of racial diversity; however, San Angelo had a larger Hispanic population than these cities.

- The State of Texas and Tom Green County were very similar in terms of racial diversity and Hispanic origin except for in the "Black" category where San Angelo has a much lower percentage.

- In comparing the diversity of the United States and the Tom Green County, a much smaller percentage of the County population was Black and a much larger percentage Hispanic.

Cultural Diversity

A population's racial make-up and origin are important to comprehensive planning in that they affect various demographic variables used in urban analysis. These include birth and death rates, migration rates, household size, travel behavior and other planning factors. This section examines the race and origin of San Angelo's residents.

TABLE D-5
WEST TEXAS DIVERSITY, 2000
San Angelo Comprehensive Plan
San Angelo, Texas

	White	Black	Am. Indian	Asian*	Other**	Hispanic***
San Angelo	**77.10%**	**4.73%**	**0.65%**	**1.03%**	**16.48%**	**33.15%**
Abilene	78.07%	8.81%	0.55%	1.40%	11.17%	19.45%
Amarillo	77.50%	5.97%	0.78%	2.09%	13.67%	21.86%
Big Spring	76.69%	5.31%	0.59%	0.65%	16.76%	44.64%
Lubbock	72.87%	8.66%	0.56%	1.57%	16.33%	27.45%
Midland	75.51%	8.37%	0.63%	1.04%	14.45%	28.99%
Odessa	73.43%	5.88%	0.77%	0.92%	19.00%	41.42%

* Includes Native Hawaiian and other Pacific Islanders
** Includes persons of two or more races
*** "Hispanic" refers to origin versus race as do the other five columns
Source: City of San Angelo Department of Planning and Community Development, U.S. Bureau of the Census

Hispanic Origin

The U.S. Bureau of the Census does not classify Hispanics as a race. This is due to the fact that a Hispanic person can be of any race, according to the Bureau of the Census. Instead, a percentage of the population is said to be of Hispanic *origin*. For instance, members of the San Angelo population are classified as either White, Black, American Indian, Asian, or as "other race." The Census then reports that over 33 percent of the persons in all racial categories are of Hispanic origin.

San Angelo and Other West Texas Cities

Table D-5 shows racial breakdowns and Hispanic population figures for San Angelo and other selected West Texas cities. Comparing the racial breakdown and Hispanic population of geographically similar cities will help determine if San Angelo is an especially significant place for a particular racial group or for persons of Hispanic origin. Note that, overall, the West Texas cities listed are very similar in terms of diversity; the most prevalent racial group being Whites, followed by the "other race" category of persons, then Blacks, Asians, and finally, American Indians. San Angelo stands out with a Hispanic population of 29,321, which was 33 percent of the city's total population. Among the selected West Texas cities used for comparison, only Odessa (41 percent) and Big Spring (45 percent) have Hispanic populations greater than 30 percent of total population.

FIGURE D-3
HISPANIC ORIGIN
San Angelo Comprehensive Plan
San Angelo, Texas
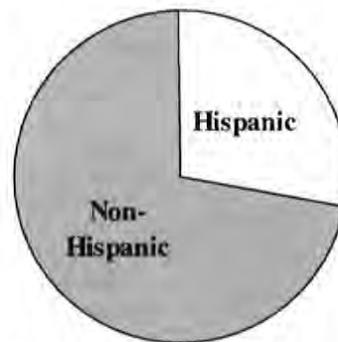
Source: U.S. Bureau of the Census

FIGURE D-4
SAN ANGELO DIVERSITY
San Angelo Comprehensive Plan
San Angelo, Texas
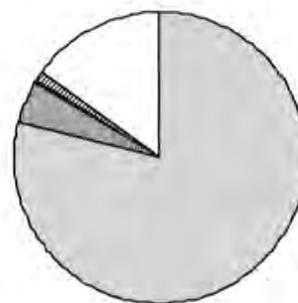
☐ White ▦ Black ■ Am. Indian ▨ Asian ☐ Other

Source: U.S. Bureau of the Census

San Angelo, Tom Green County and State of Texas

In terms of racial diversity and Hispanic origin, the figures for Tom Green County were fairly consistent with those for the State of Texas, except for the Black race category. Blacks made up a much smaller portion of Tom Green County's population than that of the entire State of Texas.

San Angelo and United States

The populations of Tom Green County and the United States were fairly different in terms of racial diversity and Hispanic population. Proportionally speaking, Tom Green County had a much smaller Black population (five percent) than the United States (12 percent). On the other hand, a much larger portion of the Tom Green County population was of Hispanic origin. More than 33 percent of the Tom Green County population was Hispanic as compared to only 12.5 percent of the U.S. population.

HOUSEHOLD STATUS

Key Points

- The average household size for San Angelo was 2.48 persons as of the 2000 Census.

- 36 percent of San Angelo's households had persons under 18 years old living in them.

- 25.5 percent of San Angelo's households had persons over 65 years old living in them.

Household Characteristics

The household is a basic unit of analysis used in comprehensive planning. As a result, it is necessary to look at a variety of household attributes. These include household size, age of occupants, and ethnicity. From this information, we may determine the household's *status* or *stage in the lifecycle*. For instance, we can determine if the majority of households in some area are occupied by retired "empty-nesters," younger married couples with children, single persons, or some other category of occupants. Each of these categories has its own activity patterns, migration tendencies, and other factors important to planning.

Household Size

Average household size is one of the most important household characteristics. About 84,484 San Angeloans lived in households (as opposed to group quarters such as dormitories, barracks, hospitals, etc.), resulting in about 34,006 separate households. The average size of a San Angelo household was 2.48 persons. This figure is especially important in future residential land use needs analysis.

Age of Householder

The age of the persons occupying a household is also valuable information. In every household, one person is designated as the householder; this is usually the person in whose name the home is owned, being bought, or rented. Householders aged 25 to 44 years were the largest homeowning group. The number of householders then tapered off before and after this age group. This is very similar to the age distribution of the overall population. Thirty-six percent of San Angelo's households had persons under 18 years old living in them. Around 25 percent of the households had persons living in them that were 65 years or older. These statistics may have implications when planning for schools, housing and other community facilities.

POPULATION PROJECTIONS

Key Points

- Populations of 98,380 and 109,434 are projected for the years 2010 and 2020, respectively.

Population Forecasts

To plan is to prepare for the future. Hence, it is important to understand past and future demographic trends in San Angelo. Population projections help a city to anticipate and prepare for the consequences of population change. These consequences may include the need for different types of housing, increased street and highway congestion, strains on water and sewer capacities, and an increased need for fire and police protection and other key public services and facilities.

In order to obtain a quick and reasonably accurate forecast of future population, some historical trends have been projected into the future. For purposes of this San Angelo Comprehensive Plan, the linear technique of choice was the exponential curve. Exponential curves identify an average growth rate (or percentage) experienced in the past and use this average to forecast future growth. From 1950 to 2000, San Angelo's population increased an average of 11.24 percent each ten-year period. During some decades, the growth rate was more than that average; during other decades, the growth rate was less than that average. **Table D-6** applies that historical average to the next two ten-year periods to yield population forecasts for 2010 and 2020.

TABLE D-6
EXPONENTIAL CURVE PROJECTIONS: 2000 TO 2020
San Angelo Comprehensive Plan
San Angelo, Texas

	Historical Data						Projected Data	
Year	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Population	52,093	58,815	63,884	73,240	84,474	88,439	98,380	109,437

Source: U.S. Bureau of the Census; City of San Angelo Department of Planning and Community Development; Wilbur Smith Associates

As a cautionary note, there are always weaknesses when this or any projection technique is applied to a relatively small geographic area such as San Angelo. The opening or closing of a large employer, natural disasters, and military base closings or realignments may cause major population changes not reflected in even the most sophisticated projection method.

COMMUNITY AREA DEMOGRAPHICS

The San Angelo Comprehensive Plan was developed based upon seven "community areas" (see community area map in Introduction). In order to prepare plans that reflect the true needs of these community areas, information about the people who live in them is a necessity. Following are demographic analyses for each community area. Furthermore, important data on a variety of variables is provided, including:

- historical population;

- age;

- income;

- especially significant population groups;

- income; and,

- average household size.

Additionally, population projections were developed for each community area. These projections were accomplished through the use of exponential curve trendline projections applied to historical data on each community area. The trendline projections were then adjusted based on control totals generated in city-wide cohort-component projections. **Due to the small land area of the community areas, significant error may be present in the projections. These numbers are used with caution.** In the Comprehensive Plan, the Community Area population projections are used to identify general growth trends.

Southwest Community Area

Key Points

- Largest community area in terms of population and the second fastest growing area in the City with a 1970 to 1990 growth rate of 57.96 percent. Most growth occurred in the 1970s when several new neighborhoods were built. Growth then slowed substantially in the 1980s. This areas's share of the overall population increased steadily over the past two decades and now encompasses over one quarter of the City's population.

- The median age is almost exactly that of the entire City. The people are heavily concentrated in the young and early middle age groups. The Southwest is just shy of having the lowest number of retired persons in the City. The low number of school children is most likely due to the small family sizes.

- Second highest median income in City, second only to the Nasworthy/South. Very low family poverty rate of 3.47 percent.

- Only the C.B.D. has a smaller household size than the Southwest's 2.37 persons per household.

- Very young housing stock with an average structure age of 16.76 years.

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
13,320	18,609	21,094	22,994	26,070	28,891

Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
30.62	17.01%	57.94%	19.08%	$31,613	2.37

West/Central Community Area

Key Points

- Sixth largest out of the seven community areas in terms of population. Since 1970, population was stable with a slightly negative growth rate resulting from normal fluctuations in the population. However, population showed a slight increase since 1980. Decreased in its share of the overall City population as other areas of the City experienced substantial growth.
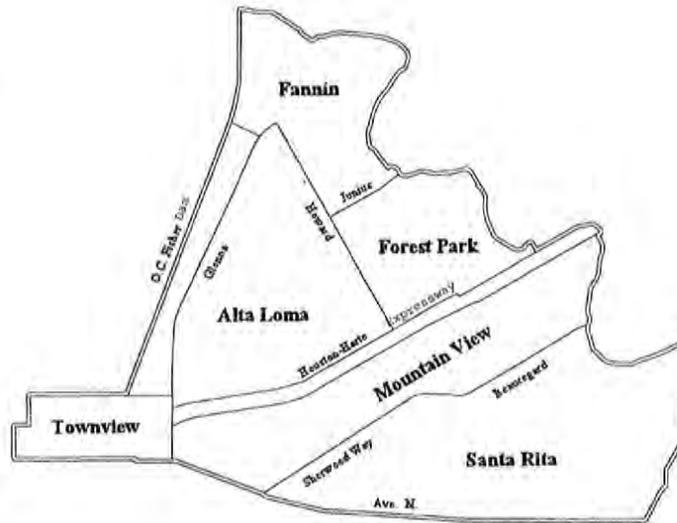
- Median age of 32.34 is somewhat higher than the median age of the City as a whole. The third oldest area in the City. Age distribution is very similar to the age distributions of the Lakeview and Northeast Community Areas where a relatively large portion of the residents are retired or school aged. The wage earning population in this Community Area seems to be concentrated in the 25 to 34 year and 35 to 44 year age cohorts.

- Median household income of $25,013 is very close to the overall city median of $23,534 in 1989. Ranks third in income behind the Nasworthy/South and Southwest Community Areas, respectively. The family poverty rate of 6.70 percent is relatively low.

- Average household size of 2.54 persons is very close to the city-wide median of 2.59.

- Average age of housing in the West/Central Community Area is almost 10 years older than the mean for the entire City, which indicates a much older housing stock. However, income and other data would indicate that this housing is of higher value than the other areas with older housing.

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
19,025	18,390	18,614	16,803	16,626	17,291
Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
32.34	18.97%	49.80%	23.01%	$25,013	2.54

Goodfellow/Southeast Community Area

Key Points

- Third largest Community Area in terms of absolute population and post-1970 growth rates. Grew relatively fast between 1970 and 1990, especially during the 1970s when it grew by 82.19 percent. This area's share of the overall City population has steadily increased since 1970.

- Youngest of all areas. Population is heavily concentrated in the younger age groups resulting in a relatively low median age of 27.97 years. This is primarily due to the presence of a large, very young military population and a large Hispanic population with a relatively large number of children per household. Retired persons make up a smaller portion of the population than in any other area.

- Median household income of $21,378 is very close to the City overall of $23,534 in 1989. There seems to be a dichotomy in the income distribution. A majority of the residents are clustered in two areas: either the $5,000-$10,000 or the $15,000-$25,000 income groups, based on income reported in 1989. As a result, the median income may be misleading. The large number of military personnel probably make up the population clusters around the $15,000 to $25,000 range (with some also making between $25,000 and $75,000). The other part of the population, clustered in the $5,000 to $10,000 income group (with some making less), is most likely a non-military, low income population. This area ranks fourth from the highest in terms of the percentages of families living in poverty (12.78 percent).

- Household size of 2.76 persons is substantially larger than that for the entire City, the Lakeview and Northeast community areas are the only areas with larger household sizes. Large household sizes are most likely due to large Hispanic population.

- Average age of housing is 23.33 years, slightly under the city-wide average.

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
7,593	13,834	16,634	21,225	26,563	31,299

Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
27.97	18.36%	55.14%	17.90%	$21,378	2.76

Lakeview Community Area

Key Points

- Fourth largest community area in the City. Very little population growth in this area with a post-1970 growth rate of 3.31 percent. Most of this growth occurred in the 1980s. Share of the City's overall population located in this area is slowly but steadily decreasing as growth in other areas continues.

- Median age of 30.85 years is very close to that of the City. Largest proportion of school aged children of all the areas. Has only a moderate amount of retired persons. Of all the areas, the population of Lakeview is more evenly distributed among the various age groups, with the exception of the 5 to 17 year age group.

- Median income of $17,763 is low compared to that of the entire City and second lowest of the area, as reported in 1990. The vast majority of households made below $25,000 per year in 1989. The family poverty rate in this area, 20.04 percent, is second only to that of the C.B.D.

- Second largest household size (2.81 persons/household) in the City. This is partially due to the large average household size of the Hispanic community, which is very populous in this Community Area.

- Average age of housing in this area is very close to the overall City median of 25.6 years. This, along with the other data, seems to confirm that this area is affordable, moderately old, housing is attractive to low and moderate income families, many of which are minorities and/or in the early stages of the family "life-cycle."

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
13,320	13,484	14,210	13,266	13,380	14,008
Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
30.85	22.53%	46.78%	21.80%	$17,763	2.81

Northeast Community Area

Key Points

- Fifth largest in population of the seven areas. A 1970 to 1990 growth rate of 13.82 percent. Despite the steadily increasing growth rate, this Community Area has held a fairly static share of the overall City population since 1970.

- Population is largely concentrated in the school aged (5 to 17), 25 to 44, and 65+ year cohorts. It is second only to the C.B.D. in terms of the proportion of the residents which are school aged or retired. This data indicates an area of young to middle aged persons with school aged children and a concentration of retired persons. The median age of this area (31 years) ranks very close to that for the entire City and is fourth from the oldest of the Community Areas.

- Median income of $17,882 is low relative to the City's median of $25,534 in 1989. The largest income category is the $15,000 to $25,000 category. About 15 percent of the families in this area live below the poverty level. This is the third highest poverty rate among the San Angelo areas.

- Average household size of 2.83 persons is the largest of all the areas. This is most likely due to the large family size and higher birth rates of the populous Hispanic community in this area.

- The average age of the housing is 29.03 years old, only four years higher than the City median. This in combination with other data, indicates an area where younger families and elderly persons are occupying older, less expensive housing

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
6,766	7,569	8,762	8,844	9,248	9,959
Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
31	21.07%	45.30%	24.26%	$17,882	2.83

Nasworthy/South Community Area

Key Points

- Second smallest community area in terms of population. Has the fastest growth rate of all areas and has tripled in population size since 1970. Portion of the overall San Angelo population encompassed by this area steadily increased to about 3.73 percent in 1990.

- Heavier concentration of population in older and school aged cohorts. Data indicates that this area is predominantly settled by families in middle to latter stages of the life cycle (such as middle aged persons with multiple children) and/or retired persons. Second highest median age in City.

- Highest median household income in City ($36,920 in 1989) and lowest number of families living in poverty. Highest percentage of population making over $100,000/year.

- Average household size of 2.61 persons per household is very close to the overall City average of 2.59.

- Newest housing in City with an average structure age of 14.57 years in 1990.
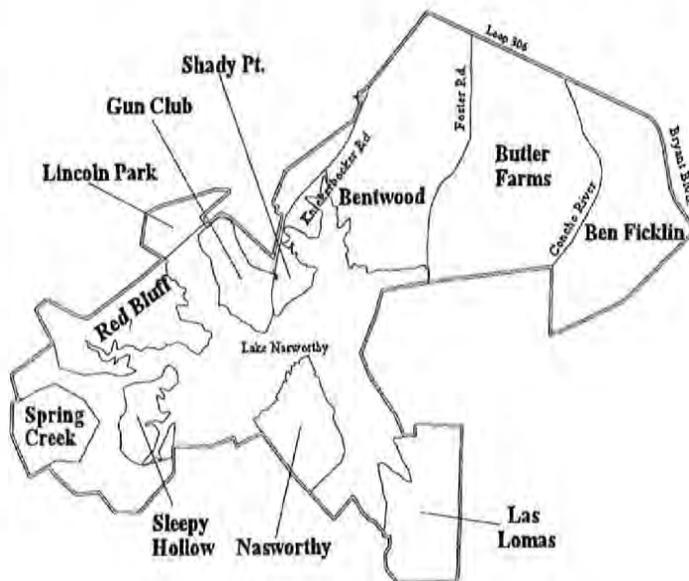
1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
1,071	1,661	3,149	4,422	5,706	7,223
Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
33.7	19.15%	53.00%	20.48%	$36,920	2.61

Central Business District Community Area

Key Points

- Smallest community area in City in terms of population. Has a negative growth rate (-12.63 percent) since 1970, with most of the population loss occurring in the 1980s. Share of the overall city population has continually dropped since 1970.

- Population is heavily concentrated in 55+ (retired) and middle age groups (wage earning). Has the lowest percentage of school aged children and highest percentage of retired persons of all areas. Indicates that the C.B.D. is an area of retired and middle aged persons without children. The very high median age of 35.7 years, highest in the City, further confirms these observations.

C.B.D.

Houston-Harte Expressway

Main St.

North Concho River

- Median income of $9,678 is lowest of all areas and is very low compared to the overall median for the City of $23,534 in 1989. Number of families in poverty is higher in this Community Area than any other, indicating that both the retirees and middle-aged persons are primarily in the lower income bracket.

- A very small household size of 1.64 persons confirms the fact that the area is inhabited by retirees and middle-aged persons with very few children and possibly single person households.

- Average age of housing (36.5 years) is the oldest of all areas. This in combination with age and income data indicates a low income elderly and working age population living in older, possibly low value housing.

1970 Population	1980 Population	1990 Population	2000 Population	2010 Population	2020 Population
1,343	1,354	1,001	883	787	766
Median Age	% School Aged (5 to 17)	% Wage Earners	% Retired	Median Income (1989 Dollars)	Average Household Size
35.7	6.99%	59.24%	27.37%	$9,678	1.64

Chapter 4
Environmental Resources

ENVIRONMENTAL RESOURCES

San Angelo residents all share the same air, water, open space and energy that provide the "life support" for this community. The purpose of the Environmental Resources element is to identify opportunities for encouraging long-term conservation and protection of natural resources in and around San Angelo. It may also help determine the impact of environmental constraints on the city's growth. This element identifies the major features of the area environment and describes San Angelo's resources using information from various regional, state, and federal agencies as well as local information sources. These environmental resources have been inventoried and evaluated both as potential constraints to growth and development as well as in terms of possible conservation and mitigation strategies. Recommended policies and actions are presented to enhance and conserve San Angelo's valued environmental assets.

ENVIRONMENTAL ASSETS & CONCERNS

Strengths and weaknesses identified by the San Angelo Comprehensive Plan Steering Committee and by citizens at a Community Forum were instrumental in developing goals, objectives and actions for this Environmental Resources element of the Plan. These strengths and weaknesses are as follows:

Assets

- Clean air.

- Area lakes.

- Relatively easy access to groundwater as a secondary, alternative source of potable water.

- Easy maintenance and conversion of open swales and streams for use as urban drainage ways.

- Rolling topography, relative to other areas of West Texas, which makes stormwater conveyance easier.

- San Angelo's location in a semi-arid climate is an attraction for certain people and some select industries. For example, the Goodyear Proving Grounds are located just outside of San Angelo, specifically to take advantage of the semi-arid climate;

- The Concho River system which, among many positive considerations, has also proven to be a valuable source of Native American artifacts buried in the river's sediment.

- Installation of aereators in standing areas of the North Concho River.

- State park located adjacent to the city.

- Dinosaur tracks.

- Landscaping along state roads.

- Composting program at the City landfill.

- Significant amounts of open space.

- The current dredging of Lake Nasworthy, which will result in a substantially more attractive lake environment for fishermen, boaters and other outdoor recreation activities, as well as for residents of lakeside properties. The next few years should also see extension of sewer mains to almost all homes and recreation areas around Lake Nasworthy, which will someday result in a better quality of Lake Nasworthy water.

- Lake Nasworthy is now fully embraced within the City limits of San Angelo and, with each passing year, becomes more completely integrated within the urbanized area. The importance of this lake as an environmental asset to an urban community set in a semi-arid climate cannot be overlooked. Lake Nasworthy is viewed as an increasingly more important asset contributing to San Angelo's image as an "oasis" community.

Challenges

- Diminished water quality in the Concho River system due to in-town runoff pollution from eroded soil, chemical runoff from continued urban development, and runoff waste from animal feed yards, otherwise referred to as "non-point source pollution" (as opposed to more obvious "point" sources of waste or pollutant discharges).

- Diminished water quality due to upstream sources that include agricultural runoff.

- Rampant growth of brush and mesquite trees in traditional grasslands of the Concho River watershed. Landowners may take advantage of State financial assistance for the widespread eradication of brush and mesquite trees.

- Unplugged abandoned oil wells. The Texas Railroad Commission is perceived as not adequately enforcing existing regulations requiring effective plugging of abandoned oil wells.

- Brownfields in older urban areas of San Angelo and at the edge of this urbanized area. ["Brownfields" is a term used by the U.S. Environmental Protection Agency (EPA) to refer to abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.]

- Litter, especially along unpaved alleyways used as routes for refuse collection trucks.

- Air pollution/odors from rendering plants.

- Lack of landscaping on many commercially developed properties.

- Lax code enforcement in regards to weed control.

- Lack of a tree preservation ordinance.

- Lack of public education on the maintenance of alleys.

- Susceptibility of lakes to drought.

- Lack of public facilities around lakes.

GOALS & OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the Environmental Resources element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **Recognition of physical constraints to development within the community, and conservation of valued environmental and cultural resources including waterways, sensitive land habitats and historic structures and districts.**

    Objective A: Preserve, protect and enhance San Angelo's natural resources while encouraging development that is compatible with the natural environment.

        Action 1: Coordinate future development with the physical environment and natural features of the community.

        Action 2: Evaluate floodplains, soils, vegetation and other physical features to identify the most appropriate sites for various types of development.

        Action 3: Promote the use of floodplains as natural areas and preserves for wildlife, vegetation, parks, and as open space buffers between incompatible land uses.

        Action 4: Identify and acquire areas of significant environmental value to the community.

Goal 2: **Management of the natural and man-made environment to assure its continued availability for present and future generations.**

    Objective A: Continue to promote environmentally sound access to and use of area waterways including the Concho River system.

        Action 1: Continue to pursue open space preservation and/or parkland acquisition along the river corridor, to minimize development impacts in areas immediately adjacent to the river.

        Action 2: Continue to provide public access to area waterways through the use of parks, trail networks, public piers and overlooks, and canoe access points.

        Action 3: Use regulatory and development review procedures to ensure that land development along waterfronts and in other valued areas does not overwhelm the natural setting, cause significant environmental impacts, or result in sprawling development patterns.

        Action 4: Explore conservation easement approaches for reserve land for long-term preservation and potential public access while maintaining private land ownership.

Goal 3: **Improved quality of air and water in San Angelo and its extraterritorial jurisdiction (ETJ).**

Objective A: Promote air quality by encouraging alternative modes of transportation and by monitoring industries, to mitigate their impacts on air quality.

> **Action 1:** Encourage "grandfathered" industries to act voluntarily to meet contemporary air quality permitting requirements, and support continued voluntary emissions reductions.

> **Action 2:** Promote car-pooling and alternative transportation, including more walking and bicycling opportunities.

> **Action 3:** Maintain an efficient roadway and traffic signalization system to improve traffic flow and reduce vehicle idling time.

> **Action 4:** Consider potential environmental impacts when conducting industrial recruitment and economic development efforts.

> **Action 5:** Assist with educational efforts to inform the public about the health and economic benefits of advanced vehicle inspection and maintenance requirements and other new air quality measures.

Objective B: Enhance and maintain the quality of area waterways for recreational and other uses.

> **Action 1:** Control stormwater runoff by limiting impervious cover, increasing vegetation and through the use of detention ponds, as well as in-stream aerators.

> **Action 2:** Continue strict enforcement of pollution prevention controls at construction sites to minimize contaminated storm runoff to area streams.

> **Action 3:** Maintain public wastewater treatment facilities at the highest standard and address effluent problems expeditiously to limit adverse impacts on area receiving waters.

> **Action 4:** Consider enrolling San Angelo in the TNRCC's Clean Cities 2000 program, which challenges local governments to take a comprehensive and action-oriented approach to environmental enhancement.

Goal 4: Enhanced visual appeal of San Angelo and its major roadway corridors.

Objective A: Reduce litter accumulation and illegal dumping in the community, which detracts from San Angelo's attractiveness as a place to live, work and visit.

> **Action 1:** Conduct an informal study to document problem locations where litter regularly accumulates and/or illegal dumping activity is routinely concentrated, despite enforcement efforts.

> **Action 2:** Consider acquiring excess rights-of-way where litter is a problem, to install landscaping or other enhancements and ensure more frequent cleaning and maintenance.

> **Action 3:** Encourage and support private and/or volunteer initiatives to clean up and beautify vacant properties.

Action 4:   Establish public/private partnerships to provide periodic cleaning of problem areas by volunteers on a more frequent basis than the City can feasibly provide.

Action 5:   Enforce ordinances regarding property maintenance and appearance.

Action 6:   Continue public education efforts, through the City's Web site, newsletters, and other outlets, especially to highlight the cost to City government and taxpayers of responding to littering and illegal dumping.

Action 7:   Install appropriate signage at high-profile locations across the City to promote community pride and publicize the City's hotline for citizen reporting of illegal dumping activity.

Goal 5:   **Efficient use of all resources, integrated to promote sustainable development. San Angelo has an intricate web of mixed land use relationships not enjoyed by all cities its same size. This diversity makes possible both small- and large-scale solutions leading to long-term sustainability. The goal of sustainable development is to put the city's wealth to work and keep its benefits within the community.**

Objective A: Maximize the value of San Angelo's natural assets, its raw material, technologies, building and people, while minimizing consumption.

Action 1:   Utilize treated effluent for irrigation and/or groundwater replenishment.

Action 2:   Promote measures that help minimize heat gain or loss through proper block layout and building orientation, and through planting shade trees and other vegetation that can screen or funnel the prevailing winds.

Action 3:   Encourage use of planted areas, shade structures and surfaces with high reflectivity to minimize solar absorption, as well as to moderate the urban microclimate.

Action 4:   Promote urban water quality by detaining, filtering or otherwise mitigating the adverse impact of stormwater runoff. Detention ponds, in-stream aerators, landscaping, soft-ground and porous paving may all be employed in this effort.

Action 5:   Create and enhance wildlife habitat by introducing complex, ecologically coherent and self-sustaining landscapes wherever possible but especially along waterways, detention ponds and wetlands.

Action 6:   Promote creation of a linked network of spaces (corridors) that can facilitate bicycling and walking.

Action 7:   Integrate all above-mentioned efforts with open amenities, to meet recreational needs of San Angelo residents. This can include paths, playfields, landforms and open-air structures.

ENVIRONMENTAL CONDITIONS

San Angelo is endowed with many environmental assets. These significant natural features are both valued resources and potential constraints to growth and development.

Climate

The San Angelo area has a generally warm and dry "semi-arid" climate. According to the National Weather Service, average yearly rainfall is approximately 20.45 inches. The average temperature in San Angelo is 64.9 degrees Fahrenheit, ranging from an average year-round high temperature of 78.1 to an average year-round low temperature of 51.6. **Figure ER-1** shows average rainfall levels between 1980 and 2000 for the United States. Note that West Central Texas, when compared to other areas of the United States, falls near the middle in terms of rainfall.

One of the most challenging aspects of San Angelo's semi-arid climate is drought. While droughts are normal periods of deficient precipitation that occur in all climatic zones, they are especially devastating in semi-arid climates like San Angelo's. Relative to other areas of the country, drought has been a frequent burden to San Angelo. Drought plagued even the earliest settlers of San Angelo, when lack of rainfall not only meant agricultural losses, but significant losses in human life. More recently, San Angelo has experienced drought conditions through much of the 1990's, with severe droughts occurring in 1995, 1996, and 1998. During the initial drafting of this comprehensive plan in the summer of 2000, San Angelo once again was suffering a severe drought. **Figure ER-2** shows that San Angelo's drought conditions were among the worst in the United States. An important indicator of this is the fact that the Twin Buttes and O.C. Fisher reservoirs were at historically low levels. While drought has not reached the proportions of the 1950's "Dust Bowl", continued lack of precipitation could result in similar conditions.

The impacts of drought are devastating. Agricultural production is severely diminished during drought periods, which has a rippling effect in agricultural economies such as San Angelo. Increased unemployment, reduced demand for goods and services, and increased prices for scarce goods are examples of the impacts. Environmental impacts of drought include the loss of desirable plant and animal species, encroachment of undesirable species, habitat destruction, soil erosion, and the degradation of rivers, lakes, and streams. When prolonged, drought may also have social impacts, such as the out-migration of population.

Drought is a reality of San Angelo's future and will undoubtedly affect the City's development. As a result, the San Angelo Comprehensive Plan must address this issue. Ways in which the Comprehensive Plan addresses drought may include the encouragement of land use patterns that reduce the impact on the area's water supplies, combined with identification and development of drought-proof water sources. Drought will also be addressed in the City's recently completed water and wastewater plans. Furthermore, State Law requires that all regions of Texas prepare a regional water plan by January of 2001. A draft regional water plan has been prepared for the San Angelo region and is discussed in the Utilities element of this plan.
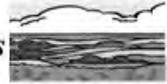
FIGURE ER-1
U.S. AVERAGE RAINFALL 1980 TO 2000
San Angelo Comprehensive Plan
San Angelo, Texas

| 4.5" | 9.0" | 13.5" | 18.0" | 27.0" | 36.0" | 45.0" | 63.0" | 81.0" |

NOAA–CIRES/Climate Diagnostics Center
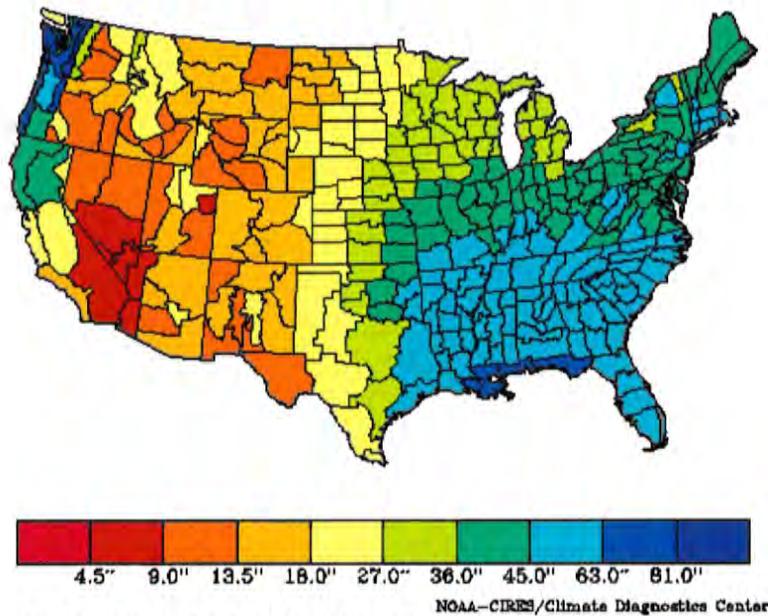
Source: Texas Water Development Board

FIGURE ER-2
U.S. DROUGHT: SUMMER 2000
San Angelo Comprehensive Plan
San Angelo, Texas

F,A

D2(A,F)

D3(A,F)

F,A

Map focuses on widespread drought. Local conditions may vary.

D0 Abnormally Dry
D1 Drought–First Stage
D2 Drought–Severe
D3 Drought–Extreme
D4 Drought–Exceptional
Delineates Overlapping Areas

Drought type: used only when impacts differ

A = Agriculture
W = Water
F = Wildfire danger

See accompanying text summary for forecast statements
http://enso.unl.edu/monitor/monitor.html
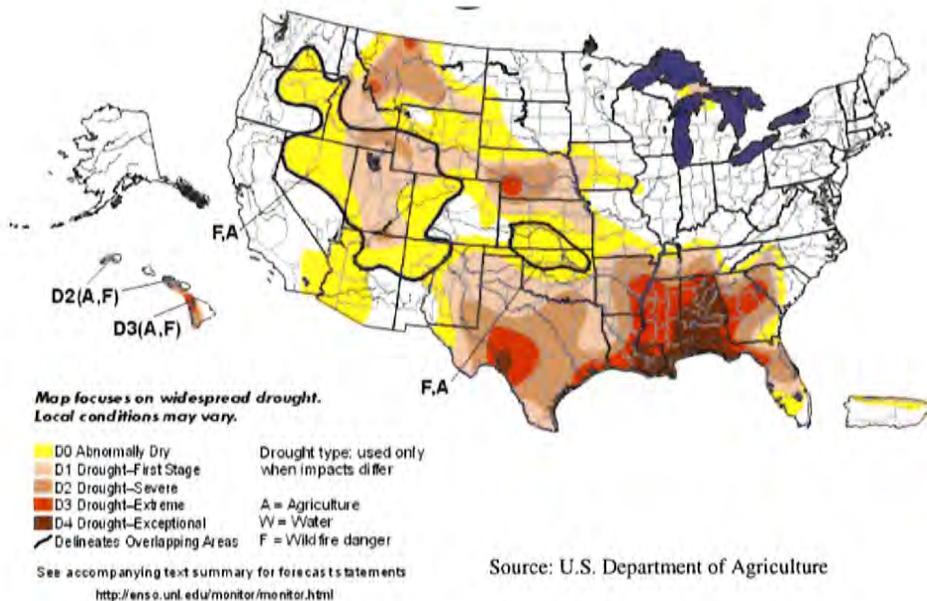
Source: U.S. Department of Agriculture

Topography

San Angelo's topography is unique in that the city is located on the edge of two types of natural areas: the Live Oak/Mesquite Savanna subregion of the **Edwards Plateau (Texas Hill Country)** and the Mesquite Plain subregion of the **Rolling Plains (See Figure ER-3)**. The Live Oak/Mesquite Savanna sub-region of the Edwards Plateau is characterized by a flat to rolling topography. The topography of the Mesquite Plain sub-region of the Rolling Plains is characterized by a gently rolling topography that is dissected by narrow intermittent stream valleys flowing east to southeast. Both types of topography can be clearly identified in the San Angelo metropolitan area.

Figure ER-4 depicts a more detailed topographic map of the San Angelo area. The lines on the map, called contours, show the elevation of the land at various points. The closer the contour lines, the more steep the slope of the land is. Steep slopes impact the land use plan because they may restrict development and/or require special development guidelines.

FIGURE ER-3
NATURAL REGIONS OF TEXAS
San Angelo Comprehensive Plan
San Angelo, Texas

Source: Texas Parks and Wildlife Department

Soils

Generally, San Angelo's soils have the characteristics of the two natural regions it straddles: the Edwards Plateau and the Rolling Plains. Soils in these areas include coarse sands, tight clays, red-bed clays, and shales. In some areas these soils may be shallow with a limestone base. As identified in the *Soil Survey for Tom Green County, Texas*, soils in the San Angelo area are generally grouped into 5 major classifications as displayed in **Table ER-1**.
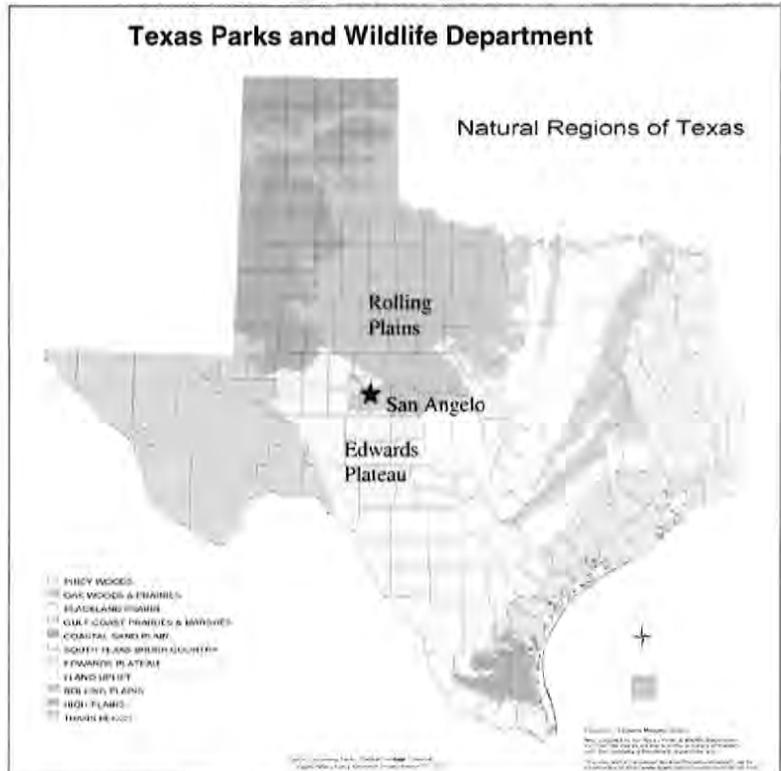
San Angelo
Comprehensive
Plan

FIGURE ER-4
TOPOGRAPHY

Study Area
Major Roads
Contour Lines

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

TABLE ER-1
TOM GREEN COUNTY SOIL ASSOCIATIONS
San Angelo Comprehensive Plan
San Angelo, Texas

Soil Association	Characteristics
Tarrant-Ector	Very shallow to shallow, undulating to hilly, calcareous soils on limestone hills
Kimbrough-Mereta-Angelo	Very shallow, shallow, and deep, nearly level to sloping and undulating, calcareous on outwash plains
Angelo	Deep, nearly level, calcareous soils on outwash plains
Rioconcho - Spur	Deep, nearly level, calcareous soils on flood plains
Olton-Cobb-Cosh	Deep to shallow, nearly level to sloping, noncalcareous soils on outwash plains or over sandstone

Figure ER-5 shows more detailed information on soils in the San Angelo area. This information is considered in the Future Land Use Plan for San Angelo. Additional information may be found in the *Soil Survey for Tom Green County, Texas,* published by the U.S. Department of Agriculture, Natural Resources Conservation Service.

Vegetation

Generally vegetation consists of oak and mesquite woods on grassland. Brush woods in the San Angelo area include cedar, acacia, and mimosa.

Jurisdictional Wetlands

Wetlands are areas that are inundated by surface or ground water with a frequency to support vegetation or aquatic life that requires saturated or seasonally saturated soil conditions. Typical wetlands include swamps, bogs, marshes and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds. Ecologically, wetlands are a unique and critical habitat for many species of plants and wildlife. The U.S. Army Corps of Engineers performs field investigations to identify "jurisdictional" wetlands – those considered a part of "waters of the United States." Permits are required for activities impacting federally identified wetlands under Section 404 of the Clean Water Act (involving discharges of dredge/fill material) and Section 10 of the Rivers and Harbors Act of 1899. The extent of floodplain areas identified by the Federal Emergency Management Agency also is indicative of where wetlands are more likely to be found, although all of the floodplain areas are not necessarily considered to be jurisdictional wetlands. Coordination with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the Texas Parks and Wildlife Department and other environmental agencies is recommended during planning
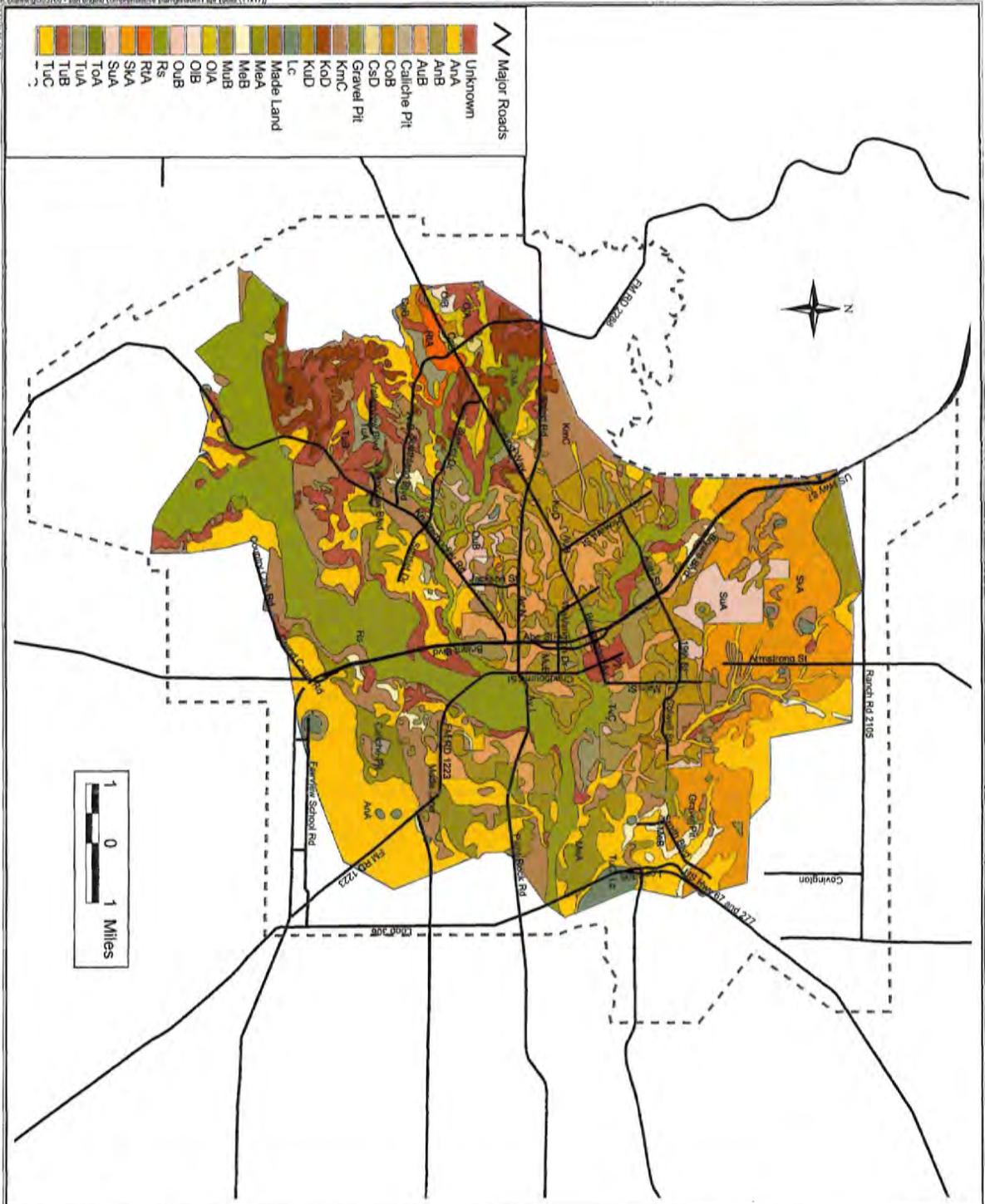
N Major Roads

- Unknown
- AnA
- AnB
- AuB
- Caliche Pit
- CoB
- CsD
- Gravel Pit
- KmC
- KoD
- KuD
- Lc
- MeA
- MeB
- MuB
- OlA
- OlB
- OuB
- Rs
- RtA
- SkA
- SuA
- ToA
- TuA
- TuB
- TuC

1 0 1 Miles

FIGURE ER-5
Soils

San Angelo
Comprehensive
Plan

THE CITY OF SAN ANGELO, TEXAS

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

for future development to identify potential wetlands locations that may be impacted by this development. Such coordination should occur for specific project areas on a case-by-case basis.

Endangered and Threatened Species

There are three species of animals listed on the U.S. Fish and Wildlife Service's Endangered and Threatened Species List (See **Table ER-2**). The species listed may have one of two designations:

- **Threatened** - A species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range; or,

- **Endangered** - A species in danger of extinction throughout all or a significant portion of its range.

TABLE ER-2
TOM GREEN COUNTY ENDANGERED OR THREATENED SPECIES
San Angelo Comprehensive Plan
San Angelo, Texas

Species	Status	Habitat
Black-capped vireo (bird)	Endangered	Rangelands with scattered clumps of shrubs separated by open grassland.
Bald Eagle	Threatened	Quiet coastal areas, rivers or lakeshores with large, tall trees. Man-made reservoirs have provided excellent habitat.
Concho Water Snake	Threatened	Free-flowing streams over rocks and shallow riffles; uses rock debris and crevices for cover.

Source: Texas Parks and Wildlife Department

Through its Texas Natural Heritage Program (TNHP) Information System, the Texas Parks and Wildlife Department will review specific projects on an individual basis and can provide site-specific species and habitat assessments based upon the most up-to-date information available from their records. Records research and field surveys conducted prior to specific development projects also establish any evidence of these species in a particular area or the necessary habitat conditions to support them, at which time protective measures would be required. The City of San Angelo should avoid land development or other activities that would detrimentally impact the habitat areas of threatened or endangered species of plants and wildlife, unless mitigation measures are implemented.

Water Resources

According to the Environmental Protection Agency, San Angelo and its environs lie at the confluence of five watersheds (**See Figures ER-6 and ER-7**):
- 12090101 – Middle Colorado
- 12090102 – South Concho
- 12090103 – Middle Concho

- 12090104 – North Concho
- 12090105 – Concho

Water quality in these watersheds is generally considered very good, although the Concho River is listed as a water quality "concern" by the Environmental Protection Agency.

The Concho Rivers

The Concho Rivers are one of San Angelo's most exceptional natural features and the geographic focus of the City. The river system is composed of three branches known as the North Concho, the Middle Concho, and the South Concho rivers. The North Concho, the main branch, originates two miles north of the Glasscock county line in southern Howard County and flows southeast for 88 miles across Glasscock, Sterling, Coke, and Tom Green counties to its confluence with the South and Middle Concho rivers, a mile north of Goodfellow Air Force

FIGURE ER-6
SAN ANGELO'S WATERSHEDS
San Angelo Comprehensive Plan
San Angelo, Texas

Source: U.S. Environmental Protection Agency

Base. The three forks merge to become known as the Concho River at this juncture. The Middle Concho River originates in central Reagan County and flows easterly through Irion County to Twin Buttes Reservoir and then to its mouth on Lake Nasworthy. The South Concho River parallels U.S. Highway 277 in central Schleicher County and flows north for 36 miles through Twin Buttes Reservoir and Lake Nasworthy to its confluence with the North Concho River. The consolidated Concho River flows east for 58 miles across Tom Green and Concho counties to its mouth on the Colorado River, one-half mile west of the Coleman county line and one mile south of the Runnels County line in eastern Concho County.

San Angelo's Lakes and Reservoirs

Lake Nasworthy is an artificial lake on the South Concho River and is San Angelo's primary municipal water source. The West Texas Utilities Company constructed it in 1929-30 to supply municipal and industrial water for San Angelo. Nasworthy Dam is an earthfill dam at an elevation of 1,879 feet above mean sea level. Normal capacity of the Lake is 13,990 acre-feet. The lake drains an area of 3,833 square miles. Lake Nasworthy is owned by the City of San Angelo

Twin Buttes Reservoir was completed in February 1963 and regulates flow into Lake Nasworthy. The reservoir is on the Middle Concho River, Spring Creek, and the South Concho River. It was formed by a rolled earthfill dam eight miles long and is used for flood control, conservation, irrigation, and recreation. The normal elevation of the reservoir is 1,940 feet above mean sea level. The project is owned by the United States government and operated by the United States Bureau of Reclamation. The dam was completed on February 13, 1963. The reservoir has made possible the irrigation of 10,000 acres of farmland east of the city of San Angelo.

O. C. Fisher Lake is on the North Concho River in the Colorado River basin. The dam was completed by the United States Army Corps of Engineers in 1952. The lake, with an elevation of 1,938.5 feet above mean sea level, is designed to protect San Angelo and other areas below the dam from flooding and to
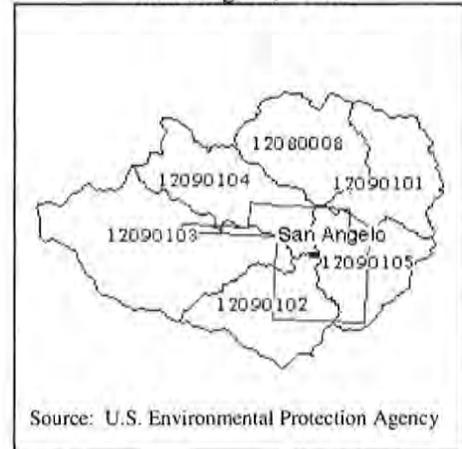
provide 396,400 acre-feet of storage capacity for flood control and 119,200 acre-feet of capacity for conservation control. The lake covers an area of 8½ square miles and has twenty-seven miles of shoreline. San Angelo uses O.C. Fisher Lake as a secondary water source.

The **O. H. Ivie Reservoir**, while not in the San Angelo area, is also a secondary water source for San Angelo. It is located in Concho, Coleman, and Runnels counties near the confluence of the Concho and Colorado Rivers. The lake waters are used for several cities' water supplies in West Texas. The conservation surface area of the lake is 20,000 surface acres. The reservoir was completed in 1990 and is owned and operated by the Colorado River Municipal Water District. The lake drains an area of 3,300 square miles.

FIGURE ER-7
SAN ANGELO WATERSHEDS
San Angelo Comprehensive Plan
San Angelo, Texas
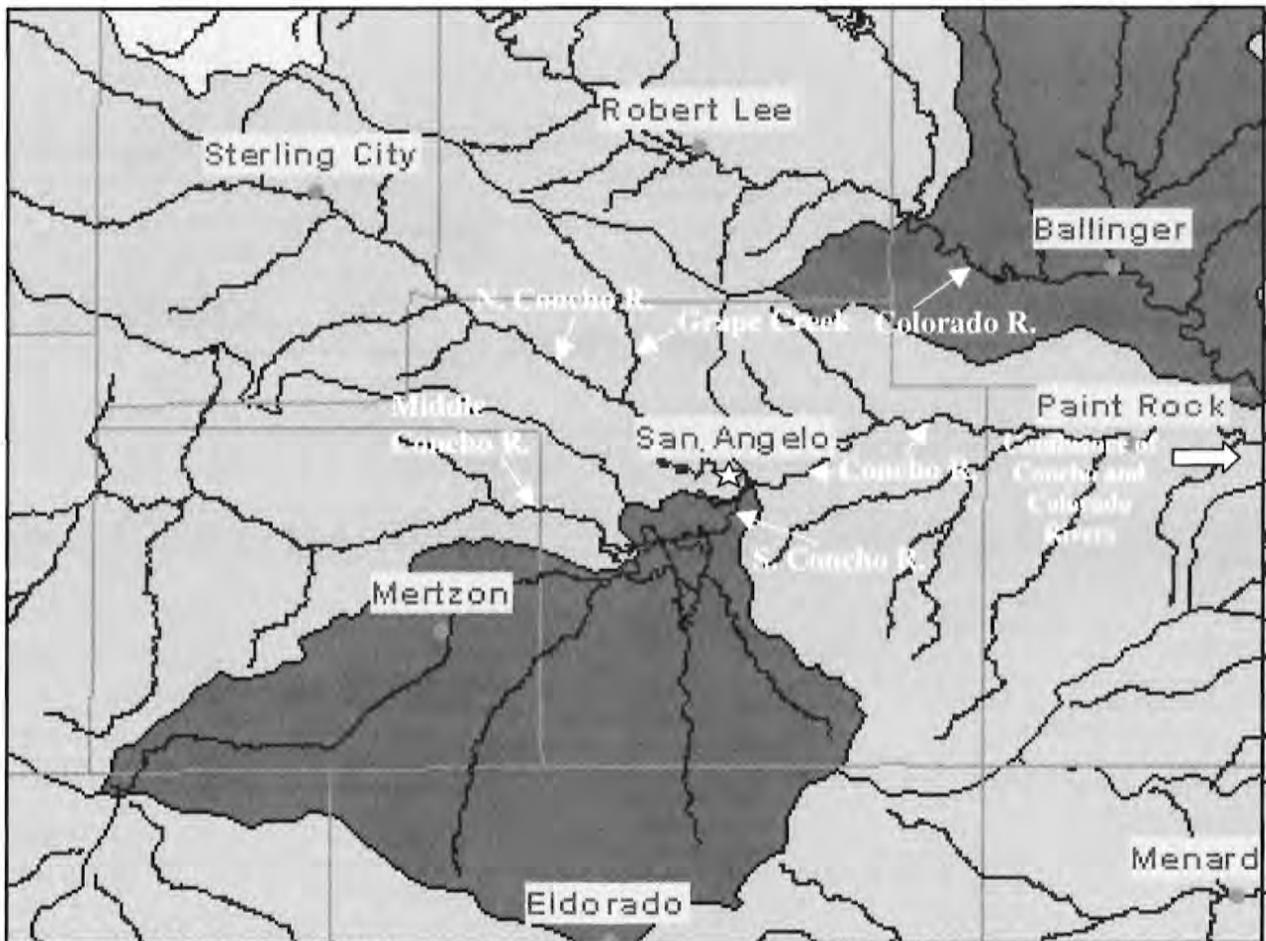
Source: U.S. Environmental Protection Agency

Aquifers

San Angelo is not situated on any significant underground aquifers.

Floodplains

Floodplains serve as an important environmental asset of the city, but pose a constraint to development. **Figure ER-8** shows floodplains in the San Angelo area.

Environmentally Hazardous Areas

San Angelo is fortunate in that it has no Federally-identified environmental hazard areas, including especially hazardous sites listed as "Superfund" sites.

N
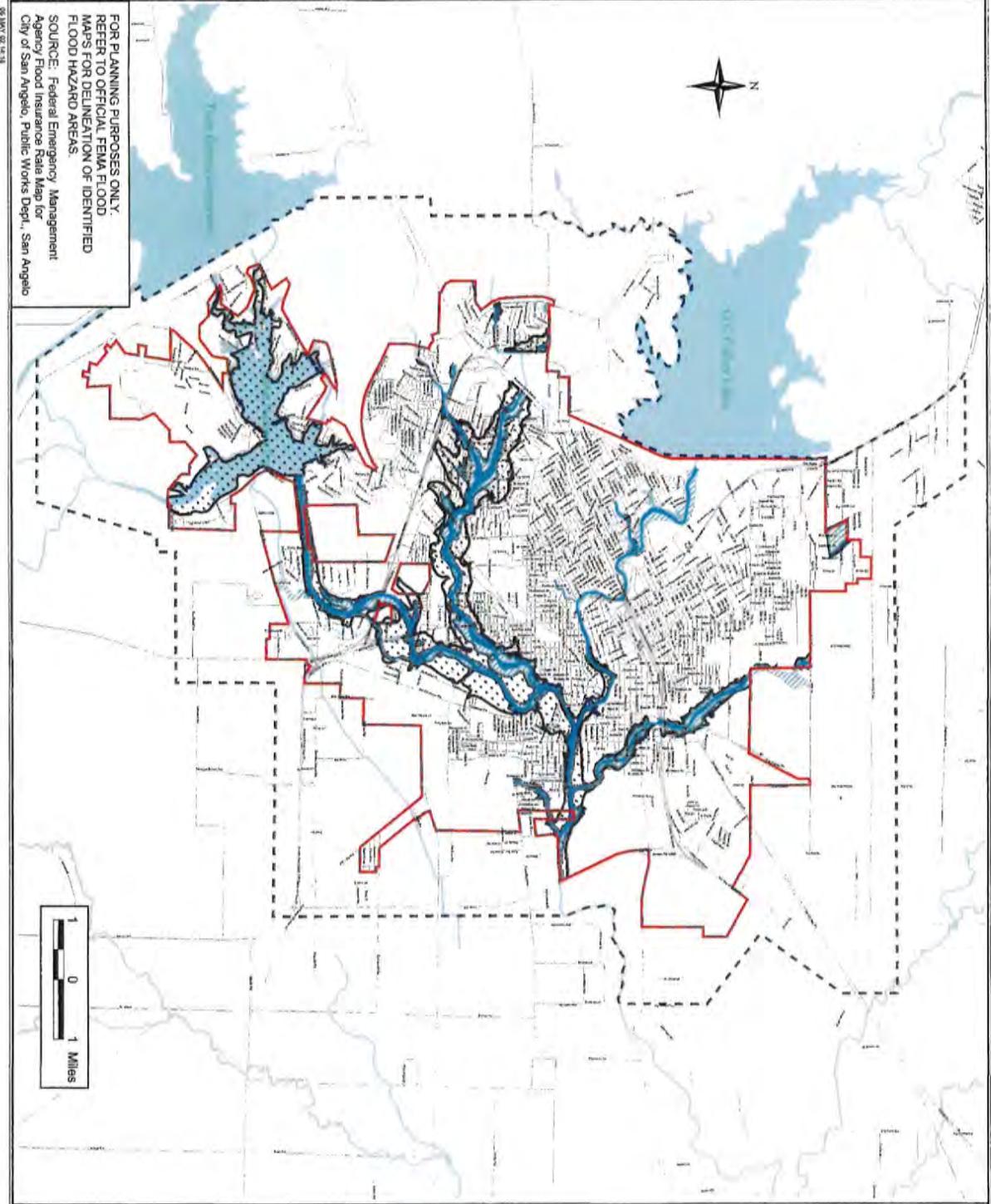
FOR PLANNING PURPOSES ONLY.
REFER TO OFFICIAL FEMA FLOOD
MAPS FOR DELINEATION OF IDENTIFIED
FLOOD HAZARD AREAS.

SOURCE: Federal Emergency Management
Agency Flood Insurance Rate Map for
City of San Angelo, Public Works Dept., San Angelo

1 0 1 Miles

San Angelo
Comprehensive
Plan

THE CITY OF SAN ANGELO, TEXAS

FIGURE ER-8
FLOODPLAIN

Study Area
San Angelo Corporate Limits
Floodway
100 Year Floodplain
500 Year Floodplain
Creek

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

TRANSPORTATION

The purpose of the Transportation element is to address mobility needs in San Angelo and ensure orderly development of the City's thoroughfare system. This element includes an overview of existing transportation facilities and services, analysis of travel characteristics and development of a Thoroughfare Plan for the San Angelo area. The San Angelo Thoroughfare Plan will address transportation improvement needs over the 20-year planning period and will serve as a guide for securing needed rights-of-way and upgrading and extending the network of streets, roads and highways within the City.

RELATED PLANS AND STUDIES

"Thoroughfare Plan for San Angelo Texas"; J.T. Dunkin and Associates, Inc. and Barton-Aschman Associates, Inc.; 1994.

"Metropolitan Transportation Plan FY 2000-2025"; San Angelo Metropolitan Planning Organization, 1999.

"Urban Transportation Study 1985-2025"; Richardson Verdoorn, Inc., Capitol Market Research, Inc., and HM Transportation Engineering Consultants, Inc.; 1987.

"Airport Master Plan Update: Mathis Field, San Angelo, Texas"; Barnard Dunkelberg & Company, Parkhill, Smith, & Cooper, Inc.; 1995

TRANSPORTATION ASSETS & CHALLENGES

Strengths and weaknesses identified by the San Angelo Comprehensive Plan Steering Committee and by citizens at a Community Forum were instrumental in developing goals and objectives for the transportation element of the Plan. These strengths and weaknesses are as follows:

Assets
- Ability to get around relatively quickly and easily, all the time, even during peak traffic hours;
- Excess capacity on most of the major street network; and,
- Anticipated completion of the Houston Harte Expressway, offering the possibility for high-speed, non-stop traffic movement across the breadth of central San Angelo.

Challenges
- Coordinating (among adjoining commercial properties) shared driveway openings onto arterial streets, in order to minimize the size and number of driveway openings onto arterial streets;
- Maintaining an adequate public transportation system over a broad area (like San Angelo) which does not have high concentrations of population and employment;
- Expanding the scope of public transit to include service during evening hours;
- Lack of pedestrian pathways, outside the central business district, and especially around elementary schools;

- Rough rail crossings over streets in some areas of the city, usually on streets other than state-maintained highways;
- Lack of pathways specifically designated for bicycle traffic, especially around elementary schools;
- Upgrading of substandard streets located at the urban fringe to accommodate increasingly urban levels of traffic;
- Narrow, rural roads in urbanizing areas;
- Rights-of-way dedicated (usually by plat) but never improved for vehicle traffic;
- Relative high cost and lack of options available for scheduled air travel to and from San Angelo;
- Unattractive appearance of passenger airport facilities, combined with inadequate opportunities for public transportation (including taxis and shuttles) to and from the airport;
- Only one main roadway for travel between the airport and San Angelo's urbanized area; and,
- Extensive repairs remain necessary on the one railroad reaching San Angelo. The present poor state of these rails requires railroad traffic to move now at extraordinarily slow speeds.

GOALS & OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the transportation element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **A hierarchy of thoroughfare classifications that will provide for safe and convenient flow of traffic throughout the community.**

Objective A: Develop a Thoroughfare Plan to ensure efficient and desirable connections between major streets and among different neighborhoods of San Angelo, and to aid in prioritizing transportation improvement needs.

Action 1: Adopt the Thoroughfare Plan of the San Angelo Comprehensive Plan and periodically consider amendments, as necessary.

Action 2: Utilize the Thoroughfare Plan during the subdivision and site development review process to ensure provision of continuous streets between adjacent developments.

Action 3: Acquire future rights-of-way, through dedication or other means, for the extension of collector and arterial roadways that are proposed for improvement on the Thoroughfare Plan.

Action 4: Review all subdivision plats and proposed developments to ensure conformance with the Thoroughfare Plan.

Objective B: Plan, fund and implement surface transportation improvements, in conformance with the Thoroughfare Plan.

Action 1: Identify and upgrade substandard streets located at the urban fringe to accommodate increasingly urban levels of traffic.

Action 2:   Identify and widen narrow, rural roads in urbanizing areas.

Action 3:   Improve rough railroad crossings over city streets, in some instances removing unused rails altogether.

Action 4:   Support and fund continued development of the freeway loop on San Angelo's east side.

Action 5:   Continue to participate with TxDOT in determining the feasibility of the Ports to Plains Corridor and evaluate specific alternative corridors through San Angelo.

Goal 2:   **Continuity of traffic flow within and between neighborhoods and throughout the community.**

Objective A: Develop an urban street network that offers efficient access to all residential neighborhoods.

Action 1:   Identify all dead-end streets and their relative impact on the flow of traffic within and between neighborhoods.

Action 2:   Implement needed street extensions and roadway improvements, addressing the most urgent needs for connecting neighborhoods with through streets.

Action 3:   Continue requiring construction of temporary cul-de-sacs where a street is to be temporarily terminated but is planned to be extended at a later date.

Action 4:   Consider amending the subdivision ordinance, specifically requiring multiple points of ingress/egress for large subdivisions.

Objective B: Adopt consistent names for streets which appear to be of a singular alignment but which presently have more than one street name, wherever such changes will increase overall legibility and understanding of the street system.

Action 1:   Identify opportunities and priorities for changing the names of certain street segments, in order to promote consistent names on continuous street alignments.

Action 2:   For each such street segment, initiate hearings to gauge the level of public support for changing that street's name, and to more completely understand what inconveniences are involved.

Goal 3:   **Relief of traffic congestion.**

Objective A: Improve traffic circulation by encouraging through traffic on the arterial street system while controlling traffic and speeds on collector and local residential streets.

Action 1:   Coordinate (among adjoining commercial properties) shared driveway openings onto arterial streets.

Action 2:   Consider adopting access management regulations for arterials and other busy roadways, pertaining to the design, construction, location, width, spacing, offset

and potential coordination of driveways; street connections; medians and median openings; auxiliary lanes; on-street parking; traffic signals; turn lanes; and, pedestrian and bicycle facilities.

Action 3:   Consider traffic impacts on affected transportation facilities during review of zone changes and subdivision applications, with possible participation by developers in making improvements needed to maintain an adequate level of service.

Action 4:   Require traffic impact studies and mitigation actions for large-scale development proposals.

Action 5:   Conduct a study of traffic delays and parking conditions around elementary schools to determine need for alternative management strategies.

Goal 4:   Use of alternative modes of transportation and related facilities including public transit.

Objective A: Pursue alternate modes of transportation, including pedestrian and bicycle routes, public transit, and others.

Action 1:   Maximize transit service to urban residents, workers and students.

Action 2:   Increase transit service during the evenings and on weekends.

Action 3:   Promote citizen and business awareness of existing and new public transportation opportunities.

Objective B: Develop a Comprehensive Bikeway Plan, which establishes prioritized bikeway improvements for future construction.

Action 1:   Fund and construct a comprehensive pedestrian and bicycle system to serve both recreational and alternative (non-motorized) transportation needs, including an enhanced sidewalk network and off-street paths accessible to many areas of the community and connecting neighborhoods, schools, parks, shopping and employment centers.

Action 2:   Initiate pedestrian/bicycle system planning to ensure advance acquisition and/or dedication of preferred routes, including coordination with owners of utility easements and other potential shared-use corridors.

Action 3:   Continue to pursue Federal and State financial assistance grants for pedestrian and bicycle transportation projects, such as transportation enhancement funds under the Transportation Equity Act for the 21st Century (TEA-21).

Action 4:   Extend the existing bikeway along Southland Boulevard and develop a comprehensive bikeway system throughout San Angelo.

Action 5:   Develop a bicycle path for recreation and alternative (non-motorized) transport along the Red Arroyo corridor.

Objective C: **Establish and maintain a network of new and existing sidewalks.**

Action 1:   Explore and analyze the wide variety of ways (structural and nonstructural) for making pedestrian travel more convenient and safe, for both recreational walkers and as alternative transport.

Action 2:   Fund and construct pedestrian walkways, sidewalks, crosswalks, handicap accessible ramps and curb cuts along city streets in areas with significant pedestrian traffic, such as around schools, parks, retail districts, and other activity areas.

Action 3:   Require commercial development to include sidewalks.

Action 4:   Provide improved pedestrian facilities such as crosswalks, handicap accessible ramps, curb cuts, pedestrian crossing signs and warning lights (near schools, parks, etc.) and pedestrian-activated signal changers.

Goal 5:   Accommodating increased demand for transportation facilities while preserving and enhancing the attractiveness of the environment.

Objective A: Ensure that all transportation projects include landscaping of some green spaces within the right-of-way and other aesthetic enhancements, consistent with traffic safety and design standards.

Action 1:   Work with TxDOT and Tom Green County to ensure that the design of bridges, overpasses, retaining walls and other improvements includes consideration of visual impact and utilizes design features and materials, including landscaping treatments, that will enhance the aesthetic appearance of the structures.

Action 2:   Plan and acquire adequate rights-of-way for thoroughfares to include open space areas and buffer zones.

Action 3:   Place a high priority on tree preservation in roadway improvement planning and tree protection during construction.

Action 4:   Carefully regulate development and require high standards for landscaping and property maintenance along highways and major thoroughfares to maintain aesthetics and avoid "strip development" outcomes.

Goal 6:   Expanded and enhanced facilities at San Angelo Regional Airport.

Objective A: Promote commercial and general aviation facilities and services that meet existing and future air transportation needs.

Action 1:   Expand commercial air service from San Angelo to additional "hub" airports.

Action 2:   Improve public transportation opportunities to and from the airport through the use of taxis and shuttles.

Action 3:   Improve and enhance the appearance of passenger airport facilities.

Action 4: Improve access to San Angelo Regional Airport by providing alternative routes to the airport.

EXISTING TRANSPORTATION SYSTEM

Development of the thoroughfare plan involves an evaluation of the City's existing transportation system. The existing roadway and traffic conditions of the highway and street network were identified and analyzed to assist in determining long range needs for thoroughfare system development.

Location

Located in Tom Green County in west central Texas, San Angelo lies at the intersection of US Highways 87, 67 and 277. The city is located between Interstates 10 and 20. Interstate 10 is located 64 miles south of San Angelo and can be accessed through US Highways 67 and 277. Interstate 20 is located approximately 80 miles to the north of the city and can be accessed through US Highways 87 and 277. Nearby cities of comparable size include Abilene 91 miles to the northeast and Midland 112 miles to the northwest.

Existing Thoroughfares

Several thoroughfares in San Angelo have U.S. Highway, State Highway and Farm to Market (FM) Highway designations. The City is currently served by three US Highways including US 67, US 87, and US 277. San Angelo is also served by State Highway 208.

Source: San Angelo Chamber of Commerce
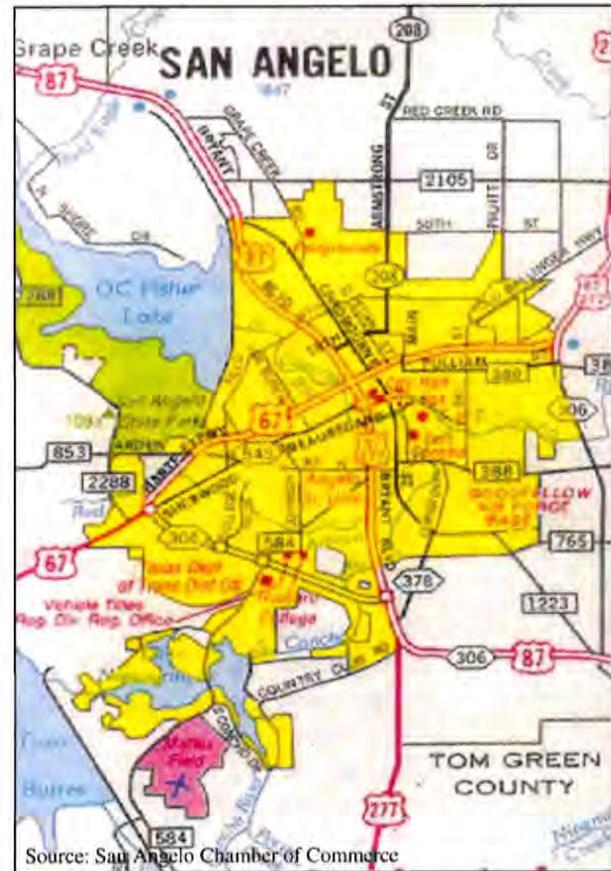
- **US Hwy 87** runs north/south through the city and coincides with US Highway 277 in the south part of San Angelo. In the north part of the city, U.S. Highway 87 is known locally as North Bryant Boulevard, and in the south part of the city, U.S. Highway 87 is known as South Bryant Boulevard. As it extends through central San Angelo, U.S. Highway 87 occupies a one-way pair of thoroughfares known as Abe and Koenigheim Streets. U.S. Highway 87 varies from four to eight lanes as it extends through town.

- **US Hwy 67** runs northeast to southwest through the city and connects with Interstate 10 approximately 131 miles southwest of the City. As it extends across San Angelo, U.S. Highway 67 is planned to occupy a four-lane divided freeway known locally as the Houston Harte Expressway. Only the eastern half of this freeway is now fully constructed. The western half has only a broad right-of-way with one-way frontage roads installed along the north and south margins of the right-of-way. Complete construction of freeway sections on this western half of the Houston Harte Expressway is expected as early as 2004.

- **US Hwy 277** runs in a southerly direction from Wichita Falls to Abilene and enters San Angelo on its northeast side. US Hwy 277 provides access to Mexico as it continues south approximately 155 miles to the nearest border crossing at Del Rio. US Hwy 277 also connects with Interstate 20 in Abilene (88 miles further north) and with Interstate 10 approximately 64 miles to the south of the city.

- **State Highway 208** extends north/south and terminates in San Angelo. State Highway 208 connects with Interstate 20 approximately 75 miles to the north of San Angelo, at Colorado City.

The following major arterials serve the San Angelo area:

- **FM 584 – Knickerbocker Road** extends from far south of San Angelo, past the airport, in a northeasterly direction to Bryant Boulevard. This roadway was expanded to a seven-lane section between Loop 306 and Bryant Boulevard. Knickerbocker Road is a major traffic carrier in San Angelo, and land use along this thoroughfare consists primarily of commercial development.

- **Sherwood Way/Beauregard Avenue** is a major east-west arterial that is bordered by commercial development along most of its length. Sherwood Way transitions into Beauregard Avenue as it approaches downtown from the west.

- **Loop 306** forms a partial loop around San Angelo. It exists as a freeway as it extends from Bryant Boulevard in the southeast to Sherwood Way in the west. The remaining portions of Loop 306 have two to four lanes of traffic with no grade separation of street crossings and only partial control of driveway access. Loop 306 effectively provides high speed access between different commercial and residential areas of San Angelo as well as connecting several important roadways.

- **Avenue N/Arden Road (FM 853)** extends from South Bryant Boulevard westward to the city limits and beyond.

- **Avenue L/Paint Rock Road (FM 388)** extends from South Bryant Boulevard eastward to the city limits and beyond.

- **South Chadbourne Street (FM 1223)** extends southeastward from downtown San Angelo to Loop 306 and beyond.

- **Main Street** begins at its intersection with East Beauregard Avenue on the east side of downtown San Angelo and extends northward.

- **FM 2288** extends from its intersection with U.S. Highway 67 on Sherwood Way northward to the community of Grape Creek. This artery provides a convenient route for travel between Grape Creek and the southwest side of San Angelo, avoiding the more congested urban areas of central San Angelo.

- **FM 2105** extends across the entire northern tier of the Comprehensive Plan's study area, but the roadway itself remains outside San Angelo's city limits. FM 2105 connects U.S. Highway 87 with U.S. Highway 277.

The following minor arterials also serve the San Angelo area:

- **Southwest Boulevard** is planned to someday extend from U.S. Highway 67 southward to as-yet undeveloped areas south of San Angelo's existing city limits on the Texas Pacifico Railroad tracks. The only unimproved segments of Southwest Boulevard are at its extreme north and south ends, i.e., north of Sherwood Way and south of the railroad tracks. The remainder is fully improved with at least four full lanes for traffic movement.

- **College Hills Boulevard** is classified as an arterial street from its intersection with West Avenue N southward to Loop 306. South of Loop 306, College Hills Boulevard is downgraded to collector street status.
- **Johnson Street** runs north/south between Sherwood Way and Knickerbocker Road.
- **Christoval Road** extends south from Paint Rock Road and intersects Loop 306. For approximately one half its length, between South Chadbourne Street and Loop 306, this arterial street is designated as Spur 378 on the state's highway network.
- **North Chadbourne Street** begins at US Hwy 87 on the north side of San Angelo, then continues south and intersects with the Houston Harte Expressway, beyond which it becomes a major arterial.
- **Bell Street** is a north/south arterial between Old Ballinger Highway and Paint Rock Road.
- **Pulliam Street** is an east/west minor arterial that turns into FM 380 east of the City.
- **Harris Avenue** is an east/west arterial located south of Pulliam Street.
- **Glenna/Edmund/29th and 28th Streets** make up an arterial alignment that arcs across almost the entire north side of San Angelo. East from Armstrong Street, however, improvements on East 28th Street are minimal at best and consist mostly of gravel.
- **50th Street** runs east/west between Armstrong Street and Covington Road. 50th Street is presently improved with only a narrow (approximately twenty-foot) width of pavement. Almost all land on either side of this street remains in agricultural use.

Airports

San Angelo is served by the San Angelo Regional Airport, which is located south of the City. The airport currently has three runways and offers private charter and commercial service. American Eagle Airlines provides seven daily flights to Dallas-Fort Worth International Airport. In addition to commercial and charter flights, the airport also provides helicopter sales and service as well as recip and turbine engine maintenance.

Inter-City Bus Transportation

Three carriers converge on the Union Bus Center in downtown San Angelo at 31 East Concho Avenue. Transportation of passengers and packages is offered by bus or shuttle vans in all four directions to and from San Angelo, at least once each day:

- Coach USA (Kerrville Bus Company)

    Three times daily south to San Antonio.

    Three times daily north to Lubbock and Amarillo.

    Two times daily south to Del Rio and Eagle Pass.

    Two times daily east to Fort Worth and Dallas.

- Sunset Stages

    Two times daily north to Abilene.

- Concho Coaches

    Three times daily (once a day on weekends) west to Midland and Odessa.

Public Transportation

Public transportation within the City is provided on buses operated by the San Angelo Street Railroad Company, a department of municipal government. Transit service covers over 80 percent of the City and operates Monday through Friday from 6:30 a.m. to 5:30 p.m. and on Saturday from 9:30 a.m. to 5:30 p.m. No service is currently provided on Sunday or on the following holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day. Round trip fares are $1 for adults and $.50 for students and seniors. Private charter service is also available and is utilized for weddings, chamber of commerce functions and city tours. Special Transportation Service is also available for persons with disabilities and for seniors. As displayed in **Figure T-1**, there are currently five circular routes that connect at the Santa Fe Depot. Long range goals for transit are outlined in the Metropolitan Transportation Plan. These include increasing marketing efforts by publishing brochures and maps and making them available to newcomers, university students and visitors. Another long-range goal is expanding to include a route or shuttle to the airport.

Ports to Plains Corridor

The Ports to Plains corridor study was intended to determine the feasibility of highway improvements between the Texas/Mexico border and Denver, Colorado, via the existing IH 27 corridor between Lubbock and Amarillo, Texas. The Ports to Plains corridor was designated by the Transportation Equity Act for the 21st Century (TEA-21) as one of 43 "High Priority Corridors" on the National Highway System. **Figure T-2** shows the area generally identified as the Ports to Plains Corridor. The corridor is approximately 800 miles long and will traverse the states of Texas, New Mexico, Oklahoma and Colorado. The corridor serves as an important connection with Mexico and will be instrumental in meeting the current and future travel demands resulting from the increased trade made possible by the North American Free Trade Agreement (NAFTA). Two northern candidate alternatives and three southern candidate alternatives were under consideration for the corridor. All three southern candidate alternatives traverse the City of San Angelo. This corridor will be important in facilitating trade and commerce with Mexico and providing a more direct and improved link between the City of San Angelo and

FIGURE T-2
PORTS TO PLAINS CORRIDOR
San Angelo Comprehensive Plan
San Angelo, Texas

Source: Wilbur Smith Associates

the Mexican border. San Angelo should continue to participate in determining the feasibility of this Ports to Plains corridor. It is important to note that the study evaluated all alternatives; however, no recommendation was made as to which is the "best" or most appropriate alternative.
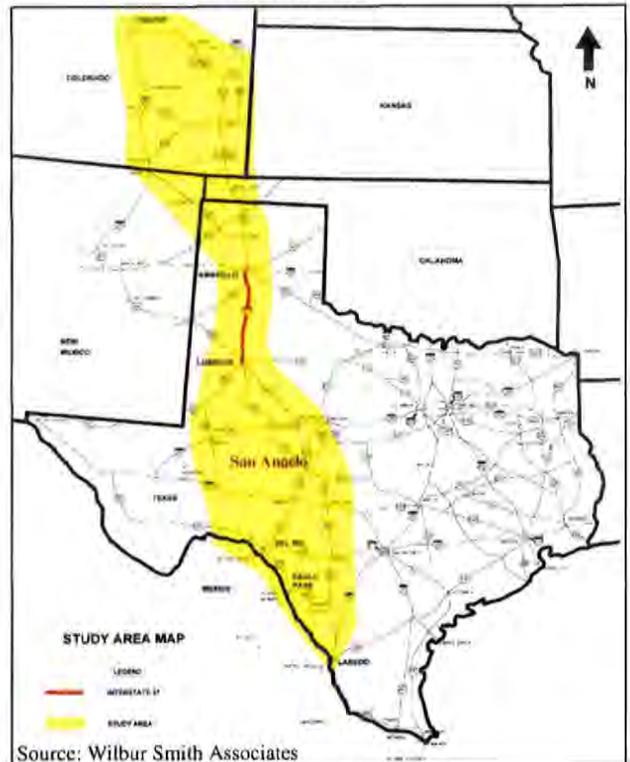
FIGURE T-1
SAN ANGELO STREET RAILROAD COMPANY ROUTE MAP
San Angelo Comprehensive Plan
San Angelo, Texas
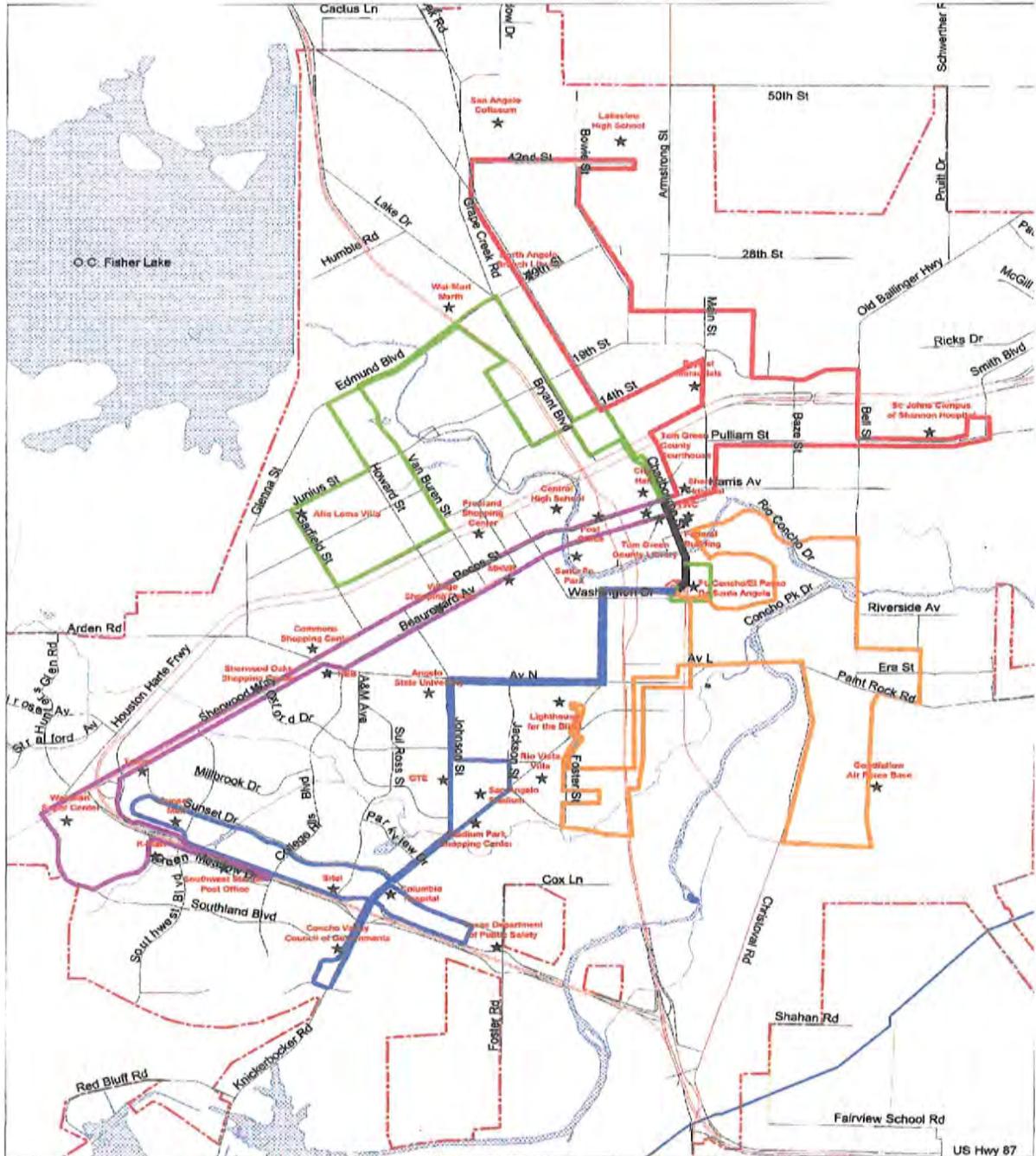
Source: Metropolitan Transportation Plan FY 2000 – 2025, 1999

Railroads

San Angelo is served by a single "short line" railroad that stretches across much of West Texas. This railroad begins 77 miles northeast from San Angelo, at an intersection with a main line of the Burlington Northern Santa Fe Railroad. It continues in a southwestern direction through San Angelo to the Mexican border at Presidio, Texas, a total distance of over 300 miles. The Texas Department of Transportation owns this railroad's right-of-way and fixtures (rails & bridges) but has leased operating right to Texas Pacifico Transportation, Ltd. These local operators are affiliated with Ferrocarril Mexicano (a.k.a. FerroMex) which is the most expansive rail operator in Mexico. FerroMex's rail system connects to Texas Pacifico's gateway at Presidio.

For the time being, Texas Presidio is concentrating on domestic freight. This includes hauling steel plates for fabricators (in San Angelo) and sand from Rankin (98 miles southwest of San Angelo) as well as agricultural commodities from farm areas surrounding San Angelo. Texas Pacifico is now operating its railroad along only its northernmost 175 miles (approximately) because there are no customers southwest of Rankin, and extensive joint repair is needed all the way to Presidio.

Texas Pacifico's stated goal is to get freight from all over the United States through San Angelo and into Mexico at Presidio. From there, FerroMex, the rail system also owned by corporate parent Grupo Mexico, can forward freight. Goods would also flow from Mexico into the United States. FerroMex specializes in working with industrial customers; it envisions carrying agricultural goods and finished products back and forth across the U.S./Mexican border. Major U.S. rail carriers are now using border gateways at Laredo and at El Paso. Both these gateways have congestion problems. A better-developed gateway at Presidio (and extending through San Angelo) is expected to be a valuable asset for expanded border trade between the United States and Mexico.

Bikeway and Pedestrian Routes

Eliminating barriers to bicycle and pedestrian mobility is one of the most important features in bicycle/pedestrian planning. Freeways, major arterials, railroads, water features, and topography can all impose significant barriers to access and mobility. On-street bikeways and off-street bike/hike/jog trails should be developed to link major attractions and destinations throughout the City, including neighborhoods and apartments, parks, schools, churches, the public library, museums, major employers, medical clinics, social service agencies, and the Central Business District as well as other shopping areas. In this way, bicycle/pedestrian routes can provide an alternative mode of transportation while also serving the recreational needs of area residents. Pedestrian and bicycle facilities should be designed and constructed in compliance with requirements of the Americans with Disabilities Act (ADA).

Pedestrian walkways, sidewalks and crosswalks are part of the City's existing transportation system that promotes pedestrian movement in residential neighborhoods, commercial business areas, and around schools, parks and other community facilities.

The State of Texas recognizes a bicycle as a vehicle, with all rights and responsibilities for roadway use that are provided to motor vehicles. As such, cyclists can legally ride on any street in San Angelo, although controlled-access highways are off limits to both bicycles and pedestrians. Certain types of roadways are more attractive to riders than others because of traffic volumes and speeds and street design. Local and

collector streets are suitable for use by most bicycle riders, while minor arterial streets are suitable only for limited use by bicyclists due to higher traffic volumes and speeds. Rural arterials, especially those with shoulders wider than four feet, attract sport cyclists interested in longer-distance travel with fewer interruptions.

The City has developed an on-street bikeway along Southland Boulevard from Bonham Elementary School east to Bermuda Street. The City should expand this one bikeway and develop a comprehensive bikeway/trail system throughout San Angelo, connecting parks, schools and major attractions.

One area of significant interest in developing an off-street pathway is along the Red Arroyo corridor, a wide swath of open space extending east-west across south central San Angelo. A two-mile long segment of this corridor is already under municipal ownership, from the Red Arroyo's intersection with Knickerbocker Road west to Sherwood Way. This corridor has long been viewed as an unrealized opportunity for developing off-street paths for bicycle and foot traffic, with access to existing neighborhoods north and south.

FUNCTIONAL CLASSIFICATION

Roads and streets are grouped into functional classes according to the type of service they are intended to provide in terms of traffic movement and access. A schematic illustration of a functionally classified roadway network is shown in **Figure T-3**. Characteristics of each functional class of roadway are further described in the following sections. San Angelo's Thoroughfare Plan includes the following functional classes:

- Freeways;
- Arterials (subdivided into major and minor);
- Collectors (subdivided into major and minor);
- Parkway; and,
- Local/residential streets.

Criteria for Roadway Classification

Criteria used in determining the functional classifications of roadways are shown in **Table T-1**. Classification is based on each roadway's functional role in the overall network and the existing and future travel patterns and areas served.

FIGURE T-3
FUNCTIONALLY CLASSIFIED ROADWAY NETWORK
San Angelo Comprehensive Plan
San Angelo, Texas
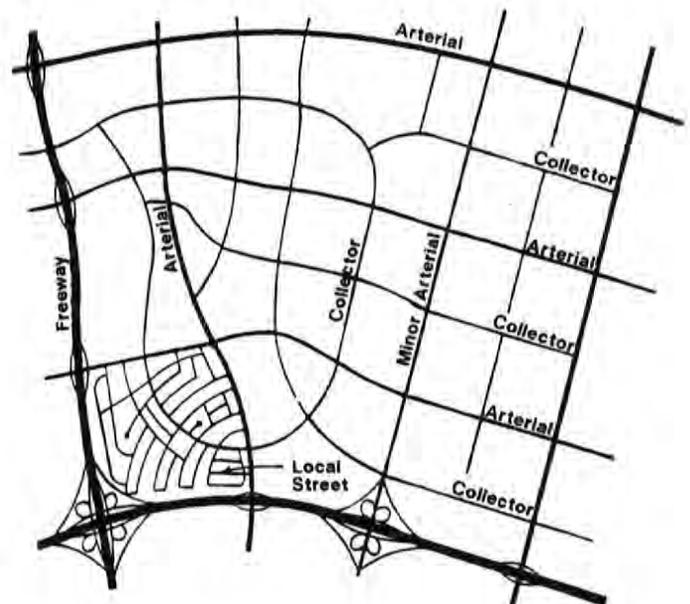
Source: Wilbur Smith Associates

TABLE T-1
THOROUGHFARE CLASSIFICATION SYSTEM
San Angelo Comprehensive Plan
San Angelo, Texas

Criterion	Freeway/ Expressway	Principal Arterial	Minor Arterial	Major/Minor Collector	Local Street
Functional Role	Entirely through movement with no direct access to property	Mobility is primary, Access is secondary; Connects Freeways and other Arterials	Connect Freeways, Principal Arterials and lower classes. Access is secondary	Collects traffic; Connect Arterials to Local Streets; also land access	Access is primary; Little through movement
Roadway Continuity	Inter-city, regional, and interstate	Connect Freeways and lower classes; Connect major activity centers	Connect Freeways and Principal Arterials to lower classes	Continuous in spaces between Arterials. Connect Arterials to local streets; extend across Arterials	Discontinuous Connect to Collectors
Purpose	Intended to serve long trips, including vehicles entering and leaving urban area and major circulation within the urban area.	Serve trips entering and leaving the urban area as well as trips within.	Serve shorter distance trips than principal arterials.	Provide direct access to residential, commercial and other land uses.	Provide direct access to residential and commercial properties.
Roadway Length	Usually more than 5 miles long	Usually more than 5 miles long	Usually more than 3 miles long	Varies from about 1/2 mile to 2 miles	Generally less than 1 mile long
Traffic Volumes	40,000 VPD and greater	20,000 to 60,000 VPD	5,000 to 30,000 VPD	1,000 to 15,000 VPD	100 to 5,000 VPD
Desirable Spacing	5 miles or more between Freeways	2 miles or more between Principal Arterials	Generally 1/2 to 2 miles between Minor Arterials	Generally 1/4 to 1/2 miles between Collectors	Varies with block length, min. >125 ft.
Posted Speed	55 to 65 mph	40 to 55 mph	30 to 45 mph	30 mph or less	20 to 30 mph
Peak Period Speeds	-	30 to 35 mph	20 to 35 mph	-	-
Access	Full or Partial Controlled Access; grade separated interchanges with service roads	Intersect with Freeways, Arterials, Collectors and Local Streets; Restricted driveway access	Intersect with Freeways, Arterials, Collectors, and Local Streets; Limited driveway access	Intersect with Arterials and Local Streets; Driveways permitted	Intersect with Collectors and Arterials; Driveways permitted
On-Street Parking	Prohibited	Restricted	Restricted	Generally permitted	Permitted
Intersections	Grade separated intersections	Intersections should be designed to limit speed differentials between turning vehicles and other traffic to no more than 10 to 15 mph		Higher speed differential and closer intersection/access spacing can be used than on Arterials	
Percent of Roadway Network	5 to 10 percent		15 to 25 percent	5 to 10 percent	65 to 80 percent
Percent of Total Motor Vehicle Travel	30 to 40 percent		40 to 60 percent	-	-
Community Relationship	Define neighborhood boundaries	Define neighborhood boundaries	Define and traverse neighborhood boundaries	Internal and traverses boundaries	Internal
Through Truck Routes	Yes	Yes	Permitted	No	No
Bikeways	No	No	Limited	Yes	Yes
Sidewalks	No	Yes	Yes	Yes	Yes

Source: Wilbur Smith Associates

Street Cross Sections

Cross sections of a roadway are related to traffic volume, design capacity and level of service as well as a community's own design preferences. Cross section standards for planning and construction of Arterials, Collectors, and Parkways in San Angelo are presented in **Table T-2**. Dimensional criteria are identified for both right-of-way and pavement widths. Pavement width and configuration can vary for major and minor arterials depending on whether a median is to be constructed.

Standard roadway cross sections should be used in all newly developing areas and when possible in existing developed areas. However, special and unique cases may arise where existing physical conditions and development constraints will conflict with the need for widening a roadway to the standard right-of-way width and cross section. These circumstances require a degree of flexibility in the implementation of the Thoroughfare Plan. Minimum design criteria and alternative cross sections may have to be applied.

TABLE T-2
STANDARD RIGHT-OF-WAY AND ROADWAY DIMENSIONS
San Angelo Comprehensive Plan
San Angelo, Texas

Road Classification	Minimum Right-of-Way Width	Minimum Pavement Width
Major Arterial	100 feet	60 feet
		25 feet on either side of 16-foot median, if divided
Minor Arterial	90 feet	60 feet
		25 feet on either side of 16-foot median, if divided
Major Collector	80 feet	60 feet
Minor Collector	60 feet	50 feet*
Parkway	60 feet	40 feet

* Effective August 21, 2001, the minimum pavement width for Minor Collectors was increased from 40 to 50 feet.

Source: City of San Angelo

Parkway

Parkway is a special designation utilized to classify roadways that serve public areas characterized by open space and waterfront features, often connecting the community's park and recreation resources. Existing parkways parallel the Concho River corridor and areas around Lake Nasworthy. The primary purpose of

these roadways is to provide access to the river and lake. The established right-of-way requirement for the parkway classification is 60 feet with a 40-foot wide, two-lane pavement section.

THOROUGHFARE DEVELOPMENT REQUIREMENTS AND STANDARDS

This section outlines typical criteria for streets and land development which should be part of a City's thoroughfare development standards and subdivision regulations.

Location and Alignment of Thoroughfares - The general location and alignment of thoroughfares must be in conformance with the Thoroughfare Plan. Subdivision plats should provide for dedication of needed rights-of-way for thoroughfares within or bordering the subdivision. Any major changes in thoroughfare alignment that are inconsistent with the plan should require the approval of the Planning Commission and City Council through a public hearing process. A major change would include any proposal that involves the addition or deletion of established thoroughfare designations, or changes in the planned general alignment of thoroughfares that would affect parcels of land beyond the specific tract in question.

Rights-of-Way and Pavement Width - The pavement width and rights-of-way width for thoroughfares and other public streets should conform to minimum City standards unless a waiver is granted. Properties proposed for subdivision that include or are bordered by an existing thoroughfare with insufficient right-of-way width should be required to dedicate land in order for there to be enough right-of-way available for pavement which may now or someday be necessary, as well as for enhancements such as sidewalks and traffic control devices that improve the function of the street. When a new thoroughfare extension is proposed to connect with an existing thoroughfare that has narrower rights-of-way, a transitional area should be provided.

Continuation and Projection of Streets - Existing streets in adjacent areas should be continued and, when an adjacent area is undeveloped, the street layout should provide for future projection and continuation of streets into the undeveloped area. In particular, the arrangement of streets in a new subdivision must continue rights-of-way for principal existing streets in adjoining areas – or where new streets will be necessary for future public requirements on adjacent properties which have not yet been subdivided. Where adjacent land is undeveloped, stub streets should include a temporary turnaround to accommodate emergency vehicles and refuse collection trucks.

Location of Street Intersections - New intersections of subdivision streets with existing thoroughfares within or bordering the subdivision should be planned to align with existing intersections, where feasible, to avoid creating off-set or "jogged" intersections and to provide for continuity of existing streets, especially collectors and higher classes of thoroughfares.

Angle of Intersection - The angle of intersection for street intersections should be as nearly at a right angle as possible. Corner cutbacks or radii should be required at the acute corner of the right-of-way line, to provide adequate sight distance at intersections.

Cul-De-Sacs - Dead-end streets should have a maximum length of no more than 1,000 feet measured from the connecting street centerline to the center point of a cul-de-sac turnaround. Pavement on the turnaround pad should have a diameter of at least 90 feet and a right-of-way diameter of at least 100 feet in residential

areas. A paved turnaround at least 180 feet in diameter with a 200-foot right-of-way diameter may be appropriate in commercial and industrial areas.

Residential Lots Fronting on Arterials - Wherever feasible, subdivision layout should avoid residential lots fronting on arterials, with direct driveway access to the arterial street. Lots should be accessed from collector or local/residential streets within or bordering the subdivision.

Residential Lots Fronting on Collectors - Wherever feasible, subdivision layout should minimize the arrangement of lots fronting on collectors, particularly within 180 feet of an intersection. To the extent possible, lots should be accessed from local residential streets.

Geometric Design Standards and Guidelines - Other requirements and guidelines for the geometric design of thoroughfares and public streets should be provided in the City's Subdivision Ordinance and standard specifications. This includes special provisions for lot width and building setbacks on corner lots to preserve sight distances at adjacent intersections.

Private Streets - The Planning Commission should not approve a plat containing private streets unless the proposal to use private streets has been previously approved by the City Council and adequate assurances are provided for continuous, long-term maintenance of such private streets.

Sidewalks - Within the boundaries of a subdivision, sidewalks should be installed on both sides of arterial and collector streets and one side of local/residential streets.

IMPLEMENTATION OF "TRAFFIC CALMING" MEASURES

Traffic-calming measures are instrumental in providing livable neighborhoods where residents feel safe walking, biking and playing. In addition to reducing speeds in residential neighborhoods, traffic-calming measures are also useful in pedestrian-oriented commercial areas. Many cities are joining a nationwide trend among local governments by adopting traffic-calming programs. Traffic-calming programs are aimed at controlling cut-through traffic and speeding on neighborhood streets and generally aggressive driving that threatens the safety of other drivers and pedestrians. The Institute of Transportation Engineers (ITE) defines "traffic calming" as "the combination of mainly physical features that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users." In addition to addressing motor vehicle issues, traffic calming can also involve disparate objectives such as improving aesthetics, promoting urban renewal, reducing crime, and increasing water filtration into the ground.

The Institute of Transportation Engineers identifies broad goals for traffic calming, which include increasing quality of life, incorporating the preferences and requirements of nearby residents and others who use the area adjacent to streets and intersections, creating safe and attractive streets, helping to reduce the negative effects of motor vehicles on the environment (pollution, urban sprawl, etc.), and promoting walking and bicycle and transit use. More specific objectives, as applied to local streets, include:

- achieving slower speeds for motor vehicles;
- reducing collision frequency and severity;
- increasing safety and the perception of safety for non-motorized users of the street;
- reducing the need for police enforcement;
- enhancing the street environment (streetscaping, etc.);
- increasing access for all modes of transportation; and,
- reducing cut-through motor vehicle traffic through neighborhoods.

Traffic calming is accomplished through a combination of measures that control both traffic and volume. Volume-controlled measures include street closures, restrictive one-way streets and turn restrictions. These measures are effective in reducing traffic on streets; however, such measures do not reduce speed and often result in diverting unwanted traffic onto other residential streets. Speed-controlled measures are important in reducing injury accident rates and in increasing walking and bicycling on streets. These measures include speed humps, speed tables, traffic circles, sharp bends, chicanes, and narrowing at mid-block. Speed control measures should be designed into the community through urban design and land use features such as smaller setbacks, street trees, short streets, sharp curves, center islands, traffic circles, textured pavements, speed humps and flat-topped speed tables.

FIGURE T-4
TRAFFIC CALMING DEVICES
San Angelo Comprehensive Plan
San Angelo. Texas

Source: Best Development Practices, Reid Ewing. Planner s Press. Chicago 1996
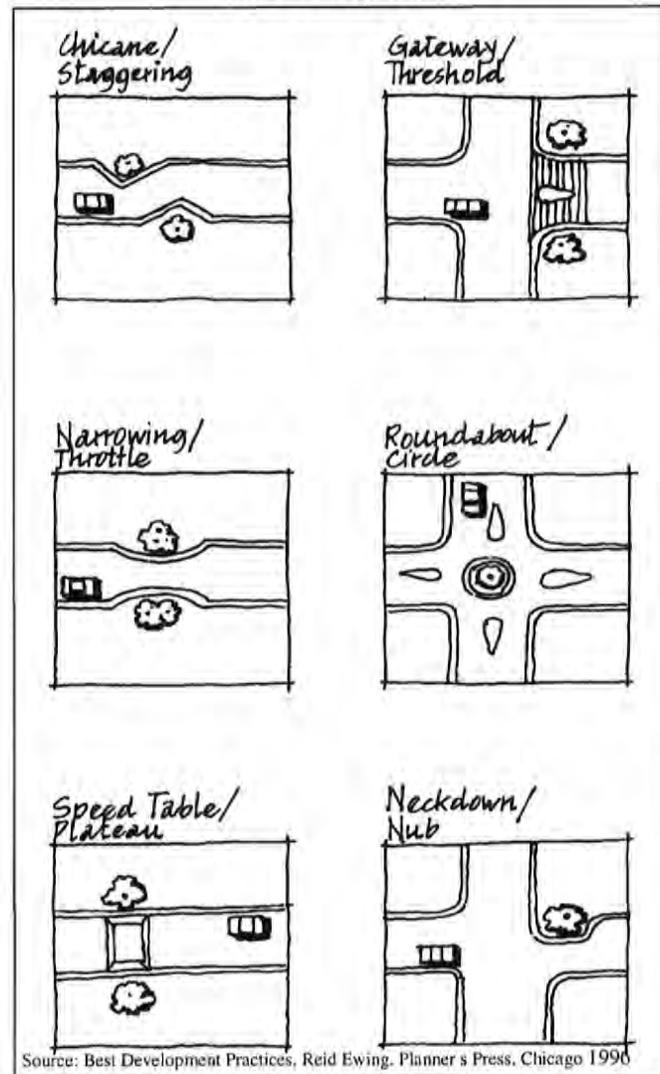
Lessons from communities that have experimented with traffic calming initiatives point to the following characteristics of a successful program:

- ensuring early involvement of and communication between neighborhood residents, City staff, and City Council;
- establishing specific procedures for defining and studying potential traffic problems;
- creating a clear process for requesting potential calming measures, securing project approval and funding, and then designing and implementing the measures;
- outlining an array of preferred calming techniques or combinations of methods based upon industry standards as documented in publications of the Institute of Transportation Engineers and similar professional associations;
- confirming neighborhood consensus and support before proceeding with implementation; and,
- monitoring and evaluating the effectiveness of calming measures on a case-by-case basis, with the ability to reconsider – and alter or remove if necessary – any traffic calming device or technique which inadvertently creates and/or shifts a traffic problem from one street or neighborhood to another.

The Institute of Transportation Engineers, state transportation departments and others entities have published manuals and other materials documenting numerous traffic calming options and techniques, including some that are subtle and intended to influence drivers' perceptions of their surroundings and thereby their driving behavior. These can include narrowing roads and intersections, better defining crosswalks and pedestrian-oriented settings, and manipulating road surfaces.

TABLE T-3
DESIGN SPEED OF TRAFFIC CALMING DEVICES
San Angelo Comprehensive Plan
San Angelo, Texas

Device	Design Speed
Speed Hump	15 to 20 mph
Speed Table (long flat-topped hump)	25 to 30 mph
Roundabout/circle (25' diameter island)	20 to 25 mph
Chicane (90' radii)	20 to 25 mph
Chicane with speed tables	15 to 20 mph
Narrowing (two-lane)	30 to 35 mph
Narrowing with speed table	20 to 25 mph
Narrowing (single-lane angled)	12 to 15 mph
Raised Junction	12 to 15 mph

Source: Best Development Practices. Reid Ewing. 1996

TRANSPORTATION PLAN

Authority for Planning and Regulating Thoroughfares

Under the provisions of Article XI, Section 5 of the Texas Constitution and Title 7, Chapter 212 of the Texas Local Government Code, the City of San Angelo can require that development plans and subdivision plats conform to "... the general plan of the municipality and its current and future streets ..." and "... the general plan for extension of the municipality and its roads, streets, and public highways within the municipality and its extra-territorial jurisdiction."

Requirements for dedicating right-of-way and constructing street improvements apply to all subdivision of land within the City's incorporated area and its extra-territorial jurisdiction (ETJ). In accordance with the Texas Local Government Code, the City has adopted rules governing plats and subdivision of land within the municipality's jurisdiction, and, by ordinance, those rules have also been extended to the City's ETJ.

Thoroughfare Plan

The thoroughfare plan displayed in **Figure T-6** identifies the existing and proposed thoroughfare system of freeways, arterials, collectors and local streets. The thoroughfare plan serves as the City's general plan for guiding thoroughfare system development, including planned widening and extension of its roads, streets, and public highways. The plan indicates needed rights-of-way, general alignments and typical sections for planned new roadways. Proposed alignments and actual alignments may vary depending on future development. The thoroughfare plan should be considered in platting of subdivisions, right-of-way dedication and construction of major roadways. The plan does not show future alignments for new local streets because these streets function principally to provide access to adjacent land, and future alignments may vary depending upon specific development plans.

PLAN AMENDMENT PROCESS

It will be necessary for the City to periodically consider and adopt amendments to the Thoroughfare Plan to reflect changing conditions and new needs for thoroughfare system improvements and development. A systematic procedure should be followed for making plan amendments, including a set schedule for annually inviting and considering proposed changes.

The process for amending the Thoroughfare Plan should be established in the City's subdivision regulations. Typically, plan amendment requests may originate from landowners, civic groups, neighborhood associations, developers, other governmental agencies, city staff, and other interested parties. Proposed revisions should be analyzed by the Planning Commission, the municipal engineer, and other city staff. The proposed change and staff recommendations should then be formally considered by the Planning Commission. The Commission should conduct a public hearing on proposed plan amendments, including required 15 days public notice in advance of the hearing. Proposed amendments should be considered in a fair, reasonable, and open process. The burden for proving compelling reasons for the public benefit of any proposed changes should rest with the requesting parties. Decisions and determinations should represent the best interests of the public.
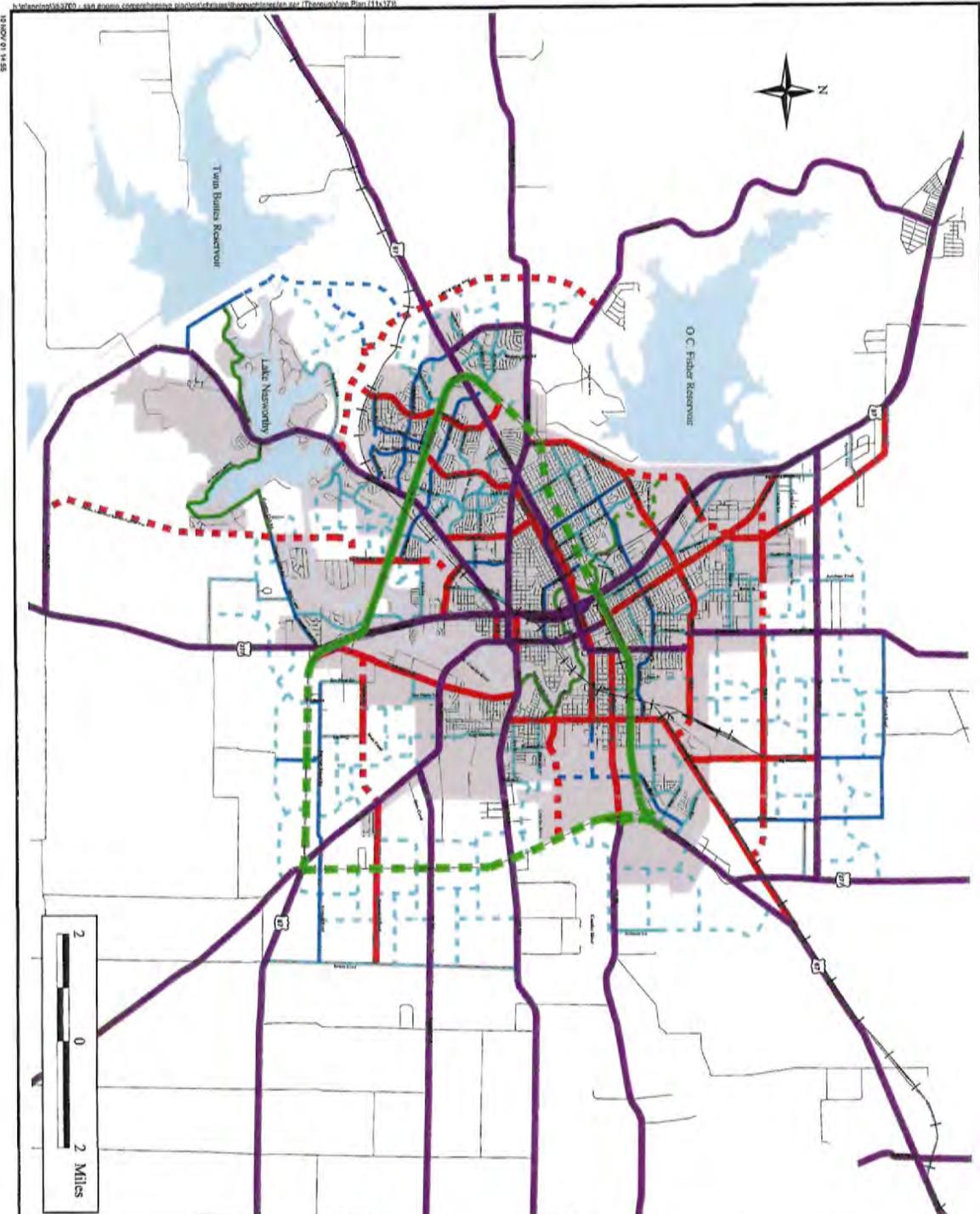
San Angelo
Comprehensive
Plan

FIGURE T-6
THOROUGHFARE PLAN

Legend:
- Existing Freeways
- Future Freeways
- Existing Major Arterials
- Future Major Arterials
- Existing Minor Arterials
- Future Minor Arterials
- Existing Major Collectors
- Future Major Collectors
- Existing Minor Collectors
- Future Minor Collectors
- Existing Parkways
- Future Parkways
- San Angelo City Limits

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO, TEXAS

The revised Thoroughfare Plan, including any approved plan amendments, should be adopted by the Planning Commission and submitted to the City Council for its consideration. The amended plan becomes effective upon final adoption by the City Council.

LAND USE

Land Use is a critical element of the San Angelo Comprehensive Plan. It addresses the location, type, scale, and density of land uses throughout the City and its extra-territorial jurisdiction. It analyzes the current pattern of land use in San Angelo, pointing out issues and opportunities as identified by San Angelo's citizens. It lays out the many goals and objectives developed by the public. These goals and objectives are intended to address the community's issues and opportunities in a manner that reflects its basic values. From established goals and objectives, land use planning policies and principles are developed that will be used to guide everyday decisions regarding the physical development of the city. These may include zoning decisions, which are legally enforceable city ordinances.

The City's future land use plan, also in this chapter, is the graphical embodiment of the City's land use principles, goals, and objectives. Together with the text, it provides a conceptual glimpse of what San Angeloans want for their future. It is a flexible, ever evolving tool that must be used to insure that the City consistently moves toward the achievement of its goals. Without them, the future would be left to chance, potentially leading to property devaluation, inadequate public facilities and services, aging and deficient infrastructure, economic stagnation, and unmanageable local conditions.

STATE LAW AND COMPREHENSIVE LAND USE PLANNING

State law addresses municipal planning in numerous ways. Several stipulations of the law directly affect land use planning. Section 219.005 of the Texas Local Government Code seeks to clarify the role of a future land use map in the comprehensive plan:

> § 219.005. Notation on Map of Comprehensive Plan
>
> *A map of a comprehensive plan illustrating future land use shall contain the following clearly visible statement: "A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries."*

Section 211.004 of the Texas Local Government Code refers to the importance of a land use plan's interaction with a City's zoning ordinance:

Study of
Existing Land Use
Conditions

↓

Issues and
Opportunities
Identified by
Community

↓

Land Use
Goals and Objectives
Developed by
Community

↓

Land Use Policies and
Principles to Guide
Everyday
Decision Making

↓

Future Land Use Plan

↓

Plan Revision
and Update
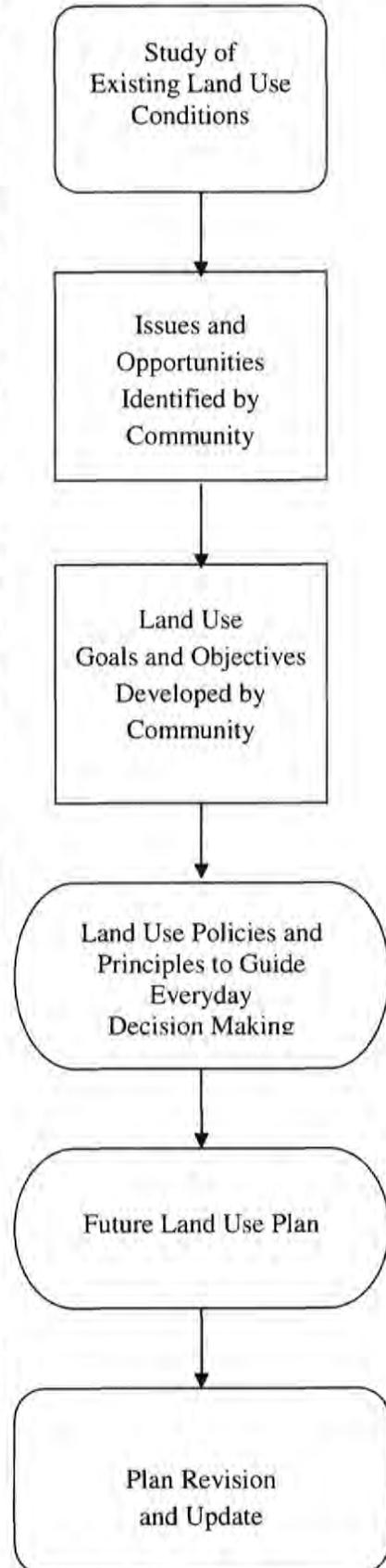
§ 211.004 Compliance with Comprehensive Plan

(a) *Zoning regulations must be adopted in accordance with a comprehensive plan and must be designed to:*

    (1) *lessen congestion in the streets;*

    (2) *secure safety from fire, panic, and other dangers;*

    (3) *promote health and the general welfare;*

    (4) *provide adequate light and air;*

    (5) *prevent the overcrowding of land;*

    (6) *avoid undue concentration of population; or facilitate the adequate provision of transportation, water, sewers, schools, parks, and other public requirements*

Section 211.004 seeks to insure that zoning regulations are in concert with land use plans found in Comprehensive Plans.

GOALS & OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the Land Use element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **An efficient, diverse and balanced pattern of land uses within the City of San Angelo and its immediate environs.**

    Objective A: Provide a mix of different land use types in suitable locations, densities and patterns consistent with the goals and objectives established in the San Angelo Comprehensive Plan.

        Action 1: Indicate on the future land use plan the generalized distribution and location of uses. Future city-building in and adjacent to San Angelo will then have a tangible guide for real estate investment.

        Action 2: Monitor the changing allocations of existing land uses in relation to the ratios used to develop the future land use plan.

        Action 3: Later formulate more detailed plans to address specific areas of concern such as downtown enhancement, river corridor development, or neighborhood business district renewal.

    Objective B: As once-rural land at the city's edge develops, the extent and arrangement of that growth should be guided to promote cost-effective service delivery and road improvements, as well as ensure appropriate use of land.

        Action 1: Promote arrangements of urban uses which make the best use of public facilities (streets, sewers, etc.) and services (fire protection, refuse collection, etc.) at least cost to the public.

Action 2: Link land use decisions to the capacity of existing and planned facilities and services.

Objective C: Minimize conflicts and nuisances that typically occur wherever people and activities congregate in urban areas. Activities in the urban environment should be allowed to overlap and succeed one another, without annoying the people that use them.

Action 1: Use transitional buffering of land use intensities such as limited-impact, low-intensity commercial office uses between high-intensity retail shopping centers and residential areas.

Action 2: Review and update San Angelo's zoning map and ordinance periodically to discourage mixing of incompatible uses.

Objective D: Encourage in-fill development sensitive to the existing and desired context of the area.

Action 1: Develop strategies for encouraging in-fill development and redevelopment activities, such as flexibility in development regulations, exemption of development fees, and grants.

Action 2: Provide tax or other incentives for selected in-fill development on vacant lots or for selective redevelopment of parcels that have undesirable uses.

Objective E: Encourage the re-use of vacant buildings in the city. Carefully integrate new uses into older areas, in a manner that encourages comfort, accessibility, efficiency and aesthetic gratification for resident and visitor alike.

Action 1: Utilize financial and economic incentives to encourage the adaptive use of vacant or underutilized buildings in San Angelo.

Action 2: Provide regulatory flexibility to allow for the use of vacant or underutilized buildings.

Goal 2: **Conservation of valued environmental and cultural resources in San Angelo, including waterways, sensitive land habitats and historic structures and districts.**

Objective A: Coordinate future development with the physical environment and natural features of the community.

Action 1: Evaluate floodplains, soils, vegetation and other physical features to identify the most appropriate sites for various types of development.

Action 2: Promote the use of floodplains as natural areas and preserves for wildlife, vegetation, parks, and as open space buffers between incompatible land uses.

Objective B: Promote environmentally sound access to and use of the Concho rivers and Lake Nasworthy.

Action 1: Continue open space preservation and/or parkland acquisition along the river corridor, to minimize development impacts in areas immediately adjacent to rivers.

Action 2:   Encourage any new development or redevelopment near the river to utilize river views and amenities while not encroaching upon the scenic natural aspects of the river corridor.

Action 3:   Provide public access to the Concho rivers and Lake Nasworthy through parks, trail networks, public piers and overlooks, and boat access points.

Goal 3:   **Safe, high-quality residential areas that meet the needs of San Angelo's residents and offer a wide range of affordable housing types.**

Objective A: Provide suitable areas for a variety of residential types and densities.

Action 1:   Identify appropriate locations for single-family and multi-family residential areas on the future land use plan, taking into consideration accessibility, site suitability, utility availability and environmental factors.

Action 2:   Encourage the development and redevelopment of quality off-base housing in the southeast area of San Angelo, targeted toward the needs of military and civilian employees at Goodfellow Air Force Base.

Action 3:   Identify appropriate and compatible areas for placement of manufactured homes.

Objective B: Preserve residential neighborhoods from indiscriminant commercial development that threatens deterioration of the residential environment. Homes in some neighborhoods may be old and inexpensive, but they represent a viable choice for lower income families. Left unprotected, that housing may suffer more rapid deterioration in the wake of surrounding commercialization.

Action 1:   Require adequate buffering and transitions between residential and non-residential land uses.

Action 2:   Utilize open space easements around residential areas.

Objective C: Closely coordinate policy and action in multiple areas of municipal concern (such as Community Development, traffic control, zoning and code enforcement) to preserve neighborhoods, and in particular, concentrations of housing for lower income residents.

Action 1:   Commit San Angelo's Community Development Block Grant to revitalize select neighborhoods in lower income areas, emphasizing housing rehabilitation in combination with public works and park improvements.

Action 2:   Avoid traffic circulation systems that promote through traffic in residential neighborhoods.

Action 3:   Use the zoning map to designate separate areas for different activities that are incompatible. Enforcing other zoning regulations on setback, screening and density can also help minimize conflict and overcrowding.

Goal 4:   Vibrant and viable commercial areas with a variety of uses.

Objective A: Locate new commercial developments near existing commercial areas and buffered from residential uses.

Action 1:   Concentrate commercial development in clusters at major intersections and other appropriate locations, as opposed to "strip" development along major thoroughfares.

Objective B: Ensure appropriate zoning to support the viability of old as well as new commercial development.

Action 1:   Review existing zoning districts and designations, to identify possible revisions to support and encourage more viable commercial areas.

Action 2:   Consider potentially adverse regulatory constraints that may discourage (or positive incentives or public/private solutions that may be needed to attract) specific desired uses such as a lodging and restaurant uses downtown.

Action 3:   Address issues related to the transition of older homes into offices, including parking and compatibility with surrounding uses.

Objective C: Enhance the attraction of San Angelo's central business district as a unique, historic and high density environment of mixed use.

Action 1:   Reinforce the visual identity of the central business district, by emphasizing the historic diversity and high density urban character of existing architecture already prevalent there.

Action 2:   Improve the appearance of public ways and property throughout the central business district, including the river corridor.

Action 3:   Reinforce the central business district's role as a multi-purpose activity center including residential use.

Goal 5:   Rehabilitation or removal of substandard and dilapidated housing within the community.

Objective A: Provide public information regarding City and State codes, standards and regulations.

Action 1:   Provide information and assistance to homeowners for correcting code violations and substandard conditions.

Action 2:   Promote financial assistance programs for low- to moderate-income households.

Objective B: Provide incentives for rehabilitation or removal of substandard and dilapidated homes.

Action 1:   Explore the feasibility of utilizing financial incentives such as tax abatement and fee waivers to encourage rehabilitation or removal of substandard units.

Action 2:   Pursue grant opportunities or programs for housing rehabilitation.

Goal 6: **Enhanced visual and aesthetic character of the community, with an urban image that is both functionally and visually appealing.**

Objective A: Clarify the existence of significant landmarks, nodes of interrelated activity and boundaries between neighborhoods, to promote a perceptually coherent urban image which does not get lost in a dreary hodgepodge of strip commercial use.

Action 1: Employ effective screening, landscaping and clustering of building mass to create a sense of enclosure in otherwise vacuous urban spaces.

Action 2: Decrease the dominance of automobiles and asphalt in commercial areas.

Objective B: Maintain the appearance of San Angelo's neighborhoods, streets and commercial districts.

Action 1: Enforce city codes related to property maintenance, environmental health and sanitation.

Action 2: Support establishment of neighborhood associations involved in maintenance of neighborhood facilities and amenities.

Action 3: Continue expanding and promoting "city clean-up" programs to encourage the maintenance and upkeep of neighborhoods and business districts.

Action 4: Consider creating a recognition program that publicly acknowledges residential and business property owners for their role in enhancing the visual quality and appearance of San Angelo.

Objective C: Consider a property maintenance code and enforcement program for vacant and undeveloped properties, which provides opportunities for reuse, renovation and redevelopment.

Action 1: Promptly enforce existing ordinances regarding property maintenance and appearance.

Action 2: Encourage and support private initiatives to landscape and beautify vacant lots or underutilized parcels.

Action 3: Conduct a survey of property and building conditions, to identify priority parcels or structures. Work with owners to bring parcels into conformance with existing codes, including landscape, signage, etc.

Action 4: Consider programs to encourage property owners to improve and maintain their property, to create an asset for the City.

Goal 5: **Attractive industrial areas accessible to transportation routes and adequate utilities.**

Objective A: Designate areas that can support industrial development in the future land use plan and the Zoning Ordinance and Official Zoning Map.

Action 1: Use capital improvements to encourage industrial development through the extension of streets, utilities and drainage improvements to appropriately zoned areas.

Action 2: Utilize economic development sales tax funds to provide incentives to attract desirable industrial development.

EXISTING LAND USE

An inventory of existing land use is a basic data collection activity that is necessary to understand the existing types of land uses, their location, pattern and intensity both within the corporate limits of San Angelo and its immediate environs. Refer to **FIGURE LU-1: EXISTING LAND USE MAP** for a summary of this information. This map illustrates the type, density, scale and location of the existing land uses within the corporate limits of San Angelo and its immediate environs. The existing land uses outside of City Limits are generalized to represent the predominant uses within larger developed areas.

THE FUTURE LAND USE PLAN: A DESIGN FOR SAN ANGELO'S FUTURE

Building Blocks of the City

Designing a city is much like designing a bridge. A bridge consists of steel beams, concrete plates, pylons, and any other components necessary to serve the functional needs of its users. Likewise, a city like San Angelo has multiple components. The nature of these components depends on the functional needs and desires of its residents. These components are geographical rather than structural:

- *Paths* are channels through which the city's users move. These may include roads, sidewalks, waterways, or railroads. Paths create the framework of the city on which all other city components are fit. Local examples include Bryant Boulevard and the Concho Rivers.

DISTRICT

- *Districts* are the medium or large areas of the city into which the city's users can *enter*. For example, they may include residential districts, industrial districts, or even districts with a mixture of different land uses. Some local examples include the Santa Rita residential district and central business district.

- *Nodes* are geographical points in the city where the city's users *arrive*. They primarily include focused concentrations of land uses such as shopping centers and may also be at the intersection of paths. Table LU-1 identifies four types of commercial nodes.

- *Edges* are another linear component of the city formed by the intersection of two other types of components.

N

0.5 0 0.5 1 Miles
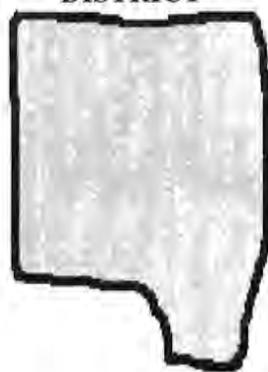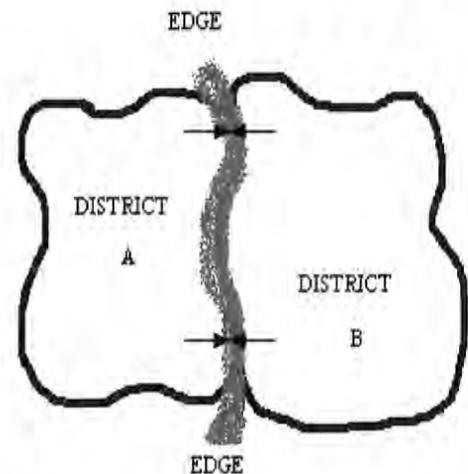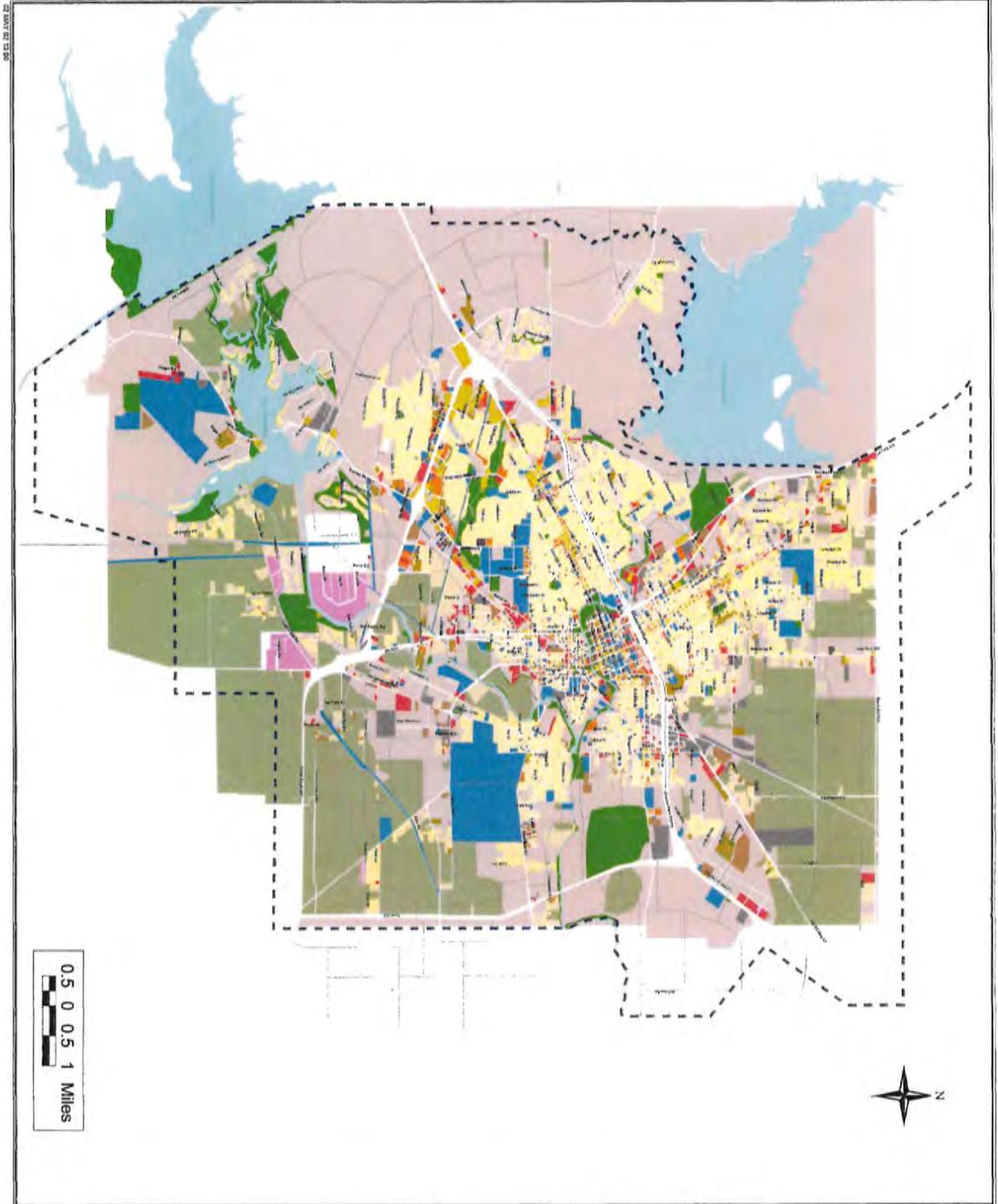
**San Angelo
Comprehensive
Plan**

**FIGURE LU-1
EXISTING LAND USE
OVERALL**

THE CITY OF SAN ANGELO, TEXAS

Study Area
Proposed Thoroughfares
Water

Land Use

Two single-family on one lot
Agriculture, Cultivated Land
Agricultural/Residential (3-10 acre lot with house)
Commercial
Commercial Agriculture (Ranches, Dairies)
Industrial, Light
Industrial, Heavy
Residential, Low
Residential, Medium Density
Residential, High Density
Mobile Home, Individual
Mobile Home Park
Office
Parking Lot (Off-Site)
Parks/Recreation
Public/Semi-Public
Retail/Personal Services
Not Yet Coded

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

For instance, an edge occurs where a multi-family residential district abuts a single-family residential district. The circumstances inside an edge are sometimes referred to as *edge conditions*. If an industrial district abuts a residential district, there may be some problematic edge conditions. Controlling edge conditions is a major focus of city planning, especially in the application of zoning ordinances. One such "edge" in San Angelo may be where the commercial corridor along West Beauregard Avenue and Sherwood Way abuts a residential district.

TABLE LU-1
TYPES OF COMMERCIAL NODES
San Angelo Comprehensive Plan
San Angelo, Texas

Node Type	Typical Land Uses	Typical Site Area	Minimum Population to Support Node	Service Area
Neighborhood	Supermarkets, small retail and services oriented to serving surrounding neighborhoods, or small offices	3 to 10 acres	3,000 to 40,000	No more than 5 to 10 minute drive
Community	Small department stores, discount stores, variety stores, department stores, larger offices, or entertainment.	10 to 30 acres	40,000 to 150,000	20 minute drive
Regional	Shopping center or malls that include one or two full-line department stores, large office buildings, specialty stores, or entertainment.	10 to 60 acres	150, 000 or more	25 to 30 minute drive or more
Super Regional	Shopping Centers or malls that contain three or more large, full-line department stores, large office buildings.	15 to 100 or more	300,000 or more	25 to 30 minute drive or more

Source: The Shopping Center Development Handbook (Urban Land Institute)

NOTE: These definitions of nodes are very conceptual and used for general planning only.

- *Landmarks* are points in the city used by residents to establish their location. These may be signs, buildings, trees or other high recognizable features. Some local examples include Fort Concho Museum and Santa Fe Depot (now a transit station).

LANDMARK

San Angelo has its own unique version of these components. Their nature is determined by the needs and desires of the community. For instance, a community commercial node in San Angelo may have a wider range of retail use since there are no other cities with a community shopping district in the immediate area.

Determining How Much of Each Component San Angelo Needs

The "building material" of the city is land use. A district, for example, may consist of residential uses or industrial uses. As the population of San Angelo grows, and its demographic composition changes, additional amounts of each land use may be required. In order to anticipate these amounts, statistical techniques may be used to produce desirable ratios of various land uses to population. For example, the ratios state that X amount of commercial land use is required for each citizen of San Angelo. In preparing the Future Land Use map, the ratios may be altered based on assumptions about future changes in population. For instance, as more of San Angelo's residents reach retirement age, the amount of medium density residential development per person may need to be increased. Land use ratios may also be altered based on the desires of San Angelo's citizens. If more of a certain type of use is desired, then the amount of this type of use per capita may be increased.

The projected acres needed for each type of land use for the Year 2020 are displayed in **TABLE LU-2: PROJECTED FUTURE LAND USE REQUIREMENTS**. These estimates represent the approximate acreage needed (inside the City Limits of San Angelo and its immediate environs) required to support future growth and development of the community. While market trends and public policies and capital investments will affect the actual land use allocation and development intensities over the next 20 years, the projected numbers provide a benchmark for assessing whether adequate acreage has been identified for each type of land use on the 2020 Land Use Plan to meet anticipated needs. The land use categories for future land use are more general than those on the Existing Land Use Map because they are to be used on future land use maps that are more conceptual in nature. The land use categories for the future land use map, which are consolidated from those in the existing land use map, are shown in **TABLE LU-3: FUTURE LAND USE CATEGORIES**. This table shows the acreages by land use type that are actually depicted on the future land use plan map for the area within the existing city limits.

TABLE LU-2
PROJECTED FUTURE LAND USE REQUIREMENTS (within planning area)
San Angelo Comprehensive Plan
San Angelo, Texas

Category	Existing Acres	Percent	Acres/100 persons	Projected Acres
Residential, Low Density (single-family detached homes)	6,599	10.3%	6.84	7,953.31
Residential, Medium Density (four-plexes, tri-plexes)	259	0.4%	0.27	312.21
Residential, High Density (apartment buildings)	336	0.5%	0.35	404.41
Mobile Home, Individual	198	0.3%	0.20	238.12
Two Single-Family On One Lot	18	0.0%	0.02	21.74
Mobile Home Park	47	0.1%	0.05	57.10
Office (Small to medium scale office buildings)	165	0.3%	0.17	199.35
Retail/Personal Services (Establishments engaged in selling of household or personal goods/services in small quantities to the ultimate consumers i.e. grocery store, beauty shop)	798	1.2%	0.83	962.00
Commercial (Large scale facilities engaged in selling relatively large quantities of goods or services i.e. wholesalers, large office buildings)	1,033	1.6%	1.07	1,244.53
Industrial, Light i.e. office warehousing and assembly)	496	0.8%	0.51	597.62
Industrial Heavy (factories, slaughterhouses)	873	1.4%	0.91	1,052.18
Agriculture, Cultivated Land	14,912	23.2%	15.46	17,972.88
Agriculture, Residential (3-10 acre lot w/house)	1,837	2.9%	1.90	2,214.23
Commercial Agriculture	67	0.1%	0.07	81.03
Public/Semi Public (Public buildings/offices and semi-public facilities i.e. churches, schools)	3,546	5.5%	3.68	4,273.42
Parks/Recreation	5,107	7.9%	5.29	6,155.70
Parking Lot (Off-Site)	44	0.1%	0.05	53.31
Vacant/Right-of-way	27,992	43.5%	29.02	33,737.43
Total	**64,326**	**100.0%**	**66.69**	**77,530.57**

TABLE LU-3
FUTURE LAND USE CATEGORIES (within the City Limits)
San Angelo Comprehensive Plan
San Angelo, Texas

Category	Acres	Percent
Residential, Low Density (single-family detached homes)	13,182	38.9%
Residential, Medium - High Density (four-plexes, tri-plexes, apartments)	1,345	4.0%
Transitional (areas that are predominantly residential and are transitioning to other commercial/retail uses)	55	0.2%
Neighborhood Commercial (limited retail and office uses serving nearby neighborhoods)	9	0.0%
General Commercial	3,116	9.2%
Highway Commercial	1,733	5.1%
Industrial	3,011	8.9%
Civic and Institutional - Government, Schools and Churches	4,734	14.0%
Parks and Open Space	3,464	10.2%
Low Density Rural sparsely populated areas that are distinct from more urbanized areas	3,264	9.6%
Total	33,913	100.0%

Neighborhood Design Guidelines

Once the types and amounts of each city component are determined, the citizens of San Angelo decide how these building blocks of the city will be assembled. The goals and objectives, which are obtained through an open and intensive public process and embody the values of the community, determine how this assembly occurs. They are the foundation of the land use policies and principles used for everyday decisions regarding the physical development of the city.

Goals and objectives guide the discretionary decisions made by the community regarding the physical development of the city. However, much like the basic core of engineering principles used to design bridges, there is a basic core of land use planning principles that should be observed to insure a functional city. Many of these principles are listed below. The core land use planning principles, combined with the goals and objectives of the city, determine the design of future land use maps. Several of the principles below address thoroughfare planning. Thoroughfare planning will be discussed in greater detail in the Thoroughfare element of this plan.

The figure below (**FIGURE LU-2: CONCEPTUAL URBAN LAYOUT WITH NEIGHBHORHOOD UNIT**) is a **highly conceptual** illustration depicting the building blocks of the city assembled on a

framework of paths according to fundamental planning principles. It does not depict reality, but is merely intended to graphically explain how the building blocks of the city may be assembled in a highly functional arrangement.

FIGURE LU-2
CONCEPTUAL URBAN LAYOUT WITH NEIGHBORHOOD UNIT
San Angelo Comprehensive Plan
San Angelo, Texas
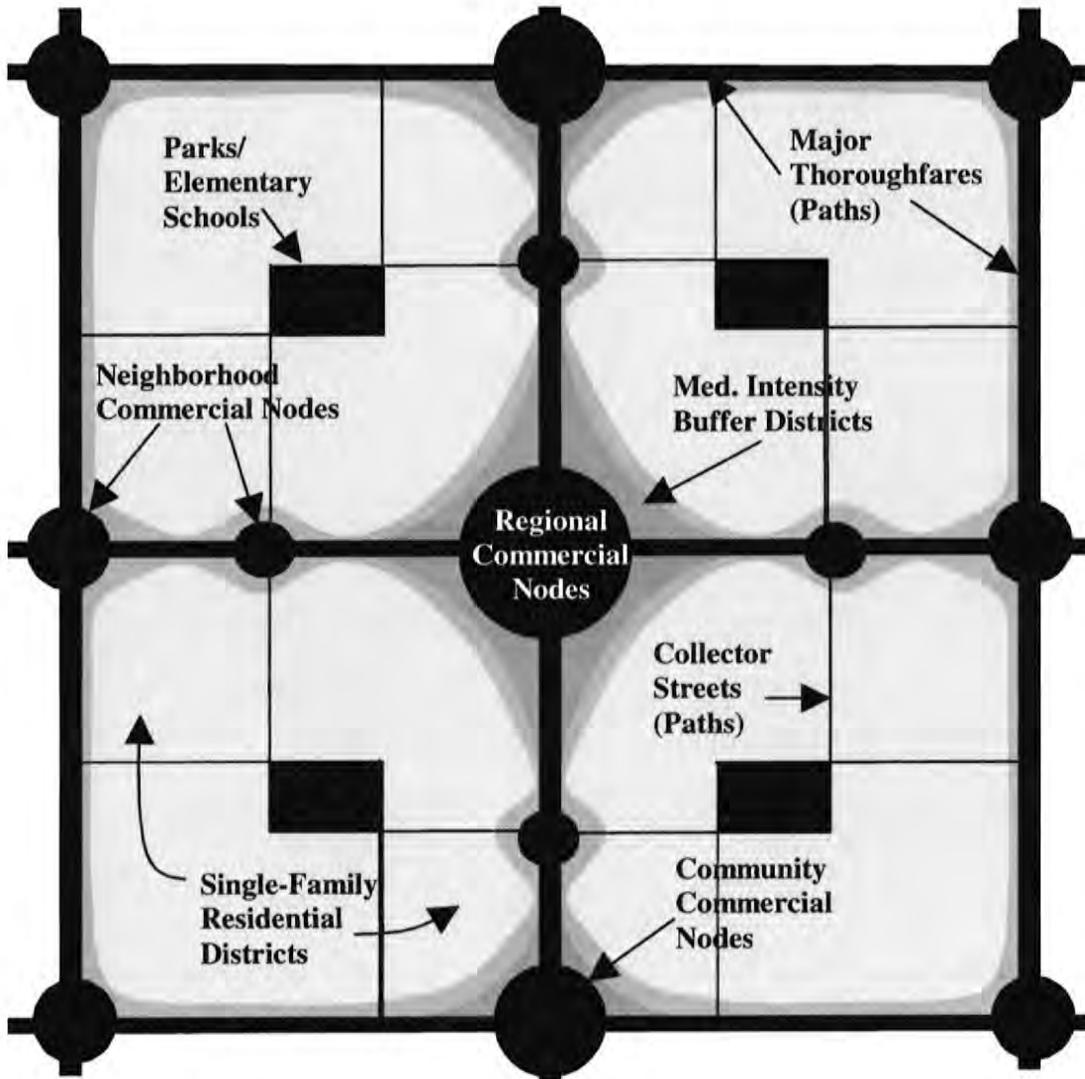
The illustration below (**FIGURE LU-3: THE NEIGHBORHOOD UNIT**) depicts how the building blocks may be assembled in reality. The resulting design, which is widely used throughout Texas and the United States, is sometimes called the "Neighborhood Unit Concept" or "Corridors and Nodes Concept". It is generally characterized by major thoroughfares that form a one-mile grid resulting in neighborhoods that are roughly one square mile. Single-family residential is the primary component of the neighborhood and is focused toward a centrally located elementary school and park. The park and school are intended to be a

focus of community activities. Commercial development is primarily located at the intersection of major thoroughfares, with smaller convenience retail being located at the intersections of collector streets and arterials. Residential uses are buffered from commercial uses by lower intensity office uses or by medium to high density housing. Collector streets provide access to major thoroughfares but discourage through traffic by terminating in the center of the neighborhood.

FIGURE LU-3
THE SAN ANGELO NEIGHBORHOOD UNIT
San Angelo Comprehensive Plan
San Angelo, Texas
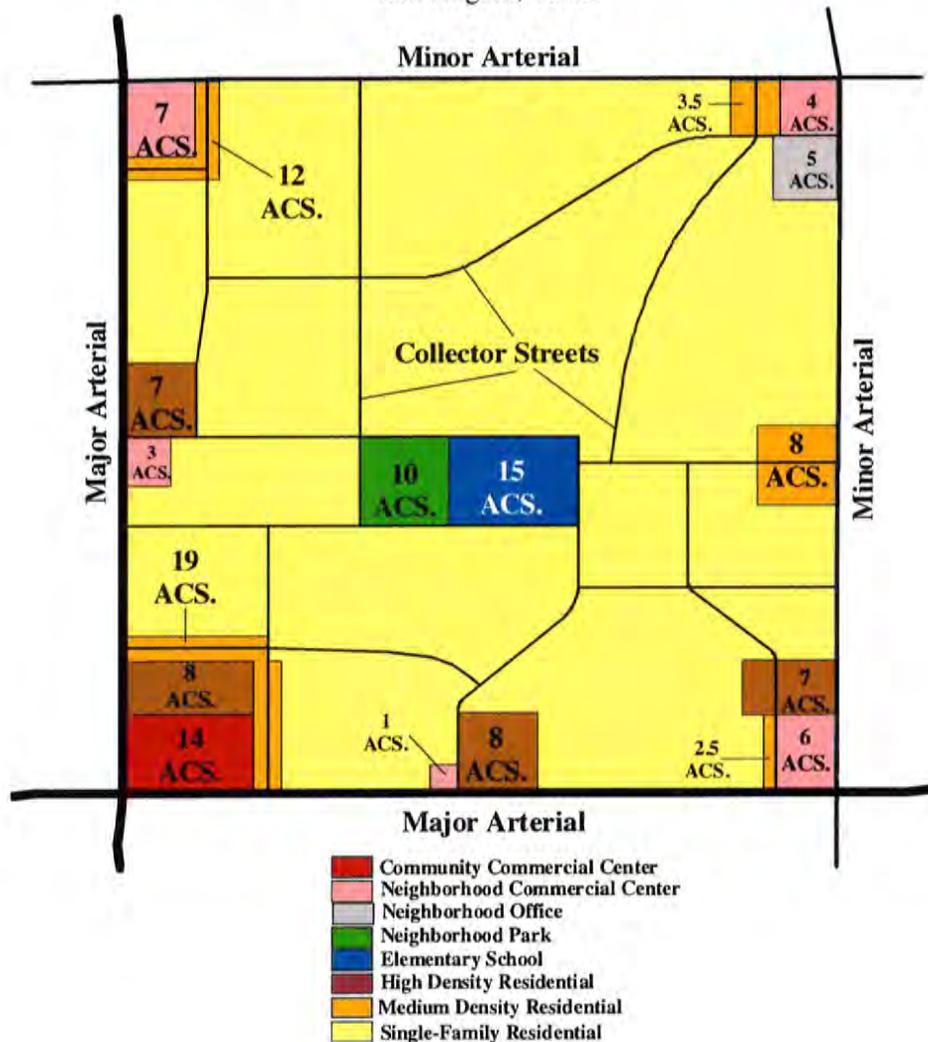
Fundamental Land Use Planning Principles

The following principles, based on the neighborhood unit concept, are the fundamental guidelines for land use planning in San Angelo. These principles, combined with the illustrations above, are actually more important than the land use designations shown on future land use maps in the following section. In most instances, the future land use maps indicate desirable **patterns** of development. In a few instances, such as

along major street and highway corridors, careful attention was made to delineate specific boundaries between commercial and residential areas.

Land Use Compatibility

1. Infill development should be compatible with (not adversely impact) adjacent and surrounding land uses.

2. Where incompatible uses adjoin one another, as they often must, then it is generally preferable that incompatible uses abut on their rear or side boundaries, rather than face each other across the same street.

3. Where incompatible land uses abut, there should be increased separation through additional setbacks and buffers, i.e. fences, earthen berms, landscaping, etc., to visually insulate the uses. This includes buffers between major thoroughfares and adjacent residential development. Adhering to this principle should not, however, result in substantially increasing municipal government maintenance of marginal right-of-way or other landscaping and screening features.

4. Commercial nodes should be buffered from residential districts with medium intensity land use districts for small offices or multi-family housing.

Residential Land Uses

5. Residential neighborhoods should be free from the influence and encroachment of uses that may detrimentally affect the value and enjoyment of residential property.

6. Residential neighborhoods should be planned such that they form cohesive environments oriented toward the elementary schools at their core.

7. Residential neighborhoods should be protected from high traffic volumes on streets piercing through these neighborhoods.

8. Medium and high density residential districts should be on the "edge" of neighborhoods to insure that they have access to high-capacity roadways. Medium and high density housing districts can also serve as a transition between single-family residential uses and commercial uses.

9. Multi-family residential districts should be limited in size to avoid overwhelming the physical and social infrastructure of their neighborhoods.

Public Facilities

10. Community and neighborhood parks and recreation areas should be dispersed evenly throughout the city and within or adjacent to neighborhoods served.

11. Neighborhood parks and elementary schools should be located toward the center of neighborhoods. If possible, such parks should be adjacent to elementary schools.

12. Public safety facilities such as police and fire stations and substations should be located to minimize travel and response times.

13. Elementary schools should be located toward the center of neighborhoods along collector and local streets, within close walking distance for most children.

14. Junior and Senior high schools should be located adjacent to arterial streets to improve access from a much wider area than from what an elementary school would draw.

Commercial Land Use

15. Commercial use should be focused in areas where there are streets and utility infrastructure designed to accommodate the loads typically associated with such intensive use.

16. Strip commercial development should be avoided where possible. Extensive commercial use stretched alongside major thoroughfares reduces the capacity of such streets to move traffic, contributes to an undefined and dreary urban image, and often leads to a premature demise of those commercial districts.

17. Commercial use should, where possible, be clustered at strategic intersections of major streets that can both accommodate traffic volume (commensurate with commercial use) and offer the exposure which most retail trade requires. Such clusters of commercial activity also provide adjacent neighborhoods with a sense of identity often lost to ill-defined commercial strips.

18. The intensity of land use should relate well to the street functional classification, with higher intensity uses having good access to expressways or principal arterial roadways, and low intensity uses located in nodes along local residential streets.

Industrial Land Uses

19. Industrial development should generally be located in areas where there is infrastructure designed to support industrial uses.

20. Industrial districts should be located and designed so that they are compatible with surrounding land uses.

Floodplain Areas

21. Floodplain areas should not be encroached upon by future development unless there is adherence to established stringent floodplain management practices and criteria.

Environmentally Sensitive Areas

22. Environmentally sensitive areas should be protected, including important wildlife habitat areas and topographically constrained areas.

Infrastructure

23. New development should be allowed only in areas where there are adequate public facilities and services available, such as streets, water, wastewater and drainage improvements.

Land Use and Transportation

24. Transportation access and circulation should be provided for uses (adjacent to major thoroughfares) that generate significant numbers of trips, providing that access is well managed with the use of cross-access easements and coordinated driveways.

25. A comprehensive and coordinated land use and transportation system should be provided to meet existing and future travel needs, and to serve the mobility and access needs of the public.

26. Major thoroughfares should be provided at approximately one-mile intervals, generally in north/south and east/west directions.

27. Collector streets should provide access into neighborhoods; however, they should terminate in the center of neighborhoods to discourage through traffic.

FUTURE LAND USE PLAN

The attached future land use plan (**FIGURE LU-4: FUTURE LAND USE PLAN**) is the graphical representation of the community's goals, objectives, and principles regarding land use. The shape and area of land use designations are, for the most part, conceptual and are not intended to be exact design criteria for individual properties in every instance. For example, an area designated on the map as high density
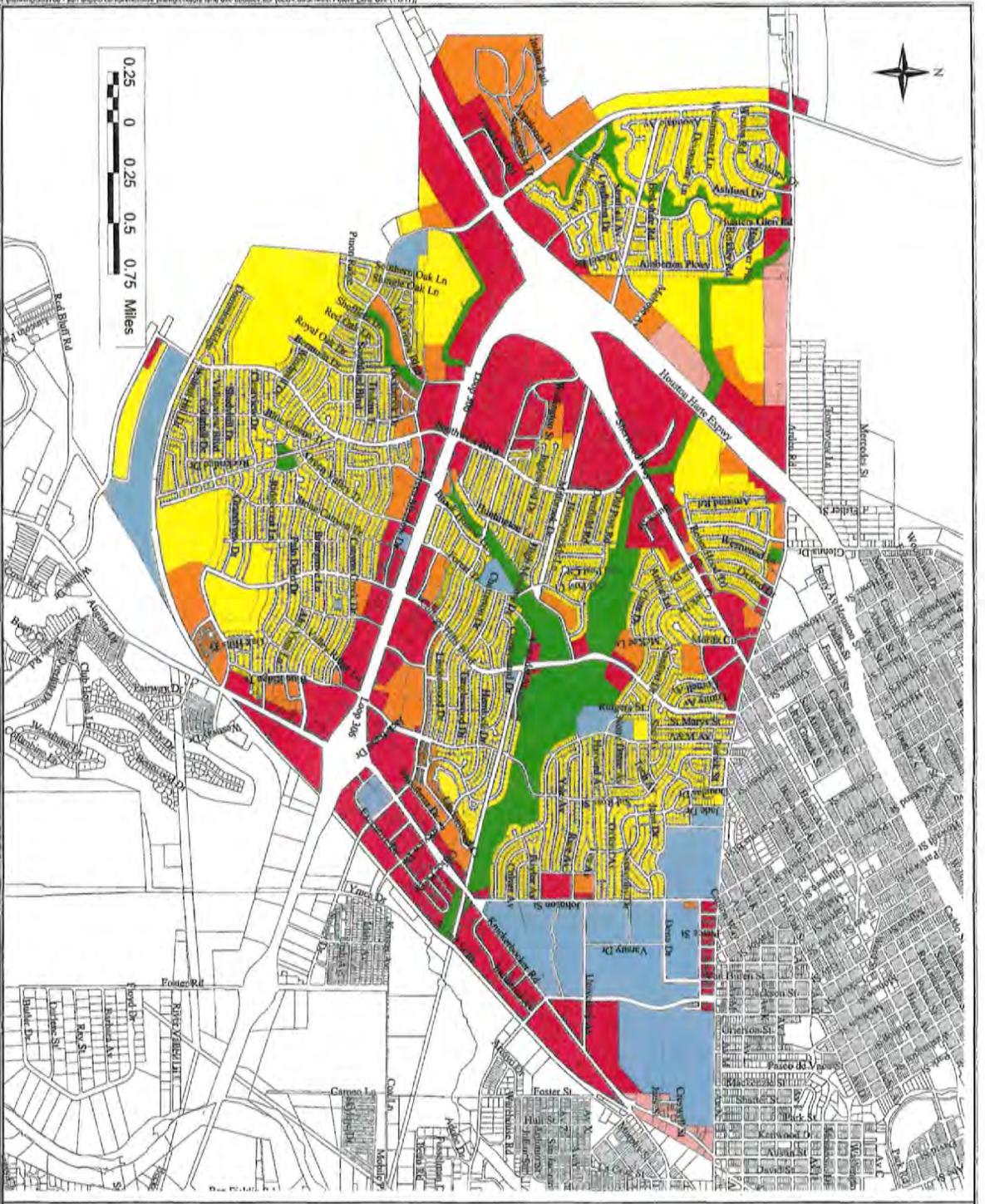
San Angelo
Comprehensive
Plan

FIGURE LU-4
FUTURE LAND USE
SOUTHWEST

Future Land Use:
- Low Density Residential
- Mid-High Density Residential
- Transitional
- Neighborhood Commercial
- General Commercial
- Highway Commercial
- Civic and Institutional
- Industrial
- Park and Open Spaces
- Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

0.25   0   0.25   0.5   0.75 Miles

San Angelo
Comprehensive
Plan

FIGURE LU-4
FUTURE LAND USE
WEST/CENTRAL

Future Land Use:
Low Density Residential
Med-High Density Residential
Transitional
Neighborhood Commercial
General Commercial
Industrial
Civic and Institutional
Park and Open Spaces
Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations
or establish zoning district boundaries.

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS
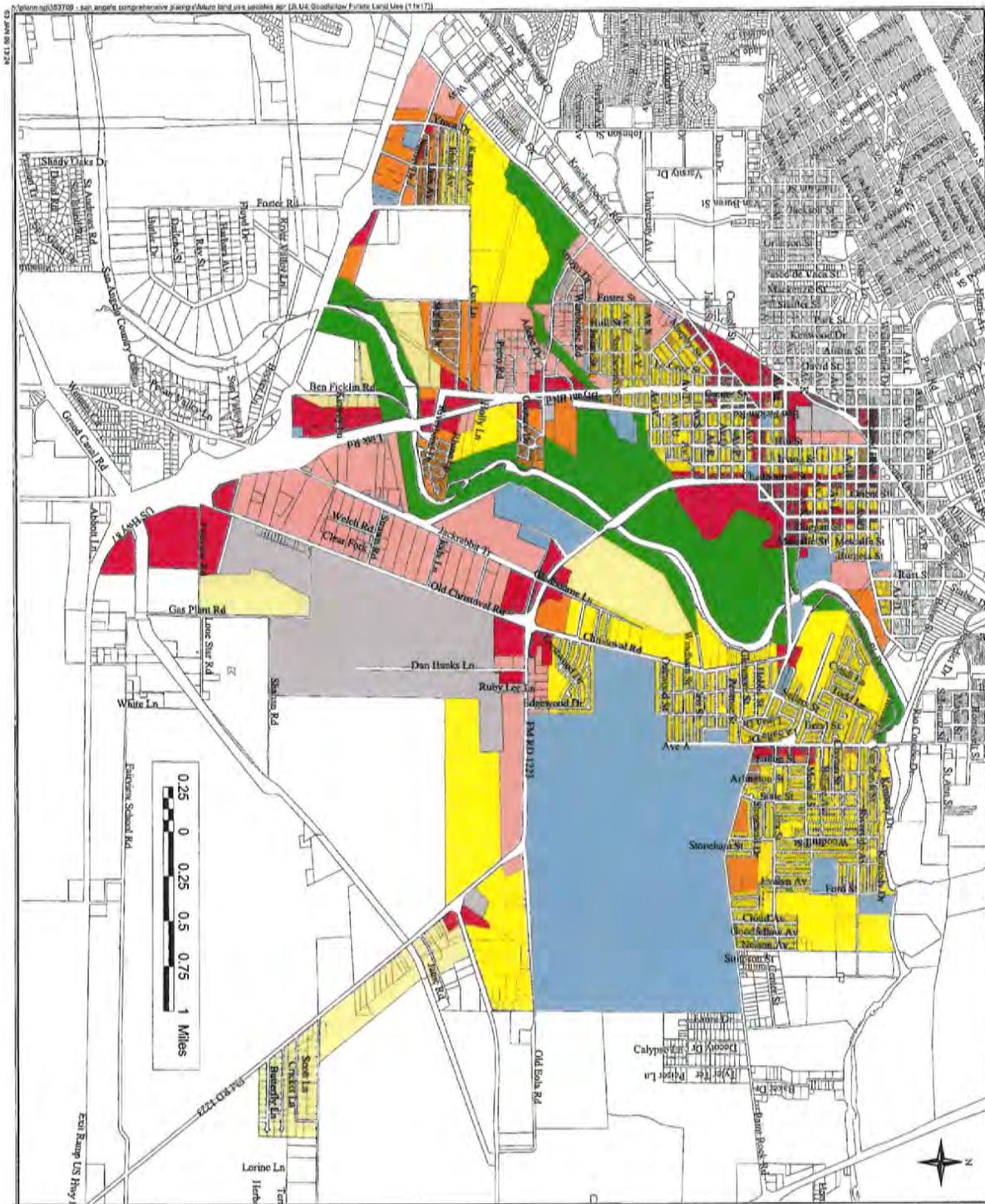
San Angelo
Comprehensive
Plan

FIGURE LU-4
FUTURE LAND USE
GOODFELLOW/
SOUTHEAST

Future Land Use:

- Low Density Residential
- Med-High Density Residential
- Transitional
- Neighborhood Commercial
- Highway Commercial
- General Commercial
- Industrial
- Civic and Institutional
- Park and Open Spaces
- Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

0.25 0 0.25 0.5 0.75 1 Miles

San Angelo Comprehensive Plan

FIGURE LU-4
FUTURE LAND USE
LAKEVIEW

Future Land Use:

- Low Density Residential
- Med-High Density Residential
- Transitional
- Neighborhood Commercial
- General Commercial
- Highway Commercial
- Industrial
- Civic and Institutional
- Park and Open Spaces
- Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO TEXAS

San Angelo
Comprehensive
Plan

FIGURE LU-4
FUTURE LAND USE
NORTHEAST

THE CITY OF SAN ANGELO, TEXAS

Future Land Use:
- Low Density Residential
- Med-High Density Residential
- Highway Commercial
- Transitional
- General Commercial
- Industrial
- Civic and Institutional
- Park and Open Spaces
- Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

0.25 0 0.25 0.5 0.75 1 Miles

N

San Angelo Comprehensive Plan

FIGURE LU-4
FUTURE LAND USE
NASWORTHY/SOUTH

Future Land Use:
- Low Density Residential
- Med-High Density Residential
- Highway Commercial
- General Commercial
- Industrial
- Civic and Institutional
- Park and Open Spaces
- Low Density Rural

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO, TEXAS
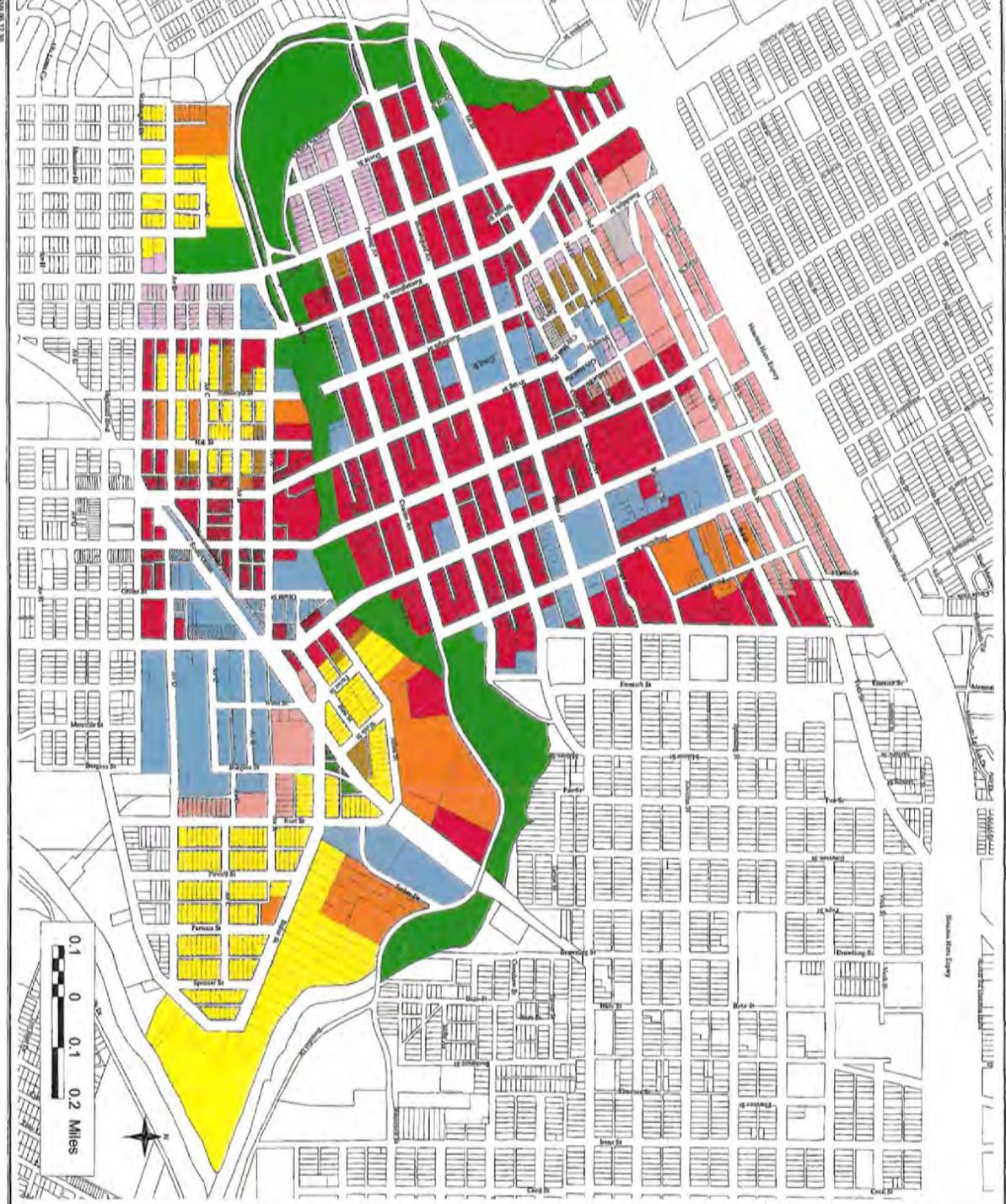
San Angelo
Comprehensive
Plan

FIGURE LU-4
FUTURE LAND USE
CBD EXTENSION

Future Land Use:

- Low Density Residential
- Med-High Density Residential
- Transitional
- Neighborhood Commercial
- Highway Commercial
- General Commercial
- Civic and Institutional
- Industrial
- Park and Open Spaces

Note: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

0.1 0 0.1 0.2 Miles

N

residential may, upon detailed study, be determined to be suitable also for office uses. San Angelo contains over 40,000 parcels of land. It is not possible, especially considering the constantly changing and dynamic nature of a city, to always determine the most appropriate land use designation for every parcel. The neighborhood design principles discussed in the preceding section should be given at least as much weight as the future land use maps when considering specific land use decisions.

Changing the Future Land Use Plan

The future land use plan is intended to generally guide land use decisions. It is a "living document" which may need to be updated or changed as land use conditions within San Angelo change. Consideration should be given to the following issues prior to making land use decisions:

- conformance to the City's land use planning principles;
- character of the surrounding and adjacent neighborhoods;
- existing use of nearby properties, and the extent to which a land use classification would be in harmony with such existing uses or the anticipated use of the properties; and
- suitability of the property for the proposed uses.

COMMUNITY AREA LAND USE

Central Business District Community Area

Issues:

- Growth of the Shannon Medical Center
- Encourage the use of hospitality/entertainment activities as a possibility for infill development
- Transition of older homes to offices
- Dilapidated housing
- Vacant buildings
- Need for additional hotels/motels
- Conversion of historic buildings to multi-purpose uses
- Property values low for development
- River as a focal point

Land Use:

The Central Business District (CBD) serves as the geographic focus of the city. Existing land uses in the central business district are primarily nonresidential and include a mixture of commercial, residential and public uses, with parkland located along the North Concho River. County and City government offices are concentrated at the core of the CBD, along Beauregard Avenue and Irving Street. Public and semi-public uses in the CBD include Shannon Medical Center; Tom Green County administrative, court and jail facilities; Federal Courthouse; Fort Concho Museum; the main post office; City Hall Plaza and Auditorium; and the San Angelo/Tom Green County Health Department as well as several large religious congregations. Other dominant uses in the district consist of commercial, office and retail/personal services. As is characteristic of many downtowns, there are transitional areas where residential uses are intermixed with other commercial and office uses. The area located south of the Concho River and north of Washington

Drive also has a diverse mix of uses including single-family residential, duplexes, cultural and historical landmarks as well as heavy commercial and retail activities.

The future land use plan shows the central business district community area as predominately general commercial with civic and institutional uses located throughout the district and with highway commercial along the Houston Harte Expressway. Low density residential uses are shown south of the Concho River, which is consistent with existing land uses in the area.

One of several mixed use areas in San Angelo's central business district lies north and east of Santa Fe Park. This area was predominantly residential until the 1960s when South Abe and Koenigheim Streets were expanded to form a path for U.S. Highway 87. After then, this area began gradually commercializing. On the map of future land use, much of this mixed use area is designated to be "neighborhood commercial." Introducing intensive retail uses here would accelerate the decline of remaining residences and not be compatible with nearby Santa Fe Park. The neighborhood commercial classification, however, implies limited retail trade and services of lower intensity and generally higher environmental character. The neighborhood commercial classification also implies introduction of low-rise offices which are not noticeably more bulky than nearby residences in the same area of existing mixed use.

Another area of mixed use in San Angelo's central business district lies north and west of City Hall. An entire one-block-wide strip of this area (between Martin Luther King Drive and Koenigheim Street) is proposed for redevelopment with the same general commercial uses found directly beside Koenigheim Street, a major arterial. Land located closer to City Hall and bordering West 1st, 2nd and 3rd Streets is designated as "transitional" in character. This designation suggests that limited commercial activity can and should be carefully introduced on these city blocks, with the intent of making such commercial use as compatible as possible with what remains a predominantly residential environment.

Goodfellow / Southeast Community Area

Issues:

- Development/redevelopment of southeast and eastern portions of the city
- Maintain housing quality
- Encourage large-scale uses such as grocery stores and drug stores
- Re-examine current industrial zoning classification along Christoval Road
- Maintain quality commercial uses around Goodfellow Air Force Base
- Encourage redevelopment within established neighborhoods
- Prevent low-quality strip commercial development on major streets
- Develop quality off-base housing targeted toward military and civilian employees at Goodfellow Air Force Base
- Enforce existing codes on building construction, sanitation, and property appearance
- Mitigation of unsightly property due to appearance, trash, abandoned cars in yards, junkyards
- Infill development needed, too many vacant lots
- Dilapidated homes

♦ Actions and efforts required to retain military employment and activity at Goodfellow Air Force Base and, if that is not possible, explore all possible alternate uses of land and facilities there.

♦ Maintain and enhance existing park areas

Land Use:

A mixture of uses including low and medium density residential, commercial and numerous public and semi-public uses characterize the Goodfellow/Southeast community area. Located on the east is Goodfellow Air Force Base, which is the prominent landmark in this community. The South Concho River spirals south through this community area, with primarily parks and vacant land located on either side. There is a significant amount of vacant and agriculture land in this community area, which provides ample opportunities for future development.

Land uses shown on the future land use plan include single-family residential with general and highway commercial uses along major thoroughfares. Parcels abutting both sides of the Concho Rivers are designated as parks and open space to ensure long-term protection and conservation of the rivers. Several areas have been designated for higher density developments, north of Loop 306. The area east of Christoval Road and south of FM 1223 is classified as industrial, given the existing industrial developments in the area.

East from Goodfellow Air Force Base and the industrial corridor on Christoval Road, future use of land is shown (on the map of future land use) to be low density rural. Municipal sewers are not now extended into this area and are not likely to be within the foreseeable future. Cultivated farmland now characterizes much of this land, with isolated enclaves of non-farm housing on large tracts. Without sewers, such scattered low density housing is all that might reasonably be expected to develop during the 20-year timeframe of this plan. Of particular concern, though, is the maintenance of a comfortable residential environment and high property values wherever industrial-like development emerges adjacent to areas of scattered low density housing.

Similar concerns of a more congested, urban scale occur elsewhere in this community area, closer to the central core of San Angelo. Commercial districts extend 100-150 feet on each side of South Oakes and Chadbourne Streets, where these two thoroughfares extend south from the central business district. Problematic edge conditions exist here in long-standing tension between recurring demands to expand these commercial corridors and the need to maintain a residential environment along intersecting side streets. Future land use maps suggest little expansion of commercial use (on these specific corridors) in favor of preserving what remains of residential areas already squeezed by conflicting use.

Lakeview Community Area

Issues:

♦ More industrial development

♦ More apartments

♦ Need for improved traffic circulation to and from the fairgrounds site, a need which becomes more apparent with completion of more year-round exhibit and spectator facilities there

♦ Encourage the re-use of older, vacant buildings

♦ Prevent encroachment of commercial land uses into residential areas

♦ Need for larger recreational areas

- More retail businesses
- Strong tax base
- Need to enhance property appearance and upkeep, reduce trash along highways
- Need for more neighborhood parks
- Utilize vacant land spaces to beautify the Lakeview area
- Need more retirement centers/communities

Land Use:

Existing uses in this area consist primarily of low density residential, with scattered commercial along major thoroughfares. Public facilities include the San Angelo Fair Grounds, Coliseum and Spur Arena, located north of 43rd Street. West of U.S. Highway 87 is the Riverside Golf Course and Recreation Area.

On the future land use plan, this area is primarily designated as low density residential, with highway and general commercial along major thoroughfares including North Bryant Boulevard, North Chadbourne Street and 19th Street. Areas north of 37th Street and north of 50th Street are designated as low density rural given the large lot development in the area and absence of sewers. Several areas in this community are also designated as industrial, given their current use.

Little or no expansion of existing industrial areas is proposed in the Lakeview Community Area. North from 31st Street, the Bryant Boulevard corridor is projected to be a heavy commercial area characterized by wholesale trade, warehousing and outdoor storage rather than industrial or manufacturing use.

On the map of future land use, lowland areas beside the North Concho River are shown mostly remaining as open space. No expansion of either industrial or heavy commercial use is projected in lowland areas beside the North Concho River.

Nasworthy / South Community Area

Issues:

- Need for a variety of housing types including zero lot line homes, duplexes, and affordable housing for elderly including assisted living facilities
- Need for retirement and medical facilities in the area
- Development suggestions for Lake Nasworthy include promoting commercial development around the lake to include a resort and possibly a restaurant overlooking the lake, preserving all open land around Lake Nasworthy and establishing wildlife habitat areas around the lake
- Buffers between commercial and residential uses
- Low quality development at the Shady Point area of Lake Nasworthy
- Demolish dilapidated homes
- Improve and enhance parks along Lake Nasworthy

Land Use:

This community area is centered around Lake Nasworthy. The San Angelo Regional Airport is the most dominant public facility and is located south of Lake Nasworthy. Existing uses consist primarily of vacant land with parkland and scattered residential development around the lake.

On the map of future land use, existing residential districts on Lake Nasworthy are represented as low density residential. This is how single-family residential neighborhoods are represented elsewhere in more urbanized areas of San Angelo. The density of existing lakeside residences is comparable with that of single-family homes in most other neighborhoods of San Angelo.

Municipal sewers are now or will soon be available to City-developed lots around Lake Nasworthy. Beyond already developed lots on Lake Nasworthy, other adjacent City-owned land is proposed to remain mostly open space. Not all this land is now improved, though, for any active outdoor recreation.

South and east of Lake Nasworthy, most land is characterized as "low density rural" on the map showing future land use. Non-farm development of this land is expected to be primarily single-family homes on large tracts not served by municipal sewers. Sewers are not generally extended into these regions, nor are sewers expected to be so extended during the next 20 years.

North and west of Lake Nasworthy, future development is proposed to be low density residential and comprised of more-or-less conventional single-family homes on urban-sized lots. This is an area into which sewers are likely to be extended incrementally throughout the new century.

One special feature of the map showing future land use in Nasworthy/South is a unique classification identified as "office/warehouse." This new classification is reserved for a band of land adjacent to Knickerbocker Road and bordering the San Angelo Regional Airport. None of this land is now inside the corporate limits of San Angelo, and almost all this land remains unused. Introducing an "office/warehouse" classification here suggests a hope for commercial development of high environmental character that makes use of this property's proximity to the airport.

Northeast Community Area

Issues:

♦ More growth on the east and northeast of San Angelo
♦ More single-family residential development
♦ More industrial park developments
♦ More multi-family residential development
♦ Enforcement of codes on building construction, sanitation and property appearance
♦ Need for neighborhood parks and a recreation facility
♦ Appearance of junkyards along Houston Harte Expressway
♦ Rental property upkeep and maintenance, appearance of vacant lots
♦ Unimproved rights-of-way for certain key streets leave inconvenient "holes" in traffic circulation around Paul Ann Park Addition.

Land Use:

Existing land uses in this community area consist of low density residential development, industrial uses along the railroad tracks, agriculture to the northwest of Old Ballinger Highway and a significant amount of vacant land on the east. In addition, there are numerous public/semi-public facilities including churches, schools and medical facilities. The St. John's Campus of Shannon Medical Center is located south of

Houston Harte Expressway and north of Pulliam Street, and the Baptist Memorial Geriatric Hospital is located north of Houston Harte Expressway and on either side of Main Street.

On the future land use plan, several areas are designated for industrial uses, including land to the east of U.S. Highway 67 and several tracts to the west of Old Ballinger Highway. Designating large tracts for industrial uses will allow for more "industrial park" types of developments in the future. A significant amount of the eastern part of this community is designated as low density residential, and land located north of 28th Street has been classified as low density rural. Additional areas for medium to high density residential uses are identified north of St. John's Campus, south of Roosevelt Street (abutting the Concho River) and east of Loop 306. Areas for general and highway commercial uses are located throughout this community, principally along major highways and arterials.

On the map of future land use, land located beside U.S. Highway 67 is often shown to have an industrial classification. Its wide exposure to motor traffic on a major entryway suggests this land may be well-suited for an "industrial park" environment with concern for aesthetics and quality of appearance.

Another parallel industrial corridor lies along North Bell Street and Old Ballinger Highway where little motor traffic exists other than to and from adjacent properties. This district would be ideal for unsightly but essential industry and related industrial service activities. This area enjoys good access to U.S. Highway 67 while not actually visible from the highway.

Southwest Community Area

Issues:

- Lack of office space
- Encroachment on Red Arroyo open space corridor
- Need for development of "hike and bike" trails in Red Arroyo open space corridor
- Appearance of trash on streets and private properties
- Buffer apartments and single-family residential from other uses
- Need for more rental housing for military
- Ecological preservation and re-establishment of native flora and fauna
- Need for more parks and trails including a pet park

Land Use:

Angelo State University, located east of this area, is one of the more prominent landmarks in this community. Other uses consist of low and high density residential with commercial and retail/personal services located along major arterials. The western portion of this community area is less developed with large tracts of vacant land. Land abutting the Red Arroyo, which runs through the center of this community area, is often used as parks and intentional open space.

Low density residential is the predominant land use shown on the future land use plan with commercial uses along major arterials including Loop 306, Houston Harte Expressway, Sherwood Way and Knickerbocker Road. Several areas are designated for higher density residential developments, often to accommodate the student population of Angelo State University.

A significant regional node of commercial activity exists where Sherwood Way intersects Houston Harte Expressway and Loop 306. This district is approximately one square mile in size and includes a regional shopping mall as well as other "big box" retailers and entertainment venues. During the 1980s and 1990s, this area supplanted the central business district as the principal focus of retail trade in San Angelo. Red-colored areas shown surrounding the intersection of Sherwood Way with Houston Harte Expressway and Loop 306 (on the map of future land use) encompass large vacant tracts suitable for still more such development.

Beyond the city limits, expansion of low density residential use is suggested on the map of future land use. These areas are mostly rangeland now, not even cultivated for crops. City water and sewer systems are capable of being extended into these areas. Future use is projected to be the same urban-scale, single-family home development typical of neighborhoods now existing elsewhere in the Southwest Community Area.

West Central Community Area

Issues:

+ Too many empty buildings
+ Unattractive metal buildings
+ Need more flexibility in zoning
+ Grants for community development
+ Provide incentives for reuse of older buildings, especially, in traditional commercial areas
+ Incentives for properties being rehabilitated
+ Enhance and improve existing parks
+ Need more parks
+ Encroachment of businesses into residential areas
+ Improved zoning regulations for Bed and Breakfast Inns
+ Maintenance and enhancement of historic commercial corridor on West Beauregard Avenue

Land Use:

Existing uses in the West Central Community Area are primarily residential, with a variety of public/semi-public uses including schools and churches located throughout. Between West Beauregard Avenue and Colorado Street, there is a mixture of commercial, retail/personal services and office uses often adjacent to residences. Other commercial, office and retail/personal uses are scattered throughout the community area, often along arterials. On the future land use plan, this area maintains its residential character with commercial uses primarily located along Sherwood Way, Beauregard Avenue, Arden Road, Abe Street and at the intersection of Glenna Drive with Houston Harte Expressway. Land adjacent to the river and land west of Glenna Drive is usually designated as parks and open space.

On the map of future land use, "transitional" areas often suggest where commercial districts have expanded into established residential neighborhoods. These include the one-block-wide space between West Beauregard Avenue and Colorado Street. Other transitional areas are depicted where the commercial district north of Angelo State University conflicts with an adjoining residential neighborhood. In such transitional areas, some commercial uses might carefully be integrated within the predominantly residential environment, subject to limiting conditions designed to mitigate incompatible aspects of commercial use.

At the eastern edge of the West Central Community Area, a one-block-wide strip of land is wedged between two legs of a major arterial forming the path of U.S. Highway 87. These two one-way legs of U.S. Highway 87 (i.e., South Abe and Koenigheim Streets) were expanded and improved during the 1960s. Ever since this expansion, the narrow strip of land left between them has gradually been commercializing. Future land use maps show this district as "neighborhood commercial," which suggests a more limited range of retail trade and services than the "general commercial" classification. Outside display and storage of material and merchandise in neighborhood commercial districts is generally more restricted than in general commercial districts. Small office buildings of no more than two stories also fit nicely within neighborhood commercial districts. All these characteristics are intended to promote commercial development of relatively high environmental character and low traffic generation. Such development will be reasonably compatible with (and less detrimental to) the comfort and value of nearby residences. These include residences remaining in the commercial district itself as well as residences in the Santa Rita neighborhood west of South Abe Street.

ANNEXATION

Annexation is the procedure through which a city increases its overall size by incorporating additional land into the corporate limits of its municipal government. Through annexation, the City extends its municipal services, regulations, voting privileges and taxing authority to newly annexed territory. Many cities expand their corporate limits to manage land development in new growth areas, expand their tax base, and encompass critical areas and public facilities. Benefits of annexation include the following:

- Incorporate new infrastructure and new development within the bounds of a city, so that it does not become characterized only be old infrastructure and old development prone to deterioration, lower property values and higher public costs.
- Allows the City to exercise regulatory authority necessary to protect public health, safety and welfare.
- Ensures that residents and businesses outside the City's corporate limits who benefit from access to San Angelo's facilities and services share the tax burden associated with constructing and maintaining those facilities.
- Ensures orderly extension of public infrastructure and adequate provision of public services;
- Can be utilized as a growth management tool to implement the comprehensive plan, through the imposition of land development regulations such as zoning.
- Encompass critical areas and facilities in order to manage and protect adjacent development areas, such as those areas adjacent to major transportation corridors and major land uses.

The annexation element of the Comprehensive Plan includes a review of the City's annexation history and current policies and provides guidelines toward the development of an Annexation Plan.

ANNEXATION ASSETS & CHALLENGES

Assets and challenges identified by the San Angelo Comprehensive Plan Steering Committee and by citizens at a Community Forum were instrumental in developing goals and objectives for the annexation element of the Plan. These assets and challenges are as follows:

Assets
- Potential growth areas within the ETJ where it is important for the City to regulate and manage future land use and development.

Challenges
- Annexation of areas that are already developed and do not meet city standards/codes.
- Lack of policies related to voluntary and City-initiated annexations.
- No growth management plan/study that identifies future development areas within the ETJ that would be suitable for annexation.
- Private water distribution companies operating just outside and occasionally inside City Limits, which: (1) prevent extension of municipal water service within the private companies certificated service areas; (2) have limited capacity to provide water service to additional customers; and, (3) do not now or never will have water distribution lines large enough for firefighting.

GOALS & OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the Annexation element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **An ongoing process to ensure appropriate planning and preparation for future annexation.**

> **Objective A:** Determine the City's policy on annexing land as a tool to guide and manage future development.
>
> > Action 1: In accordance with Senate Bill 89, as approved by the Texas legislature in 1999, prepare a 3-year annexation plan to identify targeted areas, if any, for city-initiated annexation.
> >
> > Action 2: Prepare updates to the annexation plan, as necessary, to account for changing land use and development patterns as well as new infrastructure development.
> >
> > Action 3: Prepare plans for the provision of municipal services and facilities, as necessary, for each annexation area in accordance with the requirements of State law.
>
> **Objective B:** Identify potential growth areas based upon current trends, existing or anticipated infrastructure improvements such as roads and utilities that may create an opportunity or demand for new urban development.
>
> > Action 1: Utilize the targeted growth areas map (Figure A-2 included later in this chapter) to identify future development areas within the City's ETJ, particularly those adjacent to major transportation corridors and existing municipal water lines, where it is important for the City to regulate and manage future land use and development.
> >
> > Action 2: Conduct a fiscal impact analysis to weigh the projected costs of providing municipal services to future development areas against the anticipated future revenues to be generated by land development.
> >
> > Action 3: Maintain an inventory of existing utilities, streets, structures, businesses, and population in the ETJ, to maintain a database of existing infrastructure and future service requirements.
> >
> > Action 4: Monitor existing flood plains, boundaries of potential gravity wastewater service, and other environmental constraints that may limit development or provision of urban infrastructure.

Objective C: Closely monitor State legislation to stay abreast of anticipated amendments to law pertaining to the City's authority to annex land.

   Action 1: Actively monitor and support, if appropriate, legislation sponsored by the Texas Municipal League (TML) and relating to the authority of cities to annex land into their corporate limits.

   Action 2: Assess the impacts of new legislation on the City's annexation management policies and determine the best course of action.

ANNEXATION HISTORY

Illustrated in **Figure A-1: Annexation History** are all annexations in San Angelo since 1949. As shown in **Table A-1, Annexation by Decade,** San Angelo has annexed 83 tracts encompassing over 25 square miles of land since 1949. During the 1940s, the City annexed a significant amount of land, including much of what is now the north side of San Angelo. Since then, the City has primarily annexed smaller tracts of land mainly through voluntary annexation. Property owners may request annexation into the corporate limits of a municipality by petition. If the petition is granted, the City Council may annex the area by ordinance. In the last decade, there were 17 smaller annexations primarily concentrated in the southern portion of the City, with the exception of two tracts annexed on the east, along US Highway 67, and four tracts to the west of the Houston Harte Expressway.

TABLE A-1
ANNEXATION HISTORY BY DECADE, SINCE 1950
San Angelo Comprehensive Plan
San Angelo, Texas

Year	Acres	Tracts	Square Miles
1950-1959	199.95	1	0.31
1960-1969	1,056.22	10	1.65
1970-1979	3,478.87	29	5.44
1980-1989	6,350.49	26	9.92
1990-1999	5,298.99	17	8.28
Total	16,384.52	83	25.60

Source: City of San Angelo

As of December 31, 2001, the City Limits of San Angelo encompass a total of 58.45 square miles.
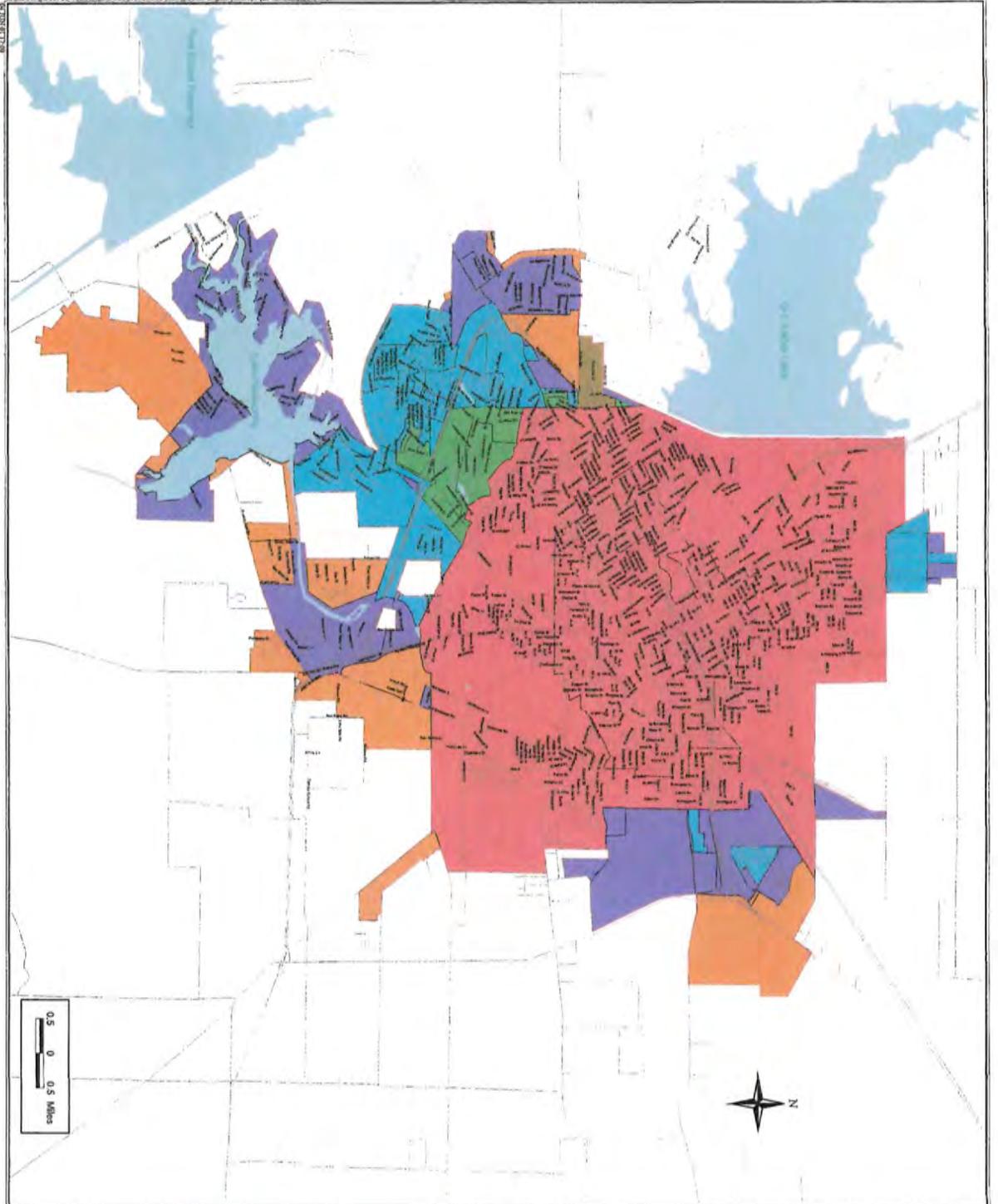
San Angelo
Comprehensive
Plan

FIGURE A-1
ANNEXATION HISTORY
(Since 1950)

Community Areas in
Corporate Limits

Water

Annexation Areas:

Area Incorporated
within City Limits of
San Angelo, up to 1950

1950-1959
1960-1969
1970-1979
1980-1989
1990-1999

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO, TEXAS

0.5   0   0.5 Miles

ANNEXATION REQUIREMENTS

Annexation for Home Rule Cities is governed by the planning and procedural requirements in Chapter 43 of the Texas Local Government Code. As a home rule City, San Angelo has the authority to annex on a non-consensual basis. Annexation authority extends into the extraterritorial jurisdiction (ETJ) of the City, which is the area outside the corporate limits but within a certain distance of the corporate limits. San Angelo's ETJ extends 3.5 miles beyond the city limits as a result of its population of between 50,000 and 100,000 persons. Annexation in any given year is limited to a total area equal to ten percent of the City's existing incorporated area. The amount of land that can be annexed in a given year is cumulative, so that if the City does not annex ten percent of its existing area one year, it may carry forward that acreage and combine it with another ten percent the next year. The maximum allowable accumulation of annexation area is 30 percent of the incorporated area. This does not include areas owned by the municipality, county, the state or the federal government and used for a public purpose, areas annexed at the request of the majority of qualified voters, or areas annexed at the request of the owners of the area. An annexation area must be contiguous to the existing city limits and must be at least 1,000 feet in width at its narrowest point. The City may also preclude the incorporation of a new municipality within its ETJ.

Service Requirements

The City is required by law to comply with stringent service delivery requirements for newly annexed areas. As part of the annexation process, the City prepares and presents a service plan for the area(s) proposed for annexation. The service plan must provide for the extension of basic fire, police, and EMS services immediately upon annexation, and for maintenance of water, sewer, streets, street lights, parks and recreation facilities, and other public facilities serving the proposed annexation area. The City must plan to provide municipal services that are at least of the same level as existed in the newly annexed area prior to annexation and that are available in other parts of the City with similar characteristics. Construction of capital improvements required for extension of municipal services must be completed within 2.5 years. These requirements may not apply if the annexation is initiated by the landowners to be annexed by the City, and the landowners agree that the improvements will not be completed within 2.5 years.

Senate Bill 89

The Texas Legislature significantly revised annexation requirements in 1999 with passage of Senate Bill 89 (SB 89). Under the revised statute, all property must be included in any "annexation plan" for three years before it may be annexed. In addition, if the City does not pursue annexation within 31 days of the third anniversary, then the property is ineligible for annexation for another five years. Once an area is identified for potential annexation, the City must compile a comprehensive inventory of all services currently provided in the area, including the condition of facilities, existing public safety response times, and current service costs. As in the past, the City must meet stringent service planning and delivery requirements for proposed annexation areas. However, the revised statute now requires the City to begin preparation of a service plan within 10 months of the receipt of data required for the service inventory. Significantly, the Legislature also reduced the time frame in which "full municipal services" (including necessary capital improvements) must be provided from 4.5 years to 2.5 years, although the statute includes some allowances for extending this service schedule. Senate Bill 89 required that an initial three-year annexation plan be

adopted and in place by December 31, 1999. Prior to that date, San Angelo's City Council adopted a resolution indicating it had no plans for annexing additional territory during the next three years, except possibly for some limited areas and circumstances which are exempt from having to be included within an annexation plan. This "minimal" annexation plan may be amended someday to include some specific areas that the city desires to annex during a subsequent three-year period. **This element of the San Angelo Comprehensive Plan is only a first step in the preparation of a full annexation plan, as required by SB 89.**

ANNEXATION POLICIES

Policies are utilized to achieve the goals and objectives of this plan and serve as a tool for officials and staff in guiding future annexations in the community. The following policies will help minimize future costs of providing municipal facilities and services in newly annexed areas, and reduce the complexity of annexation procedures:

- Consider an annexation policy to manage future growth in a manner that is coordinated with existing and future infrastructure investments, compatible with the existing urban form, environmentally sensitive, and fiscally responsible.

- Maintain a long-range annexation plan which is consistent with realistic proposals for extension of municipal facilities and services. The annexation plan should guide the development of annexation programs on a periodic basis, as needed. In addition, the annexation plan should identify those areas that will be accepted into the corporate limits through voluntary annexation.

- Utilize policies established in the Comprehensive Plan to direct growth to the developable and unutilized or under-utilized areas within the current corporate limits, thus efficiently utilizing the existing transportation and utility infrastructure prior to annexing additional areas.

- As development densities increase along the fringe of the urbanized area, San Angelo needs to grow and expand to incorporate developing areas and provide services to the expanding urban area.

- Extend the City's jurisdiction to encompass critical public facilities and important growth areas, which require protection and management through regulatory powers that can be applied by the municipality within its incorporated area.

- Future growth and development needs to occur in an orderly and coordinated manner. Private land development, construction of public facilities (streets, water, sewer, drainage, etc.), and expansion of the corporate limits should occur in a phased and coordinated manner, in accord with State laws.

- Annexation should occur prior to or concurrent with development, where possible, to coordinate the extension of adequate public facilities and services in developing areas.

- Fiscal impact analysis should be utilized to assess the estimated costs of providing municipal services and weigh them against the anticipated revenues of each annexation effort. Early-year costs may exceed revenues because of the lag time between annexation and collection of taxes and

fees, and annexations may require one-time expenditures for capital facilities. The fiscal impact of annexations should be assessed on a multi-year time frame.

- There may be exceptional situations where health, safety, environmental, general welfare, or other factors will override fiscal considerations. In such instances, areas may be considered for annexation despite a less-than-satisfactory assessment of the fiscal impact of annexation.

- Municipal utilities such as water or sewer service should not generally be extended to users outside of City Limits. Compliance with this policy will help minimize inappropriate urbanization occurring without the guiding hand of the City's zoning and construction codes. If and when already-urbanized areas are annexed, the City may be inheriting an undesirable mix of incompatible uses typified by substandard building construction and site development. Some exceptions to this general policy may include: (1) extending municipal utilities to industrial users, presumably, within the context of an industrial district agreement; (2) extending municipal utilities to targeted areas already identified on the City's three-year annexation plan; and (3) extending municipal utilities to sparsely populated areas subject to "short form" annexation proceedings, and for which the owners have formally requested annexation and had a subdivision plan approved by the City.

ANNEXATION PLANNING

San Angelo should take a proactive and responsible approach to annexing lands as a means to manage peripheral growth and have regulatory control over the type, scale and density of future development. Future annexations should, therefore, target growth areas before development occurs. In doing so, this will allow the City to effectively guide and manage land development, provide for orderly and cost-effective improvement and extension of public infrastructure and services, and expand the City's tax base in coordination with the increasing demands for municipal facilities and services.

As part of the Comprehensive Planning process, the San Angelo Planning Commission, with input from the public, identified and evaluated properties within the City's ETJ that are prime for development. The results of this process are illustrated in **Figure A-2: Targeted Growth Areas**. The City should establish policies and guidelines under which these potential areas for annexation will be accepted. These policies and guidelines should ensure that potential annexations are fiscally responsible and are within the service area for the provision of adequate public facilities and services.

Preparation of an annexation plan is essential in identifying key areas that the City should annex prior to development. An annexation plan will specifically identify annexations that may occur beginning on the third anniversary of the date the annexation plan is adopted. It is important that the identified annexations be deliberate and specific. While the annexation plan may be amended to remove an area proposed for annexation, there are consequences pertaining to the amount of time that must expire before the property can again be added to the plan, thereby extending the timetable for annexation. Following preparation of the annexation plan, a detailed inventory of services and facilities provided by both public and private entities is required. The inventory must include all services and facilities the City may be required to provide following annexation, which include: police protection; fire protection; emergency medical

THE CITY OF SAN ANGELO, TEXAS
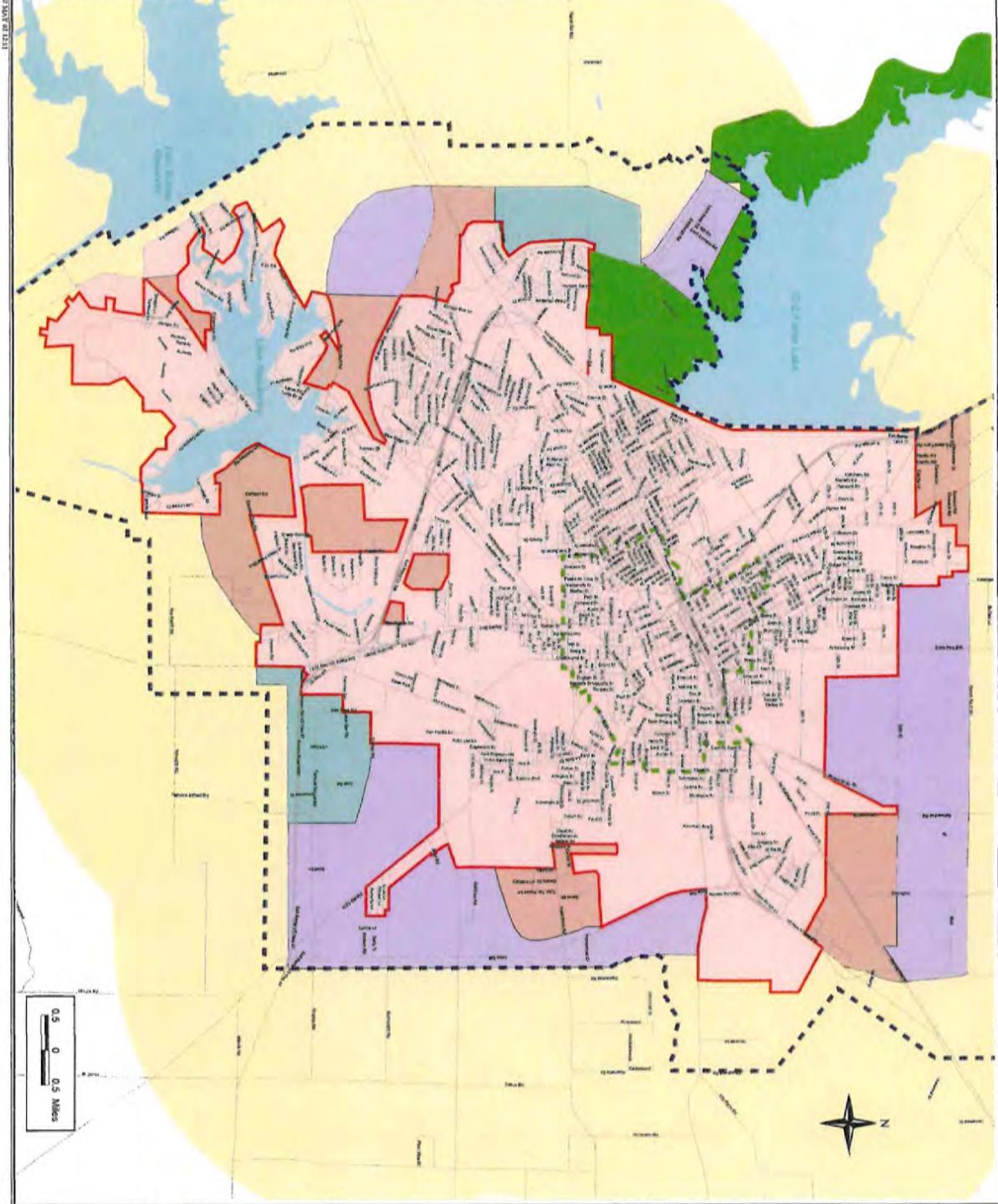
San Angelo
Comprehensive
Plan

FIGURE A-2
TARGETED
GROWTH AREAS

San Angelo Corporate Limits
Comprehensive Plan Study Area
Boundaries of City Limits: 1916
San Angelo State Park
Extraterritorial Jurisdiction
Water

Annexation Areas:
Area Incorporated Within
City Limits Of San Angelo
Up Through 1999
Long Range
Mid Range
Short Range

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS
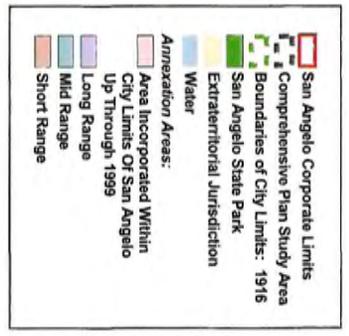
services; solid waste collection; water and wastewater facilities; roads and streets including street lighting; parks, playgrounds and swimming pools; and any other public owned facilities, buildings or services.

The City's Planning Department should conduct annexation studies on a periodic basis to evaluate and consider potential annexations on an annual basis. Specific areas recommended for consideration should be identified and assessed in accordance with the goals, objectives, and actions of the Comprehensive Plan and in compliance with State and Federal statutes. The annexation plan should be viewed as a "living" document that is continuously updated and never fully retired, unless the municipal government purposefully decides to take a long reprieve from annexation.

UTILITIES

The provision of municipal utilities – including **drinking water**, **sanitary sewer**, and **stormwater drainage** – is a major determinant of how San Angelo will grow in the future. This Utilities element of the San Angelo Comprehensive Plan identifies assets and challenges of the City's utility system and sets a framework of goals and objectives to guide future development of the system. The findings and recommendations of this element are based on input from San Angelo's citizens, interviews with City officials and staff, and the San Angelo Planning Commission.

RELATED PLANS AND STUDIES

There are a number of plans and studies related to the provision of water, wastewater, and storm water services.

- **"Water Distribution System Master Plan Update"**; Freese and Nichols, Inc.; 1998;
- **"City of San Angelo Master Drainage Plan (Not Complete)"**; Freese and Nichols, Inc.; 2000;
- **"Sewer Maps for the City of San Angelo, Texas"**; City of San Angelo; 2000;
- **"Water Maps for the City of San Angelo, Texas"**; City of San Angelo; 2000;
- **"Region F Water Conservation Plan, 2000"**; Texas Water Development Board; 2000; and,
- **"Flood Insurance Rate Maps (FIRMs)"**; Federal Emergency Management Agency; 1994.

ISSUES

- Problems with reliability of secondary water sources such as the proposed Brady well field.

- Need to study impact of water supply on future growth.

- Substandard water lines, which are found in many areas of the city, are slowly but surely being replaced, at significant cost to ratepayers. Substandard water lines limit infill development, especially in northern areas of San Angelo.

- Continue program for ongoing rehabilitation of water lines.

- City should work with other groups dealing with water issues.

- Expansion of wastewater collection system to Lake Nasworthy area.

- Evaluate need (or lack of need) for extending wastewater collection system to areas inside City Limits not now served by sanitary sewer.

- Numerous drainage problems throughout City.

- Continued use of regional landfill as dumping ground for sludge left from treating wastewater (with opportunities for applying treated sludge onto land).

- Expanding municipal water system to areas outside of City Limits, where water wells have routinely failed under drought conditions.

- Impact of private water utilities on prospects for annexing partially developed areas now located outside San Angelo's City Limits.

- Extending municipal water system to newly-annexed areas served by private water utilities, now and in the future.

GOALS AND OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the Utilities element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **Drinking water that meets the highest standards for quality.**

Objective A: Treat water to meet applicable standards and maintain water quality.

Action 1: As required by the TNRCC, the City should continue to measure quality of water delivered.

Objective B: Adopt the latest codes and standards.

Action 1: Continue to enforce the current TNRCC requirements for water distribution systems and the International Plumbing Code, as adopted by the City of San Angelo.

Goal 2: **A water system that is adequate to meet the needs of existing and future population.**

Objective A: Ensure the city's water system is able to satisfy the maximum daily demand and water pressure requirements for existing and projected future growth.

Action 1: Expand the daily pumping capacity of the water treatment plant.

Action 2: Add elevated storage capacity to meet TNRCC's requirement of 100 gallons of elevated storage for every 2,500 water connections.

Action 3: Implement recommended improvements for creating lower and upper pressure planes, as outlined in the Water Distribution System Master Plan Update of 1998.

Objective B: Develop an ongoing maintenance program to ensure safe and effective operation of the pumps, lines and storage facilities.

Action 1: Periodically conduct safety inspections of the pump and water storage facilities.

Action 2: Conduct periodic flushing of lines with special attention to dead end lines.

Goal 3: **Water conservation.**

Objective A: Adopt a water conservation plan.

| Action 1: | Adopt a code requiring that all new construction and remodeling incorporate water-saving devices such as low-flow toilets and shower heads, and periodically review and update this requirement. |

Objective B: Promote water conservation awareness.

Action 1: Implement a system of credits for water conservation.

Action 2: Insert a mailer in the water bill pointing out the benefits of water conservation.

Objective C: Promptly respond to repair leaks/water line breaks.

Action 1: The City should respond quickly to leaks and breaks.

Goal 4: Sufficient, dependable long-range water supply.

Objective A: Assure that planning is in place to provide for future water needs under drought conditions.

Action 1: Document actions taken to assure an adequate water supply for future needs.

Action 2: Implement the water conservation strategies recommended in the Region F Water Conservation Plan.

Goal 5: Minimal infiltration of stormwater into the sanitary sewer system.

Objective A: Comply with applicable codes and TNRCC regulations concerning infiltration and inflow.

Action 1: Evaluate the existing system to determine infiltration problem areas.

Action 2: Implement a plan to repair the system in areas where infiltration is identified as a major problem.

Objective B: Have an ongoing maintenance/rehabilitation program to insure that all lines are properly maintained.

Action 1: Evaluate the existing wastewater collection system to determine which portions require rehabilitation, utilizing both in-house monitoring and inspection and contracts with private consultants for analysis of unusual problems.

Action 2: Check manholes for structural problems and locations of lids relative to inundation during periods of rainfall. Inflow preventers for lids and grouting of cracks should continue to minimize inflow to the sanitary sewer system.

Goal 6: Beneficial reuse of wastewater effluent.

Objective A: Use wastewater effluent for irrigation or for certain industrial uses, where appropriate.

Action 1:	Use treated effluent to irrigate agricultural land and golf courses. Seek other uses for effluent in public and private areas of the City, such as cooling water.
Objective B:	Assure maximum achievable quality of effluent prior to discharge.
Action 1:	Continue to use the most current treatment technology and periodically evaluate whether additional treatment would make wastewater effluent more amenable to beneficial reuse.

Goal 7: **Adequate wastewater treatment capacity.**

Objective A:	Regulate the use of the wastewater system and prevent dumping of unauthorized waste into the system.
Action 1:	Monitor the influent into the plant and respond quickly to identify causes of variation in influent chemical composition.
Action 2:	Require pretreatment of certain industrial waste before it is discharged into the municipal system.

Goal 8: **Adequate capital funding for infrastructure improvements.**

Objective A:	Ensure that adequate funding is available to implement infrastructure improvements.
Action 1:	Explore opportunities to collect impact fees for utility improvements.
Action 2:	Work with other relevant entities to obtain support and maximize funding participation of county, state and federal agencies and private developers in construction of utility improvements.

DRINKING WATER

Existing Water Supply

The City obtains its drinking water from several area reservoirs. The primary reservoir is Lake Nasworthy, which, under normal conditions, can provide up to 29,000 acre-feet of water per year (limit set by Texas Natural Resource Conservation Commission). The water level in Lake Nasworthy is determined by the amount of water released from the Twin Buttes Reservoir via the Twin Buttes Dam. The Twin Buttes Reservoir, in turn, is fed by the Middle and South Concho Rivers. Under drought conditions, which are frequent in West Texas, Lake Nasworthy may not be able to produce the amount of water needed by San Angelo. As a result, the city has several secondary sources of water. San Angelo has contracted with the Colorado River Municipal Water District to obtain water from the O.H. Ivie Reservoir and E.V. Spence Reservoir. The O.H. Ivie Reservoir is the foremost secondary water source drawn upon during droughts. O.H. Ivie Reservoir can provide up to 15,000 acre-feet of water per year. Furthermore, San Angelo may draw up to 3,000 acre-feet per year from the E.V. Spence Reservoir in Coke County. Finally, the

O.C. Fisher Reservoir in San Angelo may provide up to 1,000 acre-feet per year in emergency situations. However, O.C. Fisher has not been used for that purpose to date.

In addition to surface water, the City of San Angelo could potentially draw upon groundwater to meet future demand. The city currently owns a tract of land in McCulloch County, near Brady, that could be used as a well field for pumping groundwater. This well field is fed by the Hickory Aquifer. However, several issues exist with the well field including: critically low water levels in the Hickory Aquifer, naturally occurring radioactivity in Hickory aquifer water supply, and the relatively large cost of transporting water from the well field to San Angelo. Outlined in **Table U-1: Drinking Water Sources** are San Angelo's various water sources and their supply capacity in terms of gallons per day.

TABLE U-1
DRINKING WATER SOURCES
San Angelo Comprehensive Plan
San Angelo, Texas

Source	Max. Capacity (Gallons Per Day)
Lake Nasworthy / Twin Buttes (Primary)	25,925,825
O.H. Ivie Reservoir (Secondary)	13,409,909
O.C. Fisher Reservoir (Secondary)	893,993
E.V. Spence Reservoir (Secondary)	2,681,982
Brady Well Field (Future)	0
Total	**42,911,709**

Source: City of San Angelo, Public Works Department, October 2000

In a 1998 draft report titled "Water Distribution System Master Plan Update" (hereafter referred to as the WDSMP), Freese and Nichols Inc. found the average per capita water consumption rate in San Angelo to be approximately 185 gallons per day in the Year 2000. Based on this per capita water usage rate and the 2000 Census count of 88,439 persons in San Angelo, the average amount of water consumed per day in San Angelo is approximately 16,361,215 gallons. The WDSMP report also projects that per capita water consumption will increase to 195 gallons in Year 2010 and to 200 gallons in Year 2020. With these figures, the City can generally project how much water will be needed to service the future population of San Angelo, based on the population projections for the City of San Angelo. Provided in **Table U-2: Projected Water Demand, 2000-2020**, are the projected water needs through the Year 2020.

TABLE U-2
PROJECTED WATER DEMAND, 2000 TO 2020
San Angelo Comprehensive Plan
San Angelo, Texas

Year	Population	Average Daily Demand (Gallons Per Day)
2000	88,439	16,361,215
2010	98,380	19,184,100
2020	109,437	21,887,400

Source: Wilbur Smith Associates, November 2000

Note: Based Upon Projected Daily Per Capita Water Usage; WDSMP; Freese and Nichols, Inc.; 1998

By comparing Tables U-1 and U-2, it is clear that, **under normal weather conditions**, San Angelo has a sufficient water supply to meet current demand during this first decade of the 21st Century. However, drought is a very common condition in San Angelo and poses some critical challenges.

San Angelo's Water Sources and Drought

Due to the frequency of drought in West Texas, San Angelo's water supply must be analyzed based on its ability to provide water under these conditions. Examining how water supplies fared in past droughts provides a general idea of the future drought resistance of San Angelo's water supply. During summer 2000, San Angelo was experiencing severe drought. In fact, drought persisted through most of the late 1990s. The status of San Angelo's water sources during this period and other issues which may affect the ability of the water supply to provide potable water are outlined in **Table U-3**.

The difficulty in preparing for drought is illustrated in Table U-3. Despite the foresight demonstrated by San Angelo's decision makers in preparing for water supply shortages, recent droughts have highlighted the potential susceptibility of San Angelo's water supply.

Regional Water Conservation

In 1997, the State of Texas passed comprehensive water legislation requiring all counties in Texas to participate in preparing regional water conservation plans. Texas counties were then divided into 16 water planning regions, each with its own Water Planning Group. The plans were to be completed by January of 2001. The Texas Water Development Board must adopt these regional plans and incorporate them into a statewide plan by January of 2002. The importance of these plans will be underscored by two points:

- State financial assistance for municipal water supply projects will only be provided if the project is consistent with an approved regional water plan.

- The Texas Natural Resource Conservation Commission will not issue further water rights permits to municipalities after January 5, 2002, unless the permit request is consistent with conservation measures outlined in the regional water plan.

These requirements will directly impact San Angelo, which uses state funding and TNRCC water rights permits.

TABLE U-3
SAN ANGELO'S WATER SOURCES AND DROUGHT: SUMMER 2000
San Angelo Comprehensive Plan
San Angelo, Texas

Source	Water Provided Under Drought Conditions (Million Gallons Per Day)	Issues
Lake Nasworthy / Twin Buttes Reservoir	0 mgpd	Supply diminishes quickly due to heavy demands. Twin Buttes Reservoir was at 4% of capacity during 2000 drought.
O.C. Fisher Reservoir	0 mgpd	Supply diminishes quickly due to heavy demands. Reservoir was at 7% capacity during 2000 drought.
O.H. Ivie Reservoir (Colorado Municipal Water District)	18 mgpd	**Becomes primary water source during drought periods.** However, fell to less than 25% capacity during 2000 drought. Not all participating cities (with water rights) have begun to draw from this reservoir.
E.V. Spence Reservoir (Colorado Municipal Water District)	0 mgpd	Lake water is very salty and, as a result, expensive to process. Lake was at 13 percent capacity during 2000 drought.
Brady Well Field	Undeveloped	Well field would tap into Hickory Aquifer, a source already at critically low levels and showing evidence of problems with naturally occurring radioactivity. Pipeline between well field and City of San Angelo will be very expensive.

Source: City of San Angelo

Tom Green County and San Angelo are included in the Region F Water Planning Group, one of 16 regional water planning areas. The City of San Angelo, along with 39 other water user groups, participated in the Region F water conservation plan. At the time the San Angelo Comprehensive Plan was being drafted, a draft water conservation plan had been prepared. Key findings of the plan include:

- Total water demand in Region F is projected to increase from 881,500 acre-feet per year in 2000 to 900,200 acre-feet per year in 2050.

- Water demand currently exceeds water supply in Region F, primarily due to agricultural groundwater demand that cannot be met during drought periods.

- Under current policies, water demand will continue to exceed water supply in Region F.

- The largest water user in Region F is agriculture, which accounts for 75% of the region's water demand.

- Municipalities are second only to agriculture in terms of water usage. Municipalities account for 15% of water use in Region F.

- Midland and San Angelo are the largest municipal water users in Region F.

- Aquifers in Region F are being used at rates that cannot be sustained. Among the most critical are the Edwards-Trinity and Hickory Aquifers.

- Tom Green County is one of the largest agricultural water demands in Region F.

To address water supply problems, the Region F plan identifies numerous water conservation strategies:

- Full implementation of water conservation irrigation technologies, such as drip irrigation, which could potentially reduce agricultural water demand by 50%.

- Water conservation and drought response strategies.

- Weather modification (i.e., cloud seeding) to encourage larger quantities of rainfall.

- Wastewater reuse.

- Aquifer recharge enhancement.

- Water desalination.

The plan recommends strategies for each county in Region F. The following strategies are listed for Tom Green County:

- Increase the capacity to deliver water provided by the Colorado River Municipal Water District to San Angelo.

- Improve irrigation practices to maximize benefit of existing supplies.

- Treat effluent from San Angelo so that it may be used to meet increased steam electric demands.

San Angelo's actions regarding water supply should be carefully guided so that they are in conformance with the recommendations of the Region F Water Conservation Plan.

WATER DISTRIBUTION

With a water supply in place, water *distribution* then becomes an important factor in determining how development will occur in the City. There are many ways in which water distribution affects development, including:

- The cost of extending water lines to proposed or existing developments limits the location and size of the developments.

- Local government policies regarding extension of utilities and/or the formation of utility districts in the City or its extraterritorial jurisdiction significantly affect the cost of development and, as a result, the location and size of developments.

- The actual physical ability to connect to a municipal water system may determine whether or not a new development is feasible.

San Angelo's water distribution system includes several components. Water is pumped from previously described sources to the San Angelo water treatment plant located at East Avenue I and Metcalfe Street. The plant has a daily pumping capacity of 59 million gallons per day, which may someday need to be expanded to meet "maximum day demand." The WDSMP defines the maximum day demand as 2.25 times the Average Daily Demand. This means that on days when the highest amount of water is being used, such as a dry August day, the daily water demand will be 2.25 times the amount used on an average day. **Table U-4** shows the projected maximum day water demand through the year 2020.

TABLE U-4
MAXIMUM DAY WATER DEMAND, 2000 - 2020
San Angelo Comprehensive Plan
San Angelo, Texas

Year	Maximum Day Demand (Million Gallons Per Day)
2000	36.8
2010	43.2
2020	49.2

NOTE: Based on projections of average daily water demand (in TABLE U-2) multiplied by a factor of 2.25.

After being treated, water is then pumped from the water treatment plant to various elevated and ground storage tanks throughout the area. Currently there are 2.6 million gallons of capacity in elevated water storage tanks. The Texas Natural Resource Conservation Commission requires that cities have 100 gallons of elevated storage for every 2,500 water connections. San Angelo currently does not meet this requirement and, as a result, must add elevated storage capacity in coming years.

Water is distributed from the water storage tanks to residential and commercial water connections mainly by gravity flow. The amount of pressure on any given water connection is determined by its distance from the storage tank and the size of the water distribution lines serving the connection. The area which may be served at a reasonable pressure level by a single integrated system of existing or proposed water storage tanks is called a "pressure plane." The WDSMP report identifies two "pressure planes" for water service in San Angelo. These pressure planes are identified in **Figure U-1: Water Service Areas** as the upper pressure plane and lower pressure plane. The lower pressure plane, which includes much of east, north, and central San Angelo, currently accounts for 94 percent of maximum day water demand. The upper pressure plane, which primarily includes west and southwest San Angelo, accounts for the remainder of the water demand. However, the upper pressure plane includes San Angelo's highest growth areas and will experience rapidly increasing water demand in the coming years.

Water System Improvements

The WDSMP outlines several improvements in both the lower and upper pressure planes that are intended to insure the City is able to satisfy the maximum day demand and water pressure requirements for existing and projected future growth through the Year 2020. The report projects substantial development in the south and southwest portions of the city and, as a result, outlines multiple improvements to the water system in the **upper pressure plane**, as follows:

- Additional pumping and elevated storage, including a new three to four million gallon elevated water storage tank on the southwest side of the city.

- Additional ground storage tanks on high ground west of the city.

- Extension of trunk lines to currently undeveloped areas on the southwest side of the city.

- Increase the size of the upper pressure plane to serve areas that are now located in lower pressure plane.

The WDSMP outlines the following improvements for the **lower pressure plane:**

- New elevated storage tanks on the north and northeast sides of the city, to serve new growth in these areas and to meet minimum water storage requirements set by the Texas Natural Resource Conservation Commission. The lower pressure plane has one million gallons of elevated storage capacity, whereas over 3.0 million gallons will be required for population in the lower pressure plane.

- Additional pumping capacity.

- Extension of trunk lines to increase service.

- Eventual expansion of the water treatment plant.

These improvements will directly impact the location and nature of future development within the city. In other words, if there are significant constraints in the City's ability to provide adequate services, development may be impeded.

h:\planning\353780 - san angelo comprehensive plan\gis\waters apr (8 Water Service Areas)
04 JUN 01 16:33
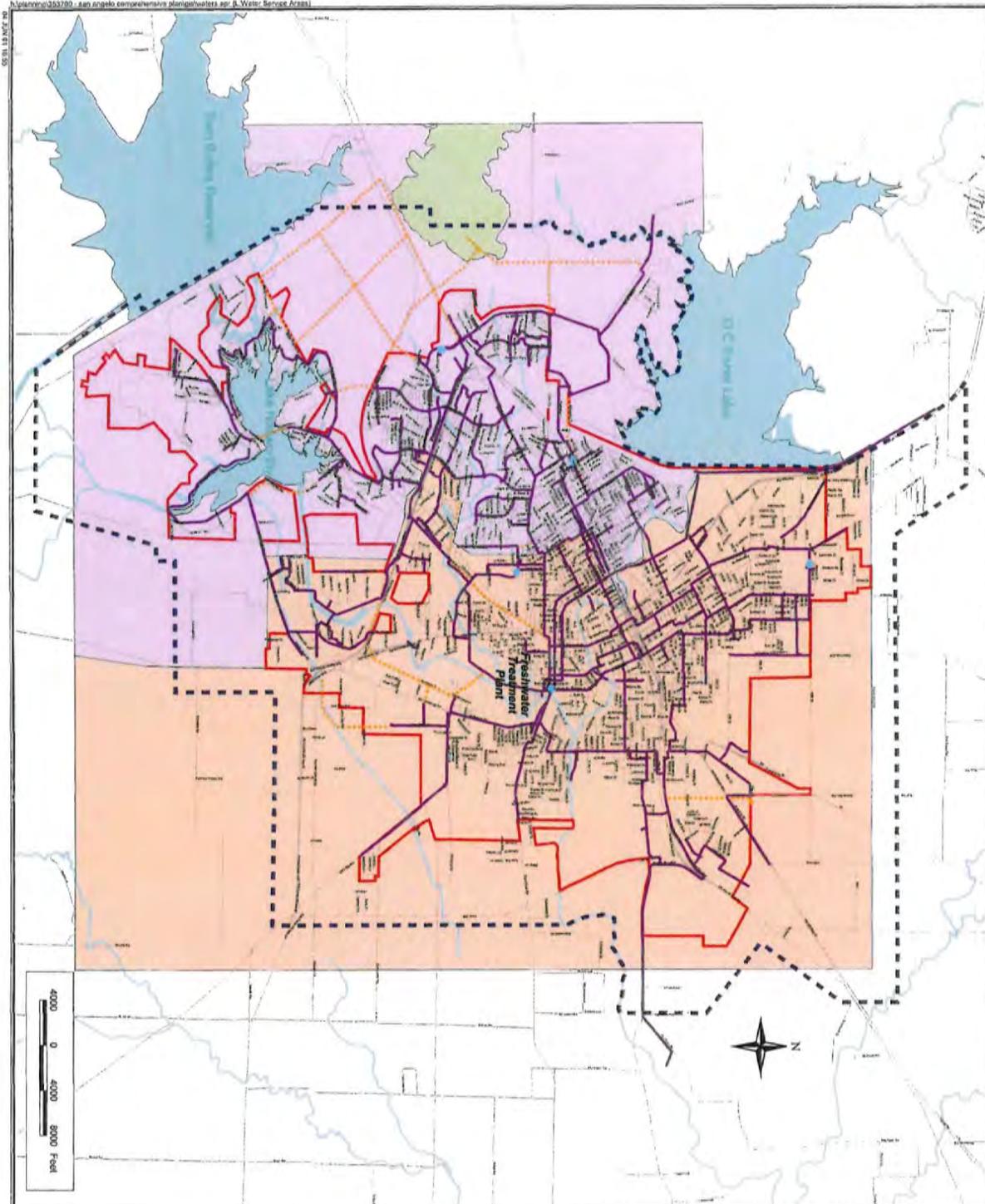
San Angelo Comprehensive Plan

FIGURE U-1
WATER
SERVICE AREAS

- Study Area
- San Angelo Corporate Limits
- Trunk Water Line
- Future Main Water Line
- Creek

Water Pressure Planes:
- Upper
- Lower
- Future Westside II

SOURCE: Public Works Dept., City of San Angelo
Based on draft of "Water Distribution Master Plan
Update" for San Angelo by Freese & Nichols, Inc.
(content subject to change).

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO TEXAS

Extension of City Water System to New and Existing Developments

The City of San Angelo Land Development and Subdivision Ordinance stipulates the following in regard to providing water to new developments:

- Generally, all new subdivisions must be serviced by the City of San Angelo water system, unless specifically exempted by City Council, or as allowed for certain subdivisions located more than one (1) mile from the City's water distribution system.

- Subdivisions located more than one (1) mile from an acceptable City of Angelo water source may construct their own water distribution system, if approved by City Council. Upon acceptance of the subdivision, the City will operate and maintain the system. Residents of the subdivision will reimburse the City for operation and maintenance costs. These systems must be constructed according to City of San Angelo design requirements.

- Developers are financially responsible for providing all water system infrastructure related to their developments.

- City water may be extended to existing developments outside the City Limits, with the approval of City Council. Service will only be extended to areas whose water infrastructure meets minimum design criteria established by the City of San Angelo.

- If water service is extended to areas located within the City's extraterritorial jurisdiction, this area must petition for voluntary annexation into the City of San Angelo.

- Water service may not be extended beyond the limits of the City's extraterritorial jurisdiction.

- In cases where oversized water lines are necessary to serve future developments in the immediate area, the City will reimburse the developer for the cost of over-sizing water lines.

- In cases where off-site water lines are necessary to serve future developments, the City will reimburse the developer over a six-month period using charges from future users of the off-site mains.

These policies directly impact the nature of growth in the San Angelo area. Consequently, these policies should be carefully tailored to insure that their effect is consistent with the goals of the City.

Private Water Systems in San Angelo's Extraterritorial Jurisdiction (ETJ)

Private water utilities are formed when areas are unable or unwilling to connect to a City water supply. These water utilities are typically formed by an individual or group of individuals. Currently, two private water systems fall within the study area of the San Angelo Comprehensive Plan:

- Concho Rural Water Company (individually owned).

- Millersview-Doole Water Supply Corporation (user cooperative).

Both of these private systems use wells as their source and primarily serve residential users. The infrastructure in these areas is not typically built to minimum city standards.

Due to their location in San Angelo's ETJ, private water utilities pose several important concerns to the City of San Angelo, primarily related to annexation:

- At some point in the future, the City may wish to annex these areas; or, the persons who own the land in private water service areas may request annexation. However, annexation of these areas may be not be cost-effective to the city because of substandard water infrastructure, which the City will either have to maintain or replace once the area is annexed.

- If the City chooses not to annex land served by these private utilities, they may stand as barriers to annexation and development of other parts of the City's ETJ.

In conclusion, San Angelo has an adequate water supply in place to meet the City's needs through the Year 2020. However, San Angelo's water supply, like many large cities in arid regions, is susceptible to drought. No single water source employed by the City has proven to be completely drought resistant.

Additionally, San Angelo is currently preparing a water distribution plan to insure that current and future areas of the city are served and that the city meets state and federal standards. This plan has identified potential areas of future growth and directs utility improvements to serve these areas. By targeting improvements to these areas, the plan will have a major impact on the growth of the city by guiding development into service areas of these utility improvements.

WASTEWATER SYSTEM

The City of San Angelo operates and maintains an extensive wastewater collection and treatment system, including gravity sewers, multiple lift stations and a wastewater treatment plant (WWTP). Some areas of the city rely on septic systems. The existing WWTP is located several miles east of the City on FM 380. This facility currently has a capacity of 16.3 million gallons per day (mgd) and currently treats an average of 9.5 mgd. The sewer treatment plant is designed so that it can be expanded in the future, as necessary.

Figure U-2: Wastewater Service Areas shows the areas of San Angelo serviced by the City's sewer system. Areas not included in wastewater service areas are typically serviced by septic systems. Currently, the sanitary sewer system is primarily a gravity flow system flowing into the city's WWTP. As a policy, San Angelo does not generally allow sewage processing on individual lots, but requires that sewage flow to main lift stations and then to the city's WWTP. The primary exception to the gravity flow system is the Lake Nasworthy area, which must be pumped due to the topography. The City's wastewater system is currently being expanded to serve subdivisions around Lake Nasworthy, which have historically used septic systems. This expanded service will protect water quality in Lake Nasworthy and provide a much higher level of service to citizens in the area.

The City is currently upgrading its sludge treatment facility at the sewage treatment plant so that treated sludge may someday be distributed as an agricultural fertilizer project. Treated liquid effluent is distributed into canals and used to irrigate farmland east of San Angelo's urbanized area.
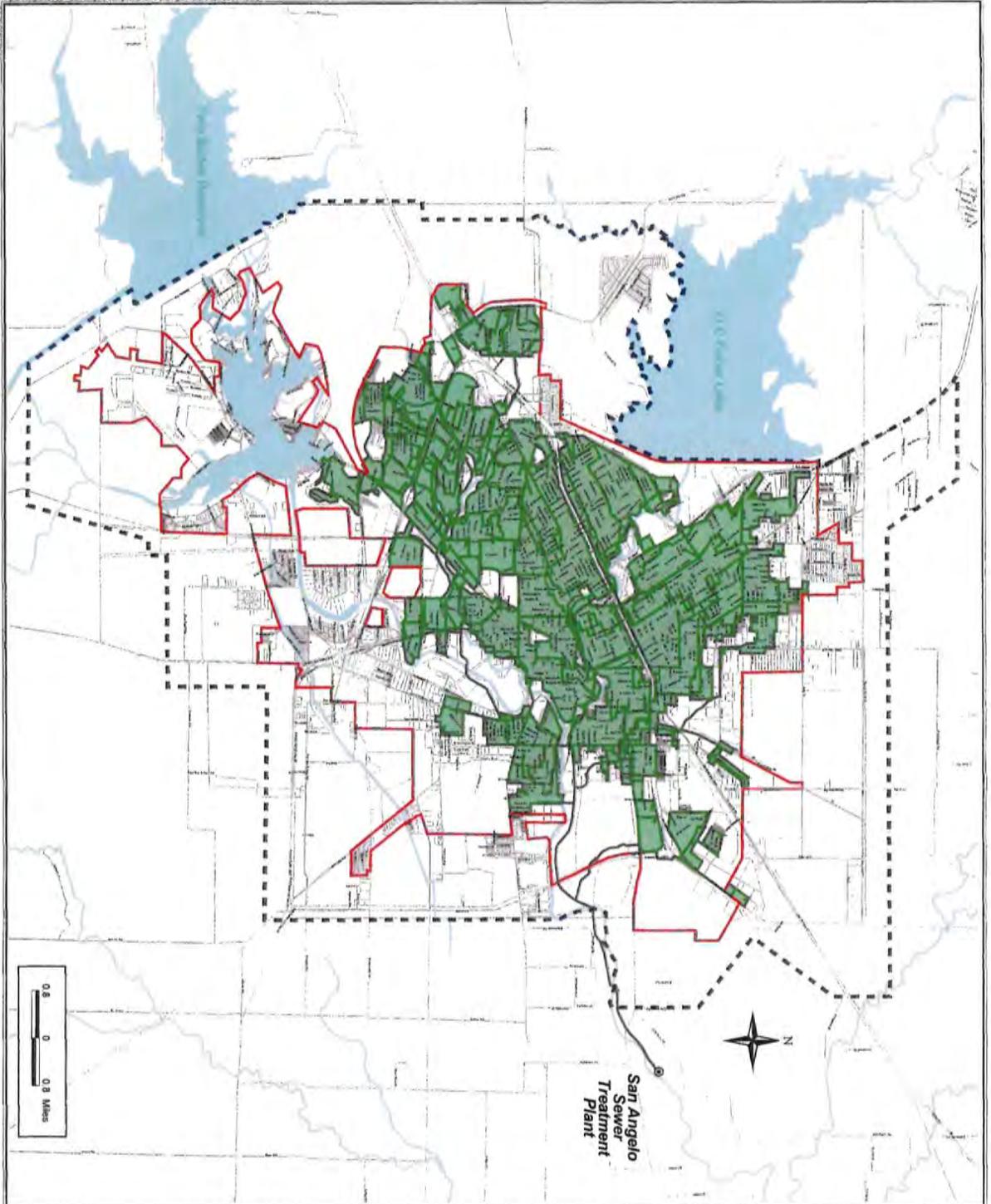
San Angelo
Comprehensive
Plan

FIGURE U-2
WASTEWATER
SERVICE AREAS

Legend:
- Study Area
- San Angelo Corporate Limits
- Trunk Wastewater Lines
- Wastewater Service Areas

SOURCE: Public Works Dept., City of San Angelo

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

San Angelo Sewer Treatment Plant

0.8 0 0.8 Miles

THE CITY OF SAN ANGELO TEXAS

h:\planning\353700 - san angelo comprehensive plan\gis\waters.apr (U-Water)
04 JUN 01 16:03

The wastewater production rate in San Angelo is approximately 95 gallons per capita per day, which increases to 98 gallons per capita per day during peak periods. Based on the 2000 Census count of 88,439 persons in San Angelo, the City produces about 8,401,705 gallons of wastewater each day and 8,667,022 gallons on peak production days. Based on population projections, the city will produce approximately 9,614,240 gallons/day of wastewater in 2010 (at peak production), and 10,724,826 gallons/day in 2020 (at peak production). Based on these numbers, the capacity of the sewage treatment facility will be sufficient to handle peak sewage production through the Year 2020.

Wastewater Service Outside the City Limits

The City of San Angelo's policies regarding provision of wastewater services (in the City of San Angelo Land Development and Subdivision Ordinance, Chapter 12) state that any new subdivision or resubdivision must install the infrastructure necessary to connect to the City's sewer system, if the (re)subdivision is not considered suitable for septic systems. Policies regarding provision of over-sized pipes or off-site improvements to serve future development are similar to those for potable water systems. These policies do not specifically address providing wastewater utilities to areas outside the City Limits.

The City of San Angelo has rapidly grown to a current population of nearly 90,000. Extensive development and population increases are placing pressure on the community for quality city parks and leisure services and creating a demand for new and extended park facilities, recreation programs and open space areas. The purpose of the Parks and Recreation element of the Comprehensive Plan is to ensure adequate parks, recreational facilities, and open spaces are provided for citizens and visitors of San Angelo. The Parks, Recreation and Open Space Master Plan was prepared in a separate, but coordinated project concurrent with the comprehensive planning process. The City of San Angelo selected Carter & Burgess, Inc. (consultant) to prepare the new Parks, Recreation and Open Space Master Plan through an interactive process involving a Task Force Advisory Committee, the City Parks and Recreation Departments, and the citizens of San Angelo. The Master Plan is intended to:

- provide the framework for orderly and consistent planning and development;

- provide detailed and researched facts concerning the community and the roles of parks and recreation;

- establish priorities and statements of direction, based on researched and documented facts and a community-based needs analysis;

- provide direction in the area of acquisition and development of park land to meet future needs; and,

- conform to the preparation suggestions and guidelines for local Park, Recreation and Open Space Master Plans prepared by the Texas Parks and Wildlife Department for Texas Recreation and Parks Account Local Park Grant Program.

The Master Plan, accepted by the San Angelo City Council by resolution on April 17, 2001, outlines the methods, results and recommendations of the Parks, Recreation and Open Space study and is intended to be used as a guide for future park, recreation and open space development in the City of San Angelo through the early part of the 21st century. The Master Plan should also be the basis for future fiscal planning regarding park and recreation system upgrades over the next 10 years. This plan element summarizes the significant issues, findings and recommendations documented in greater detail in the Master Plan.

PRIORITIES AND GOALS FOR PARKS, RECREATION & OPEN SPACE

Parks and Recreation Service Area Mission Statement

*Provide and maintain facilities and programs that furnish the citizens
and visitors of San Angelo with recreation, leisure, and education
opportunities that enhance the community's overall quality of life.*

In addition to the Mission Statement above, the City identified the following priorities and goals for parks and recreation in San Angelo:

Priorities

1. Identify funding sources
   Consolidate Services
   Develop a Park and Recreation Master Plan

2. Pursue Development Along River
   Upgrade Facilities to be ADA Compliant
   Make Improvements to Recreation Centers

3. Develop a Senior Center Annex
   Improve Sprinkler / Lighting Systems at Facilities / Parks
   Improve Public Knowledge about Facilities and Programming
   Provide Shelter Facilities in Parks

Goals

A. Provide a parks and recreation program to meet the diverse needs of the citizens of San Angelo.
   1. Provide immediate and short-term improvements for the parks.
   2. Provide long-term planning of a parks system.
   3. Provide recreation facilities, opportunities, and programs for all ages of the community.

B. Determine practical means of maintaining and upgrading existing areas and facilities to a prescribed standard and purpose.

C. Acquire parkland and develop outdoor recreational facilities, including orderly development of existing park areas.

D. Enlist community interest by encouraging individuals and citizens groups to provide funds, property, manpower, and input for the development and operation of parks and recreational facilities.

E. Provide new and traditional parks and recreation experiences for current and future community residents.

To ensure that these priorities and goals were met, a Task Force Advisory Committee was assembled at the beginning of the project to monitor the Parks, Recreation and Open Space Master Plan process throughout the study. This Committee helped facilitate communication between public officials, City staff, the Park Commission, the Recreation Advisory Board, the City Council, the School District, and the citizens of San Angelo.

The Parks, Recreation and Open Space Master Plan, covering a period of ten years, was prepared using a two-phase process:

- Phase 1 involved inventory/supply analysis, standards analysis and needs assessment.

- Phase 2 involved recommended priorities, budget analysis, funding methods and a 10-year action plan.

During the first phase of the Master Plan process, the consultant toured all the park sites with San Angelo Parks and Recreation Department staff. The City provided acreage and amenity inventories for each park and a list of recreation associations and organizations throughout the City. Within the San Angelo Park System are 42 parks and open space areas totaling 769.31 acres. Detailed parks inventory information is included in the Master Plan.

STANDARDS AND GUIDELINES

The adequacy of existing parks, recreation facilities and open spaces is determined by comparing the needs of the present and forecasted populations of San Angelo to specific goals and standards. The Parks, Recreation and Open Space Master Plan includes the standards established by the National Recreation and Park Association (NRPA) as included in the 1990 printing of Recreation, Park and Open Space Standards and Guidelines. "The NRPA standards have generally been the most widely accepted and used standards of their type, especially by local government." *(Recreation, Parks and Open Space Standards and Guidelines, p. 7)* This section includes a comparison of San Angelo to national standards based upon park acreage per population and facilities per population.

Criteria for Standards

The most common standards for park planning guidelines, as recognized by park and recreation professionals, are the published standards by the National Recreation and Park Association (NRPA). As written in the introduction, the NRPA "recognizes the importance of establishing and using park and recreation standards as:

1. A national expression of minimum acceptable facilities for the citizens of urban and rural communities.

2. A guideline to determine land requirements for various kinds of park and recreation areas and facilities.

3. A basis for relating recreation needs to spatial analysis within a community wide system of parks and open space areas.

4. One of the major structuring elements that can be used to guide and assist regional development.

5. A means to justify the need for parks and open space within the overall land use pattern of a region or community.

The purpose of this document is to present park and recreation space standards that are applicable for planning, acquisition, and development of parks, recreation, and open space lands, at the community level. *These standards should be viewed as a guide.* They address *minimum*, not maximum, *goals to be achieved.* The standards are to be coupled with conventional wisdom and judgment relating to the particular situation to which they are applied and specific local needs". *(Recreation, Park and Open Space Standards and Guidelines, p. 11).*

Park Classification System

When evaluating existing or future parks in San Angelo, it is necessary to classify each park by type, size, service area, and acres per 1,000 population. The following seven classifications for parks are used in the Parks, Recreation and Open Space Master Plan:

Mini-Park

The mini-park is used to address limited, isolated or unique recreational needs of concentrated populations. Typically less than 1/4 mile apart in a residential setting, the size of a mini-park ranges between 2500 square feet and one acre in size. These parks may be either active or passive, but speak to a specific recreational need rather than a particular population density.

Neighborhood Park

Neighborhood parks serve a variety of age groups within a limited area or "neighborhood". They range in size from 1-5 acres and generally serve residents within a ¼ to ½ mile radius. The neighborhood park is an area for active recreation such as field games, court games, playgrounds, picnicking, etc. Facilities are generally unlighted and there is limited parking, if any, on site. NRPA standards for these parks are 1.0 - 2.0 acres per 1,000 population.

Community Park

Community parks are larger than neighborhood parks and serve several neighborhoods. They range in size from 16-99 acres and serve the entire city. The community park may be a natural area or developed area for a variety of outdoor recreation such as ball fields, playgrounds, boating, fishing, swimming, camping, picnicking, and trail systems. NRPA standards for these parks are 5-8 acres per 1,000 populations.

Metropolitan Park

Metropolitan parks are large park facilities. They range in size from 100-499 acres and serve the entire city. The metropolitan park is a natural area or developed area for a variety of outdoor recreation such as ball fields, playgrounds, boating, fishing, swimming, camping, picnicking, and trail systems. NRPA standards for these parks are 5-10 acres per 1,000 populations.

Regional Park

Regional parks are very large, multi-use parks that serve several communities within a particular region. They are typically 500 acres and above and serve those areas within a one-hour driving distance. The regional park provides opportunity for both active and passive recreation, with a wide selection of facilities for all age groups. They may also include areas of nature preservation for activities such as sight-seeing, nature study area, wildlife habitat, and conservation. NRPA standards for regional parks vary due to the specific site and natural resources.

Special Use Areas

Special use areas and parks are for specialized or single-purpose recreation activities. NRPA defines these as areas such as historical areas, nature centers, marinas, zoos, conservatories, arboretums, arenas,

amphitheaters, plazas or community squares. There are no specific standards for size or acreage since each community will vary.

TABLE P-1
NRPA Park Acreage Guidelines
San Angelo Comprehensive Plan
San Angelo, Texas

Type	Size/Acres	Service Area	Acres per 1,000 Population
Mini-Park	2500 S.F. - 1 Acre	Less Than ¼ Mile Distance in Residential Setting	.25 - .5 ac/1,000
Neighborhood Park	1 - 15 Acres	One Neighborhood ¼ to ½ Mile Radius	1.0 - 2.0 ac/1,000
Community Park	16 - 99 Acres	Several Neighborhoods	5.0 - 8.0 ac/1,000
Metropolitan Park	100 - 499 Acres	Several Communities Under 1 Hour Driving	5.0 - 10.0 ac/1,000
Regional Park	500 + Acres	Several Communities Within 1 Hour Driving	Variable
Special Use Areas	Varies Depending on Desired Size	No Applicable Standard	Variable
Linear Park/Linkages	Sufficient Width to Protect the Resource and Provide Maximum Usage	No Applicable Standard	Variable
		TOTAL	11.25 - 20.5 Ac/1,000 Population

Standards from Recreation, Park and Open Space Standards and Guidelines, pp. 56-57 and pp. 68-69, 4th Printing, 1990, a publication of the National Recreation and Park Association.

Linear Park/Linkages

Linkages and linear parks are built connections or natural corridors that link parks together. Typically, the linear park is developed for one or more modes of recreational travel such as walking, jogging, biking, in-line skating, hiking, horseback riding, and canoeing. NRPA does not have any specific standards for linear parks other than they should be sufficient to protect the resource and provide maximum usage.

EXISTING RESOURCES AND NEEDS ASSESSMENT

The adequacy of existing parks, recreation facilities and open spaces in San Angelo was determined by comparing the needs of the present and future populations to specific goals and standards established by the National Recreation and Park Association. These standards are applicable for planning, acquisition and development of parks, recreation and open space lands at the community level, but should be viewed as a guide. They address minimum, not maximum, goals to be achieved and should be coupled with conventional wisdom and judgment relative to the particular situation to which they are applied.

Comparison of Park Land Acreage with NRPA Guidelines

Based upon the NRPA standards for each of the previous park classifications, the recommended park acreage per 1,000 populations ranges from 11.25 to 20.5 acres. The City of San Angelo includes a total of 769.31 acres for a ratio of 8.70 acres per 1,000 populations at its 2000 population of 88,439. The tables on the following pages summarize the NRPA acreage standards and the standards applied to the existing parks in San Angelo.

TABLE P-2
Existing Park Acreage
San Angelo Comprehensive Plan
San Angelo, Texas

Type	Park	Acres
Mini-Park	Live Oak Park	.20
	Pete Chapa Tot-Lot Park	.68
	Purkey Tot-Lot Park	.60
	Webster Tot-Lot Park	.70
	Subtotal	**2.18**

Neighborhood	Bell Park	3.00
	Bradford Park	5.00
	Brentwood Park	11.40
	Brown Park	2.40
	City Park	4.80
	Civic League Park	11.20
	College Hills / Unidad Park	7.30
	College Hills Open Space Area	24.29
	Glenmore Park	6.00
	Harmon / Picnic Bend Park	14.20
	Kiwanis Park	2.50
	Lakeview Park	14.00
	Martin Luther King Park	4.00
	Meadow Creek Park	5.50
	Mountain View Park	6.50
	North River Drive Park	4.30
	Park Heights Park	1.50
	Rio Vista Park	5.00
	Santa Rita Park	8.40
	Sulfur Springs Park	4.90
	Sunken Garden Park	7.10
	Subtotal	**153.29**
Community	29th Street Recreation Area	33.30
	Bart DeWitt Park	10.00
	Ben Ficklin Park	6.44
	El Paseo de Santa Angela	8.00
	Municipal Pool / River Stage Area	3.40
	North Concho Park	21.05
	Northern Little League "Rotary Fields"	8.00
	O.C. Fisher Dam / Soccer Fields	62.85
	Rio Concho Park	26.60
	Rio Concho Sports Complex	12.54
	Santa Fe Park / Golf Course	76.00
	South Concho Park	33.50
	Southern Little League "Rio Concho Fields"	5.98
	Western Little League Baseball Complex	9.18
	Subtotal	**316.84**
Metropolitan	Lake Nasworthy	212.00
Regional	Twin Buttes Dam	25.00
	Twin Buttes Recreation Area	60.00
	Subtotal	**85.00**

Special Use Parks	0.00
Linear Park / Linkages	0.00
TOTAL PARK ACREAGES	**769.31**

TABLE P-3
NRPA Guidelines Applied to San Angelo (Dedicated Park Land Only)
San Angelo Comprehensive Plan
San Angelo, Texas

Park Facility	Existing Acreage	NRPA Guidelines for 2000 Population of 88,439[A]	NRPA Guidelines for 2005 Population of 93,415[B]	NRPA Guidelines for 2010 Population of 98,380[A]
		Range in Acres	Range in Acres	Range in Acres
Mini Parks	2.18	+22.11 to +44.22	+23.35 to +46.71	+24.58 to +49.15
Neighborhood	153.29	+88.44 to +176.88	+93.42 to +186.83	+98.38 to +196.76
Community Parks	316.84	+442.19 to +707.51	+467.08 to +747.32	+491.90 to +787.04
Metropolitan Park	212.00	+442.19 to +884.39	+467.08 to +934.15	+491.90 to +983.80
Regional	85.00	N/A	N/A	N/A
Special Use Parks	0.00	N/A	N/A	N/A
Linkages	0.00	N/A	N/A	N/A
TOTALS	**769.31**	**+994.93 to +1,813.00**	**+1,050.93 to +1,915.01**	**+1,106.76 to +2,016.75**

[A] Population numbers from 2000 Census and the Demographics element of this Comprehensive Plan.

[B] Population number derived by averaging the 2000 Census and 2010 projections reported in the Demographics element of this Comprehensive Plan.

Comparison of Park Land Acreage Including Publicly Owned Lands

Additionally, the City owns 1,919.78 acres of public land. The following acreage guidelines *include* those public lands. The results of the comparison clearly shows that the inclusion of these lands as dedicated park land could be a potential asset to help the City build a park land inventory that begins to meet current needs.

The potential park land identified can become an important linear linkage between existing parks already owned by the City, and could provide opportunities for new parks and services in areas currently not served by existing parks. Consideration should be given to whether these publicly owned lands are best suited for parks and recreation use.

TABLE P-4
NRPA Guidelines Applied to San Angelo (Including Publicly Owned Lands)
San Angelo Comprehensive Plan
San Angelo, Texas

Park Facility	Existing Acreage	NRPA Guidelines for 2000 Population of 88,439[A]	NRPA Guidelines for 2005 Population of 93,415[B]	NRPA Guidelines for 2010 Pop. of 98,380[A]
		Range	Range	Range
Mini Parks	2.18	+22.11 to +44.22	+23.35 to +46.71	+24.58 to +49.15
Neighborhood	129.00	+88.44 to +176.88	+93.42 to +186.83	+98.38 to +196.76
Community Parks	316.84	+442.19 to +707.51	+467.08 to +747.32	+491.90 to +787.04
Metropolitan Park	212.00	+442.19 to +884.39	+467.08 to +934.15	+491.90 to +983.80
Regional	85.00	N/A	N/A	N/A
Special Use Parks	0.00	N/A	N/A	N/A
Linkages	1,919.78	N/A	N/A	N/A
TOTALS	2,664.80	+994.93 to +1,813.00	+1,119.58 to +2,040.12	+1,216.01 to +2,215.84

A Population numbers from 2000 Census and the Demographics element of this Comprehensive Plan.

B Population number derived by equally averaging the 2000 Census and 2010 population projection reported in the Demographics element of this Comprehensive Plan.

Comparison of Facility Development and NRPA Recommendations

Another way to analyze San Angelo's park system as compared to NRPA standards is by facility development. This allows a detailed review of current facilities available versus recommended facility development based upon population numbers. Facilities comparison allows the City to see where more recreation facilities may be needed in the community.

The following table provides a detailed facility review based on the current population and the projected 2010 population in San Angelo compared to NRPA recommendations. According to the standards, the City is keeping up with demands for outdoor basketball courts, recreation centers, league soccer fields, trails and picnic tables. The City is noticeably short in meeting facility standards for other active recreation amenities such as league and practice baseball fields, football fields, league and practice softball fields, swimming pools, tennis courts and outdoor volleyball courts.

The NRPA recommendations also address the standards for passive recreation facilities such as pavilion / shelters and playgrounds. The City of San Angelo falls short in these two categories for providing passive amenities to its citizens.

TABLE P-5
NRPA Facility Development Guidelines Applied to San Angelo
San Angelo Comprehensive Plan
San Angelo, Texas

Activity / Facility	Recommended Facilities Per Population	Existing Facilities in San Angelo	Recommended Facilities for 2000 Population of 88,439[D]	Recommended Facilities for Projected Population of 93,415[D] in 2005	Recommended Facilities for Projected Population of 98,380[D] in 2010
Baseball Fields (league)	1 per 5,000 [B]	15	18	19	20
Baseball Fields (practice)	1.5 per each league facility [E]	18[F]	27	29	30
Basketball Courts (outdoor)	1 per 5,000 [B]	21	18	19	20

Football Fields	1 per 20,000 [B]	0	4	5	5
Pavilion/Picnic Shelter	1 per 2,000 [A]	15	44	47	49
Picnic Tables	1 table per 300 [C]	386	295	311	328
Playgrounds	1 area per 1,000 [C]	40	88	93	98
Recreation Center	1 per 20,000 - 30,000 [C]	4	3 - 4	3 - 5	3 - 5
Soccer Fields (league)	1 per 10,000 [B]	15	9	9	10
Soccer Practice Fields	1.5 per each league facility [E]	2	14	14	15
Softball Fields (league)	1 per 5,000 [B]	11	18	19	20
Softball Practice Fields	1.5 per each league facility [E]	18[F]	27	29	30
Swimming Pool (outdoor)	1 per 20,000 [B]	1	4	5	5
Tennis Courts	1 court per 2, 000 [B]	22	44	47	49
Trails	½ - 1 mile per 10,000 [C]	7.5	4.42 - 8.84	4.67 - 9.34	4.92 - 9.84
Volleyball Areas (outdoor)	1 per 5,000 [B]	9	18	19	20

[A] Guidelines from Kansas City Metropolitan Region Public Parks Standards in Recreation Park and Open Space Standards and Guidelines, p. 67, 4th printing 1990, a publication of the National Recreation and Park Association.

[B] Guidelines from appendix A in Recreation, Park and Open Space Standards and Guidelines, pp. 60-61, 4th printing 1990, a publication of the National Recreation and Park Association.

C Guidelines from Dallas Recreation Component Standards in Recreation, Park and Open Space Standards and Guidelines, p. 76, 4th printing 1990, a publication of the National Recreation and Park Association.

D Population numbers reported by and/or derived from the 2000 Census and projections from the Demographics element of this Comprehensive Plan.

E Consultant recommendation based on years of park planning/design experience. Practice facilities should average approximately 1.5 times the amount of league facilities.

F Fields are cross utilized for both baseball and softball practice.

Public Input Into the Needs Assessment

The results of the needs assessment study, completed by National Service Research (NSR), provided the basis for priorities and recommendations in the Parks, Recreation and Open Space Master Plan. On May 23 and 24, 2000, NSR conducted three focus group meetings with sports groups, cultural/arts groups, senior citizens and randomly selected citizens. The purpose of these meetings was to identify key issues with regard to parks, open space and recreation programs. On June 8, 2000, a public meeting was held in San Angelo to allow citizens to provide input into the Parks, Recreation and Open Space Master Plan process. Based on input from the focus groups, public meeting, City Staff and the consultant, NSR designed a citizen survey. A total of 10,000 surveys were mailed to randomly selected households and 600 surveys were returned and processed. This represents a 6% response rate. The margin of error of this sample size (600) at a 95% confidence level is plus or minus 4.1% Additionally, a similar survey was implemented with sixth, seventh, ninth and tenth grade students in selected schools throughout San Angelo. A total of 256 youth surveys were returned. The margin of error of this sample size (256) at a 95% confidence level is plus or minus 6.3%.

ACTION AND IMPLEMENTATION PLANNING (PHASE II)

There are three avenues of implementation that are important to the Master Plan: Policies and Ordinances, Funding Sources, and a Ten-Year Action Plan. Policies are tools that aid the citizens, staff and public officials to communicate and coordinate on all matters, which affect the San Angelo Parks System. Ordinances provide the legal framework for implementation of the Parks, Recreation and Open Space Master Plan. Seventeen funding sources are listed that may be utilized to assist with the implementation of the Parks, Recreation and Open Space Master Plan. The Ten-Year Action Plan is discussed at the end of this plan element.

The recommendations and priorities in this section are a result of incorporating the inventory, standards analysis and needs assessment into an action plan to direct the growth, development, and maintenance of the parks, recreation, and open space system in San Angelo for the next five to ten years. The recommendations are based upon an existing population of 88,439 and a projected population of 98,380.

Priority Summary

At the completion of the citizen survey during the needs assessment phase, a method of ranking priorities was implemented. This method included an extensive review of all standards, citizen input, and consultant

recommendations. The following factors were considered in order of importance with weighted values assigned to each:

1. Citizen Input/Survey Results (30%) - The specific needs and requests by the San Angelo community.
2. Youth Input/Survey Results (20%) - The specific needs and requests as identified by sixth, seventh, ninth and tenth graders at selected schools.
3. Recreation Advisory Board Input (10%) - Specific needs throughout the community as identified by appointed Board members.
4. Parks Commission Input (10%) - Specific needs throughout the community as identified by Commission members.
5. City Council Input (10%) - Specific needs as identified by appointed council members.
6. Task Force Advisory Committee Input (10%) - Specific needs identified by members on the committee that represent distinct recreational groups/activities in San Angelo.
7. City Staff Input (5%) - The specific needs as identified by City staff based upon recreation programs and demands upon resources.
8. Consultant Evaluation (5%) - Professional recommendations based upon years of park planning/design experience as well as assessing the unique needs of San Angelo and its community, demographics, etc.

The results of the priority ranking were tabulated into three categories: High Priority, Moderate Priority, and Low Priority. The tables on the following pages provide a summary of the priorities for the City of San Angelo.

TABLE P-6
Summary of Master Plan Priority Items
San Angelo Comprehensive Plan
San Angelo, Texas

	Facility	High	Moderate	Low
1	Playground/Playground Equipment	•		
2	Restrooms	•		
3	Picnic Shelters/Pavilions	•		
4	Hike/Bike Trails	•		
5	Lighted Tennis Courts	•		
6	Lighted Baseball Fields	•		
7	Lighted Outdoor Basketball Courts	•		

8	Open Spaces	•		
9	Natural Areas	•		
10	Lighted Softball Fields	•		
11	Neighborhood Swimming Pool		•	
12	Outdoor Basketball Courts		•	
13	Large Community Swimming Pool		•	
14	Recreation Center/Complex		•	
15	Practice Baseball Fields		•	
16	Practice Soccer Fields		•	
17	Botanic/Flower Garden Areas		•	
18	Lighted Football Fields		•	
19	Lighted Soccer Fields		•	
20	Skateboard Park		•	
21	Practice Football Fields		•	
22	Activity Pool		•	
23	Unlighted Baseball Fields			•
24	Practice Softball Fields			•
25	Indoor Basketball Courts			•
26	Unlighted Soccer Fields			•
27	Sand Volleyball Courts			•
28	Unlighted Football Fields			•

29	Senior Center			•
30	Unlighted Softball Fields			•
31	Indoor Volleyball Courts			•
32	Outdoor/Indoor In-Line Hockey			•
33	Indoor Ice Rink			•

Based on the list of priorities, recommendations were generated regarding land acquisition:

Year 2001
To meet NRPA high-end range of 20.5 acres per 1,000 populations, based on a current population of 88,439, the city would need to acquire or dedicate 1,044 acres of park land.

Year 2005
To meet NRPA high-end range of 20.5 acres per 1,000 populations, based on a projected population of 99,518, the City would need to acquire or dedicate 1,270 acres of park land.

Year 2010
To meet NRPA high-end range of 20.5 acres per 1,000 populations, based on a projected population of 108,090, the City would need to acquire or dedicate 1,446 acres of park land.

It should be noted that there are various methods of obtaining additional park land, including a park land dedication ordinance, joint-use opportunities with San Angelo Independent School District, and by strengthening relationships with the Corps of Engineers, the Bureau of Reclamation, and Tom Green County. Also, the City owns 1,919.78 acres of public land. The inclusion of these lands as dedicated park land could be a potential asset to help build a park land inventory that begins to meet current needs. Consideration should be given to whether these lands are best suited for parks and recreation use.

Recommendations were also generated for facility improvements. The top ten priorities include playgrounds and equipment, restroom facilities, picnic shelters/pavilions, hike/bike trails, lighted tennis court facility, lighted baseball fields, lighted outdoor basketball courts, open spaces, natural areas and lighted softball fields. The Master Plan includes an Expenditure Analysis that lists the priority item, proposed location for upgraded or new facilities, and a proposed budget outline.

Ten-Year Action Plan

Finally, a Ten-Year Action Plan responds to the priorities established in the Needs Assessment portion of the Parks, Recreation and Open Space Master Plan and sets up a timetable with respect to the potential

funding sources. Working in coordination with the City staff, the plan combines action item recommendations for improvements and new facilities in an effort to enhance the quality of programming and facilities throughout the City of San Angelo.

A series of tables in the Master Plan outline facility improvements, location, proposed budgets, potential funding sources, and a time frame within which projects are to be funded. The facilities listed are the minimum which are recommended to be provided.

During the course of the next five years, if additional funding is received, the schedule of projects may be advanced to move projects up earlier in the Ten Year Plan, allowing funding for currently un-funded projects. City staff should conduct annual reviews of the Action Plan and update current priorities, budgets and time schedules ensure that Master Plan implementation remains on course.

For example, public comments received during exposition of the draft Comprehensive Plan revealed significant interest in developing an inline skating/skateboard park. At such a facility, skaters could tackle a challenging environment for skating somewhere other than on sidewalks and drainage ways. Such comments were received after the current Master Plan for Parks, Recreation and Open Space was complete and accepted by San Angelo's City Council. But the number and intensity of recent concerns expressed for a skate park suggest that demand for this type of facility might warrant more than a medium priority.

COMMUNITY FACILITIES

The purpose of the Community Facilities element is to promote the adequate provision of primary public services. This element identifies existing conditions and future needs for facilities related to municipal administration, fire service, police service, vehicle maintenance, libraries, health and medical services. This element is vital to the plan. The provision of community facilities can significantly impact decisions regarding current and future land use, and public/private investments. Goals, objectives, and actions are provided that may guide San Angelo's decision makers in insuring that future community facility needs are met. **Figure CF-1: San Angelo Community Facilities** illustrates a wide variety of existing community facilities, many of which are under the control of San Angelo's municipal government.

RELATED PLANS AND STUDIES

"Angelo State University Campus Master Plan: 1998 to 2003"; Angelo State University; 1998

"Airport Master Plan Update: Mathis Field, San Angelo, Texas"; Barnard Dunkelberg & Company, Parkhill, Smith, & Cooper, Inc.; 1995

GOALS & OBJECTIVES

Following consideration of various issues and challenges, plus previous goals and objectives from other applicable plans, the goals and objectives for the Community Facilities element of the San Angelo Comprehensive Plan are as follows:

Goal 1: **Adequate provision of police services and facilities in San Angelo.**

Objective A: Ensure the San Angelo Police Department has adequate personnel to meet current and future demands of the community.

Action 1: As population continues to grow, periodically review the staffing needs of the Police Department and hire additional staff to accommodate growth and increased calls for service.

Objective B: Ensure the department has adequate equipment and facilities in order to continue providing quality services to residents.

Action 1: Evaluate the feasibility of acquiring new space or renovating existing facilities to provide additional office space for the Police Department.

Action 2: Maintain an inventory of equipment and identify replacement and acquisition needs in advance to ensure appropriate budgeting.

Action 3: Support regular software and equipment upgrades ensuring the department has state-of-the-art technology. These include purchasing a vehicle locater system, as well as a mobile video recording system, and replacing the existing radio system.

San Angelo Comprehensive Plan

FIGURE CF-1A
COMMUNITY
FACILITIES
(NORTH/CENTRAL)

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO, TEXAS

Legend

- Study Area
- Public Facilities

Facilities Shown:
1) Carl Ray Johnson Recreation Center
2) Police Dept. Headquarters, Municipal Court Bldg.
3) Transit Center
4) Public Safety Communications Center
5) Southside Recreation Center (at Rio Vista Park)
6) San Angelo Coliseum, Exhibit Hall and Spur Areas
7) San Angelo Convention Center
8) Riverstage, Municipal Swimming Pool
9) Sunset Plaza, Farmers Market
10) El Paso de Santa Angela, Farmers Market
11) Santa Fe Crossing Senior Center & Senior Center Annex
12) Fort Concho Museum
13) Northside Recreation Center, Lakeview Park
14) Animal Services
15) Parks Department (Shops, Offices, and Yards)
16) City Hall Plaza and Auditorium
17) Fire Station #3
18) Municipal Golf Course (at Santa Fe Park)
24) Fire Station and Fire Station #4
25) San Angelo/Tom Green County Health Dept.
26) Fire Station #5
27) Fairmount Cemetery
28) Fire Station #6
29) Vehicle Maintenance Center, Shops and Yards of Public Works Dept.
30) West Texas Training Center
31) Hemphill Wells Building
32) San Angelo State University
33) San Angelo Visitors Center
34) Tom Green County Main Library
38) Community Services/Traffic Offices of Police Dept.
39) San Angelo Museum of Fine Arts
40) Main Post Office
41) Tom Green County Courthouse (and Annex)
42) Tom Green County Jail
43) Tom Green County Sheriff's Office
44) Angelo North Branch of Tom Green County Library
45) Federal Courthouse
46) State of Texas Service Center
47) Tom Green County Shop (Vehicle Maintenance)
48) Goodfellow Air Force Base
49) Shannon Medical Center (St. John's Campus)
51) Shannon Medical Center (Memorial Campus)

0.5 0 0.5 1 Miles

N

San Angelo Comprehensive Plan

FIGURE CF-1B
COMMUNITY FACILITIES
(SOUTHWEST)

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

Legend

- Study Area
- Public Facilities

Facilities Shown:

19) Fire Station #7
20) Fire Station #2
21) San Angelo Nature Center
22) Auxiliary shop and yard for Street & Bridge,
     ROW and Lake Maintenance Divisions
33) Aircraft Rescue and Firefighting Facility
35) San Angelo Regional Airport/Mathis Field
36) Southwest Station Post Office
37) Angelo West Branch of Tom Green
     County Library
52) San Angelo Community Medical Center

0.5   0   0.5   1 Miles

h:\planning\353700 - san angelo comprehensive plan\cf\thoroughfareplan.apr (L:Community Facilities 8/11)

02 MAY 02 1255

Goal 2:   **High quality fire services and facilities.**

   Objective A: Ensure the Fire Department has adequate resources and facilities to meet the needs of a growing population spread over a broad service area.

   Action 1:   Review fire staffing needs, and hire additional employees as needed.

   Action 2:   Regularly review service areas and response times, in order to help make good decisions about when and where to construct additional fire stations.

   Action 3:   Support regular technology and equipment upgrades.

Goal 3:   **Adequate building space for City administration.**

   Objective A: Address the short-term and long-term space needs associated with City government functions.

   Action 1:   Review and evaluate all options for housing municipal administrative functions, ensuring adequate space for current and future staffing needs.

   Action 2:   Evaluate whether to remodel existing structures (such as the current City Hall) or to build new facilities, in order to house municipal departments in an efficient way which would increase the ease of public access to local government.

Goal 4:   **Community facilities that adequately serve the desires and needs of San Angelo's residents.**

   Objective A: Ensure adequate facilities are provided in appropriate locations serving all residents of the community.

   Action 1:   Address handicap access to City buildings and facilities as needed, per requirements of the Americans with Disabilities Act.

   Action 2:   Continue to study the possibility of remodeling or building a new Convention Center/Exhibit Hall facility.

   Action 3:   Construct a maintenance facility in the Lake Nasworthy area, to be used by the Public Works Department.

MUNICIPAL ADMINISTRATIVE FACILITIES

Municipal administrative buildings include the various structures that house city offices. This section does not include administrative offices located in police and fire stations. City Hall currently houses the following City departments: Planning, Public Works (administration and design), Building Permits, Risk Management, Finance, City Manager, City Clerk, City Attorney, Purchasing and Personnel. Offices of other departments including Parks, Recreation, Health, Utility Billing, Public Safety Communications, Community Development and Information Services are located in buildings adjacent to the main City Hall

Building or in satellite offices throughout the city. **Table CF-1** lists the main buildings in the City Hall Plaza Complex.

TABLE CF-1
CITY ADMINSTRATIVE BUILDINGS
CITY HALL PLAZA COMPLEX
San Angelo Comprehensive Plan
San Angelo, Texas

Administrative Buildings	Address(es)
City Hall	72 W. College
Health Department	2 E. City Hall Plaza
	31 W. 1st Street (rented space)
Utility Billing	122 W. 1st Street, 1st Floor
Community Development	115 W. 1st Street
Information Services	122 W. 1st Street, 2nd Floor

Source: City of San Angelo

In recent years, the City of San Angelo has recognized the potential need for a new city hall. The existing City Hall was built in 1928. It has never been significantly expanded. As demand for administrative offices has grown over the years, many departments have located to adjacent buildings or elsewhere in the City. According to recent inventories and projections, the departments currently in the building do not have adequate space for current or future staffing needs. Most importantly, the current layout of city hall and its satellite offices does not support the customer-friendly government approach emphasized by the City's leaders. Like many American cities in recent years, San Angelo seeks to increase ease of public access to local government, by providing an efficient "one-stop shopping" environment for citizens doing business with the City. A well-designed facility is key to this goal. Examples of this type of facility may be found in Texas cities such as Grapevine and Farmers Branch.

THE SAN ANGELO CONVENTION CENTER

Built in 1978, the San Angelo Convention Center has been a major attraction for San Angelo, hosting local, state, and national events. The Convention Center is located at 500 Rio Concho Drive and includes almost 15,000 square feet of meeting space. It has a capacity for 2,000 people seated theatre style or 950 seated banquet style. The Convention Center site is large enough for some expansion of its facilities on-site.

In recent years, the possible need for a new, more modern facility has been examined. Some of the primary questions regarding a new facility include:

- What size does the facility need to be?

- Should the current facility be remodeled and expanded, or should an entirely new facility be built?

- Where should the convention center be located?

The issue of the Convention Center was formally studied in 1999. A citizen committee that led this study mainly sought to determine the best location for the Center. The primary issue was whether or not the Center should be moved into the CBD to encourage downtown revitalization. The study concluded that the Convention Center should remain in its current location. The San Angelo City Council has allocated money to study the matter further.

FIRE

The ability of the San Angelo Fire Department (SAFD) to respond to fire and medical emergencies is directly related to the proximity of firefighting and emergency medical personnel and equipment to the emergency scene. As a result, the San Angelo Comprehensive Plan analyzes existing fire station locations, and the equipment at these stations, to identify any current or future needs.

Fire Station Inventory

San Angelo has seven fire stations located throughout the City, as shown in **Figure CF-1: Community Facilities**. Ambulances staffed by SAFD personnel are headquartered at each fire station. Listed in **Table CF-2: Fire Station Inventory** is the equipment and staffing for each station. In addition to the equipment shown in Table CF-2, SAFD maintains three reserve engines and six reserve EMS units at various stations.

As of the Year 2000, the San Angelo Fire Department had 135 trained firefighters. Assuming a San Angelo population of 88,439 persons, there is a ratio of approximately 1.52 firefighters per every 1000 people in the City. This compares favorably to the national median of 1.33 fire fighters per every 1000 population. The San Angelo Fire Department also has 20 non-firefighting staff including: Fire Marshals (6), Airport staff (3), EMS coordinator (1), Safety Officer (1), Training (3), and Administration (5).

At a given time, there are approximately 32 fire personnel on duty. Currently, a fire station must be staffed so that three fire fighters per engine can respond to an emergency call. In the near future, the Texas state legislature may require that Fire Departments adhere to the so-called "Two In/Two Out" rule. This rule

TABLE CF-2
FIRE STATION INVENTORY
San Angelo Comprehensive Plan
San Angelo, Texas

	Address	Staff	Fire Engines	Ladder Truck	EMS Unit
Station 1	306 W. 1st Street	45	2	1	4
Station 2	4702 Southland Blvd.	12	1	0	1
Station 3	514 Smith Blvd.	12	2	0	1
Station 4	702 E. Ave. L	8	1	0	1
Station 5	2727 Freeland Ave.	9	2	0	1
Station 6	4286 N. Chadbourne St.	36	2	0	1
Station 7	2121 Office Park Dr.	36	2	0	1

Source: San Angelo Fire Department

means that, at an emergency scene, two firefighters must be available to address a burning structure, while two firefighters must be on stand-by to assist the first two firefighters. This would mean that at least four fire fighters, per truck, would be necessary. Should this requirement be implemented, additional staffing may be necessary.

The San Angelo Fire Department has earned an Insurance Services Organization (ISO) Class 4 fire insurance rating. This rating is applied to all homeowner and commercial insurance premiums in the City. ISO bases its rating on a scale of 1 to 10, with one being the best and 10 being considered unprotected. A Class 4 is considered good for a city of San Angelo's size. A city's rating is based on the number of personnel, size and type of equipment, operating procedures, locations of stations, water supply and distribution and communications. A fire department is the only city service that directly impacts the insurance premiums paid by its citizens.

Service Area

As a general guideline, the SAFD provides fire suppression, EMS services, and hazardous material response to all areas inside the city limits of San Angelo and to any adjoining unincorporated area also served by the municipal water system. One such unincorporated area includes the residential subdivision known as Highland Range Estates. This subdivision is served by the municipal water system and has hydrants available for firefighting, but SAFD cannot guarantee the same prompt response time to emergencies in this relatively remote area. Furthermore, SAFD has cooperative agreements with Goodfellow Air Force Base to provide fire suppression on the base. In exchange, Air Force firefighters and equipment are available to the City of San Angelo, if severe emergencies put a strain on SAFD's ability to respond. Cooperative agreements are also in place with many of the seven volunteer fire departments in the San Angelo region.

Airport Fire Service

San Angelo Regional Airport (Mathis Field) has recently built a fire station, known technically as an Aircraft Rescue and Firefighting Facility. This station is not included as a primary SAFD station because it serves the airport only and is manned by airport personnel. However, as firefighters from the airport fire station retire or leave, they will be replaced by SAFD firefighters. Depending on requirements from the Federal Aviation Administration, the station has the potential to be expanded in the future so that it could serve areas outside of the airport. This new station was built on the western edge of the airport grounds, with driveway aprons and overhead doors opening onto both an airport runway and Knickerbocker Road.

Response Time

The San Angelo Fire Department strives for a response time of five minutes for firefighting and EMS units.

Fire Station Location Analysis

In order to identify current and future needs of the San Angelo Fire Department, a computer model was used to analyze fire stations based on their ability to serve adjacent areas with a five-minute response time. The "FLAME" model, or Fire Station Location and Mapping Environment, is a widely used tool developed by the Bode Research Group in Derby, Kansas. The FLAME model essentially looked at San Angelo's street network and the location of fire stations to generate estimates of the areas each station could serve within the 5-minute response time.

More specifically, the model estimates a speed range (for fire engines) for each segment of the San Angelo street network. In determining this speed range, factors such as the amount of traffic signals and type of roads are considered. With speed ranges for the segments established, the model calculates how far in every direction fire engines from each fire station could traverse the street network within 5 minutes. A 40-second response delay (the approximate time it takes for dispatch to receive a call and get a fire truck on the road) is included in the 5-minute response time.

The results of this analysis are shown in **Figure CF-2: Fire Station Service Areas**. The service area of each fires station is shown in a unique color. The map indicates that coverage for the city is relatively good, with only limited gaps in service. **Figure CF-3: Fire Station Service Area Overlap** shows where station service areas overlap. Significant overlap exists in some areas. This may indicate the opportunity to relocate stations in more efficient locations. **It is very important to note that the FLAME computer model is a simulation based on "average" conditions. The output does not represent reality, but is a general guide for planning purposes.**

FIGURE CF-2
ESTIMATED FIRE STATION RESPONSE AREAS
(FIVE-MINUTE RESPONSE TIME)
San Angelo Comprehensive Plan
San Angelo, Texas

Station Response Area
Each color represents
the closest station
by travel time.
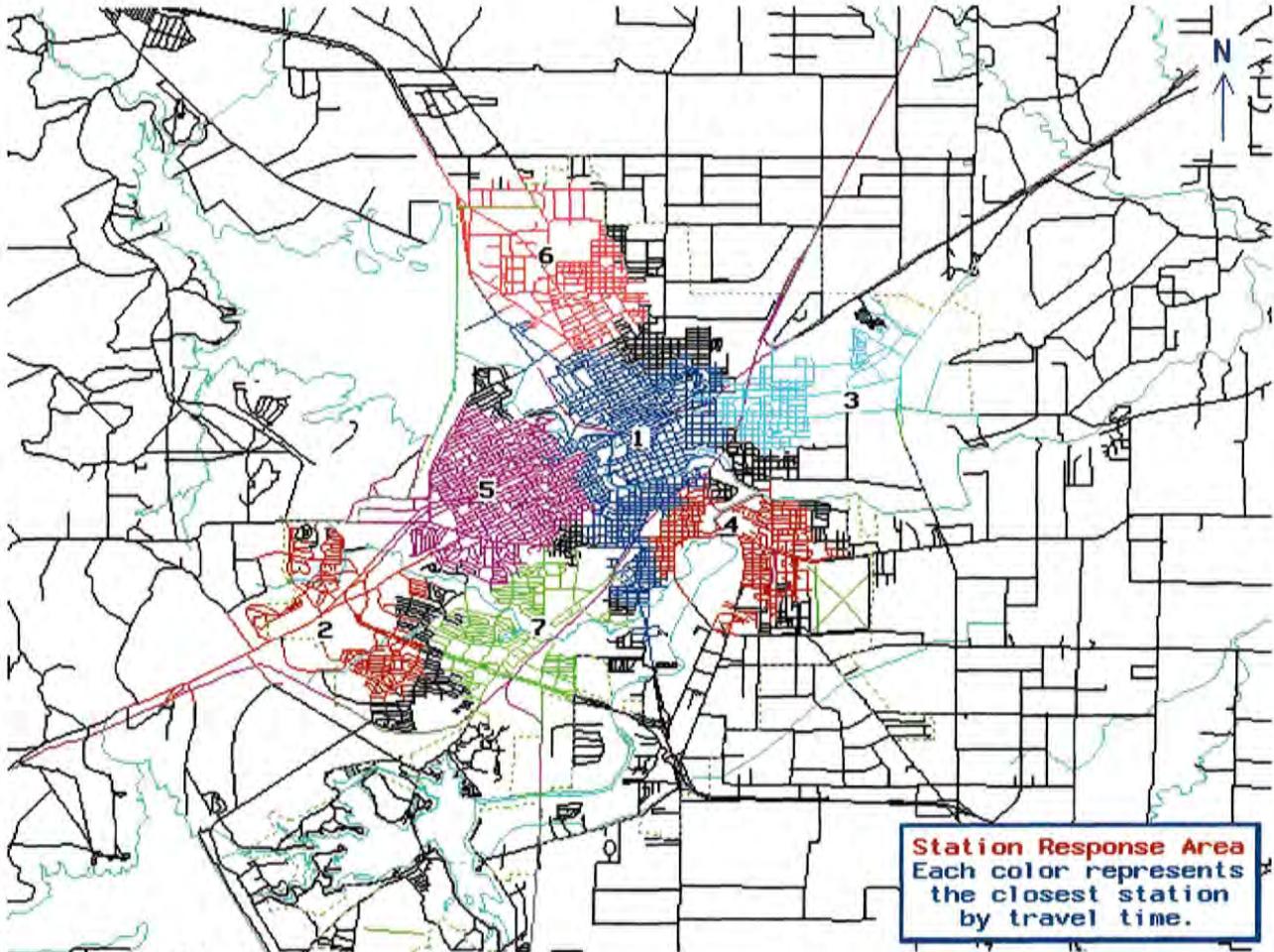
Source: Wilbur Smith Associates

FIGURE CF-3
ESTIMATED FIRE STATION RESPONSE AREA OVERLAP
(FIVE-MINUTE RESPONSE TIME)
San Angelo Comprehensive Plan
San Angelo, Texas
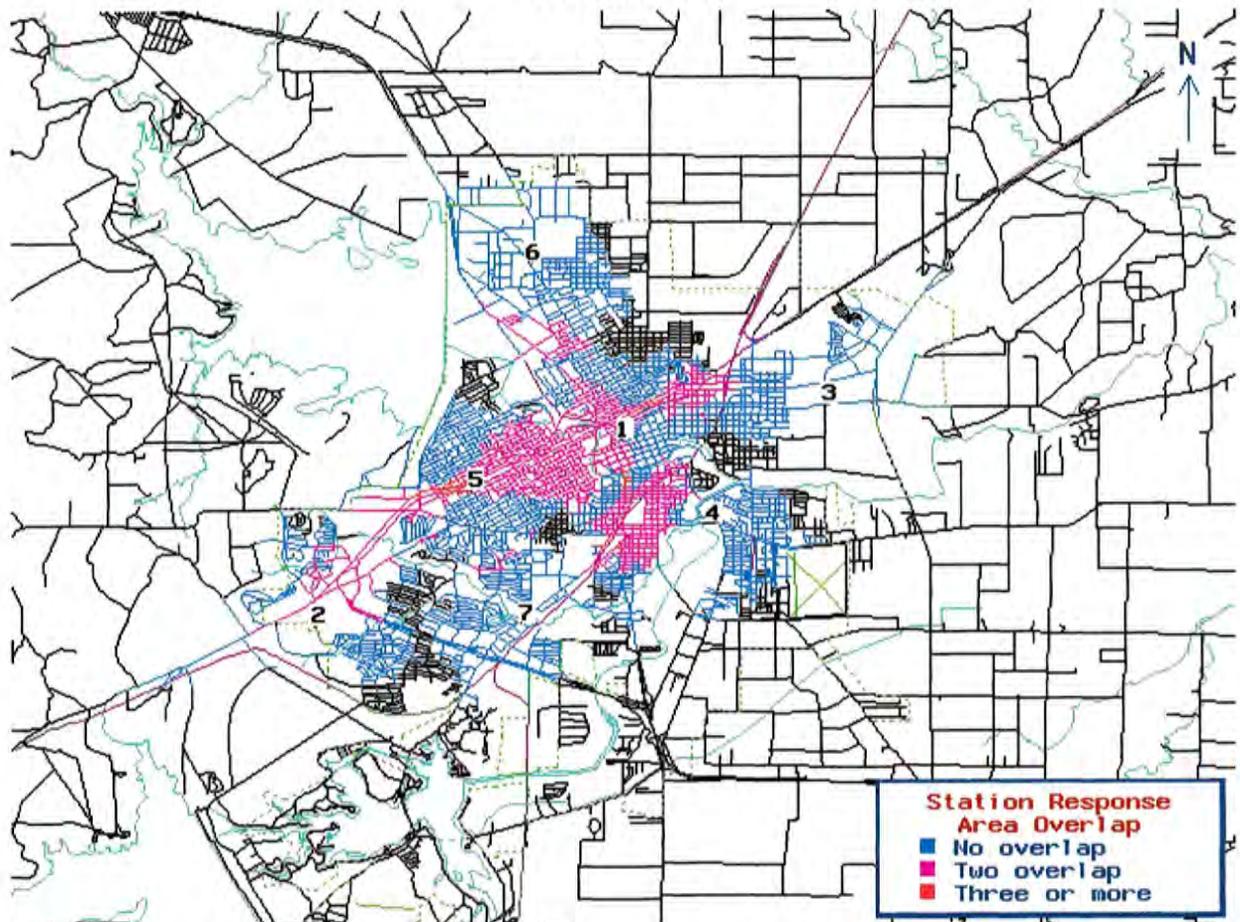
Source: Wilbur Smith Associates

POLICE

Police Facilities

The San Angelo Police Department (SAPD) operates from their headquarters building located at 401 East Beauregard Avenue. They serve a 2000 population of 88,439 encompassing an area of approximately 58 square miles. These facilities, which are listed in **Table CF-3**, include the central police station at 401 East Beauregard Avenue and three outlying buildings including the training academy, narcotics facility and community services/traffic. Currently no holding facility exists within the City; therefore, prisoners are transported to the County jail.

TABLE CF-3
POLICE DEPARTMENT FACILITIES
San Angelo Comprehensive Plan
San Angelo, Texas

Name	Address	Square Footage	Staff
Central Police Station	401 East Beauregard Ave.	34,350	134 officers & 21 civilians
Training Academy	3737 F.M Hwy 584	9,916	3 officers & 1 civilian
Community Services/Traffic	505 S. Chadbourne St.	5,700	12 officers & 1 civilian
Narcotics/Task Force	Confidential	7,450	10 officers & 2 civilians

Source: City of San Angelo Police Department

Department Divisions

The San Angelo Police Department is divided into the following divisions:

- The **Administration Division** includes the offices of the Chief, Assistant Chiefs, Internal Affairs and Purchasing.

- The **Patrol Division**, is the largest division in the SAPD, and includes officers who patrol one of eight districts within City 24-hours a day, seven days a week.

- The **Special Investigations/Drug Task Force Division** is part of the Rio Concho Multi-Agency Drug Task Force, whose primary objective is investigation of the manufacture, sale and/or use of illegal drugs.

- The **Criminal Investigations Division** of the San Angelo Police Department is responsible for the investigation of crimes, collection and maintenance of evidence of a crime. They also ensure that the proper charges are filed in the proper court and assist the prosecuting attorneys throughout case disposition.

- The **Records Division** keeps the records of all reportable traffic accidents and records of all reports written by police officers.

- The **Traffic Division** investigates accidents that occur within the city and make appropriate reports, provide traffic control at major events and enforce driver safety and obedience to traffic laws.

- The **Special Weapon and Tactics Team** is a specially trained team of officers that are armed and equipped to gather information, contain and, if necessary, neutralize a special threat during any critical incident.

- The **Hostage Negotiation Team** is a team of personnel specially trained in the art of creating dialog between an offender and the police during a critical incident.

- The **Canine Unit** is used to locate offenders who have fled on foot, lost persons, property or implements of crime. They are also used for crowd control, narcotics searches, building searches and arrest of violent offenders.

- The **Crime Prevention/Crime Stoppers Division** provides information to the public on ways to prevent becoming a victim of crime. Crime Stoppers pays rewards for information that leads to the arrest and/or indictment of a felony offender.

- The **DARE** program involves officers instructing 5th grade students on the dangers of gangs, peer pressure, conflict resolution and consequences, both good and bad, for the choices one makes in life.

- The **Gang Unit** gathers intelligence and information on gang activity to crimes committed by these groups.

Police Staffing

The Police Department of the City of San Angelo currently employs 159 sworn officers and 25 civilians. A survey conducted by the Federal Bureau of Investigation of cities with a population of 50,000 to 99,999 persons, showed an average of 1.8 law enforcement officers per 1000 citizens (Crime in the United States 1998, Uniform Crime Reports, Federal Bureau of Investigation). With a 2000 City population of 88,439 persons, the San Angelo Police Department currently has an average of 1.8 law enforcement officers per 1,000 citizens.

As population continues to increase, and it is expected to grow, additional personnel will be needed to meet the current service levels and to provide even better police protection in the future. Future staffing needs can be estimated by using population projections and the desired standard of at least 1.8 law enforcement officers per 1,000 residents as displayed in **Table CF-4: Future Police Department Staffing Needs**. Assuming the population projections for the Year 2020 in the Demographics element, the Department will

have to increase its staff by approximately two officers every year to meet the growing need for police services.

<div align="center">

TABLE CF-4
FUTURE POLICE DEPARTMENT STAFFING NEEDS
San Angelo Comprehensive Plan
San Angelo, Texas

</div>

Year	Population	Officers	Officers per 1,000 Population	Additional Officers Needed
2000	88,439	159	1.8	-
2010	98,380	177	1.8	18
2020	109,437	197	1.8	20

Source: Wilbur Smith Associates

Future Priorities

The San Angelo Police Department has identified the following future priorities:

- The Police Department has been dedicated approximately 457 acres of land located 4.5 miles east of the city limits. Initial plans are to construct a shooting range and one range building. Future plans are to completely move the training facilities to this location, build a live-fire shoot house and a driver-training track.

- The Police Department is in need of additional office space, which may be achieved by re-construction or renovation of existing facilities.

- With regards to equipment, there is the need for: improvement or replacement of the existing radio system; automatic vehicle locator system to be used in conjunction with the CAD system; and a mobile video recording system.

MAINTENANCE FACILITIES

The City of San Angelo has a joint vehicle maintenance center with the San Angelo Independent School District located at 1727 St. Ann Street. This multi-functional facility serves as a maintenance facility for all city vehicles including buses used in San Angelo's transit system. Adjacent facilities also contain shops and yards for the Public Works Department that includes Utility Maintenance, Street & Bridge/ROW/Lake Maintenance, Traffic Control, and Signal Control. The facilities at the Vehicle Maintenance Center are displayed in **Figure CF-4: Vehicle Maintenance Center and Adjoining Shops and Yards of the Public Works Department**.

FIGURE CF-4
VEHICLE MAINTENANCE CENTER AND ADJOINING SHOPS AND YARDS
OF THE PUBLIC WORKS DEPARTMENT
San Angelo Comprehensive Plan
San Angelo, Texas
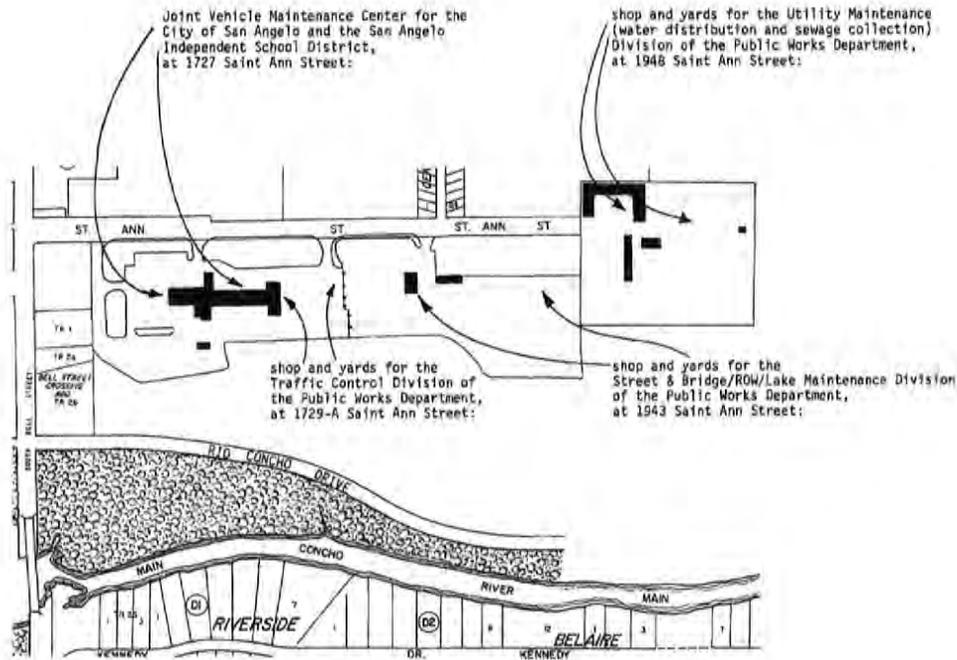
Source: City of San Angelo

These central maintenance facilities are likely to need expansion in the near future. Vehicle maintenance operations currently do not have the space to install needed equipment. Public works operations in the facility require additional storage space for equipment and supplies.

The Public Works Department also operates a small maintenance facility in far southwest San Angelo, near the intersection of Fisherman's Road and Knickerbocker Road. This facility includes a shop and yard for equipment and supplies used in maintaining roads and recreational areas around Lake Nasworthy. Due to the distance of Lake Nasworthy from the central maintenance facility, this satellite facility is necessary to prevent wasteful trips between the two locations. However, the satellite facility is not adequate for the functions it currently serves and is not suitable for expansion to other functions. As a result, the need for a new facility has been identified. This new facility could potentially serve not only as public works shop, but also as a vehicle maintenance shop with a refueling station for city and police vehicles used in the Lake Nasworthy area. A site located on the southern portion of the San Angelo Regional Airport property has been identified as a possible location for this facility.

CITY OWNED PROPERTY

The City of San Angelo owns over 12,804 acres of land. This property could potentially be used for a variety of purposes, including city facilities and parks. The parcels of land owned by San Angelo are identified in **Figure CF-5: City Owned Property**.

LIBRARIES

San Angelo has three public libraries run by the Tom Green County Library System. These facilities are described in **Table CF-5.** In addition to these locations, there is a bookmobile that operates on a seasonal schedule. The library system's holdings include over 270,000 books and audio/visual materials with an annual circulation of 545,000.

TABLE CF-5
TOM GREEN COUNTY LIBRARY SYSTEM FACILITIES
San Angelo Comprehensive Plan
San Angelo, Texas

Facility	Location	Size	Holdings
Main Library	113 W. Beauregard Avenue Judge Edd B. Keyes Bldg.	25,000 sq.ft.	207,635
Angelo West Branch	3013 Vista Del Arroyo	N/A	43,905
North Angelo Branch	3001 N. Chadbourne	N/A	17,377

Source: Tom Green County Library System

The primary goal of the library is to maximize the use of its collection by area residents. However, library officials indicate that the main library is experiencing a critical lack of space. Overcrowded shelving, lack of patron seating and crowded working conditions prevents the library from expanding services to meet the demands of an increasing population. Furthermore, the poor physical condition of the main library creates an uninviting feel and does not encourage use by citizens.

Library officials stress that branch libraries have not alleviated pressures on the main library downtown. In fact, branch libraries have actually increased the load at the main library due to the administrative resources needed to oversee the branch system, as well as the many other library programs. As a result, the Library's main focus in terms of facilities is on expanding and improving the main library downtown.

Currently, the library is expanding into the basement of the Judge Edd B. Keyes Building, adding 18,417 square feet to the main library. When complete, the total area of the library will be 43,417 square feet. This expansion should meet the basic space needs for the next twenty years. After expansion, the focus of the library will be on physically enhancing this space to improve reader services and satisfaction, contact between readers and staff, efficiency, importance as a major information source, and economy. Consideration should be given to a new facility, if the existing facility cannot be enhanced.
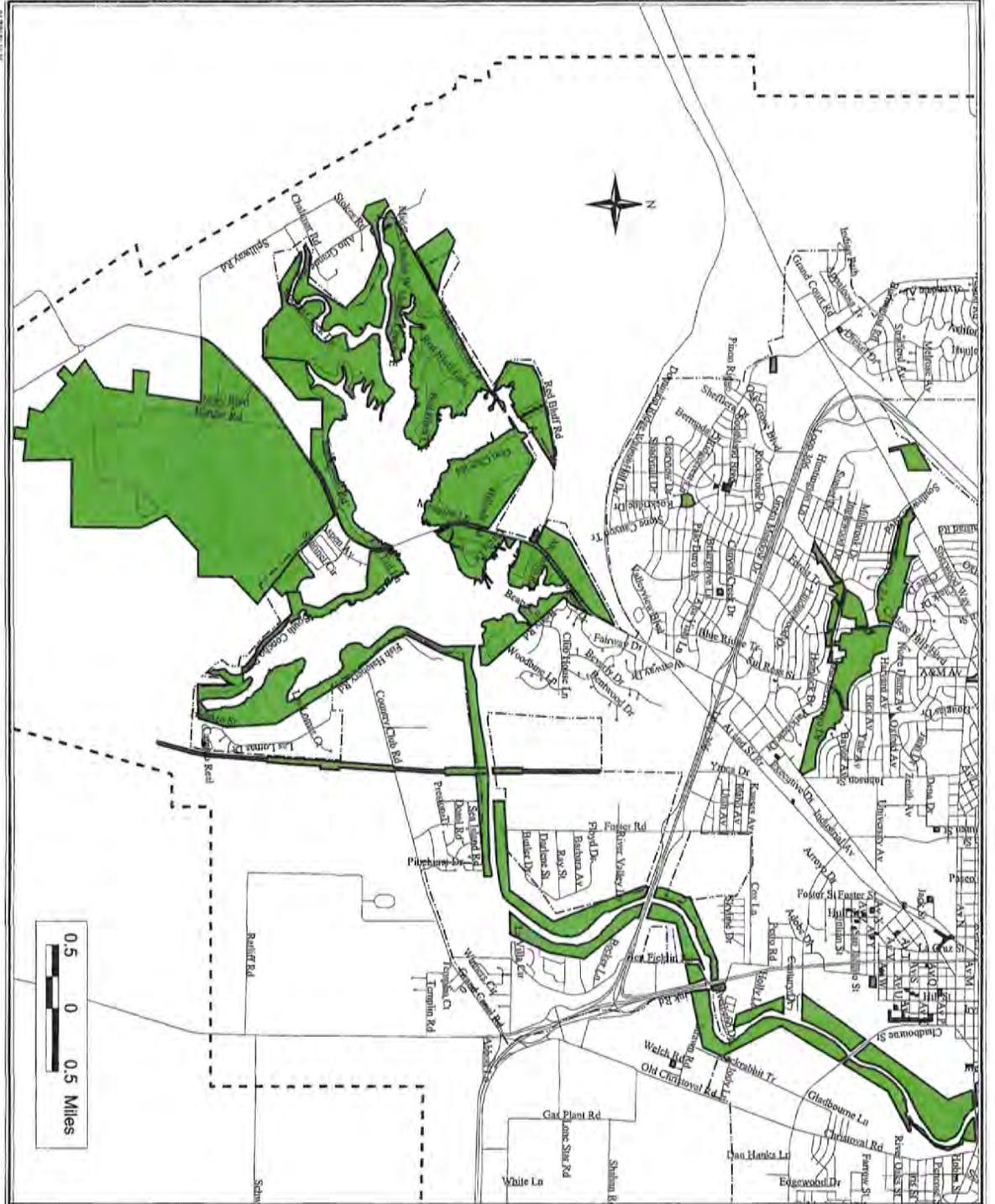
San Angelo Comprehensive Plan

FIGURE CF-5A
CITY-OWNED
PROPERTIES
(SOUTHWEST)

Study Area
San Angelo Corporate Limit
City-Owned Land

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

THE CITY OF SAN ANGELO, TEXAS

0.5   0   0.5 Miles

0.5   0   0.5 Miles

San Angelo
Comprehensive
Plan

FIGURE CF-5B
CITY-OWNED
PROPERTIES
(NORTH)

THE CITY OF SAN ANGELO, TEXAS

Study Area
San Angelo Corporate Limit
City-Owned Land

Wilbur Smith Associates

ENGINEERS
PLANNERS
ECONOMISTS

N
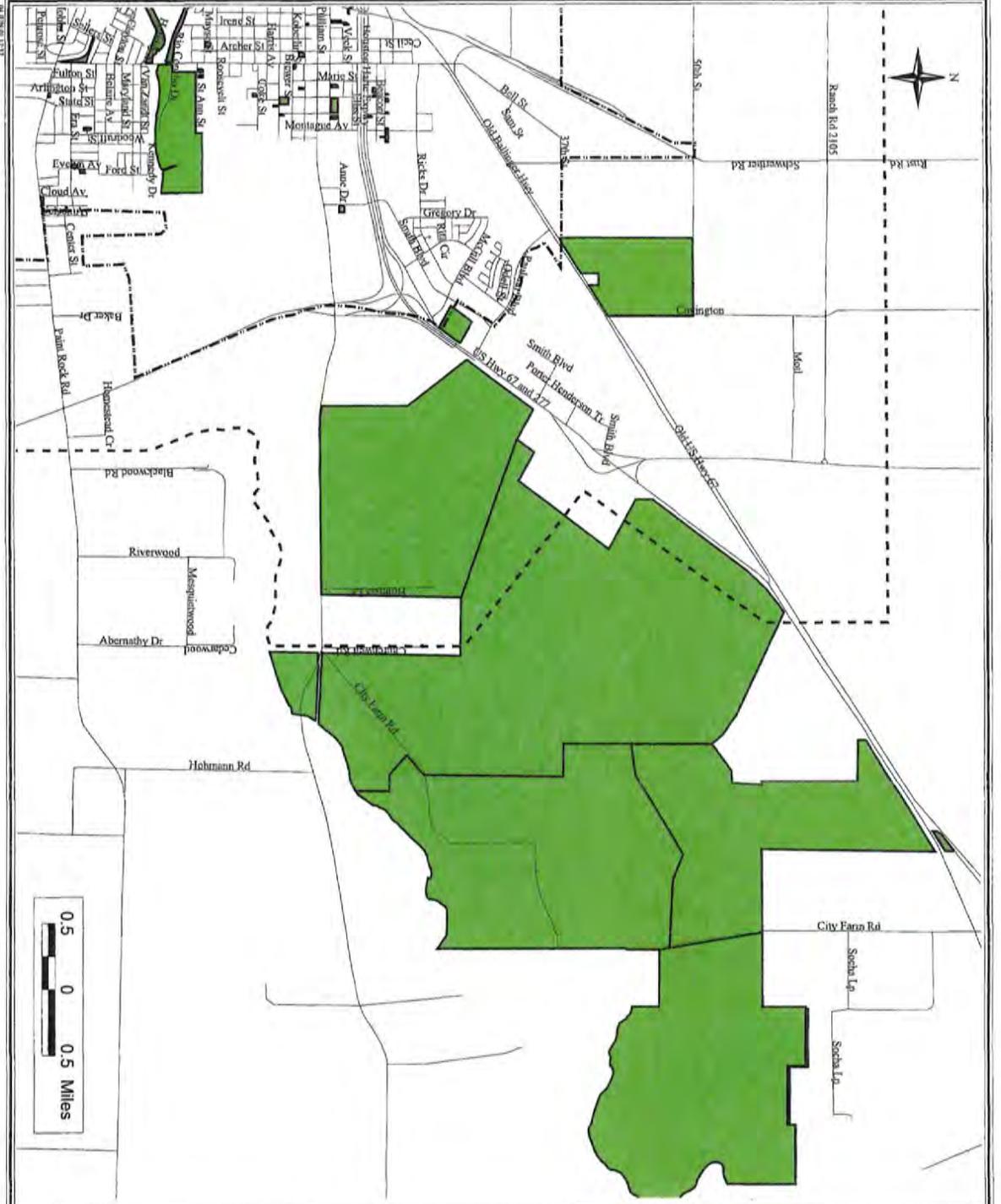
San Angelo Comprehensive Plan

FIGURE CF-5C
CITY-OWNED PROPERTIES (NORTHEAST)

Study Area
San Angelo Corporate Limit
City-Owned Land

Wilbur Smith Associates
ENGINEERS
PLANNERS
ECONOMISTS

HEALTH FACILITIES

Public Health Services

The City of San Angelo/Tom Green County Health Department is responsible for social services, indigent health care, nursing services, pharmacy, WIC Program and code enforcement. The department's facilities currently include two buildings in the City Hall Plaza area. Like other departments in City Hall Plaza, the Health Department is in need of expanded facilities.

Medical Services

San Angelo serves as a regional medical center in the West Central Texas area. There are two medical centers located in the City: Shannon Medical Center and San Angelo Community Medical Center. Both medical centers provide a variety of services and treatments in most medical areas.

- The Shannon Medical Center includes the Memorial Campus, the St. John's Campus and two walk-in clinics. Located at the Memorial Campus are facilities for acute medical and surgical care, as well as a Sleep Center, Rehab Center, and Women's and Children's Center. Behavioral Health Services and Shannon Med Plus are located at the St. John's Campus, as well as SCCI-San Angelo, which operates as a "hospital within a hospital" leasing space and ancillary services. SCCI-San Angelo is a 32-bed, long-term, acute-care facility operated by Spectrum Comprehensive Care, Inc., for patients expected to have an average length of stay greater than 25 days.

- San Angelo Community Medical Center consists of the hospital located on Knickerbocker Road and two Community MediCenters (walk-in clinics). Facilities include the Chest Pain Center located in the emergency department of the hospital, the Chase Children's Center and Williams Family Center.

Other medical facilities in San Angelo also include all the following:

- A geriatrics hospital at Baptist Memorials Center;

- River Crest Hospital, a private psychiatric and substance abuse facility;

- Regional Cancer Treatment Center, offering consultation, second opinions and treatment (including radiation) for cancer patients;

- West Texas Rehabilitation Center, offering outpatient rehabilitative treatment for adults and disabled children;

- La Esperanza Clinic, providing health care and dental services to primarily lower-income families;

- Healthsouth Diagnostic Center, a freestanding magnetic resonance imaging (MRI) facility; and,

- Hospice of San Angelo and Family Hospice, providing service to terminally ill patients.

SCHOOLS

San Angelo Independent School District

The San Angelo Independent School District (SAISD) provides public education services to most areas within the City of San Angelo's city limits. This district was formally created in 1903. Since 1903 the district has grown from a single stone building to include two high schools (Central and Lake View), four junior high schools, and 19 elementary schools. A new elementary school in southwest San Angelo is currently under construction. The 80-acre site for this new elementary school is large enough to accommodate an additional junior high school, should one be needed. District enrollment exceeds 16,000 students served by over 2,000 SAISD employees. **Figure CF-6** shows current locations of SAISD facilities. At this time, SAISD has no comprehensive plan for school facilities. Schools are typically built on an as-needed basis. During the mid-1990s, the Texas Comptroller of Public Accounts conducted a thorough audit of the SAISD system. The audit found that the district was relatively well managed with some shortcomings. Among many recommendations made to increase the efficiency of the system, the report suggested that SAISD develop comprehensive facility use and space guidelines that would include plans and budgets for the construction, remodeling, and repair of school facilities. Both the City and School District would benefit greatly through cooperation on such a plan.

FIGURE CF-6
S.A.I.S.D. EXISTING FACILITIES
San Angelo Comprehensive Plan
San Angelo, Texas

LakeView H.S

Goliad Elem.

Lincoln Jr. H.S.

Day Elem.

Bradford Elem.

Holiman Elem.

Reagan Elem.

Blacksheat Elem.

Fannin Elem.

Carver Learning Center

San Jacinto Elem.

Edison Jr. H.S.

Austin Elem.

Central H.S.

Alta Loma Elem.

Lee Jr. H.S.

Fort Concho Elem.

McGill Elem.

Santa Rita Elem.

Belaire Elem.

Glenmore Elem.

Travis Elem.

Crockett Elem.

Bowie Elem.

Glenn Jr. H.S.

Rio Vista Elem.

S.A.I.S.D.
Administration Bldg.

Bonham Elem.

O.C. Fisher Lake
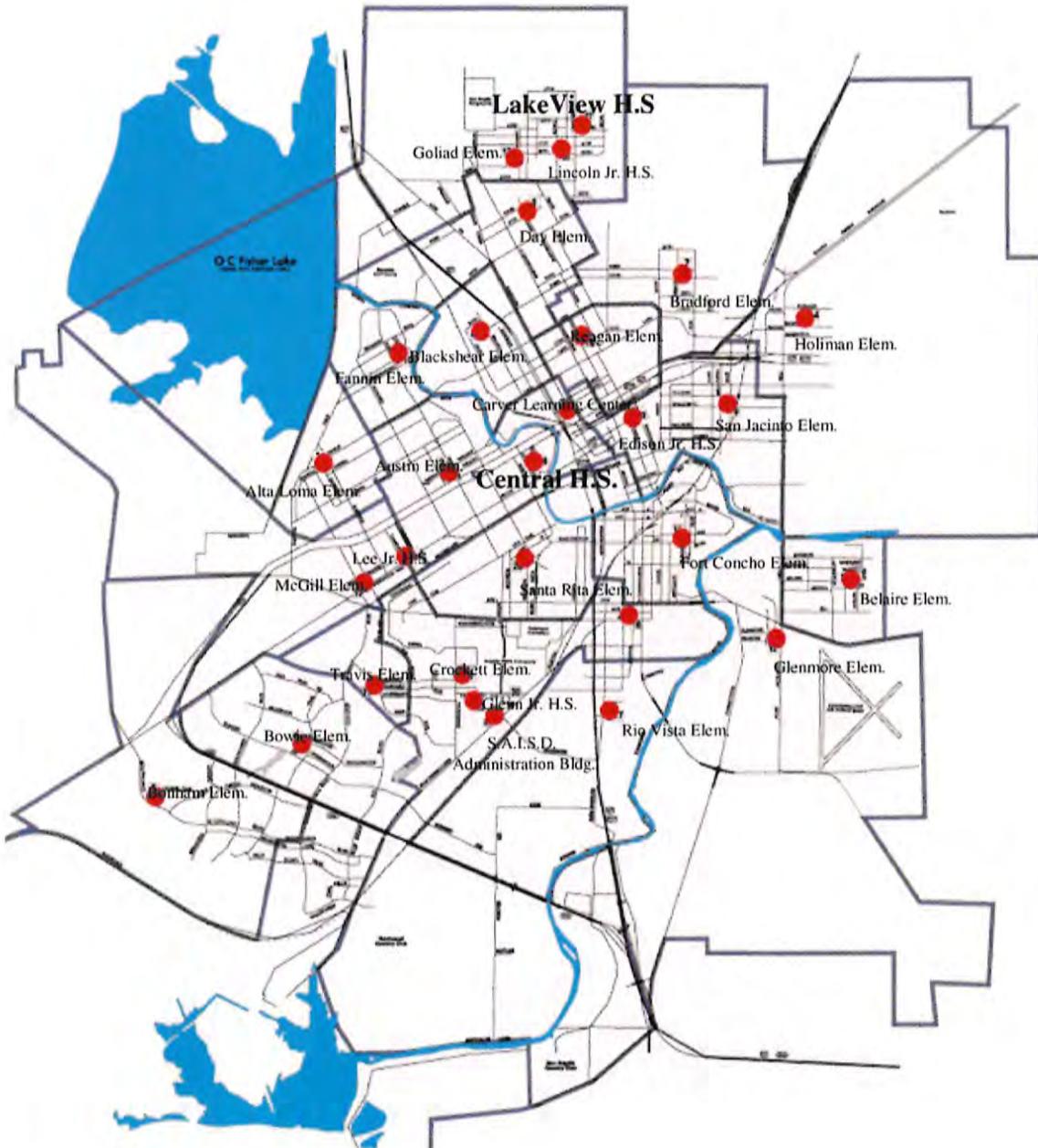
Source: San Angelo Independent School District

The location of schools has a major impact on the development and function of the city and is a very important issue to residents. Neighborhood land use and thoroughfare planning is especially impacted by school locations. Numerous factors, both positive and negative, should be considered when locating schools. These factors include:

- the safety of students from hazards such as crime and heavy automobile traffic;
- the ability of children to safely walk to school;
- the role of schools, especially elementary schools, as the social, cultural, and physical focus of neighborhoods;
- the potential of schools to generate substantial amounts of automobile and pedestrian traffic;
- the use of school grounds as after-hours recreational amenities; and,
- the ability of schools to provide an identity to neighborhoods.

School location is central to the "San Angelo Neighborhood Concept" discussed in the Land Use element of this plan. The Neighborhood Concept capitalizes on the many positive aspects of school location while preventing the negative aspects. This concept provides the following guidelines for school location:

- sites shall, insofar as practical and economical, be central to existing and eventual geographic neighborhood(s), reducing the need for students to walk or bike disproportionately long distances;
- vehicle access to each school site must be available by streets required for, and built to accommodate, expected vehicle traffic;
- location near employment centers, industrial complexes or large commercial areas should be avoided, to minimize hazards created by vehicle traffic, to lessen disturbance from noise or fumes, and to minimize the possibility of unattractive nuisances;
- whenever practical, school sites and recreation/park sites should be made adjacent in order to enhance the possibility of shared-use facilities;
- the existence or ease of providing protected pedestrian pathways and sidewalks to and into the school site should be considered in deciding which school sites to select or retain; and,
- the topography of the site should be such that grading and development costs involved in building new (or expanding old) school facilities are economical.

Other School Districts

As San Angelo grows, the city limits may overlap with other school districts in the area. These include the Wall Independent School District to the south, and the Grape Creek Independent School District to the north. Cooperation with these school districts in identifying potential school locations would significantly benefit both the City and the districts.

Angelo State University

Angelo State University (ASU) was established as San Angelo College in 1928 and formally accepted as a state-supported college in 1965. Four years later, in 1969, this institution was awarded status as a university. Since that time, ASU has grown into a first-rate university with an enrollment of over 7,000 students including representatives from 43 states and 24 foreign countries. The ASU campus consists of 268 acres in central San Angelo. The campus is centered between West Avenue N and Knickerbocker Road, west of US HWY 87. The university owns significant amounts of open land on the east end of the campus, which could be potentially used for expansion. The Angelo State University Campus Master Plan 1998-2003 identifies several goals for the future development of the university. Most of these goals deal with improvements to facilities on the existing school campus and do not require expansion. The university also states its goal to depend on the private sector to provide student housing in lieu of building additional dormitories. Goals that could potentially impact municipal planning efforts include:

- Designation of undeveloped land along Knickerbocker Road and University Drive as potentially suitable for long-term commercial leases. These would include 400' deep commercial strips along the north side of both roadways.

- Expansion of the University Center to accommodate larger conferences and activities.

- Acquisition of the Crockett Elementary School property, which stands as a barrier to university expansion on property to the south.

- A potential pedestrian bridge across Jackson Street to provide a link to mostly undeveloped property on the eastern portion of the campus.

The future land use plan for ASU is shown in **Figure CF-7: ASU Campus - Future Land Use.**

Howard College

The San Angelo branch of Howard College, which is part of the Howard College system headquartered in Big Spring, Texas, offers two-year degrees in a variety of disciplines. The school also offers technical and vocational training for several career fields. The school's main facility in San Angelo is located on Executive Drive, east of Knickerbocker Road. Several of the school's programs and courses are also offered at the West Texas Training Center on North U.S. Highway 67.

FIGURE CF-7
ANGELO STATE UNIVERSITY CAMPUS - FUTURE LAND USE
San Angelo Comprehensive Plan
San Angelo, Texas
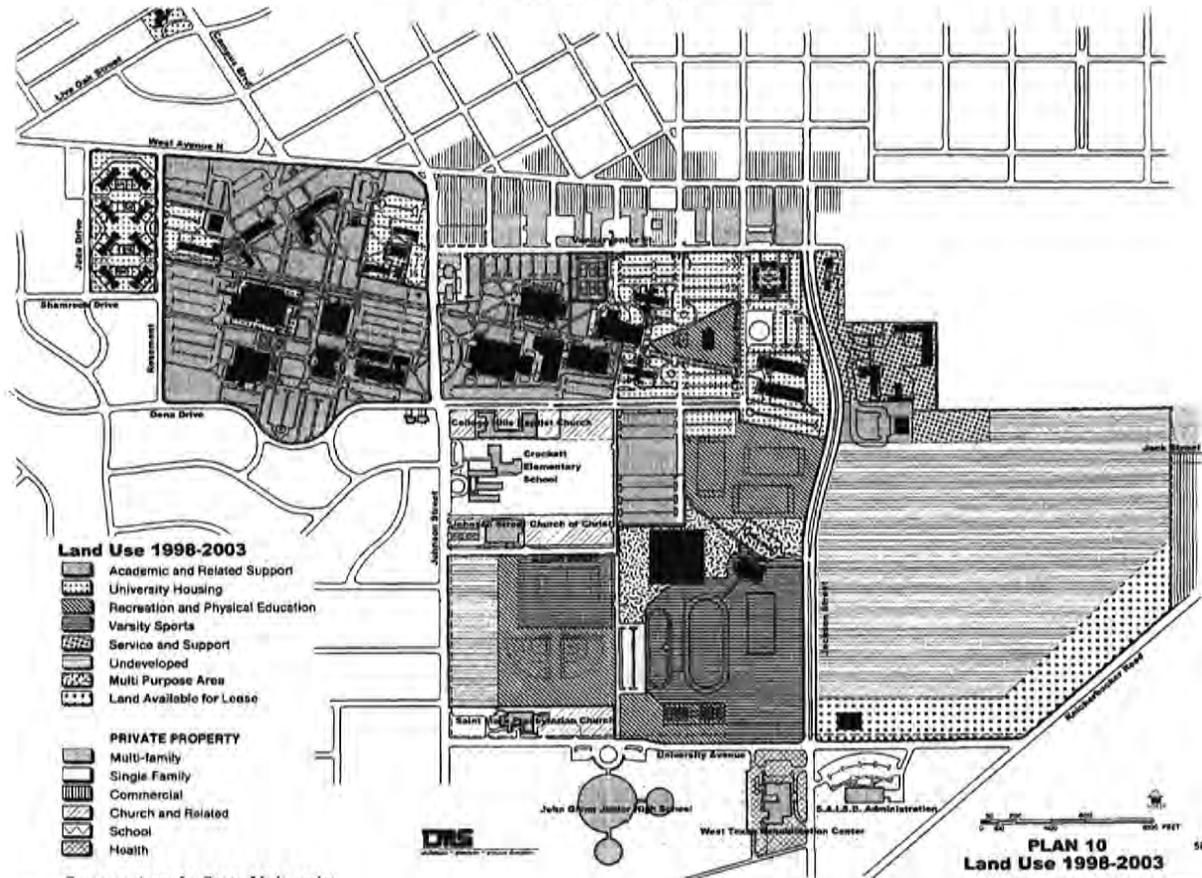
Source: Angelo State University

OTHER COMMUNITY FACILITIES

Other community facilities within the City include:

- The **City Auditorium** is located in City Hall at 72 W. College Avenue and is run by the City's Civic Events Department. The Auditorium has seating capacity for 1540 persons. Events held at the Auditorium include performances by the San Angelo Civic Ballet and the San Angelo Symphony.

- The **San Angelo Coliseum** hosts rodeos, professional hockey, and other spectator events. It is located at 50 E. 43rd and has a capacity of 6,562 people. The Coliseum sits on a 100-acre site, a large portion of which is leased to the San Angelo Stock Show and Rodeo Association (SASSRA).

The SASSRA operates an exhibit hall now known as the **Concho Pavilion** on their lease, although the City owns the hall. During 2002, construction was completed on a new pavilion named **Spur Arena** and an adjacent **horse barn**. This new construction was financed by the City of San Angelo Development Corporation and will also be owned by the city. The new structures will be located on the SASSRA lease property and operated by SASSRA. It is hoped that the new arena will promote economic development through the attraction of tourists for horse-related competitions and shows. **Lake View Stadium** is also located on the same 100-acre site.

- The **River Stage** is an amphitheatre located on the banks of the North Concho River in downtown. It has a capacity for 1,000 folding chairs; however, additional spectators can fit onto the terraced hillside. This multi-purpose facility is used for a variety of events including concerts, galas, musicals and youth shows.

- The **Santa Fe Crossing Senior Center and Station 618 Senior Center,** located at 702 and 618 S. Chadbourne Street, respectively, are open Monday through Friday from 8:30am to 4:30pm. These centers offer a variety of activities for seniors including dance classes, sewing, bridge, oil painting and movies. A meal is also provided between 11:15 and 12:30.

- The **West Texas Training Center.** This facility is housed in a former factory of Levi Strauss and Company, which was closed in the late 1990s. The City of San Angelo currently owns the building. The facility offers several vocational training programs taught by Angelo State University and Howard College.

- The **Hemphill Wells Building,** and its adjacent parking garage, was purchased by the City in the late 1990s as a possible location for a future city hall. To date, a final decision has not been made as to whether the building will be used for this purpose. Numerous physical constraints of the building, including structural problems and asbestos contamination, make potential re-use of the building an expensive alternative. Long-term parking leases on the building's parking garage, held by tenants of the adjacent Spur Building, also complicate use of the building.

- The **City Farm,** or sewage treatment facility, is discussed in the Utilities element of this plan. The City Farm provides sewage treatment for the City's entire sewage collection system. Generally, the facility is thought to be adequate for the next 20 years, with some possible equipment improvements. However, due to the topographical constraints of the City's gravity flow sewer system, a new facility may eventually be needed on the extreme southwest side of the city, if the city should continue to grow in that direction.

- During the winter of 2001-2002, construction of the **San Angelo Visitors Center** should begin. The Center is a joint project of several community organizations and government agencies, including the City of San Angelo. It is located at a key gateway into the Central Business District, between Abe and Koenigheim streets, along the south bank of the Concho River.

- The **San Angelo Municipal Swimming Pool,** located adjacent to the River Stage, is a historically significant facility that serves as the City's only major swimming facility. The City's Park and Recreation Plan addressed the overall adequacy of swimming facilities in San Angelo. That plan

focused on needs for larger, community-wide pools as well as smaller, neighborhood pools. Although not addressed by the Park Plan, the City will consider whether to replace or relocate the existing municipal pool.

These facilities are shown in Figure CF-1.

San Angelo's downtown, or Central Business District (CBD), is the geographic focus of the city as well as the entire region. Concho Avenue, which bisects the CBD, was home to San Angelo's very first businesses. Since these early times, downtown San Angelo has provided goods and services to an expansive region of West Central Texas. Today, the CBD remains a center of finance, government offices, medical facilities, and cultural and religious institutions for all of West Central Texas. At the outset of the 21st Century, the CBD faces a dawn of new opportunities, coupled with challenges and constraints. The Downtown Enhancement element of the San Angelo Comprehensive Plan provides a framework of goals and objectives to help insure that the CBD not only continues to play a vital role in San Angelo, but also in the West Central Texas region and Texas as a whole.

RELATED PLANS AND STUDIES

Two previous studies have focused on the development of downtown, including:

"River Corridor Master Development Plan"; City of San Angelo; 1990 – Drafted by San Angelo's River Corridor Commission, this plan addresses the entire Concho River corridor as it passes through San Angelo. The corridor's boundary takes in a substantial portion of the CBD. The plan also establishes goals for corridor enhancement and guidelines for review of development proposals. Several projects listed by the plan have already been implemented. Numerous ideas from the plan are included in this element.

"R/UDAT San Angelo: Connecting the Past to the Future, Planning for San Angelo's Historic City Center"; Regional/Urban Design Assistance Team of the American Institute of Architects; 1992 – The Regional/Urban Design Assistance Team (R/UDAT) is a program of the American Institute of Architects. In 1992, a R/UDAT team visited the city at the request of community groups and met with a group of San Angelo citizens who were concerned about their deteriorating city. The team, made of architects, planners, and other related professionals, carried out an intensive public involvement process over a period of several days. During their stay, they prepared a detailed plan for the CBD that was published in the San Angelo Standard-Times. Several meetings involving hundreds of citizens followed, bringing out the concerns of the citizens about their heritage and the future of their community. The community has aggressively implemented numerous aspects of the plan, particularly, creation of an open space corridor connecting cultural venues and community landmarks located on the south side of the CBD.

The meetings led to a vision and then to a workable strategic plan. The City of San Angelo was a strong part of the team, raising $2.7 million, which was then leveraged with $10 million including State, Federal and private funds. With those funds, the following key elements of the strategic plan were enhanced, encouraged or completed:

- The **San Angelo Museum of Fine Arts and Education Center**, a collaborative facility between Angelo State University (ASU) and the San Angelo Museum of Fine Arts, houses functions for the museum as well as for ASU's Art Department. The distinctive building located beside the North Concho River overlooking downtown San Angelo, provides an expanded presence for the university and arts in the community.

- **Celebration Bridge,** a pedestrian bridge that links parts of the city separated by a river, bringing the community closer together.

- **Fort Concho Museum,** a frontier army post from 1867 to 1887, now owned and operated by the City of San Angelo, includes 23 original and restored fort structures. In just a few years following R/UDAT's 1992 visit, the last non-historic structures were removed from the original parade grounds, opening vistas of Fort Concho not seen for a hundred years. Two historic barracks buildings also were separated from an adjoining industrial complex (into which they had long been physically integrated) and made a visitors center for the Fort Concho Museum.

- **Santa Fe Railroad Depot renovation** for a senior center and transit center.

- Restoration of the 1929 **Cactus Hotel** building, the fourth Hilton hotel ever built. Although no longer a functioning hotel, this most prominent of local landmarks is being restored by the San Angelo Historic City Center Project as a multi-use structure of retail, residential, office and public gathering places. A number of cultural and other nongovernmental service organizations are now headquartered at the old Cactus Hotel. These include the Civic Ballet, Symphony Society, and Hospice of San Angelo.

MAJOR ISSUES

Major issues identified by the San Angelo Comprehensive Plan Steering Committee and by citizens at a Community Forum in the Year 2000 were instrumental in developing goals and objectives for the Downtown Enhancement element of this Plan. Major issues from past studies, which continue to be relevant today, are also included. Furthermore, several more issues were identified at a joint meeting of the River Corridor Commission, Historic City Center Association, and Planning Commission held in January, 2001. These issues included:

- Lack of trees and landscaping along streets.
- Attraction of more stores and restaurants downtown, including "chain" type stores and restaurants.
- Excessive number of vacant buildings.
- Lack of financial and government incentives to encourage businesses to locate downtown.
- Need for more major employers.
- Need for more tourist amenities.
- Lack of major meeting spaces.
- Physical appearance of downtown area.
- Lack of evening entertainment venues.
- Need for more hotel space, especially around the Shannon Medical Center area.
- Continued enhancement of the River Corridor.
- Support for downtown events such as the Fourth of July celebration and Christmas lights display.
- Potential market for new housing downtown.
- Visual linkages between areas north and south of North Concho River.
- Quality of water in North Concho River.
- Lack of public facilities including public restrooms, public parking, and directional signage.
- Poor quality of existing single-family housing in and around (some of) the CBD.
- Maintenance and enhancement of CBD's historic character.

- Improvement of physical image, possibly including an architectural theme.
- Improvements to River Stage.
- Need for a small performance hall, possibly in Texas Theater.
- Need for a detailed Master Plan for Shannon Medical Center area.
- Remodeling of Convention Center.
- Continued public support for Fort Concho.
- Cleanliness of downtown.
- Potential new uses of land between Koenighheim and Randolph Streets.
- Conversion of homes to offices.

GOALS AND OBJECTIVES

Following consideration of various issues and challenges plus previous goals and objectives from other applicable plans, the goals and objectives for the Downtown Enhancement element of the San Angelo Comprehensive Plan are as follows:

Goal 1:   Enhanced visual identity of the Central Business District.

Objective A: Create an aesthetic and physically appealing character in the Central Business District that creates a unique destination for visitors.

Action 1:   Enhance the historic diversity and high-density urban character of existing architecture already prevalent in San Angelo's CBD.

Action 2:   Improve the appearance of public buildings through distinctive architecture.

Action 3:   Demolish run-down buildings that cannot reasonably be rehabilitated.

Action 4:   Improve landscaping, especially along roadway medians. Encourage use of xeriscape methods.

Action 5:   Resurface streets where necessary.

Action 6:   Improve appearance of parking lots through increased setbacks (where feasible), landscaping, and green areas.

Action 7:   Create visual connections to the Concho River Corridor.

Action 8:   Install special sidewalk paving treatments such as stone or brick pavers.

Action 9:   Explore various financing mechanisms for public and private improvements in the CBD. Such mechanisms may include public improvement districts, tax increment financing districts, municipal management districts, transportation enhancement funds, Texas Parks and Wildlife funds, tax abatements, hotel occupancy taxes, and other programs and incentives.

Action 10:   Consider performing an in-depth urban design/architectural study for downtown.

Action 11:   Encourage public art installations in the downtown area, including murals on buildings and sculpture.

Action 12: Visually "connect" various landmarks in the CBD through signage, landscaping, pedestrian facilities, and other enhancements.

Objective B: Improve the visual environment of the CBD.

Action 1: Relocate utilities underground wherever possible.

Action 2: Install decorative entrances to parks.

Action 3: Install vertical landmarks such as flags or banners along roadways.

Action 4: Install decorative themed signage that gives directions to important landmarks and public parking facilities in the CBD.

Action 5: Locate decorative gateway signage at key entry points into downtown.

Goal 2: A "user friendly" Central Business District.

Objective A: Encourage pedestrian circulation throughout the CBD.

Action 1: Install public restrooms in areas of high pedestrian traffic, such as along Concho Avenue and the River Corridor.

Action 2: Install attractive street furniture as pedestrian amenities at key points within downtown.

Action 3: Complete a continuous loop of walkways, by adding a pedestrian link along the south bank of the North Concho River, from Sunken Garden Park eastward to the Celebration Bridge.

Action 4: Install directional signage and maps.

Action 5: Consider locating more transit stops downtown.

Objective B: Provide adequate parking to meet the current peak demand and future needs of the Central Business District.

Action 1: Construct more parking including publicly owned common parking areas.

Action 2: Encourage shared parking agreements between churches, businesses, government institutions, and other major downtown users.

Goal 3: A Central Business District that combines a balance of economic, social and cultural roles in a unique way to create a destination for residents and visitors, making the CBD the activity center and focal point of the community of San Angelo.

Objective A: Attract more entertainment and restaurant uses to the CBD.

Action 1: Encourage location of additional entertainment/recreational establishments in CBD, such as sidewalk cafes, theaters, bakeries, coffee shops, and nighttime entertainment venues. Consider re-use of the Texas Theater for these purposes.

Action 2: Encourage an appropriate amount of commercial use along the riverfront, such as restaurants and entertainment venues.

Action 3: Use available municipal incentives (such as streets, sidewalks, lighting and convenient parking for automobiles) to attract additional retailers, restaurants, lodging and entertainment activities to downtown San Angelo.

Objective B: Promote annual festivals and other community activities that focus attention on the CBD.

Action 1: Encourage more downtown events similar to those currently held downtown.

Action 2: Continue support of the San Angelo Museum of Fine Arts and other cultural institutions headquartered downtown.

Action 3: Locate possible areas for additional pedestrian plazas to use as gathering places in a central downtown area.

Objective C: Reinforce the CBD's role as an "activity center"

Action 1: Reinforce downtown's role as a faith-based center for religious worship and education in West Central Texas.

Action 2: Provide public parking garages with retail at the street level.

Action 3: Continue enhancement of El Paseo De Santa Angela project and its associated uses.

Action 4: Continue enhancement of the Santa Fe Depot as a city transit center and historic education center.

Action 5: Continue to promote the image of downtown as a regional center for government and faith-based activities

Objective D: Encourage residences within the CBD.

Action 1: Explore ways which local government can encourage mixed-use housing/commercial developments in CBD, such as retail with housing on the second floor or loft-style development.

Action 2: Explore ways which local government can encourage high quality townhome developments in and adjacent to the CBD area.

Action 3: Explore ways which local government can help revitalize neighborhoods in or near downtown, such as reinvesting in public infrastructure and providing assistance for private housing rehabilitation.

Goal 4: Preservation and enhancement of downtown's historic character.

Objective A: Promote and maintain the central business district's historic, architectural, and cultural character.

Action 1: Study the possibility of a designated national historic district.

Action 2: When feasible, rehabilitate historical structures that are in disrepair. Only preserve what can *reasonably* be preserved.

Action 3: Modify building codes and other regulatory mechanisms so that they do not unreasonably hinder historical preservation efforts.

Action 4: Enforce codes and regulatory mechanisms necessary to reasonably ensure public safety, circulation and the integrity of public right-of-way.

Action 5: Encourage historical architectural diversity, where appropriate.

Goal 5:   Economic development in downtown.

Objective A: Enhance the economic attractiveness of San Angelo's CBD to prospective businesses and industries.

Action 1: Encourage quality housing downtown to insure a customer base for retail type businesses.

Action 2: Encourage job-training programs that create the skilled workers that companies desire.

Action 3: Promote programs to assist in the retention of existing businesses.

Action 4: Consider the master plans of Shannon Medical Center and YMCA in planning for downtown.

Action 5: Help facilitate the YMCA's plans for new building construction downtown.

Action 6: Improve image of downtown as a tourist destination with museums, entertainment uses, hotels, restaurants, and unique shops.

Action 7: Remodel the convention center and create other moderate to large meeting places downtown.

Action 8: Make sure communications infrastructure is in place, such as digital communication lines.

Action 9: Promote cooperation among various groups concerned with downtown issues.

Objective B: Attract appropriate businesses and industries to the Central Business District.

Action 1: Encourage a diverse range of industries, focusing on those that provide better salary opportunities for San Angelo's residents.

Action 2: Focus on attracting "back office" support businesses such as telecommunications and internet companies.

Action 3: Market particular locations such as the Nathan's building, Texas Theater, old Central National Bank building on North Chadbourne Street, Cole's Army

Surplus, Town House Hotel, Harry's Food Store buildings, and vacant restaurants on the river.

Objective C: Utilize financial incentives to enhance San Angelo's attractiveness to prospective businesses.

Action 1: Consider a variety of incentives for companies to locate downtown, such as tax abatement, low-interest loans, relaxed permitting requirements, expedited City approval processes, and special districts.

Action 2: Study successes of other cities and identify innovative programs that can be applied in San Angelo.

Action 3: Consider creation of an economic development position with the City of San Angelo.

Goal 6: **Enhanced natural amenities downtown.**

Objective A: Preserve and protect the natural amenities that contribute to the character of downtown San Angelo.

Action 1: Support and expand the work of the San Angelo River Corridor Commission and the "River Corridor Master Development Plan."

Action 2: Enhance visual and pedestrian linkages to the North Concho River.

Action 3: Continue efforts to improve the water quality in the North Concho River.

Action 4: Consider limited commercial development that takes advantage of river amenities.

EXISTING CONDITIONS

Central Business District Boundary

The CBD Community Area currently includes the area surrounded by the heavy solid line shown on the first FIGURE LU-4: FUTURE LAND USE in CBD EXTENSION, inserted earlier in the plan document. At the community meetings held during the drafting of this comprehensive plan, including a special CBD forum held in January 2001, members of the community suggested that the boundaries of the CBD be expanded to include areas that are commonly thought of as part of the CBD. These include the Fort Concho Museum, the Santa Fe Depot, River Stage, Museum of Fine Arts, and El Paseo de Santa Angela. These areas are recommended for inclusion into CBD for purposes of this chapter on CBD Enhancement. On the following **Figure DE-3**, this expanded area is indicated with a dashed line extending outward from the CBD Community Area shown by the heavy solid line. Although not shown on FIGURE DE-3 or on the first FIGURE LU-4, consideration should also be given to expanding this study area (for CBD Enhancement) eastward at least one block beyond Main Street.

The CBD currently lies at the geographic heart of the city and is surrounded by other community areas on all sides. The Lakeview and Northeast community areas abut the CBD on the east and north, the Goodfellow/Southeast community area abuts the CBD on the south, and the West/Central community area

is adjacent to the West. The Southwest and Nasworthy/South community areas do not abut the CBD, and they present a geographic challenge to the CBD. As economic activity and population shift to the southwest, the CBD may become less of a central focus of the community.

Land use in the CBD is primarily non-residential. The breakdown of land uses in San Angelo's CBD is shown in **TABLE DE-1: EXISTING LAND USE ALLOCATION**. The diversity of land uses shows how important the CBD is to the economic, cultural, and social fabric of the city and region. County and City government offices are concentrated at the core of the CBD, along Beauregard Avenue and Irving Street. The government core is largely surrounded by office uses, with some other commercial and retail uses, located in a variety of building types.

TABLE DE-1
EXISTING LAND USE ALLOCATION
San Angelo Comprehensive Plan
San Angelo, Texas

Land Use	Total Number of Parcels	Total Acreage
Low Density Residential	111	17
Medium Density Residential	17	3
High Density Residential	43	13
Two Single-Family On One Lot	1	.3
Commercial	138	42
Office	189	41
Retail / Personal Services	204	49
Parking (On-Site)	19	58
Parking Lots (Off-Site)	36	10
Public / Semi-Public	125	57
Light Industrial	27	8
Heavy Industrial	1	2
Vacant	84	24

Source: City of San Angelo; Wilbur Smith Associates

The largest concentration of retail uses is along Concho Avenue and Twohig Avenue, which parallel the river. Concho Avenue is the historic center of commerce in the city and remains a vibrant node of retail shops and entertainment establishments that, to some extent, have maintained their 19th Century architectural themes. There is also a concentration of commercial uses along the Chadbourne Street

corridor, as it passes north/south through the CBD. However, many of the structures along Chadbourne Street are vacant, especially in the northern portion of the CBD.

The northern portion of the CBD, generally north of College Avenue, is a mix of commercial, industrial, retail, and residential land uses. This is clearly a transitional area between the intense commercial uses of the CBD and residential neighborhoods farther to the north.

The eastern portion of the CBD, east of Chadbourne Street, is also a transitional area consisting of a mix of commercial, residential , and institutional land uses. Shannon Medical Center is the dominant landmark on the east side, taking up numerous city blocks in the area. The central police station is also located in this area, as well as Edison Junior High School. The only grocery store in the CBD is also on the east side.

The southern area of the CBD is traversed by the North Concho River, a natural spine of the city. Most parcels of land that abut the area are actively used as either parkland or for cultural/entertainment facilities. This includes Santa Fe Park, the River Stage and northern tip of El Paseo de Santa Angela. The Concho River corridor has largely been preserved as a natural setting, with few commercial or retail establishments directly abutting the river.

Although not formally included in the CBD community area, the area located south of the North Concho River and north of Washington Drive is commonly thought of as part downtown. The diverse mix of uses in this area is similar to areas north of the river. This area includes multiple social, cultural, and historic landmarks such as Fort Concho Museum, San Angelo Museum of Fine Arts, and Santa Fe Depot. Numerous state, local, and federal government agencies are also located in the area. In addition to public and government uses, there is a significant amount of commercial activity, including some retail. Finally, there are also numerous duplex and single-family residences in the area.

The western portion of the CBD is severed by the U.S. Highway 87 corridor, commonly known as the Abe Street/Koenigheim Street one-way pair in the downtown area. The portion of the CBD situated west of U.S. Highway 87 consists of two parts. South of Beauregard Avenue, the area is largely a mix of residential, retail, and office uses, many of which are homes that have been converted into businesses. North of Beauregard Avenue, the area is commercial and includes an automobile dealership, office buildings, and San Angelo's largest post office.

The U.S. Highway 87 corridor contains the most "chain" retail establishments in the CBD. Among other things, the corridor includes a number of major chain fast food restaurants, a drug store, and several local banks.

Zoning in the CBD

Zoning patterns in the Central Business District reflect existing land use patterns. The core of the CBD has been designated a "CBD" zoning district. The CBD zoning classification encourages the high density commercial development currently found in the CBD by relaxing setback, parking, and floor area ratio requirements of other commercial zoning classifications. The zoning of areas around the core CBD reflects the transitional nature of the land uses, which include commercial, residential, office and industrial. Much of this transitional area is zoned CG/CH (General Commercial/Heavy Commercial) because it includes the mix of heavy commercial and lighter commercial uses mentioned in the previous section. The

Land Use element of this plan provides strategies for dealing with areas zoned CG\GH and other zoning issues.

Economic Conditions

The Central Business District has historically been a center of commerce for the entire West Central Texas region. The CBD continues to serve this role at the beginning of the 21st Century. Like many other American cities, however, San Angelo's CBD has faced intense challenges presented by the general trend of businesses and industry locating in peripheral areas of the city along major transportation corridors. Vacant buildings and a decrease in the amount of business activity downtown are clear evidence of this trend in San Angelo. At the heart of this geographic shift is a general reluctance of businesses to deal with the constraints of downtown locations. These may include:

- lack of land at reasonable prices;
- lack of land tracts large enough for the specialized site and building needs of modern business;
- insufficient resources, or lack of desire, for companies to renovate existing structures;
- inability of downtown locations to provide sufficient parking;
- lack of amenities important to modern workers such as restaurants, day care facilities, and health facilities;
- a perception that downtown areas are less "safe"; and,
- the "tired" visual image of downtown.

Many cities have successfully attracted new business to their downtowns by countering these constraints with assets and new opportunities. The goals and objectives set forth in this plan element focus on the constraints associated with San Angelo's CBD that have resulted in a loss of business activity.

Transportation

San Angelo's current CBD has excellent access to other areas of the city as well as to all major roads leading into and out of the city. The major roadways providing access to and from the CBD are described below. Downtown San Angelo is laid out in a grid street pattern, with most major streets constructed in wide, multi-lane sections with two-way flows. All major streets in the downtown area are at-grade (not elevated) and are easy to access. Overall, circulation in the downtown area is good. Due to the prevalence of on-street parking in the area, circulation is often impeded by cars entering and exiting on-street parking spaces.

Access Between the CBD and West/Southwest Areas of the City

- *West Beauregard Avenue / Sherwood Way Corridor (existing east/west major thoroughfare)* - Provides <u>direct</u> access to west/southwest portions of the city. West Beauregard transitions into the Sherwood Way commercial corridor which eventually leads to the major commercial node surrounding Sunset Mall. Sherwood Way then coincides with the route of U.S. Highway 67 which leads west to Fort Stockton, Presidio and the border with Mexico.

- *West Harris Avenue / Pecos Street Corridor (existing east/west minor arterials)* - Relatively short street segment runs parallel to West Beauregard on the north, providing additional direct access to neighborhoods west of downtown. It is more residential in character, with very limited commercial uses. West Harris Avenue turns into Pecos Street a few blocks west of downtown. Pecos then merges into the Sherwood Way corridor.

- *U.S. Highway 87 (north/south major thoroughfare) / Knickerbocker Road (northeast/southwest major thoroughfare) Corridor* - Provides indirect access to Knickerbocker Road commercial corridor, ASU facilities, and Lake Nasworthy.

- *Houston Harte Expressway (east/west freeway)* - Provides direct high-speed access to west/southwest area of city, where it merges with Loop 306 which arcs around the south and east sides of San Angelo.

Access Between the CBD and eastern areas of San Angelo

- *East Beauregard Avenue/ Main Street/Pulliam Street Corridor* - Provides limited access into East Angelo, following Beauregard eastward from the CBD's core, turning northward on Main Street, and then following Pulliam eastward through east San Angelo. From the City limits line at Loop 306, this same roadway becomes Farm-to-Market Highway 380 and extends into rural areas east of San Angelo.

- *East Harris Avenue (existing east/west minor arterial)* - Provides limited access into East Angelo where Harris Avenue dead-ends east of Bell Street. This arterial is planned to eventually continue further eastward into future residential subdivisions proposed on the eastern edge of San Angelo.

- *Houston Harte Expressway/U.S. Highway 67 Corridor* - Provides direct high speed access to east/northeast areas of city, where it intersects the eastern leg of Loop 306 and then continues northeast to Ballinger, Texas.

- *South Chadbourne Street/East Avenue L (F.M. 388)* - Chadbourne Street leads south out of the CBD and intersects Avenue L (F.M. 388) that continues eastward and becomes known as Paint Rock Road in the vicinity of Goodfellow Air Force Base and then on to rural areas east of San Angelo.

- *Concho Avenue/Rio Concho Drive* - Concho Avenue continues eastward from the historical business district along the North Concho River. East of Magdalen Street, the road becomes Rio Concho Drive that continues as a scenic parkway along the river to its current termination east of Bell Street. Rio Concho Drive will eventually become a direct access point to Loop 306 when Rio Concho Drive is extended eastward in the future.

Access Between the CBD and Southern Areas of San Angelo

- *US Highway 87/US Highway 277 (South Bryant Boulevard) Corridor* - Provides direct access from downtown to southern areas of San Angelo where the highway splits. U.S. Highway 277 continues south to Interstate 10, and U.S. Highway 87 continues southeast into the San Antonio metropolitan area.

The river corridor has been developed as natural parkland along almost the entire length of the CBD. This parkland is actively used and includes a paved walking trail, numerous hardscaped areas (i.e. fountains, decorative structures), picnic facilities, recreation equipment, and other pedestrian amenities. While commercial and residential structures line the banks, they are usually set back from the river and do not directly take advantage of the water features as is done in cities such as San Antonio and New Braunfels. There are, however, several public facilities located directly on the River, including: the River Stage, Celebration Bridge, EL Paseo de Santa Angela, and the Museum of Fine Arts. River Drive, a two-lane asphalt road, runs along the northern bank of the river in the CBD, providing excellent access to parks along the Concho River.

In 1990, the City's River Corridor Commission adopted the River Corridor Master Development Plan that formally established development guidelines and plans for the area. The River Corridor Commission is responsible for implementing the plan's development guidelines, through the Commission's routine review and approval of building construction in the designated River Corridor. A significant portion of the CBD is included in the river corridor. As a result, many of the ideas found in the River Corridor Master Development Plan are included in this plan.

LANDMARKS IN THE CBD

Due to the regional importance of San Angelo's CBD and its long history, numerous landmarks exist in the CBD, which are significant for a variety of reasons. Some of the most prominent of these landmarks are listed in **TABLE DE-2: PROMINENT LANDMARKS.**

DOWNTOWN ENHANCEMENT PLAN

The Downtown Enhancement Plan (**FIGURE DE-3: DOWNTOWN ENHANCEMENT PLAN**) is the graphical embodiment of many of the goals and objectives for the CBD. This plan provides a visual tool for taking action on behalf of the Central Business District.

TABLE DE-2
PROMINENT LANDMARKS
San Angelo Comprehensive Plan
San Angelo, Texas

Landmark Name	Type	Location
Tom Green County Courthouse	Public Building	Northwest Corner of Irving Street and Beauregard Avenue
City of San Angelo City Hall Plaza	Complex of Public Buildings	North of College Avenue/Irving Street intersection
Cactus Hotel Building	Historic, multi-story building which houses a variety of meeting/entertainment venues as well as offices and shops	Northwest corner of Chadbourne Street and Twohig Avenue

TABLE DE-2 (Page 2 of 3)
PROMINENT LANDMARKS
San Angelo Comprehensive Plan
San Angelo, Texas

Landmark Name	Type	Location
Federal Building	Public Building	Southwest corner of Chadbourne Street and Twohig Avenue
River Stage	Outdoor Amphitheater	South Bank of Concho River, between Chadbourne Street and Oakes Street
El Paseo de Santa Angelo	Outdoor plaza linking several public structures including the River Stage, San Angelo Museum of Fine Arts, and the Santa Fe Depot	Several city blocks on the south side of the North Concho River, between Chadbourne Street and Oakes Street
San Angelo Museum of Fine Arts	Visual arts museum and education center	Avenue A, between South Chadbourne Street and Oakes Street (south bank of North Concho River)
Shannon Medical Center	Complex of medical facilities	Several city blocks roughly located between East College and Beauregard Avenues, east of Chadbourne Street
Municipal Golf Course at Santa Fe Park	Public golf course and recreational area	Along the north bank of the Concho River, on the west side of the CBD, near West Beauregard Avenue
Judge Edd B. Keyes Building	Public building which includes main library and administrative offices	West Beauregard Avenue between Irving and Randolph Streets
San Angelo Convention Center	High capacity, city-owned convention facility	Just east of CBD, on Rio Concho Drive
Fort Concho Museum	Historic military outpost	South of Concho River, east of Oakes Street, generally between Henry O. Flipper Street and West Washington Drive
Sunken Gardens Park	Outdoor public gardens and park	Along the south bank of the Concho River, west of Abe Street
U.S. Post Office	Public building	Northwest corner of Abe Street and Harris Avenue
Concho Avenue Block One	Historic city block which was location of San Angelo's first businesses	Concho Avenue east of South Chadbourne Street
Santa Fe Depot	Historic public building / transit terminal	Hardeman Pass between South Chadbourne and Irving Streets
Santa Fe Crossing	Historic public building / senior activity center	Directly east of South Chadbourne Street adjacent to Texas Pacifico Railroad
State of Texas Services Center	Public building	Southeast corner of Henry O. Flipper and South Oakes Streets
Tom Green County Justice Center	Public building (including jail)	Northwest corner of North Irving Street and West Harris Avenue
Former Town House Hotel Bldg.	Vacant hotel building	Southeast corner of South Chadbourne Street and East Concho Avenue
Former Roosevelt Hotel Bldg.	Vacant hotel building	Northeast corner of North Chandourne Street and East College Avenue
Former Hemphill Wells Bldg.	Vacant department store	Southeast corner of South Irving Street and West Beauregard Avenue

TABLE DE-2 (Page 3 of 3)
PROMINENT LANDMARKS
San Angelo Comprehensive Plan
San Angelo, Texas

Landmark Name	Type	Location
Former Central National Bank Bldg.	Vacant office building	Northeast corner of South Chadbourne Street and East Beauregard Avenue
Trimble-Batjer Insurance Bldg.	Office building	Southwest corner of South Chadbourne Street and West Twohig Avenue
One East Twohig	Office building	Southeast corner of South Chadbourne Street and East Twohig Avenue
Spur Building	Office building	Northeast corner of South Irving Street and West Twohig Avenue
Wells Fargo Bank Bldg.	Office building	Northeast corner of South Irving Street and West Beauregard Avenue
Beauregard Tower	Office building	Southeast corner of South Irving Street and West Beauregard Avenue
Continental Bldg.	Office building	South Chadbourne Street between West Harris and Beauregard Avenues
Texas Theatre	Vacant movie theatre	West Twohig Avenue between South Chadbourne and Irving Streets
Central Fire Station	Public building	Northeast corner of North Koenigheim and West First Streets
Police Department and Municipal Court	Public buildings	Southweast corner of South Emerick Street and East Beauregard Ave.
Edison Junior High School	Public school campus	North Magdalen Street between East College Avenue and East Third Street
Rio Concho Manor	Retirement center	Rio Concho Drive
Emmanuel Episcopal Church	Church	Southwest corner of South Randolph Street and West Harris Ave.
First Baptist Church	Church	Southwest corner of South Oakes Street and East Harris Ave.
First Christian Church	Church	Southwest corner of North Oakes Street and East College Avenue
First Methodist Church	Church	Southwest corner of South Oakes Street and East Beauregard Ave.
First Presbyterian Church	Church	Southeast corner of North Irving Street and West College Avenue
Sacred Heart Cathedral	Church	Northwest corner of South Oakes Street and East Beauregard Ave.

Source: Wilbur Smith Associates

FIGURE DE-3
DOWNTOWN ENHANCMENT PLAN
San Angelo Comprehensive Plan
San Angelo, Texas
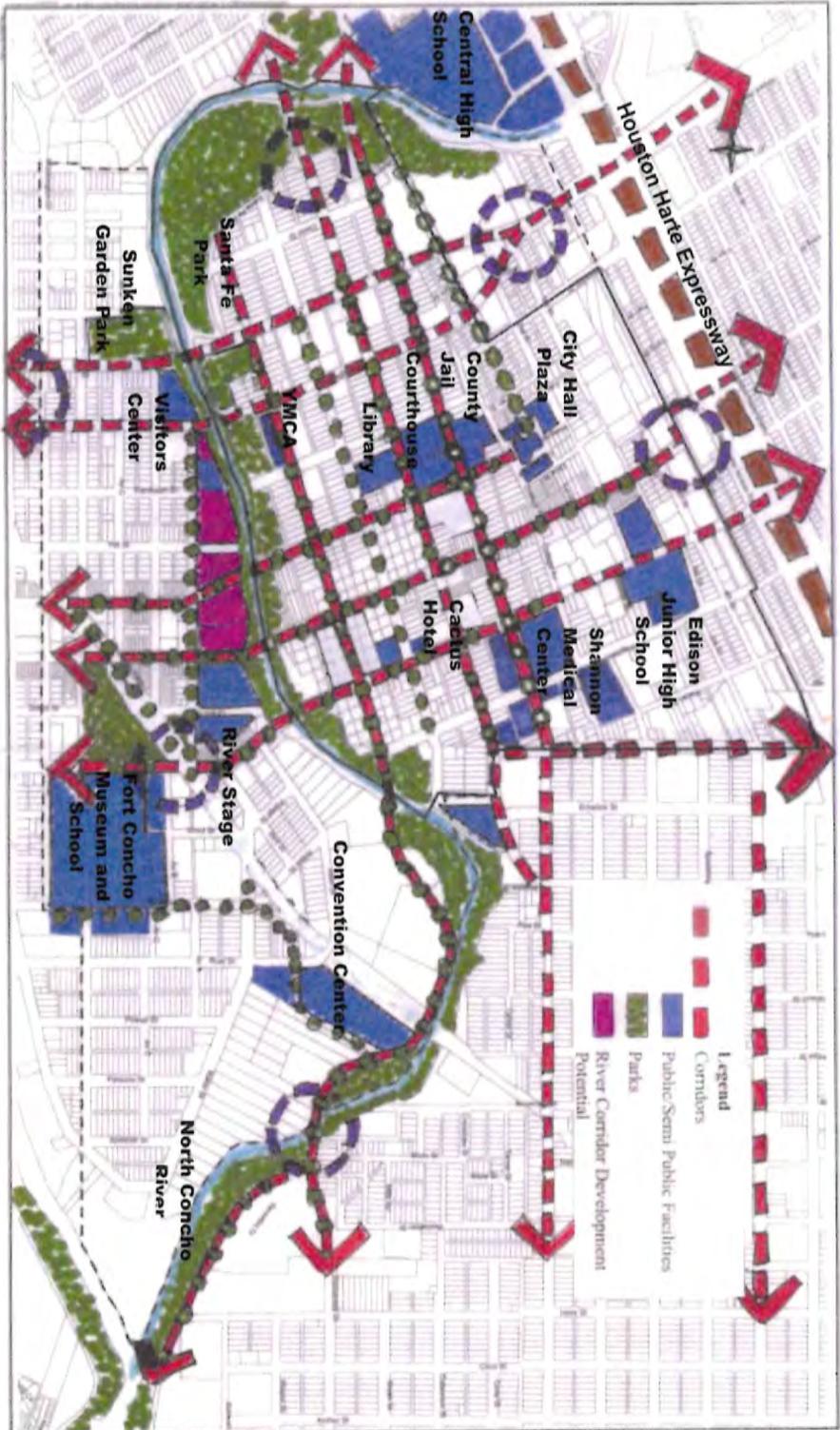
IMPLEMENTATION

Planning is a continuous process. Completion of the Comprehensive Plan is by no means an end in itself. A comprehensive plan must be constantly scrutinized to ensure that its goals, objectives, and recommended actions continue to reflect changing community needs and attitudes. Above all, it must be used.

The purpose of the implementation element is to provide direction and recommendations for implementing the Comprehensive Plan and for continuing planning. This element summarizes major actions from each of the plan elements that are designed to aid in implementing the goals of the San Angelo Comprehensive Plan.

THE CONTINUOUS PLANNING PROCESS

Circumstances will continue to change in the future, and the San Angelo Comprehensive Plan will require modifications and refinements to be kept up-to-date and current. Some of its proposals will be found unworkable and other solutions will continue to emerge. Needed refinements and changes should be carefully noted and thoroughly considered as part of **Annual Plan Updates** and **5-Year Major Plan Revisions**. As change occurs, however, San Angelo's vision should remain the central theme and provide a unifying element. The plan's importance lies in the commitment of citizens to agree on San Angelo's purpose for the future, and to apply that consensus in continuing efforts that focus on betterment of the community.

Review by the Planning Commission

The Planning Commission should review the status of efforts to implement this Comprehensive Plan, on a quarterly basis. Significant actions and accomplishments during the past quarter should be recognized as well as recommendations for needed actions and programs to be developed in the coming year. Compiling quarterly reviews into an annual report on the Comprehensive Plan's implementation status, by the Planning Commission, should be coordinated with the City's annual budget process so that the Commission's recommendations will be available early in the budgeting process.

Annual Plan Amendment Process

Annual plan amendments will provide opportunity for relatively minor plan updates and revisions such as changes in future land use designations, implementation actions, and review of plan consistency with ordinances and regulations. A plan amendment should be prepared and distributed in the form of an addendum to the adopted Comprehensive Plan. Identifying potential plan amendments should be an ongoing process by the Planning Commission and City staff throughout the year. Requests for plan amendments can also be submitted by citizens, property owners, community organizations, and other

governmental entities. Proposed plan amendments should be reviewed and approved by the Planning Commission. Plan amendments should be adopted in a manner similar to the plan itself. This process includes public hearings and consideration of action by both the Planning Commission and City Council. Plan amendments should be adopted by resolution.

Major Updates of the Comprehensive Plan

Major updating of the Comprehensive Plan should occur every five years. These updates will ensure renewal and continued utility of the Comprehensive Plan for use by the City officials and staff. Annual plan amendments from the previous four years should be incorporated into the next major plan update. Plan updates will be a significant undertaking which involves City officials, departments, a steering committee and citizens. Consultant services may be utilized if needed. The result of major plan updates will be a new comprehensive plan for the City, including new identification of up-to-date goals, objectives, policies, and implementation actions.

CITIZEN PARTICIPATION IN CONTINUING PLANNING

San Angelo's citizens shared in developing the plan's goals, objectives and proposals by participating in public meetings and planning workshops. The many ideas and comments contributed by citizens during the plan's development were incorporated and shaped the resulting proposals and recommendations. Similarly, citizens should continue to be involved in implementing and maintaining the Comprehensive Plan. The Planning Commission, advisory committees, community workshops, town meetings, public forums, newsletters, media releases, and public notices should be utilized to inform and involve citizens in continuing planning. Methods and activities for public participation should be carefully chosen and designed to achieve meaningful and effective involvement.

IMPLEMENTATION PROCESS

The Comprehensive Plan is the City's guide for government officials and citizens when making decisions about land use and development. The Comprehensive Plan is *comprehensive* in that it identifies the myriad of factors related to future community growth. The Plan analyzes relationships among these factors, proposes what needs to be done about them, and recommends goals and objectives and actions for using the City's resources in the most efficient and effective ways.

An aggressive, yet realistic program for implementing the Comprehensive Plan should be established by the Mayor, City Council, and the Planning Commission, maintained by the staff, and then used by the entire community. Implementation tools include the Zoning Ordinance, Subdivision Regulations, the Capital Improvement Program and annual budget. These tools should be reviewed and updated periodically so that the goals, objectives, and policies of the Comprehensive Plan are put into action.

Plan implementation includes using the Future Land Use Plan as a general guide for decision-making in zoning cases and subdivision plat review. This practice is to ensure that development and redevelopment are consistent with the policies of the City's Comprehensive Plan. Review and revision of the City Code for

updating, strengthening and streamlining the Zoning Ordinance and Subdivision Regulations will be a plan implementation activity. Dedicating needed rights-of-way for street and highway improvements, in accord with the City's Thoroughfare Master Plan, will be another implementation activity. Studies for drainage basins are critical to protection of existing and future development. Water and sewer needs and improvements must be addressed on a yearly basis. Parks development and community facilities improvements will be needed as well.

Perhaps the most important method of implementing San Angelo's Comprehensive Plan comes through a day-to-day commitment by elected and appointed officials, City staff members, and citizens of the community. The Comprehensive Plan must be perceived as a useful and capable tool in directing the City's future. The Land Use Plan and Thoroughfare Plan and other key elements of the Comprehensive Plan should be displayed and available for ready reference by public officials, City staff, and citizens. The Comprehensive Plan should continually be referenced in planning studies and zoning case reports as well as informal discussion situations.

MAJOR PLAN ACTIONS

A series of proposed implementation actions were developed after reviewing the goals and objectives described in the plan elements. These are specific steps that should be taken to better implement the plan. These actions were synthesized by analysis of goals and objectives. Some proposals may call for the formation of a new committee, or identify the need for a specific study. In addition to such "new" initiatives, the continuation of ongoing City policies and programs is recommended in many instances.

The following proposed actions are intended to aid in implementing the plan and are described in each of the plan elements. While the proposed implementation actions are not legally binding like the zoning code and subdivision regulations, they are important to the plan's successful implementation, and are a vital supplement to its goals and objectives.

Environmental Resources
- Promote the use of floodplains as natural areas and preserves for wildlife, vegetation, parks, and as open space buffers between incompatible land uses.
- Identify and acquire areas of significant value to the community.
- Continue to pursue open space preservation and/or parkland acquisition along the river corridor, to minimize development impacts in areas immediately adjacent to the river.
- Continue to provide public access to area waterways through the use of parks, trail networks, public piers and overlooks, and canoe access points.
- Explore conservation easement approaches for long-term preservation and potential public access while maintaining private land ownership.
- Encourage "grandfathered" industries to act voluntarily to meet contemporary air quality permitting requirements, and support continued voluntary emissions reductions.
- Promote car-pooling and alternative transportation, including more walking and bicycling opportunities.

- Maintain an efficient roadway and traffic signalization system to improve traffic flow and reduce vehicle idling time.
- Consider potential environmental impacts when conducting industrial recruitment and economic development efforts.
- Inform the public about the health and economic benefits of advanced vehicle inspection and maintenance requirements and other new air quality measures.
- Control stormwater runoff through limiting impervious cover, increasing vegetation and through the use of retention/detention ponds.
- Continue strict enforcement of pollution prevention controls at construction sites, to minimize contaminated storm runoff to area streams.
- Maintain public wastewater treatment facilities at the highest standard and address effluent problems to limit adverse impacts on area receiving waters.
- Consider enrolling San Angelo in the TNRCC's Clean Cities 2000 program, which challenges local governments to take a comprehensive and action-oriented approach to environmental enhancement.
- Conduct an informal study to document problem locations where litter regularly accumulates and/or where illegal dumping activity is concentrated and persists despite enforcement efforts.
- Consider acquiring excess rights-of-way where litter is a problem, to install landscaping or other enhancements that ensure more frequent cleaning and maintenance.
- Encourage and support private and/or volunteer initiatives to clean up and beautify vacant properties.
- Enforce ordinances regarding property maintenance and appearance.

Transportation

- Adopt the Thoroughfare Plan of the San Angelo Comprehensive Plan and periodically consider amendments as necessary.
- Utilize the Thoroughfare Plan during the subdivision and site development review process, to ensure provision of continuous streets between adjacent developments.
- Acquire future rights-of-way, through dedication or other means, for extending collector and arterial roadways that are proposed on the Thoroughfare Plan.
- Review all subdivision plats and proposed developments to ensure conformance with the Thoroughfare Plan.
- Identify and upgrade substandard streets located at the urban fringe, to accommodate increasingly urban levels of traffic.
- Identify and widen narrow, rural roads in urbanizing areas.
- Improve rough rail crossings over city streets.
- Support and fund the development of Loop 306 on the east side of San Angelo.
- Continue to participate with TxDOT in the feasibility study of the Ports to Plains Corridor through Texas, and evaluate alternative corridors through the City.
- Implement needed street extensions and roadway improvements.
- Coordinate (among adjoining commercial properties) shared driveway openings onto arterial streets.
- Consider adopting access management regulations for arterials and other busy roadways pertaining to the design, construction, location, width, spacing, offset and potential coordination of driveways, street connections, medians and median openings, auxiliary lanes, on-street parking, traffic signals,

turn lanes, and pedestrian and bicycle facilities.

- Consider traffic impacts on affected transportation facilities during review of zone changes and subdivision applications, with developer participation in improvements needed to maintain an adequate level of service.
- Require traffic impact studies and mitigation actions for large-scale development proposals.
- Conduct a study of traffic delays and parking conditions around the elementary schools, to determine alternative management strategies.
- Maximize transit service to urban residents and workers, with the funds available for transit subsidy.
- Increase transit service during the evenings and on weekends.
- Promote citizen and business awareness of existing and new public transportation opportunities.
- Construct a comprehensive pedestrian and bicycle system to serve both recreational and alternative transportation needs, including an enhanced sidewalk network and off-street paths and trails accessible to all areas of the community and connecting neighborhoods, schools, parks, shopping and employment centers.
- Initiate pedestrian/bicycle system planning to ensure advance acquisition and/or dedication of preferred routes, including coordination with owners of utility easements and other potential shared-use corridors.
- Continue to pursue Federal and State financial assistance grants for pedestrian and bicycle transportation projects, such as transportation enhancement funds under the Transportation Equity Act for the 21st Century (TEA-21).
- Extend the existing bikeway along Southland Boulevard and develop a comprehensive bikeway system throughout San Angelo.
- Develop a bicycle path for recreation and alternative (non-motorized) transport along the Red Arroyo corridor.
- Explore and analyze the wide variety of ways (structural and non-structural) to make pedestrian travel more convenient and safe, for both recreational walkers and as alternative transport.
- Require commercial development to include sidewalks.
- Work with TxDOT and Tom Green County to ensure that design of bridges, overpasses, retaining walls and other improvements includes consideration of visual impact and utilizes design features; materials and landscaping that will enhance the aesthetic appearance of those structures.
- Plan and acquire rights-of-way for thoroughfares to include open space areas and buffer zones.
- Expand commercial air service from San Angelo to additional "hub" airports.
- Improve public transportation opportunities, to and from the airport, through the use of taxis and shuttles.
- Improve and enhance the appearance of passenger airport facilities.
- Improve access to San Angelo Regional Airport by providing alternative routes to the airport.

Land Use
- Monitor the changing allocations of existing land uses in relation to the ratios used to meet land use goals and objectives of this Comprehensive Plan.
- Review and update San Angelo's zoning map and ordinance periodically to discourage mixing of incompatible uses.

- Develop strategies for encouraging in-fill development and redevelopment, such as flexibility in development regulations, exemption of development fees, and grants.
- Utilize financial and economic incentives to encourage adaptive use of vacant or underutilized buildings in San Angelo.
- Continue to provide public access to the Concho River Corridor and Lake Nasworthy through parks, trail networks, public piers and overlooks, and boat access points.
- Encourage the development and redevelopment of quality off-base housing in the southeast area of San Angelo.
- Concentrate commercial development in clusters at major intersections and other appropriate locations as opposed to "strip" development.
- Review existing zoning districts and designations to identify needed revisions to support and encourage viable commercial areas.
- Consider potential adverse regulatory constraints that may discourage the location of certain desired uses such as hotels/motels and restaurants downtown. Identify positive incentives or public/private solutions that may be needed to attract specific desired uses such as a hotels/motels and restaurants downtown.
- Address issues related to the transition of older homes into offices, including parking and compatibility with surrounding uses.
- Provide information and assistance to homeowners for correcting code violations and substandard conditions.
- Explore the feasibility of utilizing financial incentives such as tax abatement and fee waivers to encourage rehabilitation or replacement of substandard units.
- Pursue grant opportunities or programs for housing rehabilitation.
- Enforce city codes related to property maintenance, environmental health and sanitation.
- Support establishment of neighborhood associations involved in maintenance of neighborhood facilities and amenities.
- Continue expanding and promoting "city clean up" programs to encourage maintenance and upkeep of neighborhoods and business districts.
- Consider creating a recognition program that publicly acknowledges residential and business property owners for their role in enhancing the visual quality and appearance of San Angelo.
- Encourage and support private initiatives to landscape and beautify vacant lots or underutilized parcels.
- Conduct a property and building condition survey to identify priority parcels or structures. Work with owners to bring parcels into conformance with existing codes, including landscape, signage, etc.

Annexation

- In accordance with Senate Bill 89 from the Texas legislative session in 1999, prepare a 3-year annexation plan to identify targeted areas, if any, for city-initiated annexation.
- Conduct a fiscal impact analysis to weigh projected costs of providing municipal services to future development areas against anticipated future revenues to be generated by land development.

Utilities

- Further develop a dependable, long-range water supply.

- As required by the TNRCC, the City should continue to measure quality of water delivered.
- Enforce the current TNRCC requirements for water distribution systems and the most recent plumbing code.
- Expand the daily pumping capacity of the water treatment plant.
- Add elevated storage capacity to meet TNRCC's requirement of 100 gallons of elevated storage for every 2,500 water connections.
- Implement recommended improvements for creating lower and upper pressure planes as outlined in the Water Distribution System Master Plan Update.
- Periodically conduct safety inspections of pumping and water storage facilities in San Angelo's water distribution system.
- Conduct periodic flushing of water distribution lines with special attention to dead-end lines.
- Adopt a code requiring that all new construction and remodeling incorporate water saving devices such as low-flow toilets and showerheads. Periodically review and update this requirement.
- Implement a system of credits for water conservation.
- Insert a mailer in the water bill, highlighting benefits of water conservation.
- Respond quickly to leaks and breaks in the water distribution system.
- Implement water conservation strategies recommended in the Region F Water Conservation Plan.
- Evaluate the existing wastewater collection system, to determine infiltration problem areas.
- Evaluate the existing wastewater collection system to determine which portions require rehabilitation utilizing both in-house monitoring and contracts with private consultants for analysis of unusual problems.
- Check manholes for structural problems and locations of lids relative to inundation during periods of rainfall. Inflow preventers for lids and grouting of cracks should continue to minimize inflow to the sanitary sewer system.
- Use treated effluent to irrigate golf courses and seek other uses in public and private areas of the City, such as cooling water.
- Continue to use the most current treatment technology and periodically evaluate whether additional treatment would make wastewater effluent more amenable to beneficial reuse.
- Monitor sewage flow into the plant and respond quickly to identify causes of variation in its chemical composition.
- Require pretreatment of certain industrial waste before it is discharged into the municipal system.

Community Facilities
- As the population continues to grow, periodically review staffing needs of the Police Department, and hire additional staff to accommodate growth and increased calls for service.
- Evaluate the feasibility of acquiring new space or renovating existing facilities to provide additional office space for the Police Department.
- Maintain an inventory of equipment used for public safety and other municipal services. Identify replacement and acquisition needs in advance, to ensure appropriate budgeting.
- Support regular software and equipment upgrades ensuring the Police Department has state-of-the-art communications technology. This may include purchasing a vehicle locater system, a mobile video recording system and a replacement for the existing radio system.

♦ Review Fire Department staffing needs, and hire additional employees as needed.

♦ Regularly review service areas and response times for firefighting and emergency medical services. Construct additional fire stations in appropriate locations and/or relocate fire stations to more appropriate locations.

♦ Support regular technology and equipment upgrades.

♦ Review and evaluate all options for housing municipal administrative functions, ensuring adequate space for current and future staffing needs.

♦ Evaluate the feasibility of a new city hall facility designed to house departments in an efficient way that would increase public access to local government, possibly providing a "one-stop shopping" environment for citizens.

♦ Address handicapped access to City buildings and facilities as needed, per requirements of the Americans with Disabilities Act.

♦ Continue to study the possibility of remodeling or building a new Convention Center/Exhibit Hall facility.

♦ Construct a maintenance facility in the Lake Nasworthy area, to be used by the Public Works Department.

Downtown Enhancement

♦ Enhance the historic diversity and high-density urban character of existing architecture in San Angelo's CBD.

♦ Improve the appearance of public buildings through distinctive architecture.

♦ Demolish run-down buildings that cannot reasonably be rehabilitated.

♦ Improve landscaping, especially along roadway medians. Encourage use of xeriscape methods.

♦ Resurface streets where necessary.

♦ Improve appearance of parking lots through increased setbacks (where feasible) and landscaping.

♦ Create visual connections to the Concho River Corridor.

♦ Install special sidewalk paving treatments such as stone or brick pavers.

♦ Study various financing mechanisms for CBD improvements such as public improvement districts, tax increment financing districts, municipal management districts, transportation enhancement funds, Texas Parks and Wildlife funds, tax abatements, hotel occupancy taxes, and other programs and incentives.

♦ Consider performing an in-depth urban design/architectural study for downtown.

♦ Encourage public art installations in the downtown area, including murals on buildings and sculpture.

♦ Visually "connect" various landmarks in the CBD through signage, landscaping, pedestrian facilities, and other enhancements.

♦ Relocate utilities underground wherever possible.

♦ Install decorative entrances to parks.

♦ Install vertical landmarks such as flags or banners along roadways.

♦ Install decorative themed signage that gives directions to important landmarks and public parking facilities.

♦ Locate decorative gateway signage at key entry points into downtown.

- Install public restrooms in areas of high pedestrian traffic, such as along Concho Avenue and near the North Concho River.
- Install attractive street furniture as pedestrian amenities at key points within downtown.
- Install directional signage and maps.
- Consider locating more transit stops downtown.
- Construct more parking including publicly owned common parking areas.
- Encourage shared parking agreements among churches, businesses, government institutions, and other major downtown land uses.
- Encourage location of additional entertainment/recreational establishments in CBD, such as sidewalk cafes, theaters, bakeries, coffee shops, and nighttime entertainment venues. Consider re-use of the Texas Theater for these purposes.
- Encourage an appropriate amount of commercial use along the riverfront, such as restaurants and entertainment venues.
- Encourage available municipal incentives (such as streets, sidewalks, lighting and convenient parking for automobiles) to attract additional retailers, restaurants, lodging and entertainment activities to downtown San Angelo.
- Encourage more downtown events similar to those currently held downtown.
- Continue support of the San Angelo Museum of Fine Arts.
- Locate additional areas for pedestrian plazas and public gathering places in a central downtown area.
- Provide public parking garages with retail at the street level.
- Consider the feasibility of mixed-use housing/commercial developments in CBD, such as retail with housing on the second floor or loft-style development.
- Consider the feasibility of high-quality town home developments in the CBD area.
- Evaluate the opportunities to revitalize neighborhoods in or near downtown through reinvestment in public infrastructure and providing assistance for housing rehabilitation.
- Study the possibility of a designated national historic district.
- When feasible, rehabilitate historical structures that are in disrepair. Only preserve what can *reasonably* be preserved.
- Modify building codes and other regulatory mechanisms so that they do not unreasonably hinder historical preservation efforts.
- Enforce codes and regulatory mechanisms necessary to reasonably ensure public safety, circulation and the integrity of public right-of-way.
- Encourage historical architectural themes, where appropriate.
- Encourage quality housing downtown, to insure a customer base for retail businesses.
- Encourage job-training programs that create the skilled workers that company's desire.
- Promote programs to assist in the retention of existing businesses.
- Consider the master plans of Shannon Medical Center in planning for downtown.
- Help facilitate the YMCA's plans for new building construction downtown.
- Improve image of downtown as a tourist destination with attractions such as more museums, entertainment venues, hotels, restaurants, and unique shops.

- Remodel the convention center and create other moderate to large meeting places downtown.
- Make sure a modern communications infrastructure is in place, such as digital communication lines.
- Promote cooperation between various groups concerned with downtown issues.
- Encourage a diverse range of industries, focusing on those that provide better salary opportunities for San Angelo's residents.
- Focus on attracting "back office" support businesses such as telecommunications and Internet companies.
- Market particular locations such as the Nathan's building, Texas Theater, old Central National Bank building on North Chadbourne Street, Cole's Army Surplus, Town House Hotel, Harry's Food Store building, and vacant restaurants on the river.
- Consider a variety of incentives for companies to locate downtown, such as tax abatement, low interest loans, relaxed permitting requirements, expedited City approval processes, and special districts.
- Study successes of other cities and identify innovative programs that can be applied in San Angelo.
- Consider creation of an economic development position with the City of San Angelo.
- Support and expand the work of the San Angelo River Corridor Commission and the "River Corridor Master Development Plan."
- Enhance visual and pedestrian linkages to the North Concho River.
- Continue efforts to improve the water quality in the North Concho River.
- Consider limited commercial development that takes advantage of river amenities.

CAPITAL IMPROVEMENT PROGRAM

A Capital Improvement Program (CIP) is a five-year planning process that has a direct link to the City's annual budget and appropriation cycles. The City's annual capital budget puts the CIP into action. The first year of the Capital Improvements Program becomes the basis for the capital budget for that fiscal year, and the remaining four years are the long-term capital programming document. The CIP is updated annually. The current year is eliminated and another year is added at the end, so that it will always be a five-year program.

The CIP process is a mechanism for analyzing the City's financial condition and projecting what it is likely to be in the near future. By undertaking a financial analysis as part of the CIP, the City is able to predict, with reasonable accuracy, its capacity to finance capital improvements after it has paid its basic operating expenses. Once this capacity has been identified, a fiscal program is developed. The financial analysis also estimates the impact that capital expenditures will have on the operating budget.

The San Angelo Comprehensive Plan is concerned with physical facilities and services as well as land use and population growth. The Plan provides guidance for capital project selection and assignment of priorities. The Capital Improvements Program, along with the zoning and subdivision ordinances and official maps, is a device for implementing the long-range comprehensive plan.

Capital improvements include facilities such as utility systems, public buildings, land acquisition, parks, streets and sidewalks, drainage, libraries and major equipment. These are items that may have a significant

impact on the community and are often too expensive to be financed in the annual operating budget. The distinction between a capital expenditure and an operating expenditure is not always precise. Capital projects tend to be relatively expensive and are often financed by borrowing. They are non-recurring, meaning they do not occur every year, and they usually have a life expectancy of more than a few years.

The Role of a CIP in Planning and Management

Preparation of a Capital Improvement Program involves difficult decisions. There are nearly always more worthwhile projects to consider than there are dollars to fund them. The CIP process must be well conceived and administered.

The City Council acts as the lead agency for drafting the capital improvements program, under the direction of the City Manager. The City Manager, or an appointee, should serve as the program coordinator and set general guidelines for program preparation. It is up to the program coordinator to keep the process moving. The program coordinator does not have to prepare the CIP but must be involved enough to see that the program guidelines are followed, that information and forms are disseminated and collected, that meetings are held as needed, that deadlines are met, and that City Council gets periodic progress reports. Coordination and cooperation are critical to the success of the CIP.

The CIP should be prepared within guidelines approved by the City Council. These guidelines may address such concerns as setting schedules; defining a capital project; setting a budget for program preparation, including use of private consultants; appointing a citizen advisory committee; determining the extent of public participation; and establishing any other desired parameters. The guidelines should be clear enough to prevent confusion and delay, yet not so structured that they inhibit flexibility and innovation.

Recommended Steps For Establishing A CIP:

1. Initiate program.

2. Establish procedures.

3. Inventory existing capital facilities.

4. Establish criteria for capital expenditures versus operating expenditures.

5. Determine status of previously approved capital projects.

6. Prepare project requests.

7. Perform financial analysis and prepare financial program.

8. Review project requests.

9. Prepare and review CIP proposal.

10. Adopt CIP.

11. Adopt and monitor capital budget.

12. Review and revise CIP and capital budget.