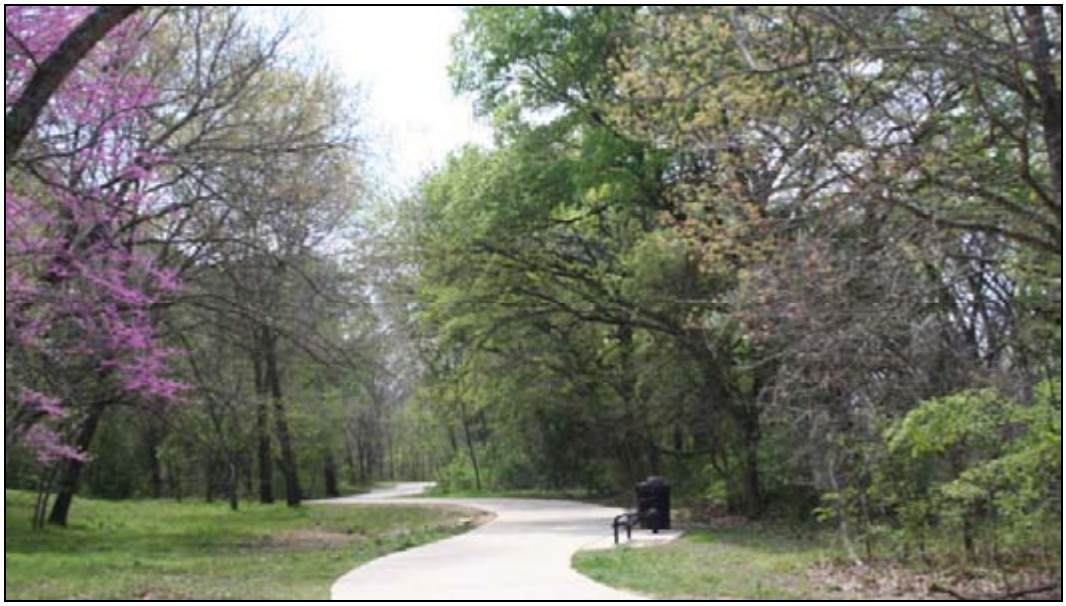

City of Mansfield

2009 Parks, Recreation, Open Space and Trails Master Plan

December 2009

Prepared with the assistance of Halff Associates, Inc.

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Statement of Purpose

This document is a tool and guideline for planning and grant application purposes only. Projects will be completed when and if funding is available; all appropriate projects will be presented to City Council and the Mansfield Park Facilities Development Corporation (MPFDC) for their future prioritization and approval prior to project implementation.

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Mike Leyman – Place 2
Greg Kunasek – Place 3
Darryl Haynes – Place 4
Mayor Pro Tem Cory Hoffman – Place 5
James Rudnicki – Place 6
Larry Broseh – Place 7

Mansfield Park Facilities Development Corporation

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Wendy Collini – Vice President
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Chapter 1

Introduction

Mansfield is a growing community located in southern Tarrant County with an estimated population of approximately 62,000 in 2009. It is estimated that Mansfield will eventually reach a build-out population of over 134,000. The city has a history dating back to the mid-1800s and a stable yet growing economic base revolving around manufacturing, education, and healthcare. The city enjoys first-rate schools and central regional positioning in the Dallas/Fort Worth Metroplex. In 2007, Money Magazine and CNN/Money named Mansfield as one of the Best Places to Live in America; being one of only six Texas cities to be on this list and ranking 83rd out of 100. It is in this context of a growing, prospering city and a national economic recession that the City of Mansfield (hereafter, the City[1]) is taking time to examine and analyze parks, recreation, trails, and open space needs for the short-term and long-term future through the creation of this Parks, Recreation, Open Space and Trails Master Plan.

PURPOSE OF A MASTER PLAN

All cities practice planning – the act of understanding current conditions and trends and developing and applying strategies to influence the development of a district, city, or region. This planning takes many forms – transportation planning, zoning, water resources planning, etc. – and results in actions and changes to cities that impact the way people live, travel, and work. While all adopted planning efforts impact citizens

[1] When capitalized, "City" refers to the City of Mansfield as a governmental organization while the lower case "city" refers to the physical urbanized area.

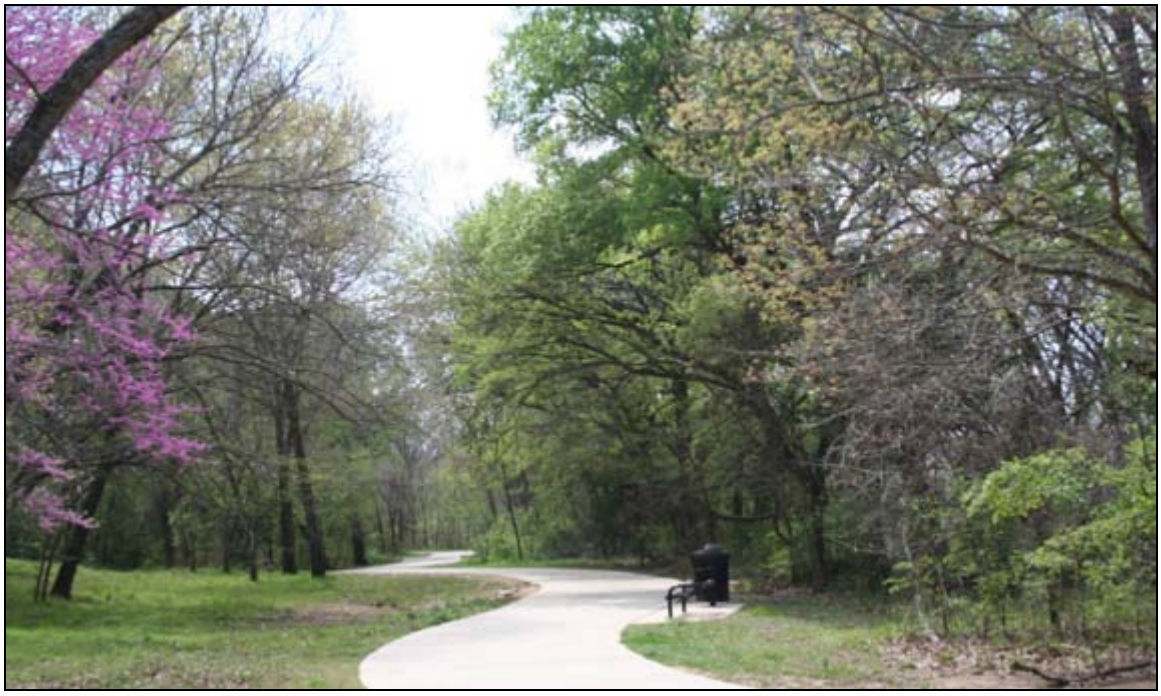
significantly, it is the work performed in Parks, Recreation, Open Space and Trails master planning that is often most recognizable by citizens.

The purpose of the Mansfield Parks and Recreation Department (PARD) is to enhance the quality of life within the community for all of the City's residents through the provision of places and opportunities for people to recreate and be active. Mansfield PARD strives to achieve this purpose through developing parks, athletic facilities, and cultural amenities that directly impact the lives of citizens. Looking around the community, one might notice the influx of new playground equipment, sidewalks, and shade pavilions in the City's parks. Many of these new additions were funded by the Mansfield Park Facilities Development Corporation (MPFDC) – a corporation whose members are appointed by the City Council and whose sole purpose is the funding, development, and management of parks, recreation facilities, trails, and open space. Specifically, the MPFDC has been instrumental in the development of the Walnut Creek Linear Park – an icon for the community and a project that was instrumental in helping Mansfield win the Gold Medal Award for Excellence in Parks & Recreational Management (for cities of 50,000 to 100,000 population) from the Texas Recreation and Parks Society. It is through these and other projects that Mansfield PARD is helping to improve the quality of life in the City and make Mansfield the standard for excellence for parks and recreation.

The Parks, Recreation, Open Space and Trails Master Plan, sponsored by the MPFDC in conjunction with the Mansfield Parks and Recreation Department (PARD), was developed with the aid of a team of consultants led by Halff Associates of Richardson, Texas (hereafter, Planning Team). Through the master planning process, the Planning Team went to the public to gain input on what is important in Mansfield. Information gathered from these meetings was combined with the mission of the MPFDC and the Mansfield PARD to develop a roadmap for park development. Through the implementation of the recommendations presented in this Master Plan, the City will take considerable steps to improve the quality of life, image, and character of Mansfield over the next five to ten years. Specifically, the 2009 Parks, Recreation, Open Space and Trails Master Plan:

- Identifies the need for additional community facilities, including parks;

- Evaluates the spatial location of parks, recreation, and cultural facilities within the City and recommends measures to ensure a balanced distribution of facilities within the City;
- Guides the MPFDC and City Staff in acquiring land to meet current and future park, open space, and facility needs;
- Recommends and prioritizes key improvements so that the most significant deficiencies are addressed as quickly as possible;
- Guides City Staff and City leaders in determining where and how funding should be allocated over the next five to 10 years;
- Identifies opportunities and recommends appropriate measures for improving quality of life within the City; and
- Provides a plan which is consistent with the funding and grant requirements for the Texas Parks and Wildlife Department.



THE MASTER PLANNING PROCESS

Parks, Recreation, and Trails master planning is an involved process that requires the coordinated effort of City Staff, City Officials (MPFDC and Council), and the Planning Team to develop a unified vision for the future of parks, recreation, open space, trails, and other related items and concepts in the City. The Master Planning process is iterative in several ways; for one, the Master Planning process typically occurs once every five to ten years. This is both to address the changing demographics, size, and character of the City and to meet regulations and grant requirements. Another way that the process is iterative is that while there are many components of the Master Plan (described below) that appear to be linear, they in fact impact each other in a cyclical fashion. Finally, the Master Planning process is iterative in that once it is complete, it is the responsibility of the City Staff and the MPFDC to continually modify the recommendations and

implementation plan to reflect the every-changing needs of the community and to coordinate the Master Plan with the MPFDC's business plan.

Components of the Master Plan

The Parks, Recreation, Open Space and Trails Master Plan for Mansfield includes seven primary components. Each of these impacts the others and each can be seen as an integral part of the Master Plan as a whole. The individual components are:

- The Context of the City including the background conditions of the City itself, the history of the community, what has changed in Mansfield since the 2002 Parks, Trails, and Open Spaces Master Plan, an analysis of the demographics and economic conditions of the City, and a description of current trends in parks and recreation.
- An analysis of Existing Conditions in the City. This section provides an overview of the existing conditions of the parks system in Mansfield and makes recommendations for the improvement and enhancement of each facility.
- Public Involvement is a core component to the master planning process. This component consists of a telephone-administered Citizen Attitude Survey, a series of Focus Group Meetings, and a Public Meeting. The summary of this input directly impacts the needs assessment.
- The Needs Assessment component of the Master Plan examines Standards-Based Needs (acreage standards and facility standards), Demand-Based Needs (derived from the public involvement process), and Resource-Based Needs (an examination of the natural resources and opportunities that impact the development of the parks system in Mansfield. Additionally, the need for additional hike and bike trails (beyond a simple mileage per population standard) is conducted.
- The culmination of the prior components leads to the creation of Goals and Recommendations for the parks system. These recommendations cover City policy and vision, parks and open space, recreation facilities, and operations and maintenance.
- A component for the Trails Master Plan follows and includes a more detailed look at the existing trails in Mansfield, the status of the existing Trails Master Plan (what has and has not been implemented successfully), and the demand for trails. Then, new trail corridors are recommended and recommendations are made for implementation strategies and trail design.
- Finally, Implementation strategies are discussed, needs and recommendations are prioritized, an Action Plan is developed, and recommendations for funding strategies and City policies and ordinances are made.

Master Plan Development Timeline

The following is a timeline of meetings and work sessions held during the development of the 2009 Parks, Recreation, Open Space and Trails Master Plan.

March 18, 2008 – City Staff and Consultant Team begin project

April 14, 2008 – Visioning Work Session with City Council & the Mansfield Park Facilities Development Corporation (MPFDC)

August 21, 2008 – Progress Update Presentation to the MPFDC

September 10-11, 2009 – Focus Group Meetings & Public Meeting

- Focus Group meetings included Senior Citizens, Mom's Club, Chamber of Commerce, Business Owners, Civic Groups, Mansfield ISD, Historical Society, Athletic Associations, and Arts Groups

January 15, 2009 – Staff Meeting

- Discussed potential Floodplain and Parkland Dedication Ordinance Revisions

March 12, 2009 – Staff Meeting

- Discussed potential Floodplain Ordinance revisions with Engineering Department
- Developed Vision ("Building on Success") and Goals

May 19, 2009 – Staff Meeting

- Presented findings and draft recommendations to Department Heads
- Discussed implications of the Floodplain Ordinance and Parkland Dedication Ordinance Revisions

June 2, 2009 – Staff Meeting

- Presented findings and draft recommendations to the City Manager, Assistant City Manager, and the MEDC
- Discussed the Floodplain Ordinance, Parkland Dedication Ordinance, Trails Master Plan, and Recreation Center

June 9, 2009 – Presentation of Revised Recommendations to the MPFDC

July 13, 2009 – Joint Work Session with City Council, MPFDC, and the Planning & Zoning Commission (P&Z)

- Presented the Draft Summary of the Master Plan, including revised recommendations, implementation plan, and all estimated costs
- Primary point of discussion was the Trails Master Plan

August 10, 2009 – Joint Work Session with City Council, MPFDC, and the P&Z

- Council, MPFDC, and P&Z discussed the Master Plan; staff and consultant were on-hand to answer questions
- Primary point of discussion was the funding implications of plan adoption. It was explained that adopting the Master Plan does not imply a commitment to fund all recommended improvements per any specific time frame – rather, it is the purpose of the MPFDC's business plan to identify annualized funding needs

October 29, 2009 – Presentation of the Revised Draft Master Plan to the MPFDC

- ***Plan approved by the MPFDC***

November 16, 2009 – Presentation of the Revised Draft Master Plan to P&Z

- ***Plan approved by P&Z*** (with a comment stating P&Z's disagreement with the recommended Parkland Dedication Ordinance revisions)

December 14, 2009 – Presentation of the Revised Draft Master Plan to the City Council

- ***Action tabled*** – Primary point of discussion was the funding implications of plan adoption. It was reiterated that Master Plan adoption does not imply a commitment to any specific funding actions.

January 11, 2010 – *City Council adoption of the Revised Draft Master Plan*

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Chapter 2

Context

IMAGE OF THE CITY

Parks, recreation, trails and open space play a significant role in portraying the quality and character of a city to its residents and to visitors. It is therefore important to consider the impact that the parks system has on the image that Mansfield conveys. Image is portrayed by a city through both the built environment (its man-made features such as buildings, streets, and parks) and the natural and cultural environment (including features such as creeks, prairies, vegetation, lakes, and rural and agricultural landscapes). The quality of a city's visual character relates to the way its features are not only respected and protected, but also **celebrated in everyday life**. Indeed, **natural features are a city's "gifts."** A city's image, like a parks system, is developed and cultivated over time.

The Built Environment

Mansfield is a well-established city having been incorporated over a hundred years ago in 1890. While Mansfield has an established, historic downtown with character, history, and uniqueness, it is also a quickly growing community with new development springing up continually. As such, the community has a wide range of building types, ages, and quality, though the majority of buildings in the city are good-quality and have been built since the 1990s (and many in the last five years). Overall, the city enjoys well built and maintained infrastructure including streets and public utilities which provide opportunities for beautified streetscapes and trail and open space connections.

Mansfield also has a growing parks system that revolves around the Walnut Creek Linear Park, which connects many of these parks via open space and a hike and bike trail. The Parks in Mansfield are attractive, well maintained, and for the most part very well designed. Such conditions have helped Mansfield to achieve its TRAPS Gold Medal Status as mentioned in Chapter 1.

The Natural & Cultural Landscape

While a city can build buildings and improve infrastructure to improve its image and physical appearance, the natural environment that a city is "born" with is not so easily improved. Mansfield, however, is blessed with many unique and beautiful natural features that help to improve the image of the city and define the structure of the City's

parks, open space, and trails system. The most visible and central natural feature in Mansfield is Walnut Creek, which flows west to east through the center of the city and roughly parallels Broad Street. Low Branch Creek also runs west to east, roughly parallel to and south of Walnut Creek. Both creeks feed into Joe Pool Lake.

As with most cities in North Texas, Mansfield has a strong agricultural past that can be witnessed by venturing to the southern and western portions of the city. The remaining agricultural land in Mansfield is an important cultural icon of the city's past. It should be remembered, however, that agricultural lands become the prime location for new development in the city and are thus in danger of disappearing completely.

Finally, one of the most recently discovered natural resources in Mansfield is the large quantity of natural gas that exists under the city (as well as much of Tarrant County) in the Barnett Shale – a geologic formation that is the largest onshore natural gas reservoir in the United States. While this formation was discovered in the 1980s, it is just now becoming economically viable to extract gas from it. The implications for the city's image are that gas wells are appearing across the city and will be constant fixtures in the city's landscape over at least the next five years. However, potential advantages to the construction of gas wells should be identified and explored.

BRIEF HISTORY OF MANSFIELD[1]

Julian Feild

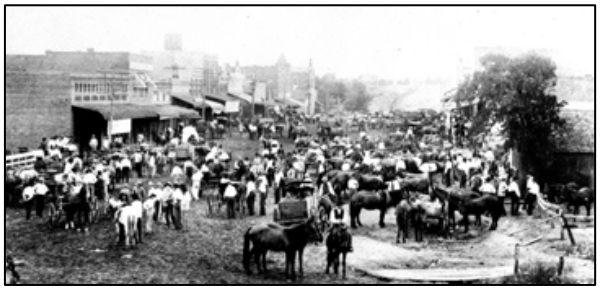
R.S. Man

Around 1850 Julian Feild met Ralph Sandiford (R.S.) Man, a miller, in Harrison County. In 1852 Man moved west of Fort Worth where he and a partner built a mill on the Clear Fork of the Trinity River. Man lived more than a year at the mill, which was both a sawmill for converting timber into lumber and a gristmill for converting wheat into flour and corn into meal. Soon after, a year-long drought caused the mill to fail and by 1854, both Man and Feild made their way to Fort Worth to find the fort being abandoned by the soldiers. Feild purchased a log cabin from a departing Army officer for he and his family. Feild soon began using his newly acquired cabin to sell general merchandise. Eventually the store served Fort Worth as a post office and Feild was appointed as the outpost's first postmaster in 1856.

Along the Trinity River, Man built another grist mill for grinding corn and wheat. The area had plenty of crops and businesses, which did well. However, continued drought dried up the water used to drive the mill.

In 1856, after the drought caused the mill to close, Feild purchased 540 acres of land on Walnut Creek and moved his family to this new area. When Man and Feild arrived at Walnut Creek, they found the beginnings of the Gibson community and the remains of an old horse-powered mill and a house on the land Feild had purchased.

Man and Feild built their own small mill just above the flood plain of Walnut Creek on Pond Branch. This began the economic opportunity for the community as local settlers were hired to cut timber, square logs and drag them to be used for the construction of the mill. Their mill soon became a popular spot for farmers to sell their wheat and corn or have it ground into flour and corn meal for their own use. The two partners realized the potential of the mill and expanded it into a three-



[1] Adapted from the 2002 Parks, Trails & Open Spaces Master Plan

story building built from locally kiln bricks. The two men wanted to have the best mill possible and converted it into steam-power, the first mill in Tarrant County (1859). The prospering community that grew up around the Man and Feild mill took on the name "Mansfeild", a combination of the founders' names. Repeated misspellings over the years resulted in the acceptance of the conventional spelling of "Mansfield".

Mansfield was incorporated and its official plat was filed with Tarrant County July 25, 1890.

Mansfield's beginnings as a progressive city began developing in the early 1940's as a water system, a telephone system and electric plant were constructed, followed by electric streetlights on Main Street and sanitary drainage. Oncor Electric, Atmos Gas Company, and Southwestern Bell Telephone Company now provide the utilities for this fast growing city.

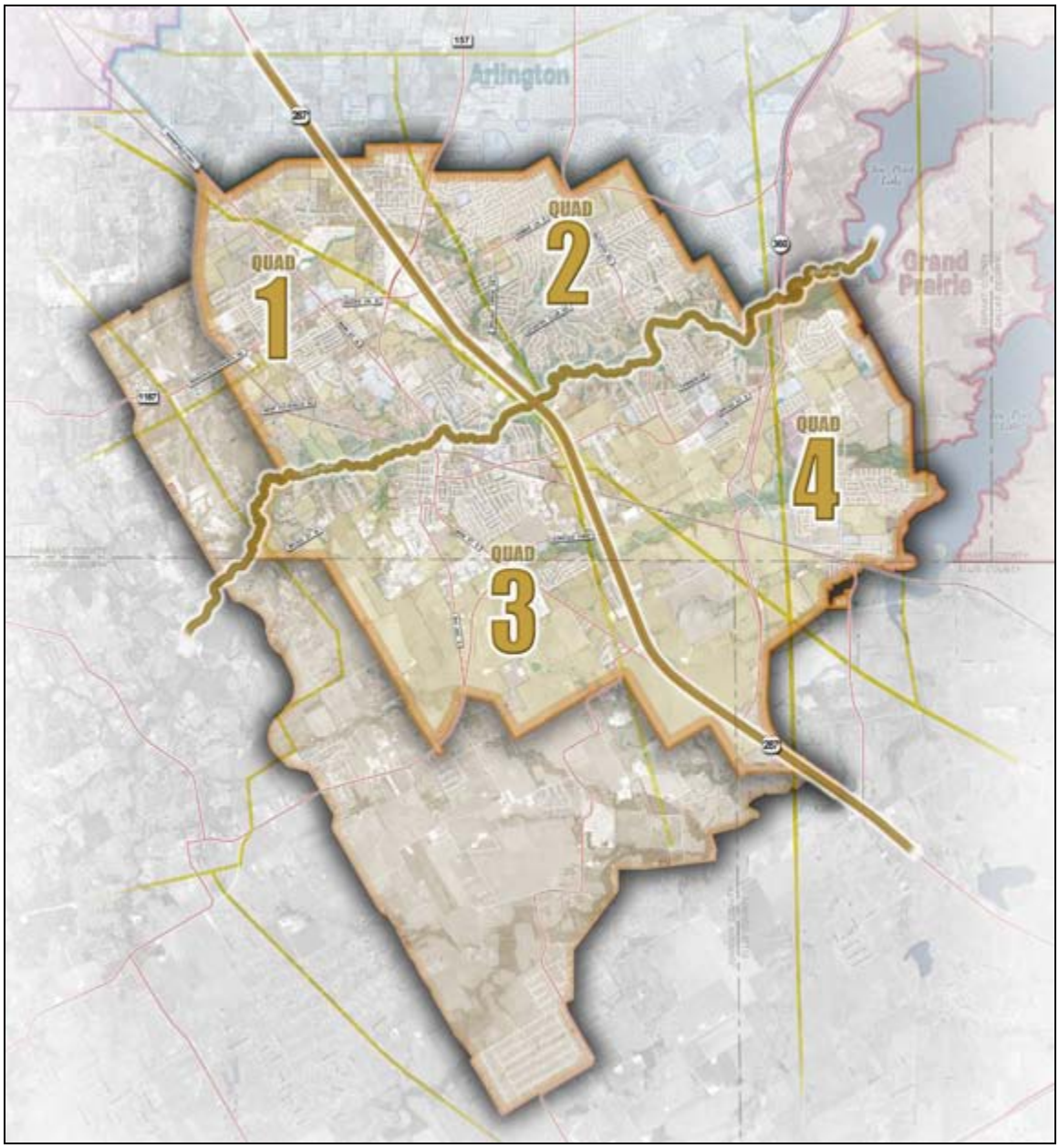
In 1990, Mansfield's population was 15,607 and the 2000 census indicated the City's population had grown to over 28,031. In 2002, Mansfield was the third largest city in Tarrant County by area, of which, 80 percent of the city's 38.8 square miles of land area was undeveloped. As is described in the Demographic and Economic Profile Section below, Mansfield has since grown to an estimated population of 53,200 and more than half of its land area is now developed or under plat.

ACHIEVEMENTS SINCE 2002

Since the creation of the 2002 Parks, Trails, and Open Spaces Master Plan, the City of Mansfield has achieved many milestones and the appearance, size, and quality of the parks system has grown considerably. One of the first and most important achievements made as a result of the adoption of the 2002 Master Plan was the creation of a Business Plan by the MPFDC and the Mansfield PARD which identifies funding strategies, priorities, and protocols for continued park and facility development. This Business Plan has been instrumental in making the Mansfield parks system what it is today and in spearheading the renovation of North Park (now known as Chandler Park) and the development of Town Park and the Walnut Creek Linear Park, which today is considered the crown jewel of the Mansfield parks system.

JURISDICTION & PLANNING AREAS

In order to ensure that input and recommendations are gained and created equitably, the Planning Team has delineated Mansfield into quadrants which are used in the administration of the Citizen Attitude Survey (telephone survey) and for the recommendations, which will be made in Chapter 6. Of the total estimated 2009 population of 62,000 (excluding ETJ), approximately 23% of the population lives in Quadrant 1, 53% lives in Quadrant 2, 13% lives in Quadrant 3, and 11% lives in Quadrant 4.



DEMOGRAPHIC & ECONOMIC PROFILE

The following is a review of past and present demographic data, including population, housing, and employment growth forecasts for the City of Mansfield. Understanding who lives in Mansfield informs direction for future decisions and actions.

Table 2.1
Population History and Forecast
1970 - 2030

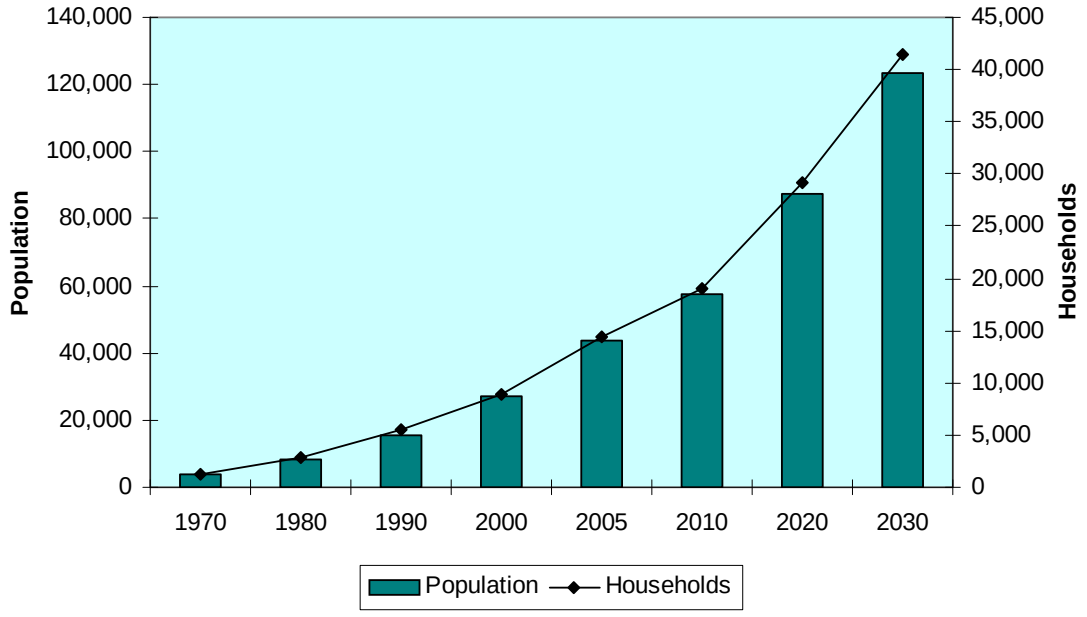
	1970	1980	1990	2000	2005*	2010*	2020*	2030*
Population	3,658	8,102	15,607	27,361	43,788	57,337	87,375	123,541
Households	1,165	2,803	5,517	8,881	14,339	18,948	29,154	41,465
Employment*	--	--	--	8,292	10,635	14,565	22,840	26,381

Sources: http://www.nctcog.org/ris/demographics/forecast/query.asp?thefield=citycode&thevalue=2650
http://www.census.gov/prod/cen1990/cph2/cph-2-1-1.pdf

*Estimated / Projected

**Employment opportunities within the city, not total employees residing within the city (for this information see table 3.5)

Figure 2.1 - Population and Households



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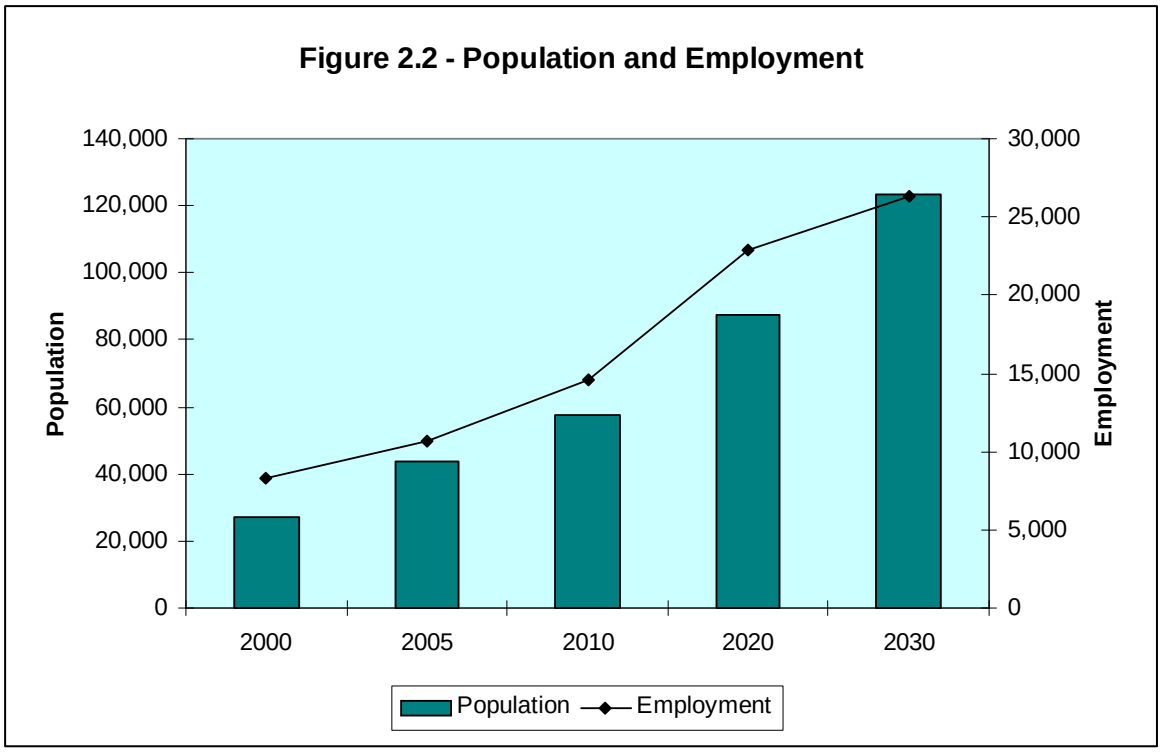
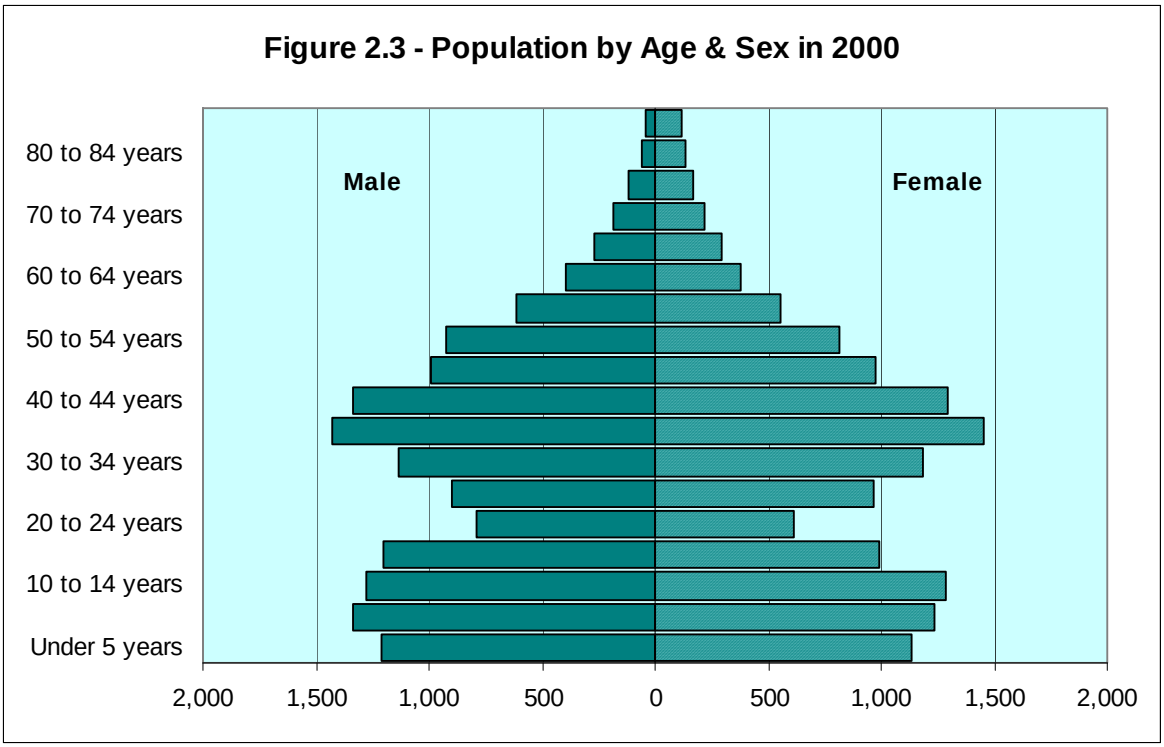


Sources: http://www.nctcog.org/ris/demographics/forecast/query.asp?thefield=citycode&thevalue=2650
http://www.census.gov/prod/cen1990/cph2/cph-2-1-1.pdf



Source: United States Census Bureau; Census 2000

Table 2.2 Racial Characteristics Year 2000	
Race	**Percent**
White	86.7%
Black/African American	4.2%
American Indian and Alaska Native	0.5%
Asian	1.4%
Native Hawaiian and Other Pacific Islander	0.0%
Some other race	5.6%
Two or more races	1.7%
Hispanic or Latino*	12.4%*

Source: http://www.nctcog.org/ris/census/sf3/dp1.asp?Geo=City&Code=2650
*Hispanic/Latino is considered an ethnicity, not a race by the US Census. This is the percentage of the total population that identify with the Hispanic/Latino ethnicity.

Table 2.3 Educational Attainment by Sex Year 2000			
Educational Level	**Male**	**Female**	**Total**
Less than High School Graduate	15%	12%	13%
High School Graduate (includes GED)	44%	52%	48%
Associate Degree	5%	5%	5%
Bachelor's Degree	25%	25%	25%
Graduate Degree	11%	7%	9%

Individuals age 25 and over
Source: United States Census Bureau; Census 2000

Table 2.4 Household Income, Housing Value, and Homeownership Year 2000	
	Median / Average
Annual Household Income	$66,764 / $82,656
Value for Owner-Occupied Housing Units	$127,200 / $148,399
Gross Monthly Rent	$647 / $663
Number of Households	8,881
Homeownership Rate	87.3%

Source: United States Census Bureau; Census 2000

Table 2.5 Occupation of Employed Civilian Population Aged 16 Years and Over (14,456 total employees) Year 2000	
Management, Professional and Related	41.2%
Service	8.9%
Sales and Office	28.2%
Farming, Fishing, and Forestry	0.2%
Construction, Extraction and Maintenance	9.7%
Production, Transportation, and Material Moving	11.8%

Source: http://www.nctcog.org/ris/census/sf3/dp3.asp?Geo=City&Code=2650

Table 2.6 Industry of Employed Civilian Population Aged 16 Years and Over (jobs within Mansfield) Year 2000	
Agriculture, forestry, fishing and hunting, and mining	0.8%
Construction	9.5%
Manufacturing	**18.2%**
Wholesale Trade	6.3%
Retail Trade	**11.8%**
Transportation and Warehousing, and Utilities	6.2%
Information	2.3%
Finance, Insurance, Real Estate, and Rental and Leasing	6.8%
Professional, Scientific, Management, Administrative, and Waste Management Services	7.8%
Educational, Health, and Social Services	**16.9%**
Arts, Entertainment, Recreation, Accommodation and Food Services	4.5%
Other Services (except Public Administration)	4.9%
Public Administration	4.0%

Source: http://www.nctcog.org/ris/census/sf3/dp3.asp?Geo=City&Code=2650

General Observations

A review of the demographic and economic attributes of Mansfield reveals an interesting characteristic of the city that is not readily apparent to the outsider. While all cities have a range of income levels, ethnicities, and other demographic traits, they typically have a combination of these traits that characterizes the average individual residing in that city – that is, while demographic traits vary widely within a city, often the majority of residents fall within a much narrower range. However, in Mansfield there are some very interesting variations in the data that are not entirely typical for a city of its size and regional position. There appears to be two types of citizens living in Mansfield: those that are educated, affluent, and live as part of a nuclear family; and those that are less educated, working class, and either live as part of a nuclear family or are single and a part of Mansfield's industrial economy. For example, Table 2.3 shows a high percentage of residents without a high school degree *and* a high percentage with a college or graduate degree (most cities usually only have one or the other). Also, Table 2.4 shows a wide variation between median and average household income and home value. The average figure for both household income and home value is typically greater than the median (in other cities and in the region), but such a wide margin implies that there exists a small number of housing units that are considerably more valuable than the typical house in the city. It is also interesting to note that Figure 2.3 shows a much larger male population than female population in the 15 to 24 year old age range[2]. It could be inferred that this is a result of the city's large industrial sector which would likely employ males in this age range, thereby attracting them to live in Mansfield.

[2] This refers to the 15 to 19 year old age group and 20 to 24 year old age group as shown in Figure 2.3.

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Chapter 3

Existing Conditions

INTRODUCTION

A key part of the park planning process is to understand what park, trail, and open space facilities are currently available and to assess the current condition of those facilities and whether or not they address the current needs of the City. By comparing the available park facilities with the number of people that the parks system serves, the need for new or improved recreational facilities can be determined. Much of the following chapter contains information also found in the 2002 Master Plan. Although much has been improved and updated, this information remains relevant for Mansfield and for the development of additional park facilities in the city. Where possible, efforts have been made to compare existing conditions with those in 2002.

Mansfield currently has 11 existing parks that are managed by the City and dedicated to the provision of outdoor recreation facilities. These parks vary in size and character from the five-acre Julian Feild Park to large, multi-use, recreational parks like the Mansfield Sports Complex that is approximately 80 acres in size. The total acreage of all developed parkland serving the citizens of Mansfield is approximately 484 acres and consists of three Neighborhood Parks, five Community Parks, three Special Purpose Parks and three privately managed parks (Big League Dreams, Hawaiian Falls, and the 225 acre Mansfield National Golf Club)[1]. In addition to these parks, the Walnut Creek Linear Park provides 26.4 acres of natural/unprogrammed space. There are 171 total acres of natural/unprogrammed space in the city. Undeveloped parkland totals almost 101 acres; most of this undeveloped acreage can be found in community parks. See table Table 3.1 later in this chapter for more detailed acreage information.

[1] These three parks were developed by the City of Mansfield and the MPFDC but are managed and maintained by private corporations.

Components of the Existing Parks Inventory

This inventory of existing parks reviews several aspects of each park in Mansfield's system. These are:

- ***Classification:*** What is the purpose of a given park? Is it intended to serve a local neighborhood around it, giving children and young adults a place to play? Is it intended to serve a much larger population, providing fields for organized league play? How was the park originally classified and is that classification still warranted today? The answers to these questions determine whether a park should be classified as a neighborhood park, a community park, a special purpose park, a regional park, or a linear park.
- ***Location:*** Where is the park located in relation to the population that it serves? Is it accessible?
- ***Service Area:*** What are the limits of the area served by each park? Are there any major thoroughfares or physical features that create barriers to accessing the park?
- ***Size of the Park:*** How big is the park? Is it large enough to adequately accomplish its intended purpose?
- ***Amenities in each Park:*** What amenities does the park contain? Are the facilities appropriate for the type of park? For example, a ball field complex requiring a large amount of parking should not be contained in a neighborhood park, where the noise, traffic and nighttime lighting create a nuisance for residents of that neighborhood.
- ***Layout:*** Is the arrangement of facilities in each park appropriate?
- ***Condition of the Park:*** What is the general condition of the facilities in each park?
- ***Natural Areas/ Sustainable Measures:*** Does the park contain areas that are natural? Is maintenance effort minimized through limited mowing areas? Is water use for irrigation minimized by use of native plants with low water requirements?
- ***Special Considerations:*** Does the park provide facilities for the physically challenged that meet the requirements of the Americans with Disabilities Act?

These issues are reviewed in the "Facilities Review" section beginning on page 3 – 13 for each of the existing parks in Mansfield's parks system. This inventory is developed from on-site reviews of each individual park by the Planning Team and reviews conducted by the City Staff. Also, following page 3 – 13 there is a map showing the location and classification of the existing parks in the city.

PARK CLASSIFICATION

National and state guidelines identify three broad categories of parks, which are:

Local, Close-to-Home Parks are usually located within the community served by the facility, which includes mini/pocket parks, neighborhood parks and community parks. Trail corridors and connections, greenbelts, and, in some instances, linear parks may also be considered Close-to-Home Parks.

Regional Parks are usually located within an hour or two driving distance. Parks in this category serve a number of communities, and include regional metropolitan parks and regional park reserves. Regional Parks are often multi-jurisdictional.

Unique Parks may be either local or regional in nature. These parks can be defined as areas that are unique in some way, whether because of physical features or because of the types of facilities provided. Parks in this category may include linear parks, special use parks, or land conservancies.

Close-to-home parks provide day-to-day facilities for all ages and activities and are within walking or short driving distance from where we live. "Close-to-Home parks" is the most important category and, as in 2002, is still the greatest need in Mansfield today. Currently, nine parks perform the close-to-home-parks role in Mansfield and fall into three categories:

- Neighborhood Parks
- Community Parks
- Linear Parks, Trails & Greenbelts

To further explain the classification of parks, a description of the general types of parks and standards for each type follows:

Neighborhood Parks

Neighborhood parks are the backbone of recreation in the *Local, Close-to-Home* park system. Ideally, they provide amenities and recreation space for the entire family but are within easy walking or cycling distance of the people they serve.

The neighborhood park typically serves one large or several smaller neighborhoods. The ideal neighborhood park, generally five to 10 acres in size, should serve no more than 3,000 to 4,000 residents per park. In Mansfield, Julian Feild Park is a good example of a neighborhood park.

- Neighborhood parks should be accessible to residents who live within a one-half mile radius of the park. Ideally neighborhood park facilities should be located within a quarter mile radius (or five minute walk) of the residents who will use those facilities.

- Neighborhood parks are frequently located adjacent to elementary schools in order to share acquisition and development costs with the school district. Adjacencies of park and school grounds allow for joint use and sharing of facilities. It also lends itself to the community's involvement with the school grounds and vice versa, leading to a synergistic result that adds to the quality of life for everyone.
- Neighborhood parks are generally located away from major arterial streets and provide easy access for the users that surround it. A neighborhood park should be accessible without having to cross major arterial streets.

Size **-** The size of a neighborhood park may vary considerably due to the physical location of the park and condition of the site. An ideal size for neighborhood parks is five acres or larger.

Location **-** If possible, neighborhood parks should be centrally located in the neighborhoods they serve. An ideal location, for example, is adjacent to an elementary school. This is already practiced by the Parks and Recreation Department when possible. Neighborhood parks should be accessible to pedestrian traffic from all parts of the area served and should be located adjacent to local or minor collector streets which do not allow high-speed traffic. When located close to or on the City boundary, every effort possible should be taken to provide access to all residents living within a quarter mile of the park, whether in Mansfield or an adjacent city. Residents typically do not discriminate between cities and it is neighborly to share facilities. Other appropriate adjacencies include creeks and greenways which allow for trail connections to other parks and city amenities.

Facilities **-** Facilities generally located in neighborhood parks may include the following (items in bold are considered the most necessary components):

- **Playground equipment with adequate safety surfacing**
- Unlighted basketball courts and half courts
- **Active free play areas**
- Picnic areas with benches, picnic tables, and cooking grills
- **Shaded pavilions and gazebos**
- **Jogging and exercise trails**
- Unlighted tennis courts
- Security lighting
- Drinking fountains

Design – The overall design and layout of a neighborhood park is important to its final quality and timelessness. These parks should generally be designed with the programmed space – playgrounds, pavilions, basketball courts, etc. – clustered into an "activity zone" within the park. These areas need ample seating and shade to be hospitable year round. Siting these areas near existing stands of trees is strongly recommended as this eliminates the years of waiting for shade trees to mature. The open/unprogrammed space should be visible from this activity area but should be clearly delineated through plantings and

hardscape features such as paved trails and seatwalls. Finally, a loop trail is today considered an essential component of a neighborhood park.

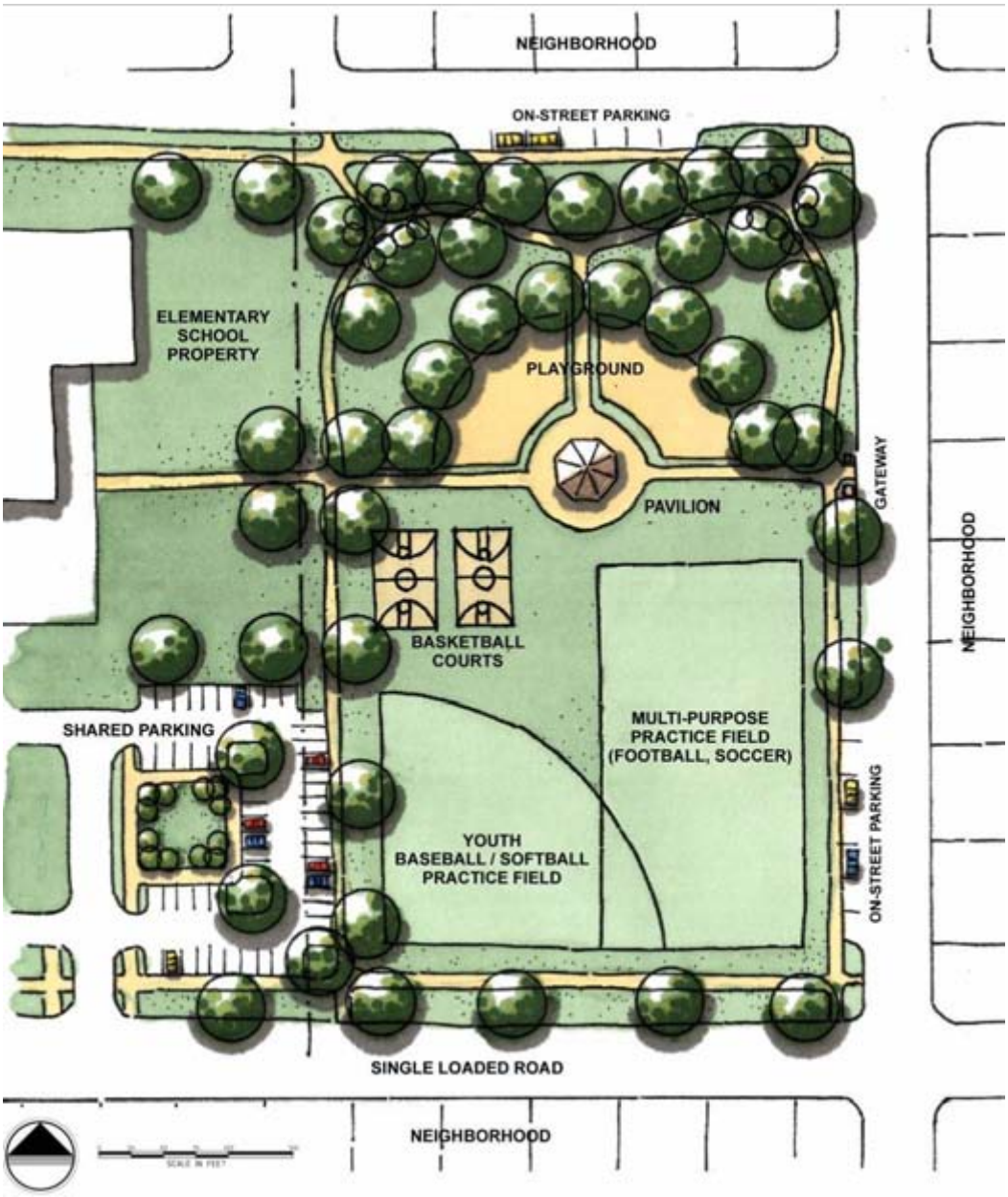
How the park integrates with the surrounding land uses – residences, schools, wooded areas, etc. – is crucial to the quality of experience within the park. When a road borders the park, the houses across the street should face the park. When houses must back up to a park, the fencing between the houses and the park should be transparent (such as wrought iron fencing or similar) rather than opaque wooden fortress fencing. Transparent fencing allows a softer transition between park and residence and provides for informal surveillance of the park. No more than 20% of any park's boundary should be bordered by the backs of houses (the other 80% should be bordered by single-loaded roads). High-limbed trees along the fence line furthermore allow for a combination of privacy and transparency. When a park is constructed adjacent to a school, the two sites should interact. Work with the ISD to have windows on the side of the school that faces the park and to provide paved connections between the two.

Lastly, it is important to design neighborhood parks that are unique in character, respond to the surrounding environment, provide unique experiences for the park's users, and bring the neighborhood together informally.

Parking – In general, the use of multi-modal trails and public transportation options should be encouraged to decrease dependency on automobiles. As deemed necessary, the exact amount of parking will vary based on the size of the park, the facilities it contains, and the number of users. Generally, depending on the carrying capacity of adjacent streets, parallel on-street parking may provide sufficient parking space. Opportunities to share parking may be beneficial to different yet compatible functions, such as churches, schools, libraries, and other City buildings.

Figure 3.1 illustrates a typical neighborhood park and some of the elements that the park might contain. Note that this is simply a typical arrangement, and each neighborhood park should be designed as a unique part of the neighborhood that surrounds it.

Figure 3.1
Typical Neighborhood Park



Community Parks

Community parks are larger parks that serve a group of neighborhoods or a portion of the city. Community parks are usually reached by automobile, although residents adjacent to the park and trail users may walk or cycle to it, rendering them *de facto* neighborhood parks. A variety of recreational facilities are provided, including in some cases, lighted playing fields for organized sports, hike and bike trails, and sufficient parking to accommodate participants, spectators, and other park users.

Type – There are two typical types of community parks in Mansfield – active and passive. Each type has a different set of amenities provided and an overall different character. Active community parks typically focus on high-intensity uses such as lighted, competitive game fields, recreation centers, and manicured landscaping. Passive community parks, on the other hand, typically have low-intensity uses such as hiking, picnicking, and free play and generally have a large amount of natural and un-programmed space in the park. James McKnight Park East is a good example of an active community park while Katherine Rose Memorial Park is a good example of a passive community park.

Size – The typical community park should be large enough to provide a variety of amenities while still leaving open space for unstructured recreation, practice space, and natural areas. The park should also have room for expansion as new facilities are required. Community parks may vary in size from 20 acres to over 70 acres depending on needs and site opportunities.

Location – Community parks should be located near a major thoroughfare to provide easy access from different parts of the city. Where possible, care should be taken to provide adequate buffers to adjacent residential streets, minimizing noise and bright lights at night. A good option to be considered is "cut-off" lighting, which allows light patterns to be controlled, thus avoiding undesired lighted areas. Because of the requirement for lighted facilities, it is often desirable to have community parks located adjacent to commercial, retail, and/or light industrial areas, rather than residential neighborhoods.

Facilities – Facilities generally located in community parks may include (items in bold are considered the most necessary components):

- **Playground equipment with adequate safety surfacing**
- **Active free play areas**
- **Picnic areas and pavilion(s)**
- **Unlighted practice fields for baseball, soccer, football, softball, etc.**
- Restrooms
- Natural open space where available or present
- **Jogging, bicycle and nature trails**
- Lighted ball fields, suitable for organized competitive events
- Lighted multi-purpose practice fields
- Recreation center (if appropriate)

- **Sufficient off-street parking based on facilities provided and size of park**
- Security lighting
- Other facilities as needed which can take advantage of the unique characteristics of the site, such as nature trails or fishing adjacent to ponds, swimming pools, amphitheaters etc.

Design – As with neighborhood parks, the overall design and layout of a community park is important to the park's final quality and timelessness. Similarly, activity zones of programmed space are also important within community parks. Playgrounds, pavilions, and basketball courts make up one type of activity zone while ball fields, concession stands, and storage buildings make up another type. Again, providing shade by means of siting the former of these two activity zone types near existing stands of trees is strongly recommended, as is the provision of benches and picnic tables. In community parks and other large parks, it is often desirable to delineate between activity zones and unprogrammed areas by the use of natural features, such as stands of trees and creek corridors. This helps to break up the park visually and delineate space. Paved trails should connect these various areas with each other, as well as provide a walking/jogging loop for recreational use.

The interaction between a community park and the surrounding areas is crucial to the quality of experience within the park. Because community parks are often located outside of neighborhoods, there are different considerations than there are with neighborhood parks. As with neighborhood parks it is important that the park is bordered by single-loaded roads and creeks or other natural areas. When development does border the park, how the edge is addressed depends on the type of development. If the development is residential, the fencing between the houses and the park should be transparent (such as wrought iron fencing or similar) or a row of trees and/or shrubs should be used along this fence line to soften its appearance. However, if the development is industrial in nature or otherwise aesthetically unpleasing or potentially a nuisance, the border should be fenced and heavily planted with trees and shrubs to soften this edge. Community parks often interface well with schools. In such instances, work with the ISD to have windows on the side of the school that faces the park and paved connections between the two.

As a final consideration, it is important to understand that community parks themselves can sometimes be a nuisance if near residential neighborhoods. Bright lighting at night, excessive noise from cheering spectators, or the overflow of parking onto neighborhood streets can all become major issues. If a park is to be developed in close proximity to a neighborhood, take measures to address these issues and identify any other potential issues.

Parking – This varies based on the facilities provided and the size of park. The National Recreation and Park Association (NRPA) recommends a minimum of five spaces per programmed acre, plus additional parking for specific facilities within the park such as pools or ball fields. The specific amount of parking provided in each park should be determined by the facilities provided in that park. Even so, consideration should always

be given towards the concept of "shared parking" whereby parking may be shared with adjacent land use facilities e.g. schools, churches, City buildings etc. In order to offset the surface water runoff and pollution from large areas of parking, it is recommended that serious consideration be given to the use of permeable paving combined with shade trees and bio-swales to bio-filtrate runoff water.

Figure 3.2 below illustrates a typical community park and some of the elements that the park might contain. Note that this is simply a typical arrangement, and each community park should be designed according to the specific needs of the community.

Figure 3.2
Typical Community Park

Special Purpose Parks

Special purpose parks are designed to accommodate specialized recreational activities. Because the facility needs for each activity type are different, each special purpose park usually provides for one or a few activities. Examples of special purpose parks include:

- Botanic gardens
- Golf courses
- Athletic fields or complexes
- Nature centers or large natural preserves
- Swimming pool centers
- Aquatic Parks
- Pocket Parks
- Recreation Centers
- Senior Citizen Centers
- Tennis complexes
- Dog parks
- Skate parks
- Cemeteries
- Campgrounds/Camping Areas

Athletic complexes and public golf courses are two of the most common types of special purpose parks. Athletic complexes seek to provide fields for organized play in a location that can accommodate the traffic and noise that a large number of users can generate. Evening activities at athletic complexes necessitate high-power lighting that can become a nuisance when the complex is located too close to residential areas. To address this, wide buffers should be placed around such complexes, lighting control should be addressed, and/or such parks should be located adjacent to commercial or industrial areas. Athletic complexes should include sufficient fields so that leagues can congregate at one facility and not have to spread out in different locations across the city.

Pocket parks are small green gathering spaces ranging typically from 1/8 acre to one acre. Due to the size of this type of park, parking spaces are typically not provided. Therefore, pocket parks are accessed by means of walking and bicycling. Benches, fountains, landscaping, and other focal features are common items found in these parks. Size is not the key factor of the typical pocket park but rather the quality of the landscaping and features that go into the park. These parks are often located in older parts of a city, where larger parcels of land are not available. The space surrounding a trail head or major city gateway may also be referred to as a pocket park. In a more urbanized environment – such as in the downtown area – urban plazas typically constitute pocket parks.

An additional type of special purpose park is a “special interest” park which typically is developed as a skate park, a dog park, or some other park designed to specifically accommodate a special recreational need. In a city the size of Mansfield, a park of this nature will often be the only one of its type in the city (i.e. only one dog park or only one skate park) unless demand constitutes additional facilities.

Linear Parks, Greenbelts and Hike & Bike Trails

Linear parks and greenbelts are open park areas that generally follow some natural or man-made feature that is linear in nature, such as creeks, abandoned railroad rights-of-way, power lines, or utility corridor easements. Properly developed to facilitate pedestrian and bicycle travel, these parks can serve to link or connect other parks in the local system, as well as schools, libraries, and other major destinations. No specific standards apply to linear/linkage parks other than to be large enough to adequately accommodate the resources they follow. They can also serve as linear greenbelts, which preserve open space.

Hike and bike trails, often found in linear parks, serve to provide active and passive recreation as well as connections between parks and other destinations within the city. A trails system should be established to serve both recreation needs and as a means to alternative transportation choices and connections throughout the city. Such a system should provide each resident with quick and easy access to parks, retail, and employment areas.

Regional Parks

The term *Regional Park* refers to land that is dedicated as parkland due to its regional importance and relevance. This may be due to its natural characteristics including habitat, geological formations, and/or aesthetic beauty. Other reasons may be the role that the particular site plays in issues of regional importance and/or function: for example, water conservation, flood protection, threatened habitat, unique landscapes, or historic memorial. The size of a regional park may vary from small to large, depending on the purpose and character of the site.

Nature Areas and Open Space

The benefit and inclusion of places that are nature areas or un-programmed open space has been largely overlooked in the context of typical parks master plans. Conservation and preservation are especially valuable as, over time, natural resources disappear in our cities and natural habitat is wiped out. The value of walking through historic and natural places that have been left untouched is immeasurable. Such opportunities are rapidly becoming rare, and the identification and protection of such areas is urgently needed in most cities today. Cities that marshal the will and act quickly to conserve natural resources demonstrate the foresight and resolve necessary to ensure that future generations may enjoy something of beauty and timelessness.

Natural areas and open space are part of a city's resources and are its "natural gems." The value of such land may have visual, historic, and cultural appeal that imprints upon the visitor and creates a sense of place as well as of lasting memories. Wilderness, creeks, lakes, prairies, and particular geologic formations or topographic change may all be considered elements worthy of protection, public access, and celebration. As un-programmed space, there is the added benefit of these areas as "self-maintaining". There may be the occasional need to check for hazards, but maintenance is generally not a significant factor.

PARK SYSTEM OVERVIEW

The parks system in Mansfield consists of a total of 14 parks (11 City-managed and three privately-managed) totaling approximately 484 acres of developed land. An additional 101 acres of undeveloped land is dedicated to the expansion of existing parks and approximately 171 acres is natural/unprogrammed space.

Additional park land which serves the citizens of Mansfield includes the 129 acre Britton Park (managed by the City of Grand Prairie and on US Army Corps of Engineers land within Mansfield City limits) and the 160 acre Loyd Park (similarly managed by the City of Grand Prairie and on US Army Corps of Engineers land within the City limits). Both of these parks are considered to be stand-alone nature areas.

Neighborhood Parks

Mansfield has five Neighborhood Parks, two more than it did in 2002, which constitutes a total of 26.9 developed acres. Neighborhood Parks in the city range in size from the five acres of Julian Feild Park to the16.6 acre Woodland Estates Park. While it is preferable for neighborhood parks to be located adjacent to an elementary or middle school, not one of the five in Mansfield is. While Mansfield's neighborhood parks are generally in good condition and are in unique settings, the City is lacking in its overall geographic coverage of neighborhood parks. It is generally understood that every residence in a city should be located within a ½ mile service radius of a neighborhood park whenever possible. Such a situation does not currently exist in Mansfield and as the city continues to grow, several neighborhood service areas need to be addressed.

Community Parks

The City has five community parks with acreage totaling 64.4 developed acres, 77.8 undeveloped acres, and 47.9 natural/unprogrammed acres. With a service radius of one to two miles, Mansfield is making good progress toward being well covered in community parks, though the northern extremity of Area 1 and the southern extremities of Areas 3 and 4 are not currently within adequate distance of a community park. Currently, the southern portion of Area 3 is not considerably developed, but as the city grows it is important to address this area as well.

Because of the amenities provided by community parks, they also serve as neighborhood parks when dedicated neighborhood parks are not present. That is, they provide the amenities of a neighborhood park and therefore serve the needs of the surrounding neighborhoods. The phrase "*de facto* neighborhood park" is often used to describe this manner of the functionality of community parks.

Special Purpose Parks

The special purpose parks in the city range in size from the 9.4 acre Hardy Allmon Soccer Complex to the 80 acre Mansfield Sports Complex. Special purpose park acreage in the city totals approximately 110 acres (all of these being developed acres). Special purpose parks are the result of a specific need or opportunity, and therefore do not have a

prescribed service radius. In essence, this category of park is not intended to cover the city in its entirety.

Special purpose parks in Mansfield are all athletics-oriented parks, though other types of parks, such as pocket parks, can be considered special purpose parks. In the future, the possibility exists to create pocket parks as a number of smaller spaces adjacent to various private and City-owned facilities, particularly as part of a larger vision of streetscapes and perhaps in the creation of pedestrian malls and trail corridors. Features which are potential pocket park locations include city gateways and trailheads, according to their suitability.

Linear Parks, Greenbelts and Hike & Bike Trails

While Mansfield has two large greenbelts that traverse the city (Walnut Creek and Low Branch), land has only been acquired for the Walnut Creek Linear Park (a total of 26 acres). The system of parks that ia located along Walnut Creek and specifically the Walnut Creek Linear Trail serves as the center piece for the Mansfield Parks System. The Walnut Creek Linear Trail System, which includes over three miles of paved hike and bike trail, connects these parks. In fact, seven of the City's 11 other parks are adjacent to or within ½ mile of the Walnut Creek Linear Park serving as the spine of the City's park system.

Open Space Preserves & Nature Areas

There are almost 340 acres of stand-alone nature areas in Mansfield's city limits. This acreage is completely constituted by Britton Park and Loyd Park and while neither is owned or operated by the City of Mansfield, the existence if both parks within the City limits benefits Mansfield's environment and visual quality.

Cemeteries

Seven cemeteries exist in Mansfield and the City's ETJ (Britton Cemetery, Calvary Cemetery, Grimsley Cemetery, Mansfield Cemetery, Perry Cemetery, Stephens Family Cemetery, and Wyatt's Chapel Cemetery). Cemeteries are typically not counted toward park acreage, especially when the cemeteries are not managed or maintained by the City (none of the above mentioned cemeteries are managed or maintained by the City of Mansfield). However, cemeteries play an important role in defining the culture and history of a community as well as providing a sense of open space, specifically from a visual point of view. As such, careful and thorough maintenance of the cemeteries in the community reflects the importance of the community's history and the legacy of Mansfield.

PARKS & FACILITIES REVIEW

The following is an overview of the parks system in Mansfield, including a discussion and assessment of each developed park in the city. The parks and parkland are discussed according to the categories of Neighborhood Parks, Community Parks, Special Purpose Parks, Linear Parks & Greenbelts, Regional Parks, and Indoor Recreation Facilities.

Table 3.1 Existing Park Facilities on the next page is a summary of park acreage and park facilities per individual park.

It is important to understand the spatial distribution of various park types within the city. Maps illustrate the location of all the existing developed and undeveloped parks and highlight the area that they service in Mansfield. For neighborhood parks and community parks, which are the basic park types, service radii are shown to illustrate the areas that are best served by parks. Neighborhood parks are the primary type of close-to-home park in Mansfield; they serve areas within a five to 10 minute walk – a ¼ to ½ mile radius. Community parks serve a broader population and are typically positioned so that everyone within the city is within a five minute drive of a park (within one mile of a community park). They also serve as a de facto neighborhood park for areas within ½ mile. The following maps are presented on the following pages:

Existing Neighborhood Parks
½ mile radius – includes community parks as de facto neighborhood parks
Existing Community Parks
1 mile radius

Table 3.1
City of Mansfield Parks, Recreation & Trails Master Plan

Existing Park Facilities

Park	Acres				Active Facilities																			Aquatics					Passive / Support Facilities												Infrastructure					
	Developed	Undeveloped	Natural / Unprogrammed Space	City Sector	Baseball Fields (Competitive)	Softball Fields (Competitive)	Soccer Pads (Competitive)	Soccer (Indoor)	Football Fields (Competitive)	Basketball Full Courts	Basketball Half Courts	Basketball / Indoor Courts	Backstops	Multi-purpose Practice Areas	Disc Golf Course	Tennis Courts	Volleyball Courts (sand)	Gymnasium	Multi-purpose Courts	Paved Hike/Bike Trails (miles) (6)	Nature area (acres)	Playground (# of units)	Horseshoe Pits	Arena	Fishing Pond	Fishing Pier / Observation deck	Water Spray Pool	Fitness/ Lap Pool	Leisure Pool	Amphitheater	Covered Picnic Table	Large Pavilions	Small Pavilions	Picnic Units	BBQ Grills	Benches	Bleachers	Drinking Fountains	Meeting Room(s) w/ tables & chairs	Foot Bridges	Lakes or Water in Park	Adjacent to Creek	Concession Bldgs.	Restroom Bldgs./Portable	Off Street Parking (# of spaces)	Handicapped Parking (# of spaces)
Neighborhood Parks																																														
Julian Field	3.0		2.0	3																	1	1																	1				14	1
McClendon West	5.1		2.0	3						1			1	1								1								8	1		5	2			2					1	25	2
James McKnight West	2.2		18.3	3																0.6										3		1	8	3	1				1		x			30	3
Garden Heights (HOA Park) (1)		12.3		4																																									
Woodland Estates (HOA Park) (1)	16.6			1																		2.0		2.0											4		2			x	x					
Wentzel Property		8.1		1																																									
Subtotal	**26.9**	**20.4**	**22.2**	**69.5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0.6**	**1**	**4**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**11**	**1**	**1**	**17**	**5**	**7**	**0**	**5**	**0**	**2**	**0**	**0**	**0**	**1**	**69**	**6**
Community Parks																																														
James McKnight East	17.3		12.1	4		5								2		3				0.5		1								4		2	10	3	6	8	2		1		x	1	1	251	9
Chandler Park (2)	13.1			2	7				2					2		3				0.5										3	1		4	4	10	8						3	2	school	2
Katherine Rose Memorial	25.5			3						3							2		1	0.5		1	8		1					8	1	4	16		11		3			1	x			84	4
McClendon East	5.0		12.3	3	1																	1									1	1	5	2			1						1	1	47	2
Williams Property (Future Park Site)		77.8		2																																					x				
Town Park	3.6		23.6	1						2							1			0.9		2	2						1	3	1		15	5	14		1				x		1	51	2
Subtotal	**64.4**	**77.8**	**47.9**	**190.2**	**8**	**5**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**2**	**0**	**3**	**3**	**0**	**1**	**2.4**	**0**	**5**	**10**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**18**	**4**	**7**	**50**	**14**	**41**	**16**	**7**	**0**	**1**	**1**	**0**	**5**	**5**	**433**	**19**
Special Purpose Parks																																													
Hardy Allmon Soccer Complex (3)	9.4			3			2							4						0.1													1		4	4			1					100	
Philip Thompson Soccer Complex (4)	20.7			4			2							4																													1	250	
Mansfield Sports Complex (5)	80.0		74.7	4	9		8															1																				2	9	498	
Subtotal	**110.1**	**0.0**	**74.7**	**184.8**	**9**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0.1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**4**	**0**	**0**	**1**	**0**	**0**	**2**	**10**	**848**	**0**
Linear Parks																																														
Walnut Creek Linear Park			26.4	3																0.5																							1 und	2 lots		
Subtotal	**0.0**	**0.0**	**26.4**	**26.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Recreation Facilties																																														
Mansfield Activities Center	3.0			3													1																					3				1	1	94	4
Subtotal	**3.0**	**0.0**	**0.0**	**3.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**1**	**94**	**4**
Other Park Facilities																																														
Big League Dreams	40.3			4	8	8		1															1												1		16								
Hawaiian Falls Waterpark	14.0	3.1		4																						1	1	1						x			2		1			1	1	400	8
Mansfield National Golf Course	225.4			4																																					4					
Subtotal	**279.7**	**3.1**	**0.0**	**282.8**	**8**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**18**	**0**	**1**	**4**	**0**	**1**	**1**	**400**	**8**
City Property Total	**484.2**	**101.3**	**171.2**		**25**	**13**	**12**	**1**	**2**	**6**	**0**	**0**	**1**	**11**	**0**	**3**	**3**	**1**	**1**	**3.5**	**1**	**10**	**10**	**1**	**3**	**0**	**1**	**1**	**1**	**1**	**29**	**5**	**8**	**68**	**19**	**53**	**20**	**30**	**3**	**5**	**5**	**0**	**9**	**18**	**1844**	**37**
Total City Acreage				**756.6**																																										

(1) Park land dedicated to City; Park operated and maintained by HOA as per 2005 Park Dedication Ordinance

(2) Two competitive football fields also serve as football practice fields and (up to) six competitive youth baseball (e.g. t-ball, coach pitch, and kid pitch)

(3) Two competitive soccer fields also serve as 4 soccer practice fields

(4) Two competitive soccer fields also serve as 4 soccer practice fields

(5) Seven competitive soccer fields also serve as (up to) 14 "Under Eight" fields or 28 "Tot" fields.

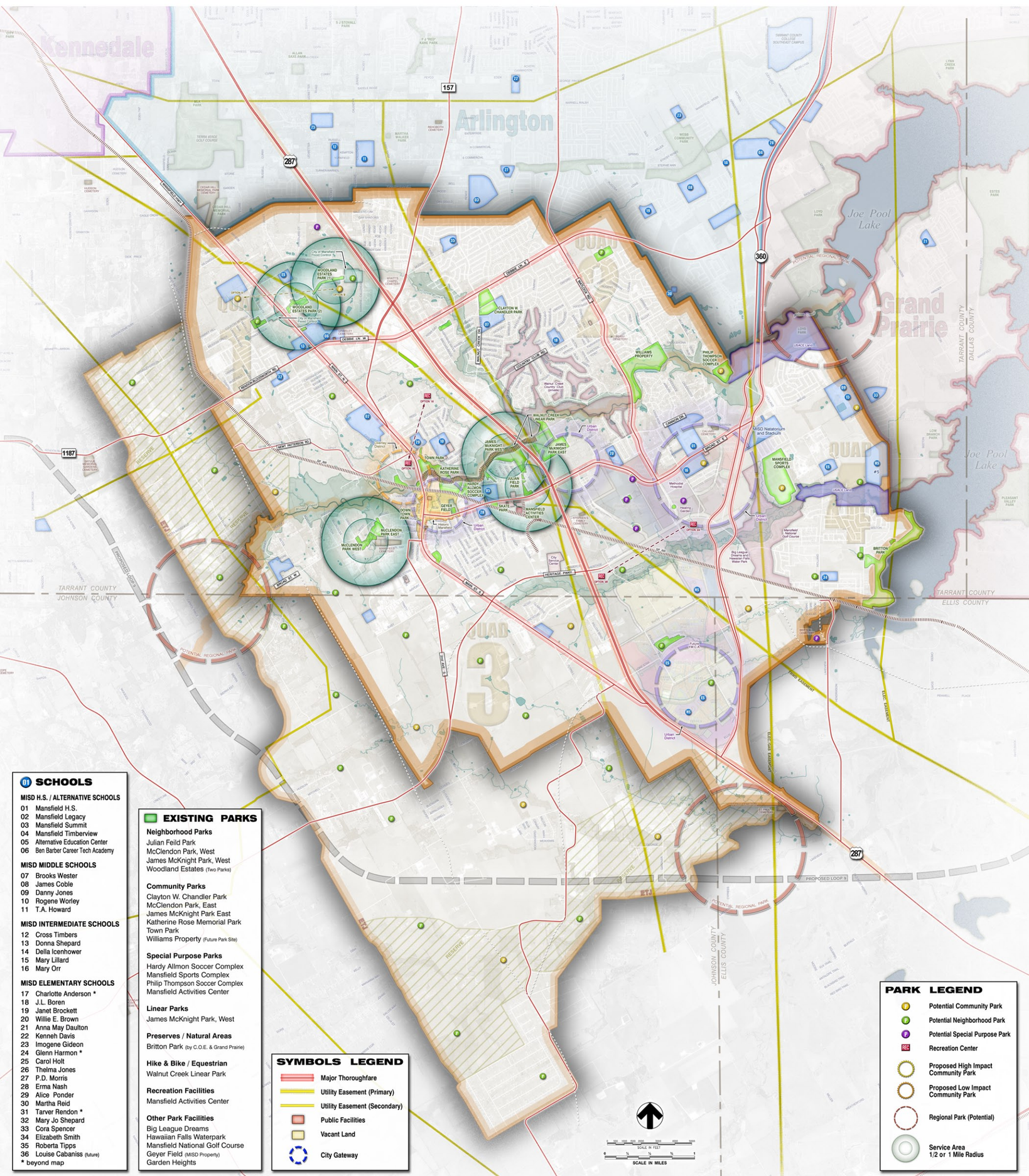
(6) Trails that are not wholly contained as part of a park already included in this table

Table 3.1
City of Mansfield Parks, Recreation & Trails Master Plan

Existing Park Facilities

Park	Acres			City Sector	Baseball Fields (Competitive)	Softball Fields (Competitive)	Soccer Pads (Competitive)	Soccer (Indoor)	Football Fields (Competitive)	Basketball Full Courts	Basketball Half Courts	Basketball / Indoor Courts	Backstops	Multi-purpose Practice Areas	Disc Golf Course	Tennis Courts	Volleyball Courts (sand)	Gymnasium	Multi-purpose Courts	Paved Hike/Bike Trails (miles) (6)	Nature area (acres)	Playground (# of units)	Horseshoe Pits	Arena	Fishing Pond	Fishing Pier / Observation deck	Water Spray Pool	Fitness/ Lap Pool	Leisure Pool	Amphitheater	Covered Picnic Table	Large Pavilions	Small Pavilions	Picnic Units	BBQ Grills	Benches	Bleachers	Drinking Fountains	Meeting Room(s) w/ tables & chairs	Foot Bridges	Lakes or Water in Park	Adjacent to Creek	Concession Bldgs.	Restroom Bldgs./Portable	Off Street Parking (# of spaces)	Handicapped Parking (# of spaces)
	Developed	Undeveloped	Natural / Unprogrammed Space		Active Facilities																				Aquatics					Passive / Support Facilities											Infrastructure					
Open Space Preserves/ Nature Areas																																												
Britton (by Corps. Of Eng. & Grand Prairie)			129.0	4																																						1 und	2 lots	
Loyd Park (10)			210.5																																									
Subtotal	**0.0**	**0.0**	**339.5**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total City and Non-City Park Acreage				**1096.1**																																									
School and College Facilities (7)					Active Facilities																				Aquatics					Passive / Support Facilities											Infrastructure					
MISD *																																													
A.E.C. Alternative Education Center																																													
Alice Ponder													1	2																																
Danny Jones													1																																
Donna Sheppard													2																																
Elizabeth Smith														1																																
Geyer Field (MISD)	2.0			3									1																								2									
J.L. Boren														2																																
Lillard Intermediate													2																																
Mary Orr 1 & 2													2	1																																
Roberta Tipps														1																																
Rogene Worley													3																																
Willie Brown													1	1																																
MISD Outside Ciy Limits (9)																																												
Charlotte Anderson													1																																
Cross Timbers													1																																
Davis													1																																
D.P. Morris													1																																
Gideon													1																																
Glenn Harmon													1																																
Howard													1																																
Martha Reid													1																																
Tarver Rendon													1																																
Thelma Jones													1																																
School Subtotal	**2.0**		**0.0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total City Wide Facilities					**25**	**13**	**12**	**1**	**2**	**6**	**0**	**0**	**24**	**19**	**0**	**3**	**3**	**1**	**1**	**3.5**	**1**	**10**	**10**	**1**	**3**	**0**	**1**	**1**	**1**	**1**	**29**	**5**	**8**	**68**	**19**	**53**	**22**	**30**	**3**	**5**	**5**	**0**	**9**	**18**	**1844**	**37**
Other Significant Public and Private Facilities					Active Facilities																				Aquatics					Passive / Support Facilities											Infrastructure					
Britton Cemetery																																													
Calvary Cemetery																																													
Grimsley Cemetery																																													
Mansfield Cemetery																																													
Perry Cemetery																																													
Stephen's Family Cemetery																																													
Wyatt's Chapel Cemetery																																													

(7) Facilities available for public use by joint use agreements. MISD shared facilities are used by the Manfield Youth Baseball, Girls Softball and Soccer Associations.
(8) The total acreage amount of publicly accessible parkland comes to 786.25 acres
(9) Red colored value indicates youth baseball vs. youth softball
(10) Includes USACE land west of Highway 360



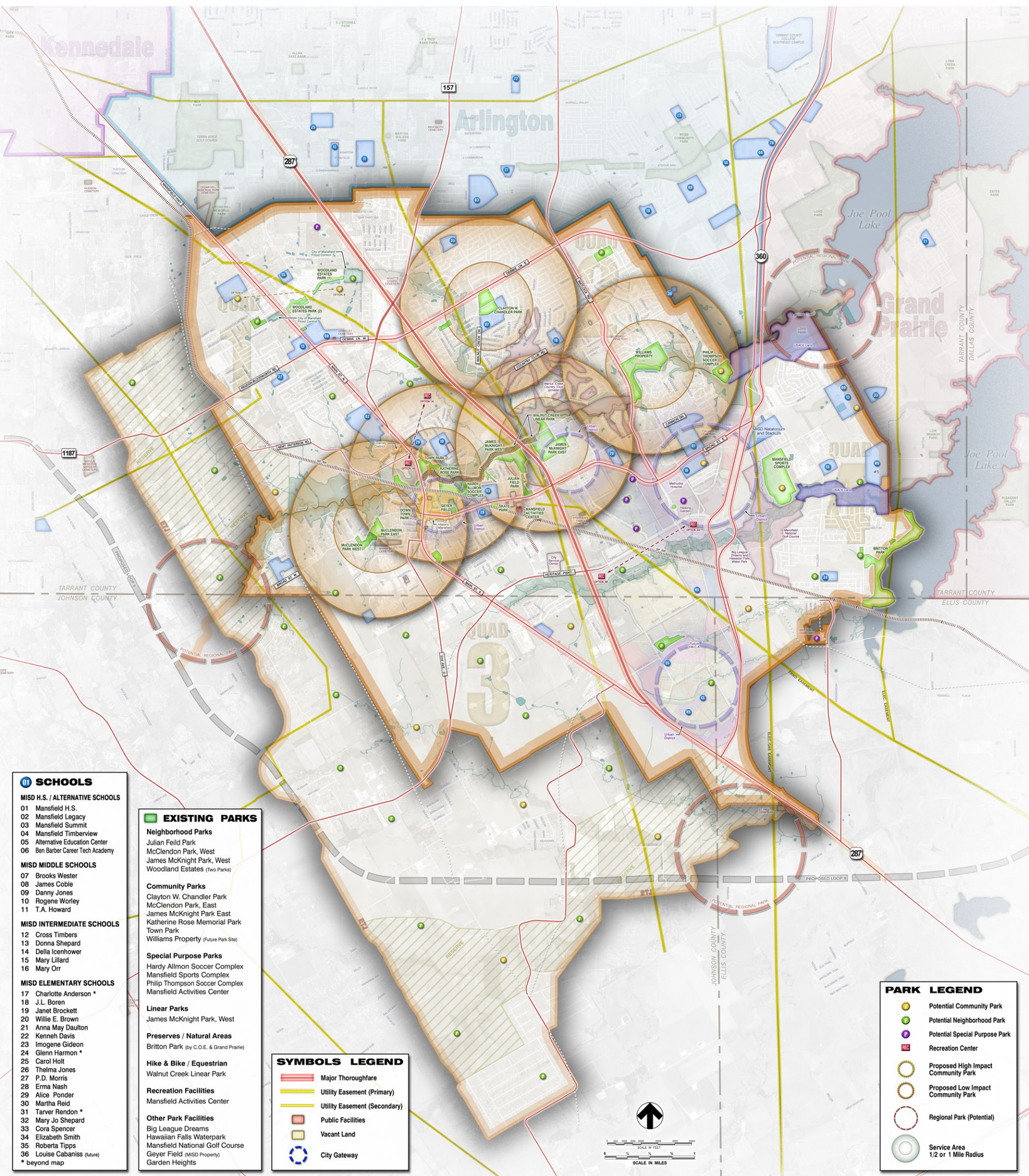
September 3, 2009

EXISTING NEIGHBORHOOD PARKS

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS



September 3, 2009

EXISTING COMMUNITY PARKS

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

Neighborhood Parks

Julian Feild Park / Serenity Gardens

Type of Park: **Neighborhood Park**

Address: 1531 East Broad Street
Size of Park: 5 acres

Comments – Julian Feild Park is typified as a neighborhood park by its smaller size and amenities such as a playground, picnic tables, and open fields. This park is bordered by two roads (Broad and Magnolia), the backs of houses, and a wooded drainage area. Even though Broad is a busy street, its elevation slightly higher than the park reduces its impact on the area to such an extent that the playground, located about 50 feet from the road creates a sense of being safe.

A creek runs through the park, which creates both an interesting topographic variation as well as providing a unique area of exploration for children and adults alike. Both the visual and audible characters of the creek add to its value in the park.

Serenity Gardens is one of the better known and more visible features within the park. This area is considered a North Central Texas SmartScape Garden – a designation applied to areas that are designed, planted, and maintained in an efficient, sustainable, and natural way and include native and adaptive plant species. Serenity Gardens was developed as a place for personal reflection and contemplation.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Repave the eastern parking lot with a more attractive and durable paving surface. Use a pervious paving material or design the parking in such a way that the run-off from the pavement is slowed through a grass swale or bio-filtration system before entering the creek. Install wheel stops as needed.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Maintain the practice of allowing grasses and other water-oriented plant species to grow naturally along the creek corridor in order to maintain the appearance of the creek corridor while increasing storm water filtration and slowing erosion. Such an action will also help to support wildlife habitat.
- As mentioned above, drainage swales or a bio-filtration system should be implemented to encourage slower storm water flow from the eastern parking lot and to filter the run-off before entering the creek.

General

- Renovate or replace the existing Serenity Gardens sign to a design that matches signs in other parks or as a unique feature for this park.
- Provide a trail connection through the northern portion of this park to the Walnut Creek Linear Park hike and bike trail to the north.

McClendon Park West

Type of Park: **Neighborhood Park**

Address: 799 W. Broad Street
Size of Park: 7.1 acres

Comments – This park has a very inviting feel once one enters it. The linearity of the park, coupled with the view corridor allowed through the trees and the visible stream crossing, encourages one to move deeper into the park. The mature trees and wooded edge give a sense of establishment to the park and help to define the park and spaces within the park. Several of the trees which stand alone or in small groups within the main spaces of the park function as focal points. The opportunities presented by the stream that bisects the park and the placement of amenities – such as the playground and

pavilion – amongst the established trees present a connection to nature that is not found in parks developed on flat, un-vegetated land.

The sense of arrival into the park, however, is marred by the aesthetics of the park's entrance. The shoulder between the road and the park is unattractive and the current configuration of the parking lot, which abruptly ends without a curb and gutter into this shoulder, does not take full advantage of the park sign (which itself is attractive).

There is an old, abandoned soft surface trail that links this park to McClendon Park East that includes a bridge and the remnants of a trailhead at McClendon Park West. This trail passes along the edge of the Mansfield Cemetery.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Repave the parking lot with a more attractive paving surface. Use a pervious paving material or design the parking in such a way that the run-off from the pavement is slowed through a grass swale or bio-filtration system before entering the creek. Install proper curbs or wheel stops as opposed to the existing mounded asphalt curbs. Wheel stops are often preferred as they allow water to sheet-flow from the parking lot instead of flowing on a concentrated manner which leads to higher flow rates, increased erosion, and less efficient bio-filtration.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Maintenance practices related to the creek crossing in the park should be examined. Specifically, allowing grasses and other water-oriented plant species to grow naturally without regular mowing will both improve the appearance of the creek corridor while increasing storm water filtration and slowing erosion. Such an action will also help to support wildlife habitat.
- As mentioned above, drainage swales or bio-filtration systems should be implemented to encourage slower storm water flow from the parking lot and to filter the run-off.

General

- Renovate the trail and trailhead leading from the far end of this park to McClendon Park East. This trail does not need to be paved – rather, a simple rehabilitation of the soft surface trail, signage, and an enhanced trailhead would be sufficient.
- Create a gateway at the park entrance that addresses the aesthetic issues related to the configuration of the existing parking lot and park sign. Through the use of plantings, monuments, and signage, the park entrance will be more inviting and will encourage increased use.

James McKnight Park West

Type of Park: **Open Space Preserve / Nature Area**

Address: 302 North Wisteria Street
Size of Park: 20.5 acres

Comments – Though located in the middle of the city, McKnight Park West serves as an open space or nature area with only approximately two of its 20.5 acres developed. This park could also be considered a neighborhood park though it lacks certain amenities commonly expected of neighborhood parks, including a playground and an open play field. The park is adjacent to the Walnut Creek Linear Park and serves as a trailhead with a parking lot adjacent. There is no clear border between the Linear Park and McKnight Park West. Amenities in the park include a medium pavilion, a couple of benches and a handful of picnic tables. Several soft-surface trails lace through the park

The park is very quiet and peaceful (other than noise from Highway 287) and enjoys a variety of birdsong. The developed area of the park provides space for quiet respite and reflection.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Repair, renovate, or replace the existing pavilion and other park amenities as needed. While multi-tiered pavilions are generally preferred, the fact that this is a heavily shaded pavilion could possibly negate this need.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Ensure that the surrounding wooded areas are allowed to exist in a natural state and limit trimming and clearing to enhance habitat and the open space's natural beauty.
- Consider establishing shade-loving native grasses such as Inland Sea Oats (*Chasmanthium latifolium*) in the shaded areas.

General

- The entrance to this park is a parking lot alone with no inviting gateway. A clear and comfortable pedestrian entrance is required and can be achieved through the use of plantings, monuments, and signage. This will render the park entrance more inviting and will encourage increased use.

Community Parks

James McKnight Park East

Type of Park: **Community Park**

Address: 757 U.S. Hwy 287
Size of Park: 29.4 acres

Comments – This park is bordered on two sides by a wooded edge and on two others by undeveloped land. The park serves as a trailhead (currently the easternmost trailhead) for the Walnut Creek Linear Park trail and includes necessary components for a community park, including play equipment and picnic tables. Unlike many parks that focus on athletic facilities, McKnight Park East has mature trees near the ball fields, which help to provide shade and visual interest for the area.

Issues within the park include noise from the highway and the character of the park entrance. One of the most predominate features in the park is the very large parking lot, which measures approximately 300' by 240'. There are no landscaped medians to provide shade or visual interest within the parking lot, which leads to a sense of vastness of pavement. Further, the walk from the parking lot to the concession building leads one along a promenade-type walkway between the ball fields. This walkway has much potential but currently appears unfinished.

On the land adjacent to the park on the south, there are plans for constructing a large, mixed-use development that would incorporate characteristics of "town center" developments, which are growing in popularity in the region. There are many opportunities with this sort of development next to the park, including opportunities for shared parking, shopping and dining opportunities for people using the park (and vice versa), and access to the Walnut Creek Linear Park trail connecting the development to other parts of the city. Precaution should be taken to ensure that the development is designed in such a way that there is connectivity – visually and physically – between it and the park.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Reconfigure the parking lot to be more aesthetically pleasing and to provide a clear crossing for pedestrians – both for users of the trail and for people who park in the parking lot for ball games. Use a pervious paving material or design the parking in such a way that the run-off from the pavement is slowed through a grass swale or bio-filtration system before entering the creek.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Ensure the ongoing protection of the adjacent wooded areas for the protection of habitat and natural vegetation.
- As mentioned above, drainage swales or bio-filtration systems should be implemented to encourage slower storm water flow from the parking lot and to filter the run-off.

General

- Additional landscaping along the walkways – particularly the central walk shown in the picture above – will improve the park's appearance and comfort for users.
- As The Shops at Broad – a mixed-use retail district that is to be developed directly adjacent to this park – is developed, create connections and linkages between this area and the park, specifically by making trail connections and providing single-loaded roads between the park and the development.

Clayton W. Chandler Park

Type of Park: **Community Park**

Address: 1530 N. Walnut Creek Drive
Size of Park: 13 acres

Comments – Formerly known as "North Park," Chandler Park contains many of the amenities typical for a community park, including athletic fields, a walking/jogging loop, picnic tables, and a pavilion. Also, this park has the only publicly available tennis courts in the city. The park is bordered by Walnut Creek Drive, Brooks Wester Middle School, and vacant, cleared land. Because of the athletic fields, there is little mature vegetation in the park, although there are several trees along one of the park's edges.

The adjacency of the school, with its parking lot, provides access for students, but the entrance and even the park's boundaries are undefined. The park has recently undergone partial renovation, but items remain within the park that are still in need of renovation and/or repair such as the tennis courts.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Renovate and repair the tennis courts including mending fencing where needed, replacing nets, and refinishing the playing surfaces.
- Consider relocating the Colt League baseball field to another park so that there is room for the provision of more community park amenities at this location.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Provide additional landscaping whenever possible to augment that which exists and to provide visual interest.

General

- N/A

Katherine Rose Memorial Park

Type of Park: **Community Park**

Address: 303 North Walnut Creek Drive
Size of Park: 25.5 acres

Comments – This is Mansfield's premier park – the one that sees the most use and is the most well known to the majority of the public. Serving as a trailhead for the Walnut Creek Linear Park, Rose Park offers many activities for citizens of all ages – from playgrounds for children, basketball and volleyball for teens and adults, to a jogging and walking loop for adults and seniors. The park features wide open areas, interspersed with intimate spaces which are created by physical amenities – like pavilions, courts, and benches – and mature trees.

The park is bordered by the Walnut Creek Linear Park, which provides an attractive backdrop for the park's many activities, Walnut Creek Drive, and a railroad track. The noise from the road and the railroad tracks is significant and at times very distracting, though this distraction is greatest only when trains pass by.

There are two factors that make Rose Park special. The first is the history of the site as a Pecan Orchard. This can be seen in the placement of the large, mature pecan trees placed on a grid in the middle of the park. The second factor is the park's integration with the Walnut Creek Linear Park system, which improves accessibility to and from the park and provides numerous other opportunities for recreation for people visiting Rose Park.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- N/A

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Over time and where not precluded due to the need for turf grasses as playing surfaces and picnic areas, replace turf grasses with native tall grasses which require less maintenance and irrigation and can be mown or left to exist in their natural state (or combinations thereof). For shaded areas, consider establishing shade-loving native grasses such as Inland Sea Oats (*Chasmanthium latifolium*).

General

- N/A

McClendon Park East

Type of Park: **Community Park**

Address: 740 W. Kimball Street
Size of Park: 17.3 acres

Comments – This attractive park, nestled in between wooded edges provides some functions of a neighborhood park, but because of the large amount of the park devoted to softball activities (the field, concession building, and large parking lot) it can be considered a community park. Many aspects add to the quality of McClendon Park East, including the wooded edges already mentioned, the varying terrain (which provides a

good sense of arrival into the park, as the whole park is laid out before you), and natural features such as the mature trees and the large boulders piled near the entrance.

The softball facility has recently undergone improvements, including the addition of new, steel bollards. More improvements are forthcoming including updated and expanded lighting.

There is a trail with a trailhead behind the softball field that connects this park to McClendon Park West. The trailhead is hidden, unmarked, and generally out of view for park users. The portion of the trail nearest this park is, like the portion nearest McClendon Park West, overgrown and generally unused.

The Mansfield Cemetery (not owned or operated by the City) is located directly adjacent to McClendon Park East. The portion of the park nearest the cemetery is undeveloped and heavily wooded. This wooded area serves as a good buffer between the park and the cemetery and should remain intact as protected open space to improve the quality of both areas – though trails through the woods should be allowed.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- The existing pavilion does not have a multi-tiered roof. Such a design does not allow heat to be released from under the pavilion. Replacing this pavilion covering with a multi-tiered roof should be considered.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Ensure that runoff from the parking lot is not channelized and flows at a rate sufficiently slow enough to allow for filtration of surface pollutants (e.g., oil and anti-freeze) from the parking lot before the storm water reaches the nearby creek.
- There is great value in the un-improved wooded areas surrounding and adjacent to this park. Ensure that the quality of these areas remains, both as a visual amenity and as a wildlife habitat.

General

- Renovate the trail and trailhead leading from the far end of this park to McClendon Park West. This trail does not need to be paved – rather, a simple rehabilitation of the soft surface trail, signage, and an enhanced trailhead would be sufficient.

Town Park

Type of Park: **Community Park**

Address: 500 North Main Street
Size of Park: 27.2 acres

Comments – This park is one of several within the city that serves as a trailhead for the Walnut Creek Linear Park. This park provides several visual and physical experiences within its spaces due to the location of mature trees, retaining walls, topography changes, and physical amenities. For example, the picnic tables nestled in the wooded areas feel as if they are in a "room" or a different space than the rest of the park. One of the nicest qualities of this park is its seamless integration with the Walnut Creek Linear Park. There is little vegetation change between the two areas and the use of similar materials in Town Park and along the trail builds an easily recognizable theme.

The orientation of the amphitheater, pavilion, and playground provide a diverse experience for park users that come to Town Park. Picnics, events, and reunions benefit from the proximity of the pavilion to the playground, while concerts, plays, and other performing arts events taking place in the amphitheater benefit from the pavilion being located in a raised area overlooking the amphitheater.

The amphitheater itself is well located with the stage defined by the backdrop of the natural forest. This provides a sense of being nestled in the woods and adds to the character and quality of activities occurring in this space, as well as the character and quality of all of Town Park.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Asses the current drainage capacity of the park. Being in close proximity to and bisected by drainage ways, this park is expected to experience large water volumes passing through the area. Facilities, such as the horseshoe pits, should be examined to ensure that water is capable of draining from these locations after rain events.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- N/A

General

- N/A

Special Purpose Parks

Hardy Allmon Soccer Complex

Type of Park: **Special Purpose Park**

Address: 310 N. Walnut Creek Drive
Size of Park: 9.4 acres

Comments – The Hardy Allmon Soccer Complex is one of many parks located along the Walnut Creek Linear Park and includes a trailhead with a small parking lot and a gateway feature leading to the trail. Other than these amenities, the remainder of the park is made up of two practice soccer fields. The park is divided by Magnolia Street, with one soccer field on either side. This bisection of the park makes it feel much smaller and more

exposed. On the east side of the park (on both sides of Magnolia), there is a sharp rise in elevation – on the northern side of the park, this slope is covered in trees while on the southern side, it is bare except for turf grass. While the bare slope provides seating areas for spectators, it also makes that end of the park feel more exposed.

The drainage way running through the park is physically and aesthetically well-established with river stone and boulders as a treatment to arrest and prevent erosion, as well as providing visual quality that relates to that of the Walnut Creek Liner Park.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Ensure the continued quality and capacity of bleachers and trash receptacles in this park.
- Repave the parking lot with a more attractive and durable paving surface. Use a pervious paving material or design the parking in such a way that the run-off from the pavement is slowed through a grass swale or bio-filtration system before entering the creek. Install proper curbs, as opposed to the existing mounded asphalt curbs.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Over time and where not precluded due to the need for turf grasses as playing surfaces and picnic areas, replace turf grasses with native tall grasses which require less maintenance and irrigation and can be mown or left to exist in their natural state (or combinations thereof). For shaded areas, consider establishing shade-loving native grasses such as Inland Sea Oats (*Chasmanthium latifolium*).
- As mentioned above, drainage swales or bio-filtration system should be implemented to encourage slower storm water flow from the parking lot and to filter the run-off.

General

- The north and south portions of the park are divided by Magnolia Street. Improve the connection between these two sides by creating an enhanced pedestrian crosswalk on Magnolia at the intersection with Walnut Creek Drive.

Phillip Thompson Soccer Complex

Type of Park: **Special Purpose Park**

Address: 1701 North Holland Road
Size of Park: 20.5 acres

Comments – This park is considered special purpose because of its lack of amenities other than those related specifically to soccer and the fact that the park is gated, prohibiting access when there are no soccer practices or games occurring. The park is bordered on one side by houses and on three sides by wooded areas. Walnut Creek wraps around two edges of this park and provides great opportunity for expanded park activities and amenities.

The edge between the park and the adjacent residential area is very abrupt. This edge is emphasized by topography change which puts the houses on a higher elevation than the park. In this instance, a single-loaded road between the park and houses (which would face the park) would have made a large difference to the experience and appearance of the park.

Within the park there is little vegetation or topographical relief which reduces the level of visual interest within the park. However, because the wooded edges of this park are so pronounced and the open space within the park is fairly small, this area feels secluded.

Along Walnut Creek, on the eastern edge of the park, are the remnants of an abandoned one-lane vehicular bridge. Specifically, only the columns and crossbars remain; the decking is completely gone. These remnants have an interesting and attractive though simple character to them and present the opportunity to serve as an amenity in this location in that the area around the bridge can be a place to walk to and explore. The remnants also provide the opportunity to one day place a deck on them and use the bridge

as a pedestrian crossing for the Walnut Creek Linear Park, which is slated to pass by the Soccer Complex in the future.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Develop passive recreation amenities along the creek corridor, including walking paths, benches, and picnic tables in order to provide activities for family members of soccer players using the adjacent fields. Take advantage of the old bridge structure as a visual amenity of the history of the area.
- Install a multi-tiered roof pavilion near the soccer fields so that there is a shaded area for spectators, parents, pre- and post-practice meetings, and so forth.
- Develop a trailhead within the park to service the Walnut Creek Linear Park trail.
- The existing parking lot is of an odd shape and is not clearly defined other than by painted stripes. Consider implementing raised curbs, wheel stops, bioswales and landscaped medians to enhance the visual character of the parking while helping to define rows and parking aisles within the lot.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Address the creek corridor adjacent to the park to ensure that it remains healthy and clean while allowing it to be used as a recreational amenity. This includes addressing and minimizing any real or potential erosion issues.
- Because of the large percentage of surface area within the park that is impervious (specifically the parking lot and driveway) and its impact on the vulnerable adjacent creek corridor, runoff is an issue that needs to be carefully studied in this location. When adding or reconstructing pavement sections, use permeable paving (pavers, asphalt, or cement). For existing paved areas, install grass swales, a bio-filtration system, or vegetated filter strips to filter pollutants from the runoff and to slow the flow of runoff, thereby reducing erosion in the adjacent creek corridor.

General

- Develop a master plan for this park that includes passive recreation amenities and a trailhead for the Walnut Creek Linear Park trail.
- Create a gateway at the entrance of the park that creates a sense of arrival. Use design themes from parks throughout the city (i.e., stone columns with standing-seam metal roofs) and if the park must have a gate to restrict entrance, create a more aesthetically pleasing alternative.
- Address the edge between the park and the abutting residential area. Soften this transition through screening/buffering plantings or partnering with property owners to replace the solid wooden fences with transparent (e.g. wrought iron, decorative aluminum) fencing for visual access to the park, informal surveillance, and to minimize the sense of isolation.

Mansfield Sports Complex

Type of Park: **Special Purpose Park**

Address: 920 North Holland Road
Size of Park: 80 acres

Comments – The Mansfield Sports Complex is the largest athletic facility in Mansfield in terms of size and number of sports fields. It is located outside of the main core of the city and is adjacent to an existing neighborhood and is bordered on another side by a quickly developing neighborhood, which will alter the edges of the park as well as the use patterns. The function of this park is solely sports practice and competition – there are currently no amenities for passive use. The park has a pleasant entrance with modest landscaping, a unique sign that announces the park's name, and a parkway feel as one enters the Sports Complex. The linearity and edges of the entrance followed by the "opening up" of the landscape once one finally enters the park provides an enjoyable experience.

The edges of this park are wooded, providing a sense of escape from urban life. Within these wooded edges run assorted creek and drainage corridors, which provide opportunities for trail corridors as well as passive recreation amenities such as picnic tables and benches. One of these creek corridors runs directly from the southern edge of the park to Joe Pool Lake, less than one mile away.

Within the park there is very little vegetation (other than turf grass), structures, or other vertical elements – the lack of such items makes the park look flat and barren, with little internal visual interest. This evokes thoughts of being hot, getting sunburned, and generally being exposed. A further issue is the arrangement of pavement within the park. Because of the large numbers of parents and spectators drawn to games that take place here, the large amount of parking that exists is necessary, as are roads and driveways to

connect these parking areas. These roads and driveways, however, are confusing to maneuver, especially given the lack of any sort of wayfinding signage.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- Develop a wayfinding system of signage throughout the park that addresses both vehicular and pedestrian circulation. Incorporate design details into this system that relate to this individual park and the City's park system. To further enhance wayfinding, also plant trees, shrubs, and groundcovers that help to define driveway corridors, thereby acting as passive wayfinding.
- While the entry sign is attractive and there are advantages to its uniqueness as compared to park signage in the rest of the park system, the entry gateway to the park could benefit from design details (such as a pair of monuments to frame the drive) that connect with the park signage used in the rest of the park system. Additionally, the condition and maintenance of the existing sign should be ensured.
- There are ample opportunities for amenities along the wooded edges/creek corridors surrounding the park including a shady walking path, picnic tables, a playground, and a pavilion.

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Plant additional trees, shrubs, and ornamental grasses that are of native, drought tolerant species throughout the interior of the park, especially in and around the parking lots and driveways to improve the visual character of the park, to provide shade, and to help define space within the park.
- Address the creek corridor adjacent to the park to ensure that it remains healthy and clean while allowing it to be used as a recreational amenity. This includes addressing and minimizing any real or potential erosion issues.
- Because of the large percentage of surface area within the park that is impervious (specifically the parking lots and driveways) and its impact on the vulnerable adjacent creek corridor, runoff is an issue that needs to be carefully studied in this location. When adding or reconstructing pavement sections, use permeable paving (pavers, asphalt, or cement). For existing paved areas, install grass swales, bio-filtration cells, or vegetated filter strips to filter pollutants from the runoff and to slow the flow of runoff, thereby reducing erosion in the adjacent creek corridor.

General

- It is recommended that a master plan be developed for this park that incorporates wayfinding, design considerations including gateway and monuments, and passive recreation amenities.

Linear Parks & Greenbelts

Walnut Creek Linear Park

Type of Park: **Linear Park**

Size of Park: 26 acres

Comments – The Walnut Creek Linear Park is the crown jewel of Mansfield's park system. In addition to the uniqueness of the terrain which comprises the park and the design of the constructed features, the real value of Walnut Creek Linear Park is the connectivity that it provides physically and thematically between many of the City's parks.

Within this corridor, many experiences are provided for users; these experiences are defined by the changing natural structure of the space and physical amenities. The area's terrain is comprised of varying natural features, including valleys, cliffs, dense wooded spaces, open meadows, intimate spaces, vast spaces, sunny spaces, and shady spaces. Hard surface trails, soft surface trails, places to sit, and places to play comprise just some of the physical amenities and facilities provided in the Walnut Creek Linear Park and the adjoining parks.

This park currently extends along approximately 1.9 miles of Walnut Creek, though the possibility exists to extend it further west to McClendon Park East and West and further east to the Phillip Thompson Soccer Complex and Joe Pool Lake.

Recommended Park Improvements:
The following improvements are recommended for this park. Some of these improvements are more easily achieved than others; this list describes a "perfect world" scenario for park improvement.

Programmed Space/Support Facilities

- N/A

Sustainable Sites/Ecological Services/ Natural Resources/Open Space

- Continue to manage and maintain the creek and trail corridor in a manner that is as natural as possible with limited maintenance. Mowing other than along the immediate two to three foot edge of the trail may be limited to once or twice per year.

General

- Continue to expand this park along Walnut Creek and continue to provide connections to adjacent and nearby parks, neighborhoods, and retail areas.

Recreation Facilities

Mansfield Activities Center (MAC)

Type of Facility: **Indoor Recreation Center**

Address: 106 S. Wisteria
Size: 22,000 SF

Comments – The Mansfield Activities Center (MAC) was opened in 2001 when the population of Mansfield was 35,000. The facility includes a gymnasium, multipurpose rooms, kitchen, game room, craft room, lobby, and staff office space. The facility was designed such that expansion could occur as the needs expanded.

The MAC is located as a part of a civic campus containing the MAC, Library, City Hall, and Tarrant County Sub-Courthouse. The facility is directly adjacent to the Library. Parking of approximately 90 spaces is provided for the MAC with land area available to expand the parking in the future. The site containing the center is essentially void of any major tree coverage and has some slopes to the back of the center that would need to be addressed with any expansion plans.

Recommended Center Improvements:
The following are possible recommendations for the Center. They are listed as Maintenance Related and Growth Opportunities.

Maintenance Related:
The dividing partitions in the multipurpose area do not provide the needed acoustical separation desired in the facility. Some reconfiguration of the lobby could be developed to allow easier control of visitors to center. Having two access doors to the lobby contributes to this challenge. As with all centers, storage space is an issue and could be expanded to better serve the needs of the MAC.

Growth Opportunities:
The City has experienced significant growth since its opening date: from 35,000 to 2009's population of approximately 62,000. This has increased the demand for recreation opportunities beyond capacity of the current center. Based upon the survey of citizens the higher rated program spaces included senior areas, indoor cardio/weight training areas, gymnasium, aerobics room and indoor jogging track. Therefore, any expansion plans should consider these as high priority needs. The City may also seek to understand the role of the MAC in the City's long range approach to providing Levels of Service noted in report. This could include conversion of the MAC to a seniors-only center in the future.

Chapter 4

Public Involvement

INTRODUCTION

No one understands the needs of the community more than the people that live and work here. Gaining the insight of the citizens is paramount to the Planning Team both for truly understanding the existing conditions of the City and for developing recommendations, which should reflect the needs and desires of the community. Public involvement informs the Planning Team and City Staff of what facilities are most needed, where key needs exist, and what level of priority should be assigned to those needs.

Developing the Public Involvement process revolved around understanding the importance and the necessity of *information exchange* – that is, information given to the public by the Planning Team and City Staff and the information gained in turn from the public. The primary pieces of the information exchange are broken down as follows:

Information to the Public

- Advertising the Master Plan
- Explaining the Master Planning process
- Explaining the Planning Team's understanding of the project and of the City itself
- Depicting potential outcomes of the planning process.

Information from the Public – Feedback on the above items plus:

- Background information and perception of existing conditions
- Community values
- Wants and needs related to the components of the Master Plan (Parks, Open Space, and Recreation Facilities)
- A community vision for the future of Mansfield

The goals for the Public Involvement process outcomes are as follows:

- Develop "buy-in" and a sense of ownership for the Master Plan
- Inform and encourage citizens to take action to improve their community
- Augment the Planning Team's analysis of the City's existing parks and facilities
- Gather information to shape the Master Plan goals which guide the development of the entire Plan

The Public Involvement process was developed based on its merits for achieving the required information exchange and the desired process outcomes. Several methods both quantitative and qualitative were used during the process. The Planning Team conducted a Citizen Attitude Survey, held three Focus Group meetings, and had one Public Meeting. Each of these methods, as well as their results, is described in the following pages.

CITIZEN ATTITUDE SURVEY

Raymond Turco & Associates conducted the "City of Mansfield 2008 Parks and Recreation Program Survey" to supplement the information gathered for this Master Planning process. This public opinion poll recorded attitudes on parks and recreation issues from randomly selected Mansfield residents. The full 400 respondent sample was interviewed by telephone with a comprehensive questionnaire that collected attitudinal data on a variety of recreational issues including quality rating of an array of facilities, the need for construction of additional amenities and overall level of satisfaction with various recreational characteristics.

The advantage of a telephone survey is that the participants are randomly chosen and therefore less likely to express bias. The survey was designed to examine residents' awareness of programming opportunities in the City, as well as to assess recreational needs in the community, especially as they relate to the Master Plan. The information gathered in this report will allow elected officials and city staff to better understand the recreational needs and desires of the citizenry.

The cumulative results "City of Mansfield 2008 Parks and Recreation Program Survey" are contained in Appendix A of this report. The survey investigated the following areas of interest:

General Recreation: Utilization and General Opinions

- Satisfaction with quality of parks and recreation
- Migration information (based upon a description of the respondent's prior address)
- Frequency of household participating in activities by type
- Recreational facilities visited in the past year

Assessing Future Needs

- Level of agreement or disagreement with recreational planning-related statements
- Level of importance placed on a series of priorities to direct future park department actions
- Recreation facilities and amenities lacking in the respondent's portion of city
- Level of importance placed by respondents in certain activities being provided or expanded by City of Mansfield
- Identification of most important recreational activity to support
- Level of importance placed by respondents in certain activities being offered in a potential future recreation center
- Level of agreement or disagreement with beautification-related statements and strategies
- Level of support for various uses of trails as part of a City-wide trails network

Study Areas

The City of Mansfield was divided into four areas as discussed in Chapter 2. Such a division helps the Planning Team to identify correlations between citizen attitude and geographical context. These same divisions were used for the administration of this survey. The sample used during the survey mimicked the population distribution of the City. That is, the proportion of respondents living in each quadrant of the City corresponds with the portion of the total population residing in each quadrant. In other words, 23% of the respondents surveyed live in Area 1 (along with 23% of the total population), 53% live in Area 2 (along with 53% of the total population), 13% live in Area 3 (with 13% of the total population), and 11% live in Area 4 (with 11% of the total population).

Respondent Profile

The profile or general characteristics of the survey respondents is an important issue in analyzing the overall results of the survey. A similar profile was analyzed in the 2001 survey (which was prepared for the 2002 Master Plan) and this survey shows some significant differences between the respondents of the past survey and those of this survey. One of the more noticeable of these differences is that the respondents this time around were markedly older than those in 2001. This implies that the average citizen age in Mansfield is increasing.

Table 4.1
Age of Respondents

Age Bracket	Percentage of 2001 Population	Percentage of 2008 Population
Under 35	26%	16%
36 – 55	55%	53%
Over 55	12%	18%
Over 65	8%	13%

Furthermore, 2008 respondents were less likely to have children under 18 (45% in 2008 versus 40% in 2001). For parents with children, the children were more likely to be in the 10-14 age range (27% of the population) than in the 0-4 (19%), 5-9 (20%), or 15-19 (18%) age ranges. Finally, respondents were more likely to have lived in Mansfield longer than the 2001 respondents.

Table 4.2
Length of Residence

Residence Duration	Percentage of 2001 Population	Percentage of 2008 Population
Under 1 year	9%	6%
2 – 4 years	40%	28%
5 – 7 years	19%	18%
8 – 10 years	7%	16%
Over 10 years	24%	32%

Survey Results

Below are the summarized results from the telephone survey. For complete results, see Appendix A.

Satisfaction with Parks & Recreation

Overall Satisfaction

The survey respondents showed a very high level of satisfaction with the quality of parks and recreation in the City. In fact, 42% said they are very satisfied while 51% said they are satisfied; a total of 93% of those surveyed are satisfied with the quality of parks and recreation. Only 4% were dissatisfied with only 1% of the survey (six people) being very dissatisfied. An anecdotal comparison to surveys performed in other North Texas cities shows this to be a very high satisfaction rate.

Quality Improvement

Respondents were queried as to whether they thought that, during their time as a resident in Mansfield, the quality of parks and recreation in the City has improved. Overall, 79% felt that it has improved while 19% felt it has stayed the same. Only 1% felt that the quality has gotten worse. It is interesting to note that in Area 1, residents were more likely to say that the quality has improved (89% of Area 1 residents) – this is likely a result of the fact that Area 1 residents are most likely to have lived at their current address for more than ten years and have witnessed the improvements that have been made as a result of the 2002 Master Plan. On the other hand, residents in Area 3 were less positive about the change in quality with only 71% replying that the quality has improved (though 27% felt it has stayed the same and 0% felt it has declined).

Participation

Survey respondents were asked several questions throughout the survey related to the types of recreational activities that they engage in. This information helps inform the Planning Team as to what trends in recreation exist in Mansfield

Types of Activities

Respondents were asked what types of activities they are interested in. This information helps the Planning Team to understand the general *categories* or *nature* of activities that the citizens of Mansfield like to participate in. As can be seen in Table 4.3 below, the only activity in which a majority of respondents said they always or often participate in was fitness/exercise like running, jazzercise, yoga, etc.

Table 4.3
Favorite Types of Activity

Activity	Always	Often	Seldom	Never	No Opinion	Ratio
Fitness/exercise like running, jazzercise, yoga, etc.	15%	39%	28%	18%	0%	1.2:1
Social activities like dances, cooking, card playing, etc.	8%	30%	35%	27%	0%	0.6:1
Outdoor recreation like camping, fishing, boating, etc.	7%	28%	35%	29%	1%	0.6:1
Excursions like tours, trips, etc.	5%	32%	36%	27%	0%	0.6:1
Team sports – basketball, soccer, etc.	13%	18%	17%	51%	0%	0.5:1
Leisure Aquatics	5%	26%	26%	42%	1%	0.5:1
Individual sports like golf, tennis, boxing, etc.	11%	17%	23%	49%	0%	0.4:1
Performing arts like music, drama, etc.	7%	22%	26%	44%	0%	0.4:1
Fine arts like painting, drawing, etc.	4%	15%	23%	57%	0%	0.2:1
Crafts like pottery, weaving, etc.	2%	11%	17%	69%	0%	0.2:1
Fitness Aquatics	3%	13%	26%	57%	0%	0.2:1

Participation Factors

It is interesting to note that there were differences in activity types dependent on geography (which area the respondent lives in). For example, residents in Area 1 were far more likely to say that they always or often participate in outdoor recreation like camping, fishing, boating, etc. (47% of respondents) while only 9% of Area 4 said they always or often participate in such activities. Similarly, residents in Area 3 are more likely to participate in social activities like dances, cooking, card playing (47% compared to only 20% in Area 4), individuals sports, like golf, tennis, and boxing drew more enthusiasm in Area 2 (35% compared to 12% in Area 3), and fitness/exercise like running, jazzercise, and yoga also drew more enthusiasm in Area 2 (62% compared to 40% in Area 3).

Facilities Visited

Respondents were asked whether they had visited the various parks and recreation facilities in Mansfield. As can be seen in the table below, Katherine Rose Memorial Park is the most visited park in the City, followed by the Walnut Creek Linear Park and Town Park.

Table 4.4 Recreational Facilities Visited in the Past Year by Subsector and Sex							
Facility	**Overall**	**Area 1**	**Area 2**	**Area 3**	**Area 4**	**Male**	**Female**
Katherine Rose Memorial Park	77%	75%	78%	81%	76%	72%	83%
Walnut Creek Linear park	46%	43%	45%	35%	67%	50%	42%
Town Park	42%	50%	36%	40%	53%	41%	42%
Mansfield Sports Complex	42%	37%	43%	35%	53%	45%	38%
Hawaiian Falls	34%	36%	32%	33%	44%	31%	38%
James McKnight Park East	30%	36%	28%	29%	31%	33%	27%
Big League Dreams	27%	24%	30%	17%	33%	28%	26%
Mansfield National Golf Course	26%	20%	32%	10%	31%	27%	25%
McClendon Park West	16%	16%	14%	17%	20%	18%	13%
Hardy Allmon Soccer Fields	15%	22%	13%	6%	24%	17%	14%
McClendon Park East	14%	13%	12%	13%	27%	17%	11%
Phillip Thompson Park	11%	10%	11%	8%	16%	12%	9%
Julian Field Park	8%	11%	6%	8%	11%	8%	7%
Clayton Chandler Park	7%	7%	10%	0%	4%	8%	6%
Haven't visited any	9%	10%	11%	6%	4%	7%	11%

Facility Provision

Lacking Facility

Overall, respondents cited the following as the most lacking facility in their part of the City:

- A Park – 17% of respondents
- Multi-use Trails – 16%
- Pool – 14%
- Recreation Center – 11%

Of note is that these are the only four facility types that at least 10% of the total population said were lacking, though at least eleven other facility types were mentioned by more than one respondent.

There were differences between the four City areas as to what facility was the most lacking as can be seen below (only those results which gained a mention by at least 10% of the respondents from each area are shown):

Area 1

- Pool – 19%
- Multi-use Trails – 17%
- A Park – 15%
- Natatorium/Aquatic Facility 11%

Area 2

- Multi-Use Trails – 22%
- A Park – 16%
- Pool – 10%

Area 3

- Pool – 37%
- Recreation Center – 16%
- A Park – 11%
- Natatorium/Aquatic Facility – 11%

Area 4

- A Park – 25%
- Recreation Center – 17%
- Miscellaneous – 17%[1]

Outdoor Facility Importance

Respondents were asked to give their opinion on the importance of the City providing or expanding items from a list of 22 different outdoor *competitive* sports facilities and a list of 18 outdoor *non-competitive* recreational facilities. The three items that topped the *competitive* list were sand volleyball courts (importance ratio of 1.7:1[2]) outdoor basketball courts (also 1.7:1), and under 12 soccer fields (1.6:1). The three items that topped the *non-competitive* list were multi-use trails for walking/jogging (6.7:1) family picnic areas (6.0:1), and natural habitat/nature area (5.6:1). As it can be seen, respondents place overall greater importance on *non-competitive* activities than on *competitive* activities.

[1] This means that 17% of the respondents from Area 4 mentioned a unique facility that no other respondent mentioned. This can be inferred as showing that a park and a recreation center are far and away the most important facilities to be provided

[2] This ratio depicts the number of people who felt the item was very important or important to the number of people who felt it was unimportant or very unimportant. In this case, there were 1.7 times as many people who felt this item was important than those who felt it was unimportant.

Table 4.5 Importance of Building Additional Outdoor Facilities in Mansfield (results with a ration equal to or greater than 1:1)						
Outdoor Competitive Facilities						
Facility	**Very Important**	**Important**	**Unimportant**	**Very Unimportant**	**No Opinion**	**Ratio**
Sand volleyball courts	6%	56%	28%	8%	2%	1.7:1
Outdoor basketball courts	4%	56%	29%	7%	3%	1.7:1
Under 12 soccer fields	9%	49%	29%	8%	4%	1.6:1
Youth baseball fields	12%	42%	33%	10%	2%	1.5:1
Under 8 soccer fields	9%	48%	30%	9%	4%	1.5:1
Youth football fields	7%	50%	30%	7%	5%	1.5:1
Racquetball or handball court	5%	50%	33%	7%	3%	1.4:1
Under 16 soccer fields	9%	46%	33%	8%	4%	1.3:1
Tennis courts	8%	43%	35%	8%	6%	1.2:1
Youth softball fields	10%	41%	36%	9%	3%	1.1:1
Skateboard park	6%	43%	37%	10%	3%	1.0:1
Outdoor Non-Competitive Facilities						
Facility	**Very Important**	**Important**	**Unimportant**	**Very Unimportant**	**No Opinion**	**Ratio**
Multi-use trails for walking/jogging	37%	50%	10%	3%	0%	6.7:1
Family picnic areas	19%	65%	11%	3%	1%	6.0:1
Natural habitat/nature areas	24%	60%	12%	3%	1%	5.6:1
Playgrounds	14%	59%	12%	3%	1%	4.9:1
Road biking lanes	29%	51%	12%	6%	2%	4.4:1
Event picnic/reunion pavilion	16%	62%	16%	4%	2%	3.9:1
Outdoor festival area	13%	58%	21%	5%	3%	2.7:1
Outdoor performance amphitheatre	12%	53%	36%	4%	3%	2.2:1
Mountain biking trails	14%	48%	28%	7%	3%	1.8:1
A dog park	16%	45%	31%	7%	2%	1.6:1
Outdoor swimming pool	17%	45%	31%	7%	3%	1.4:1
A children's water spray park	14%	41%	36%	6%	3%	1.3:1
Exercise stations along trails	8%	46%	36%	6%	3%	1.3:1

Indoor Facility Importance

Respondents were asked to give their opinion on the importance of the City providing or expanding items from a list of 13 different *indoor* facilities. The three items that topped

the *indoor* list were senior center (importance ratio of 3.7:1) indoor cardio/weight training area (1.8:1), and gymnasium/indoor basketball courts (1.8:1).

Table 4.6
Importance of Building Additional Indoor Facilities in Mansfield

Facility	Very Important	Important	Unimportant	Very Unimportant	No Opinion	Ratio
Senior center	25%	52%	17%	4%	1%	3.7:1
Indoor cardio/weight training area	10%	53%	30%	5%	1%	1.8:1
Gymnasium/indoor basketball courts	7%	56%	28%	7%	2%	1.8:1
Aerobics room	8%	52%	32%	6%	2%	1.6:1
Indoor jogging track	10%	48%	32%	7%	2%	1.5:1
Recreation center with fitness area/weight training and aerobics	9%	50%	32%	7%	3%	1.5:1
Recreation centers with indoor and outdoor aquatics	11%	45%	34%	6%	4%	1.4:1
Gymnastics room	5%	50%	35%	7%	2%	1.3:1
Natatorium/indoor swimming facility	11%	37%	39%	9%	4%	1.0:1
Dance instruction room	7%	41%	41%	8%	4%	1.0:1
Game room (pool, foosball, etc.)	4%	44%	42%	8%	2%	1.0:1
Indoor volleyball courts	6%	40%	40%	10%	4%	0.9:1
Martial arts area	3%	41%	45%	7%	4%	0.9:1

Single Most Important Facility

Respondents were then asked which of the previously mentioned activities – from both the *outdoor* list and the *indoor* list – was the most important to provide or expand. The results were multi-use trails for walking/jogging (12%), recreation center with indoor/outdoor aquatics (11%) and senior center (10%).

Action Statements

Respondents were asked how much they agree or disagree with a variety of statements dealing with potential future Parks and Recreation Department actions. Those statements are ranked below from those which people agree most strongly with to those with the lowest rate of agreement.

Table 4.7 Agreement with Action Statements						
Statement	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**	**No Opinion**	**Ratio**
Preserve environmentally sensitive areas such as natural creek corridors	36%	57%	5%	1%	1%	15.5:1
Construct facilities in accordance with the demand as new residents move into the city	13%	74%	10%	1%	2%	7.9:1
Acquire land for future park and open space development	16%	70%	10%	1%	2%	6.9:1
Plant more trees in the city	20%	63%	14%	1%	2%	5.5:1
Increase the amount of public open space	23%	57%	14%	1%	5%	5.3:1
Acquire land to protect sites of cultural value in the area where you live	14%	65%	14%	1%	5%	5.3:1
Beautify medians and entryways throughout the city	23%	57%	16%	1%	3%	4.7:1
Construct a nature center of botanical gardens	23%	55%	17%	1%	4%	4.3:1
Design and develop more parks and facilities that focus on passive experiences/activities	12%	59%	18%	1%	9%	3.7:1
Construct rental picnic reunion pavilions throughout the city	7%	67%	21%	1%	4%	3.4:1
Design and develop more indoor facilities that focus on recreational activities	11%	56%	26%	2%	5%	2.4:1
Construct a cultural/performing arts center	13%	51%	26%	2%	7%	2.3:1
Place art in parks and other public spaces	10%	55%	25%	3%	8%	2.3:1
Construct a tennis center	9%	43%	36%	3%	10%	1.3:1

Recreation Center Facilities

Respondents were presented with a list of items and asked to give input on which were important or desirable items to include if an additional recreation center was to be developed in the future.

Table 4.8 Importance of Facilities & Amenities in a Potential Future Recreation Center						
Facility	**Strongly Support**	**Support**	**Oppose**	**Strongly Oppose**	**No Opinion**	**Ratio**
Gymnasiums	21%	56%	14%	5%	3%	4.1:1
Multi-purpose rooms for meetings or party rentals	16%	59%	19%	4%	2%	3.3:1
Weight/ cardiovascular equipment room	20%	54%	19%	4%	3%	3.2:1
Health assessment areas	14%	57%	23%	4%	2%	2.6:1
Fitness/lap lane pool	14%	49%	29%	6%	2%	2.5:1
Dance and aerobic rooms	10%	58%	24%	4%	4%	2.4:1
Computer labs	19%	49%	23%	6%	2%	2.3:1
Concession area	9%	59%	26%	4%	2%	2.3:1
Indoor jogging track	16%	51%	27%	5%	2%	2.1:1
Family locker rooms	9%	57%	26%	5%	2%	2.1:1
Racquet / handball courts	9%	56%	26%	5%	3%	2.1:1
Kitchen/dining area	8%	57%	26%	6%	3%	2.0:1
Game room, with billiard tables, table tennis, etc.	9%	54%	29%	5%	2%	1.9:1
Indoor leisure pool with wading area, water play area	15%	45%	31%	7%	2%	1.6:1
Rock climbing wall	10%	44%	36%	6%	3%	1.3:1
Current channel	7%	31%	37%	8%	17%	0.8:1

Beautification

Respondents were queried on their opinion on various statements on beautification efforts in Mansfield in order to gauge both the City's past success and opinions on beautification strategies. It can be seen in the table below that residents are strongly in support of two issues – specifically the support of enhancing "gateways to the City" and improving landscaping as a means to improve City image.

Table 4.9 Agreement with Beautification Statements						
Statement	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**	**No Opinion**	**Ratio**
I am satisfied with how streets and intersections are landscaped in Mansfield	12%	60%	24%	4%	0%	2.6:1
I believe the City should plant more trees and landscaping along streets and intersections	23%	50%	21%	2%	3%	3.2:1
I would support the city developing points to where residents could access creek areas	16%	558%	21%	3%	4%	3.0:1
I do not believe that landscaping city streets and intersections is all that important	1%	16%	67%	13%	2%	0.2:1
Improved landscaping of city streets will help to improve our City image	25%	59%	13%	1%	2%	6.0:1
I support the City enhancing its "gateways to the City" so that people know they are coming into Mansfield	27%	58%	11%	1%	2%	7.1:1

Trails

Finally, respondents were asked how strongly they would support or oppose various uses of a City-wide trails system. It can be seen in the table below that overall, all of the uses are generally supported by at least half of the survey respondents. However, it can clearly be seen that recreational walking, hiking, and bicycling receive the greatest levels of support. It is striking to see the overall level of support of cycling, especially cycling for transportation purposes (biking to get to work or a store) and for providing on-street bike lanes.

Table 4.10 Support of Various Trail Uses						
Use	**Strongly Support**	**Support**	**Oppose**	**Strongly Oppose**	**No Opinion**	**Ratio**
Recreational walking or hiking	42%	49%	7%	1%	1%	11.4:1
Recreational bicycling	34%	57%	7%	1%	2%	11.4:1
Nature trail	12%	58%	7%	1%	1%	8.8:1
Connections to nearby schools	25%	57%	13%	2%	2%	5.5:1
Biking to get to work or a store	22%	55%	16%	2%	5%	4.3:1
Widen some thoroughfares for bike lanes	25%	53%	16%	3%	2%	4.1:1
Mountain biking	17%	47%	29%	4%	3%	1.9:1
Inline skating	12%	51%	29%	5%	3%	1.9:1
Horseback riding	12%	41%	34%	8%	4%	1.3:1

PUBLIC MEETINGS SUMMARY

As discussed earlier, the Public Involvement process was designed based on choosing methods most effective in creating an information exchange between the public and the Planning Team and producing the desired outcomes of the process. Face-to-face interaction with the public is one of the primary means by which the Planning Team can accomplish these goals. For the Master Plan, two types of Public Involvement events were held: small focus group meetings that created citizen dialogue and a large-group/small-group public meeting in order to communicate with and gain input from the broader public.

Focus Groups

A series of focus group meetings were held by Halff Associates as part of the information gathering stage for this plan. The three sessions were held on September 10, 2008 – each for a two hour period – with the following groups: 1) seniors; 2) business, civic groups, the historical society, and the school district; and 3) athletics, environmental groups, youth groups and associations, and performing and fine arts groups.

The overall purpose of the focus group meetings was to identify ways in which the Mansfield PARD through future planning could support and sustain the attributes that make Mansfield a desirable place for people to reside. A secondary outcome of the process was to ascertain any specific recommendations and concerns for individual stakeholder groups. This summary report will focus primarily upon those attributes and suggestions that were commonly held across all groups; specific comments and recommendations given by respondents to open-ended questions are featured in an addendum.

The sessions were held using a modified nominal group technique which enables all participants to express their ideas and suggestions in an orderly and efficient manner along with the opportunity for the common aspects of that input to be identified as well. The three central, focal areas of these meetings included:

- What characteristics or attributes make Mansfield a desirable place to reside?
- What outcomes would the community like to see?
- In what ways can the City of Mansfield and local civic groups contribute to the future of the community?

Overview of Responses

The following represents the commonality of responses across all of the focus groups related to these three basic areas of questioning:

Characteristics and Attributes Making Mansfield a Desirable Place to Reside

The following three themes were common across all groups:

- People & Culture
- Small Town Feel, Big City Advantages
- Amenities & Services

People & Culture

Focus group attendees were in agreement that one of the best characteristics of Mansfield is the people who live in the community. In fact, across all focus groups, the majority of the thoughts expressed were related to the people and the culture of Mansfield. Focus group attendees value the quiet and peaceful small-town-feel, community pride, and caring that creates a feeling of "hometown friendliness." Such a feeling is often represented in the volunteer organizations prevalent in the city and the coming-together of the diverse population groups in Mansfield working cooperatively to improve the community.

The quality and dedication of the City as an organization was also mentioned repeatedly. Specifically, the attendees cited the readiness of the City to help all groups of people from children to seniors and across demographic lines. The progressive nature and the quality of the City's leadership were often mentioned as a hallmark of excellence found in the City of Mansfield.

Finally, a culture with a progressive attitude was often mentioned; components of this attitude include the community's foresight, passion, citizen involvement, and willingness to improve Mansfield.

Small Town Feel, Big City Advantages

One of the recurring comments heard throughout the focus group meetings was the appreciation of Mansfield's small-town feel. The nice quiet atmosphere, safety, and scenery were all cited as pieces of this image of Mansfield. Citizens value the open space still present in the city and the presence of a variety of amenities and businesses within Mansfield. The groups and families that make up the City create a caring community and come together to support each other.

The proximity to the Metroplex as well as its location within the state give Mansfield the advantages of a big city, such as good jobs, hospitals, and dining and retail opportunities. While there are many benefits of being *in* a big city, being *near* a big city provides opportunities for affordable housing and having room for the City to grow while protecting open space.

Amenities & Services

The final theme of what makes Mansfield a desirable place in which to live is the multitude of amenities and services available to the city's residents which improve and support their quality of life. Many people cited the parks, trails, and open space as well as the variety of these outdoor activity opportunities as some of the best amenities in Mansfield. Further amenities that draw and retain people in the city are the convenient access to jobs, shopping, and hospitals; the variety of recreation and community events offered; and the opportunities for kids including high-quality schools.

In addition to these amenities, there was discussion across all of the focus groups about the city-operated facilities and the specific programs offered by these facilities for residents. Special mention was made of the quality of the Mansfield Activities Center (the MAC) and its programs for seniors and youth, the city's aquatic facilities, and the outstanding maintenance of the parks and facilities within the city.

What Outcomes Would You Like to See?

Citizens were asked what outcomes or results they would like to see in the future of Mansfield. Many varying responses were given and are shown as follows:

- **Community Pride** – People want to see a courteous citizenry that is involved with City programs and groups which work in cooperation to enhance community pride. The citizens want to be part of a "green-thinking community" that provides fun, wholesome learning and recreation opportunities that are of a higher quality and are unique. They want Mansfield to have a reputation as an outstanding city that is safe, fun, and fulfilling.
- **Physical & Mental Health –** People want opportunities to improve their physical and mental well-being and to keep the mind and body active through providing mental and physical stimulation. This includes not only the provision of facilities designed to provide these opportunities but also the provision of varied programming.
- **Personal Development** – Many people cited non-tangible, personal qualities that they would like to gain, including companionship, fulfillment, being positively active, confidence, and learning new skills.
- **Leisure Opportunities –** Most people were interested in having passive recreation and leisure-oriented opportunities including community events and quality programs. People correlate such opportunities with living healthy, active lifestyles.
- **Transportation & Access** – Many people (especially seniors) would like to see public transportation or another means to allow citizens to get to events and facilities without having to drive. Similarly, the accessibility of facilities and parks for the disabled is of great importance. Finally, most agreed that quality places for shopping, healthcare, and entertainment should be local – that is, these types of places should be *in* Mansfield so people don't have to *leave* Mansfield.
- **Quality Facilities –** People expressed a need for more space for recreation programs both indoor and outdoor. Some mentioned the need for space for arts, space for seniors, and indoor, flexible-use space while others mentioned the need for outdoor athletic spaces to be used for children, for formal and informal play, and for tournaments.
- **Support Diversity** – There is a diverse population in Mansfield in age, sex, ethnicity, and income. More services that meet today's diverse needs are desired by the citizens. Both active and passive recreation activities, as well as fine arts programs and facilities for people with special needs, were cited as important.
- **Senior Outreach[3] –** Some citizens were very interested in having outreach programs for seniors that include discounts, benefits, expanded Meals-on-Wheels programming, and additional health fairs. Attracting more seniors to existing programming and keeping seniors informed were also mentioned as important outcomes for the future.
- **Children's Benefits** – All groups mentioned the importance of providing facilities and programs for the children of Mansfield. On a broad scale, people feel it is important to make Mansfield a kid-friendly, safe place that provides

[3] These comments were heard primarily during the senior citizen focus group.

opportunities for children within the City so that kids don't have to go elsewhere for entertainment and recreation purposes (such as commercial entertainment, athletic leagues, etc.). Three specific issues that were mentioned are maintaining quality youth associations, broadening kids' horizons, and preventing childhood obesity.

- **Urban Development** – People want Mansfield to be a beautiful city that stands out. People want to see quality commercial and mixed-use development that will increase property values and enhance quality of life within the city. One specific item mentioned was converting downtown into a park that provides recreation as well as retail, civic, and office spaces for citizens.
- **Incorporate History** – There was much mention of the importance of Mansfield's history. People want to make Mansfield an identifiable destination that will serve the citizens as well as attract tourists. Comprehensive economic development of the Historic District was one thing that was mentioned that could help support this goal. The preservation of historic buildings within the city, as well as interpretive/educational signage that educates the citizens of their city's history, were mentioned as things that can be done to preserve the history of Mansfield.

In what ways can the City of Mansfield and local civic groups contribute to the future of the community?

While identifying what they like about Mansfield and asking what people would like to see in the future gives direction to the Master Plan, it is also helpful to ask people what the City and civic groups can do to improve the community. Some of these suggestions include improving and expanding facilities, taking a leadership role in environmental stewardship, increasing youth involvement and volunteer opportunities, improving safety and security in the parks and trails, preserving open space and expanding the parks system, improving communication with citizens, and developing partnerships and identify funding opportunities.

Benchmark Cities

Following the main discussion portion of the focus groups, the attendees were asked what cities they would compare Mansfield to or benchmark Mansfield against. The results are as follows:

- **Southlake, TX**
- **Coppell, TX**
- **Cedar Hill, TX** (because of its sports complex)
- **Redlands, CA** (because of its performance area)
- **Frisco, TX** (because of its professional sports team)
- **Austin, TX** (because of its relationship with the environment)
- **Rockwall, TX** (because of its recycling and volunteer programs)
- **Big Spring, TX** (because of its multi-use park)
- **Spring, TX** (because of its historical aspects)
- **Rock Hill, SC** (because of its strong history and compact downtown)
- **Weatherford, TX** (because of its historical aspects)
- **Fort Worth, TX** (because of its downtown tourism success and Bass Hall as a performance venue)
- **Addison, TX** (because of its parks' accessibility)
- **Granbury, TX** (because of its historical downtown and other amenities like the lake)
- **Dillon and Frisco, CO** (because of their large, connected gathering areas – these areas provide parks, restaurants, recreation all in one area)
- **Scottsdale, AZ** (because it has a park every 2 ½ miles connected by trails)
- **Flagstaff, AZ** (because it is pedestrian friendly)
- **Garland, TX** (because of its cultural arts programs)

Public Meeting

Following the series of focus group meetings, a public meeting was held to gather input from a broad cross-section of Mansfield's citizens not necessarily associated with a particular group or organization. The meeting was held on September 11, 2008 for a two hour period during which the following topics were discussed:

- Parks & Trails
- Open Space/Natural Areas
- Recreation Centers
- Athletics & Outdoor Activities
- Arts & Culture
- The Uniqueness of Mansfield

Similar to the focus group meetings, the purpose of the Public Meeting was to identify ways in which the Parks and Recreation Department through its future planning could support and sustain the attributes that make Mansfield a desirable place for people to reside. While ascertaining the needs and recommendations of specific groups and

organizations was not a goal of this meeting, one group – the Dallas Off Road Bicycle Association (DORBA) was heavily represented at this meeting.

The meeting was structured in a Large Group/Small Group format with rotating facilitators. Each of the six topics listed above was assigned to one of six facilitators. After a presentation was given to the full group, participants were asked to move into small groups. A facilitator led a short discussion with each small group on one of the six topics above and then rotated to another small group to lead the same discussion. In other words, the participants of the small groups stayed in one place while six facilitators came to them one at a time to discuss one of six topics.

Overview of Responses

The following represents the commonality of responses from each of the six small groups to each of the topics.

Parks & Trails

The results of this topic were the generalized characteristics that participants believe are important for neighborhood parks, community parks, and trails and are as follows.

Neighborhood Parks

Eight primary components or characteristics of what a neighborhood park should be were revealed through this process. The first component mentioned in most groups was the need for play equipment for children – specifically playgrounds and tot lots. The second component is a place for people to walk – specifically people mentioned trails, bike lanes, sidewalks, and a small track. Having distance markers along trails/tracks/sidewalks was mentioned as important. Water is the third component or characteristic mentioned. Ponds, fountains, splash pads, and drinking fountains are all things people like having in neighborhood parks. Seating and shade were often mentioned hand-in-hand as being an important characteristic of neighborhood parks. Many specifically said that trees should be used as shade for parks.

Though mentioned slightly less than the previous four components or characteristics, the following four were mentioned by multiple people in multiple groups as well:

- Natural spaces consisting of open space and plants and trees in their natural state
- Access and safety specifically the need for lighting and improved access for the handicapped and for schools.
- Pavilions, BBQ grills, and picnic areas
- Facilities for dogs and dog owners, including providing Mutt Mitts to help dog owners keep the parks clean.

Community Parks

Several components that define a community park were also discussed. Three primary components mentioned are: 1) gathering areas (pavilions, picnic areas, and BBQ grills); 2) water (for play, for drinking, and ponds); and 3) restrooms.

Other items mentioned included trails, shade, areas for sports, playgrounds, open space, and parking.

Trail Activities

When asked what activities the City's trail system should support, people in the small groups responded with four primary categories. Specifically, these are jogging/walking/ running, cycling, horse-back riding, and skating. People expressed the importance of lighted trails, ample access points, and adequate parking at these access points.

Open Space & Natural Areas

Participants were asked what value they place on open space and habitat and floodplain, what types of activities should occur in these areas, and how they feel about special facilities such as a nature learning center or botanical garden. There were several mentions of natural-surface trails with interpretative signage that provided opportunities for hiking, mountain biking, and equestrian uses (most likely as separate-use facilities). People mentioned the value of open and natural space for relaxation, aesthetics, and the protection of natural vegetation. Lands around creeks, wooded lands, and land with interesting topography were cited as the most desirable places for open space protection and people believe that these areas should be developed in passive park areas (including trails, benches, overlooks, etc.). Finally, the open space that is preserved should be well-distributed throughout the City and should connect parks, neighborhoods, businesses, and Joe Pool Lake.

Recreation Center

One topic focused on the provision of a future recreation center or recreation center expansion and the types of indoor activities that people enjoy. In general, the people of Mansfield are interested in traditional recreation center amenities and activities including gyms, racquetball courts, fitness centers, indoor aquatics, and group fitness classes including kickboxing, yoga, and spin classes, to name a few. Overall, people want the City to expand its recreation offerings both in terms of additional facilities and amenities as well as additional recreation programs.

Athletics & Outdoor Activities

People in this topic were asked what type of outdoor activities they think are most important, whether there are adequate facilities for those activities, and if there are any activities not currently offered. The following responses were received:

Important Activities

When asked what the most important activities in Mansfield are, several activities were mentioned, but the most often mentioned ones were cycling/mountain biking, running/jogging/walking, softball/baseball, tennis, and soccer. Other items included golf, family picnics, fishing, inline skating, dog walking, horse back riding, and swimming.

Needed Facilities

When asked what facilities they felt were needed, the responses were overwhelmingly geared toward the provision of trails and increased trail amenities. This includes soft/natural surface trails that serve as nature trails and/or mountain bike trails, paved multi-use trails that connect parks and neighborhoods; and amenities such as mile markers, trail head markers, and pocket parks along trails. Other needed items include ADA accessible playgrounds, a dog park, bike lanes on streets, multi-use space for practice, tennis courts, swimming pools and additional neighborhood parks.

Under-Supported Activities

Activities lacking support in the community are related to individual, distance-based active sports – specifically walking, running, and biking activities including organized events such as triathlons, 5k runs, and bike rallies/organized rides. Other activities mentioned include tennis, disc golf, golf lessons, swimming, and water aerobics.

Arts & Culture

Participants discussed their opinions regarding culture, performing art, and public art in Mansfield and what role it does or should play in the community. Many people expressed their beliefs that public art in parks should be practical and should convey the City's history. The occurrence of festivals and events is seen as a way that Mansfield's cultural and artistic side can be expressed, as well. Concerts, theater, and/or movies presented in the parks were discussed as a way to bring the community together and to celebrate the outdoors. People were also very supportive of using art made or performed by local artists in all of these ventures. Finally, the importance of providing classes and programming in the arts and culture is of high importance to the citizens. Partnering with the Mansfield ISD might be a way to provide such activities.

The Uniqueness of Mansfield

Finally, the last topic discussed was what the City should do to maintain and improve the character of Mansfield to keep its uniqueness. While people cited small-town feel, excellent schools, and its central location in the Metroplex as qualities that make Mansfield unique, the following items stood out as ways to preserve its character:

- continue to provide quality amenties,
- institute progressive, higher development standards,
- allow citizens to have input on future growth,
- maintain the quality of the parks system,
- improve the City's streetscapes and gateways,
- maintain Mansfield's "real downtown,"
- provide jobs in Mansfield,
- provide volunteer opportunities,
- hold community events and festivals, and
- create a cooperative working relationship with Tarrant, Ellis, and Johnson Counties.

SUMMARY OF PUBLIC INVOLVEMENT

It is inferred that citizens are, overall, generally satisfied with the quality of parks, recreation, and trails in Mansfield. The Citizen Survey explicitly asked this question (which yielded very positive results) and the tone of the Focus Group and Public Meetings supports this notion. The general issue with the current system, then, is not the quality of facilities but the *quantity* of them. Below is the summary of the Public Involvement process, consolidated from the various forms of input – the Citizen Attitude Survey, Focus Group Meetings, and the Public Meeting. This information is broadly categorized and should be interpreted as the general *categories* of input and only summarizes the wealth of information gained through the Public Involvement process. For further, more detailed information, see the preceding chapter and additional information found in Appendix B.

City Pride & City Image

The people of Mansfield are proud of the heritage and community that has been established in the City. It is important to expand and support the community spirit and history of Mansfield through providing quality amenities, quality development, and attractive and well-dispersed parks and streetscapes.

Close-to-Home Parks

Throughout the Public Involvement process, close-to-home parks were mentioned as being of great importance to the community and to the City's image. Many citizens directly addressed this issue, relating that the dispersion of park land is not adequate for the City and that many portions of the community are lacking close-to-home park land. Citizens also implicitly made the case for additional close-to-home park land by describing the importance of the activities and facilities typically located in such parks – including family picnics, playgrounds, pavilions, and open space.

Trails & Access

There is a definite need in the community for improved transportation and access to various places within Mansfield. This involves the transportation limitation placed on youth and seniors by their age and driving abilities and the need for alternative transportation choices. As such, citizens strongly support additional trails (paved and natural surface) within the community both for recreation purposes and for transportation to and from parks, neighborhoods, schools, and retail areas. It is important to note the considerable support for on-road bicycle facilities in Mansfield which is significantly higher than such support in other North Texas cities (per the experience of the Planning Team).

Land Acquisition

The citizens of Mansfield understand the necessity of land acquisition and the value of acquiring land before it is needed. They generally strongly support such acquisition for the provision of close-to-home parks (like neighborhood and community parks), natural areas and open space, and additional trail corridors.

Protected & Accessible Open Space

The citizens of Mansfield place value on the protection, preservation, and accessibility of natural areas and open space. In fact, this was rated as one of the most agreed-upon statements from the Citizen Attitude Survey. Citizens relate that such areas provide relaxation opportunities while improving the aesthetic quality of the City. It is important that such areas be made accessible to the public with low-impact facilities such as trails and a limited number of basic amenities. Furthermore, some citizens support natural surface trails over paved trails in such areas; many of these supporters are mountain bikers.

Community/Recreation Center

There is a great desire in Mansfield to provide both expanded recreation center facilities and dedicated senior center facilities. In general, the citizens are interested in traditional recreation center amenities but also desire the provision of a diverse array of recreational and cultural opportunities within the centers. Seniors enjoy the opportunities afforded by recreation centers (as their current facilities are part of the MAC) but desire their own dedicated space for their own use.

Diversity

Providing a diverse array of opportunities that meet the needs of a diverse citizenry is an important component of the community's needs. Such includes providing both active and passive recreation opportunities, a variety of park types, and expanding recreation programming. The traditional provision of parks and recreation amenities by cities across the country has often focused on active recreation opportunities. Today, people often prefer passive recreation amenities and opportunities. Therefore, expanding such opportunities – such as lengthening the Walnut Creek Linear Park and providing additional, similar facilities – are key needs within Mansfield.

Aquatics

While a comprehensive review of the Public Involvement process places trails, close-to-home parks, and other passive recreation opportunities at the top of the list in terms of overall priorities for parks and recreation in the City, there is a significant portion of the community that strongly supports the provision of additional aquatic facilities – specifically, indoor and outdoor swimming pools. These facilities could be provided as part of a new Community Center or as standalone facilities.

Events & Festivals

Many citizens view special events as being excellent ways to provide recreation opportunities, to connect the community, and to augment the City's cultural identity and image. Types of events cited as desirable in Mansfield include festivals and performances/movies in parks that attract citizens as well as people from surrounding cities.

Chapter 5

Needs Assessment

INTRODUCTION

As with the 2002 Parks Master Plan, the Needs Assessment is one of the most critical components of the 2009 Parks, Recreation and Trails Master Plan. An assessment of the current state of Mansfield's parks system, open spaces, trails, and recreation opportunities together with an overview of improvements and changes since 2002 is vital so that deficiencies and needs can be identified and so that actions can be developed to address those deficiencies. It is also important to determine future needs relative to recreational trends and the changing needs of the City's residents and to develop the necessary action plan to address these needs effectively.

A needs assessment is an analytical way of assessing what facilities, actions, and programs are most needed and desired by the citizens of Mansfield. From the results of the needs assessment, recommendations and actions to address these needs will be created and prioritized. The assessment of these needs is both quantitative and qualitative as is discussed below.

TRENDS IN PARKS & RECREATION

Because we are such a mobile society today, the recreational offerings of a city play a large role in determining where people choose to reside. It is therefore important to understand regional and national trends in recreation and cultural amenities in order to ensure that Mansfield can attract and retain residents into the future. Below several of the most prevalent trends in recreation and culture today are discussed. These are expected to carry forward into the near future and to be relevant for the lifespan of this Master Plan.

- A movement away from multiple smaller recreation centers to larger regional centers that are within 15-20 minutes travel time of its users is a current trend. This trend responds to increased diversity of programming that can be provided at

these larger centers, while also being more convenient for families to recreate together, and increasing staff efficiency.

- There is a trend of combining dry side recreation with indoor aquatics for wellness and leisure activities. This again reduces initial cost and reduces continuing costs of staff and operations while providing more activity choices for visitors.

- Locating separate senior activity areas within a large community center is another trend. The senior component would generally have its own exterior entrance distinct from that of the recreation center. This would provide autonomy of the senior component while providing convenient access to the various opportunities in a recreation center including indoor walking track, warm water exercising and properly sized exercise areas.

- Many cities today are seeking a higher fee structure to help offset operational costs. Observation reveals a range from a 50-60% recapture rate all the way to a 100% recapture rate in the North Texas Region.

- University students today have elaborate recreation[1] aquatic facilities at their disposal. This is the first generation coming out of the university that has expectations for cities to provide comparable facilities. Quality of life is an important component of their job search and residence decision and has influenced what new centers will provide.

- There is an added emphasis today on the place of arts in our society and as a factor that heavily affects quality of life in a city. There are typically many common-interest citizens groups active in the arts (dance, theater, vocals, etc.) that do not typically have a sizable enough membership or audience within the community to justify dedicated or stand-alone facilities. Therefore shared facilities are often provided as part of a regional community center.

- Large meeting rooms with a stage, lights, and sound system that accommodate modest seating levels (200-300) are being provided in many community centers today to partially address these needs.

[1] The use of the term "recreation" here is to differentiate this type of aquatic facility from a competitive aquatic facility, which many universities also have.

ASSESSMENT METHODS

There are three techniques which are used to evaluate the current and future parks and recreation needs in Mansfield. These techniques follow general methodologies accepted by the Texas Parks and Wildlife Department for local park master plans and by the Department of the Interior for local park system Recovery Action Plans (RAP). These three techniques are as follows:

Standard-Based

The standard-based technique for parks, recreation, and open space refers to standards developed by the National Recreation and Park Association (NRPA) in 1995. These standards are based on park acreage (by park type) per 1,000 residents and by number of specific recreation amenities (such as basketball goals) per number of residents. The NRPA standard is used as a reference only, to be informed by local trends, demand and conditions within the City of Mansfield.

Consequently a target Level of Service (LOS) is developed for Mansfield for park acreage and recreation amenities by adjusting the NRPA standards based on the unique attributes and characteristics of the community. This target LOS is then used to assess the surplus or deficit of park acreage at build-out population and various recreation amenities for Mansfield for the population five years from now. The five year target limit specifically for recreation facilities is in recognition of the fact that these needs change over time due to changing trends, demographics, and so forth whereas park acreage needs remain constant.

Demand-Based

This approach uses participation rates, league usage data, surveys, public input events, and questionnaires to determine how much the population uses and desires certain types of recreation facilities, park amenities, and activities for which land needs to be acquired, facility provision needs to be made, or programming needs to be provided.

Resource-Based

This approach is based on the usefulness of available physical resources to provide recreation opportunities. For example, the City's extensive creek system, including Walnut Creek and Low Branch Creek, and shoreline along Joe Pool Lake provides opportunities for trail corridors.

It is a combination of all three of these assessment methods that comprises a comprehensive Needs Assessment. It is from these types of analyses that target levels of service and further recommendations for the Parks Master Plan are derived.

STANDARD-BASED NEEDS ASSESSMENT

National guidelines and standards are based on demographic trends rather than specific local desires, requiring that they be fine-tuned to meet local conditions. It is important to recognize that national standards are simply guidelines or benchmarks that are intended to serve as a starting point for park planning. Each city has its own unique geographic, demographic, and socio-economic composition, and as such, the arbitrary application of national standards, as is often done, would not necessarily meet the needs of that particular community.

Standards exist and are applied in three primary ways:

- **Spatial or Park Acreage Standards** – These define the acres of park land needed and are usually expressed as a ratio of park acreage to population.
- **Facility Standards** – These define the number of facilities recommended to serve each particular recreation need. Facility standards are usually expressed as a ratio of units of a particular facility per population size. For example, a facility standard for competitive baseball might be one field for every 5,000 inhabitants.
- **Development Standards** – These define the spatial requirements for a specific recreation area (such as a Neighborhood Park versus a Community Park). *These recommended standards are discussed in Chapter 3.*

ACREAGE STANDARDS

The Need for Park Acreage

Developing and applying a target Level of Service or "standard" for park acreage results in acreage standards for different types of parks and park land. Neighborhood Parks and Community Parks, however, are the primary park types to focus on as they provide close-to-home park space as discussed in Chapter 3. Additional acreage is required both in order to serve the existing and future population but also to allow for the development of additional Neighborhood and Community Parks evenly spaced throughout the City. The goal of this is to provide close-to-home parks within ¼ to ½ mile of each resident in Mansfield.

On the maps on pages 3 – 14a and 3 – 14b, both Neighborhood Parks and Community Parks are shown with the ¼ mile and ½ mile service radii of a typical Neighborhood Park. The reason that Community Parks are included in this coverage analysis is that they typically contain the elements of a Neighborhood Park and thus function as *de facto* Neighborhood Parks. By inclusion of both park types in this study, the maximal coverage of existing "close-to-home" parks is depicted. Other types of parks such as Special Purpose or Linear Parks typically are not included in such a service coverage analysis. The reason for this is that each is unique and may only be found where a particular function or resource opportunity exists.

*The overall park distribution goal is to provide **walking distance** (¼ to ½ mile) service to all residents, throughout Mansfield. The areas covered with the service radii are well served, whereas the areas that are exposed or not covered indicate the highest need for neighborhood type recreational facilities and parks.*

Park Acreage Standards

The purpose of spatial standards for parks and recreational areas is to ensure that sufficient area is allocated to allow for all the outdoor recreation needs of a community. Having developed acreage standards, which show the City's deficit of park acreage of different types, allows the City to plan ahead, so that park land can be targeted and acquired before land in the various parts of Mansfield becomes unavailable or too expensive. These spatial standards are expressed as the number of acres of park land per 1,000 inhabitants.

The NRPA-recommended spatial standards for cities in general are shown in Figure 5.1 below.

Figure 5.1
Park Acreage Guidelines Based on National (NRPA) Recommended Standards

NRPA Recommended Standards:

Close to Home Parks

• Neighborhood Parks:	1.0 to 2.0 acres / 1,000 population
• Community Parks:	5.0 to 8.0 acres / 1,000 population

Total recommended close to home parks per NRPA:
6.0 to 10.0 acres / 1,000 population

Other City Wide Parks:

• Special Purpose Parks:	Variable standard
• Linear Parks / Linkage Parks:	Variable standard
• Nature Preserves / Open Space:	Variable standard
• Regional Parks:	5.0 to 10.0 acres / 1,000 population

Target Park Acreage LOS

The nationally recommended spatial standards as presented in Figure 5.1 are referenced to develop target standards for Mansfield's particular set of needs as shown below. Specific target Levels of Service (LOS) were developed for Neighborhood Parks and Community Parks but were *not* developed for Special Purpose Parks, Linear Parks, or Open Space Preserves & Nature Areas. Rather, a total LOS was developed for "other parks" (which includes Special Purpose Parks, Linear Parks, and Open Space Preserves & Nature Areas) because, while these types of parks are only developed when the specific need or opportunity for such a park is determined, it is important for the City to provide park and open space land in addition to that provided as neighborhood and community parks. These park land target levels of service are presented in Table 5.1 and are summarized in Figure 5.2 below.

Figure 5.2
2009 Park Acreage Target Levels of Service for Mansfield

Close to Home Parks

• Neighborhood Parks:	2 acres / 1,000 population
• Community Parks:	6 acres / 1,000 population

Other Parks

• Special Purpose Parks	no target
• Linear Parks	no target
• Open Space Preserves & Nature Areas	no target
• Regional Parks	no target

Total recommended close to home parks: 8 acres / 1,000 population
Total recommended other parks: 13 acres / 1,000 population
Grand total recommended City parks: 21 acres / 1,000 population

The 2009 recommended target LOS for close-to-home park land (Neighborhood and Community Parks) for the City is eight acres per 1,000 population. This falls within the NRPA's recommended six to 10 acres per 1,000 population while being comparable to other cities in the region. The combined recommended target LOS for other parks is 13 acres / 1,000 population. This is based on Mansfield's current level of service for these park types. The 2009 city-wide recommended target LOS (for all park land minus regional parks) is 21 acres per 1,000 population.

Table 5.1 on the following page displays this information and indicates that Mansfield today has only 1.12 acres of Neighborhood Park land per 1,000 population and 3.07 acres of Community Park land per 1,000 population. Overall there are currently 17 acres of park land and open space per 1,000 population in the City. Also of note is that the City has acquired 37 additional Neighborhood Park acres[2] over the last seven years and 105 additional Community Park acres, constituting Town Park (27.2 acres) and an undeveloped park currently referred to as the "Williams Property" (77.8 acres). Finally, 26.4 acres have been acquired for the Walnut Creek Linear Park.[3]

Table 5.1 Park Land Standards on the next page describes the acreage standards and resulting needs from 2009 until build-out conditions for each park category.

Existing Conditions in Mansfield

The figures following Table 5.1 on the next page relate the existing acreage of park by type of park, the target LOS for each park type, the target acres at build-out, and the acreage needed to meet the target LOS. The Neighborhood Parks and Community Parks sections include a discussion on the current spatial distribution of parks within the City.

Close-to-Home Parks

As discussed in Chapter 3 (page 3-3), local, close-to-home parks (Neighborhood and Community Parks)serve as the backbone of any city's parks system by providing the day-to-day facilities for citizens and by being within short walking or driving distance of where most people live. For Mansfield, a total of **8 acres per 1,000 population** is recommended for close-to-home parks.

Neighborhood Parks

As of 2009, Mansfield currently has about one quarter of the acreage for Neighborhood Parks needed for the projected build-out population and 56% of the acreage needed for this year:

[2] 28.9 of these acres are accounted for as acreage dedicated to the City yet maintained by homeowner associations; these acres are currently undeveloped.

[3] Note that the subtraction of the "Total 2002 Existing Acres" from the "Total 2009 Existing Acres" on table 5.1 shows changes in acreage that are different from what is discussed in this paragraph. This is due to two things: 1) park acreage was re-measured and is more accurately presented in this Master Plan and 2) some acreage has been reclassified from its previous 2002 classification.

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City of Mansfield Parks, Recreation and Open Space Master Plan
Table 5.1 - Park Land Standards

Facility Type	N.R.P.A. Size/ Acres	Total 2002 Existing Acres	Total 2009 Existing Acres	Current Level of Service	NRPA Target Standard (1)	Mansfield 2002 Target Standard (2)	Mansfield 2009 Target Standard (3)	2009 ~ 62,000 pop. (4)	30 to 40 Year Build-Out ~ 135,000 pop. (5)
Park Category									
Neighborhood Parks	**5 - 10 acres**	16.2 acres	69.5 acres	1.12 Acres/ 1,000 pop.	1 - 2 Acres/ 1,000 pop.	1.5 to 2.5 Acres/ 1,000 pop.	2 Acres/ 1,000 pop.	**124 Acres** (deficit of 55 acres)	**270 Acres** (deficit of 201 acres)
Community Parks	**According to function; usually 30 - 50 acres**	81 acres	190.1 acres	3.07 Acres/ 1,000 pop.	5 - 8 Acres/ 1,000 pop.	5 Acres/ 1,000 pop.	6 Acres/ 1,000 pop.	**372 Acres** (deficit of 182 acres)	**810 Acres** (deficit of 620 acres)
TOTAL		**97 acres**	**260 acres**	**4 Acres / 1,000 pop.**	**6 - 10 Acres / 1,000 pop.**	**6.5 to 7.5 Acres / 1,000 pop.**	**8.0 Acres / 1,000 pop.**	**496 Acres (deficit of 236 acres)**	**1080 Acres (deficit of 820 acres)**
Special Purpose Parks	**Varies by function**	113 acres	184.8 acres	2.98 Acres/ 1,000 pop.	Variable	Variable	Variable	**n / a**	**n / a**
Linear Parks	**Varies by resource protection & opportunity**	20 acres	26.4 acres	0.43 Acres/ 1,000 pop.	Variable	2 - 4 Acres/ 1,000 pop.	Variable	**n / a**	**n / a**
Open Space Preserves & Nature Areas	**Varies by resource availability & opportunity**	0 acres	339.5 acres	5.48 Acres/ 1,000 pop.	Variable	5 - 10 Acres/ 1,000 pop.	Variable	**n / a**	**n / a**
Other Park Facilities (6) NRPA = Metropolitan	**100 - 500+ acres**	225 acres	282.8 acres	4.56 Acres/ 1,000 pop.	Variable	None	Variable	**n / a**	**n / a**
TOTAL		**487 acres**	**834 acres**	**13 Acres / 1,000 pop.**		**12 to 19 Acres / 1,000 pop.**	**13 Acres / 1,000 pop.** (8)	**806 Acres (deficit of -28 acres)**	**1755 Acres (deficit of 921 acres)**
CITY PARK GRAND TOTAL		**584 acres**	**1094 acres**	**17 Acres/ 1,000 pop.**	**n / a**	**13.5 - 21.5 Acres/ 1,000 pop.**	**21.0 Acres/ 1,000 pop.**	**1302 Acres (deficit of 208 acres)**	**2835 Acres (deficit of 1741 acres)**
Regional Parks NRPA = Metropolitan	**100 - 500+ acres**	129 acres (7)	0 acres	0.00 Acres/ 1,000 pop.		5 Acres/ 1,000 pop.	Variable	**n / a**	**n / a**

Comparable adopted park land standards of other cities in the Metroplex.
McKinney's adopted park land standards **= 25 acres per 1,000 residents.**
Waxahachie's adopted park land standards **= 20 acres *** per 1,000 residents.**
Prosper's adopted park land standards **= 20 acres *** per 1,000 residents.**
Lancaster**'**s adopted park land standards **= 18 acres *** per 1,000 residents.**
Keller's adopted park land standards **= 18 acres *** per 1,000 residents.**
Rowlett's adopted park land standards **= 17-25.5 acres per 1,000 residents.**
Frisco's adopted park land standards **= 13-19 acres per 1,000 residents.**
Southlake's adopted park land standards **= 21 acres *** per 1,000 residents.**
*** Excluding Regional Parks

(1) 1995 NRPA standards.
(2) City of Mansfield 2003 Adopted Standards.
(3) Standard allows City of Mansfield to establish general target service levels.
(4) Based on City of Mansfield Department of Economic Development data.
(5) Rounded; Time horizon and population estimate from the 2002 Comprehensive Land Use Plan
(6) Includes Big League Dreams, Hawaiian Falls Water Park, and Mansfield National Golf Course.
(7) Britton Park was considered a Regional Park in the 2002 Master Plan. Its acreage is now accounted for under the "Open Space Preserves & Nature Areas" park category
(8) This target LOS for parks other than Neighborhood and Community Parks is equal to the current LOS
(9) Source: Inside City Parks, Peter Harnik, 2000.

Mansfield's 2009 Target Standard is 21 acres per 1,000 residents.

<u>City wide park area</u>
Current City of Mansfield park acreage = 1,094 acres
Mansfield current level of service (CLOS) = 13 acres per 1,000 residents (1,094 acres for 62,000 residents).
Mansfield 2009 target level of service **(TLOS) = 21 acres per 1,000 residents** (2,835 acres for 135,000 residents).

Population Density (excluding ETJ) = 2.65 persons per acre
(Population 62,000 / City acreage 23,440)

<u>Park area as a percentage of City area</u>
Current city limits acreage for the City of Mansfield is 23,440
Current ETJ for the City of Mansfield is 10,816 acres
Total City area (ETJ included) = 34,256
The existing park area (regional parks included) for the City of Mansfield is 3.2% of the total land area of the City and its ETJ (calculated as 1,094 total park acres / 34,256 total City acres).
Metroplex average = 4.8% (translated to the City of Mansfield = 1,644 park acres at build out).
National average = 8.1% (9) (translated to the City of Mansfield = 2,775 park acres at build out).
City of Dallas = 10% (translated to the City of Mansfield = 3,426 park acres at build out).
Proposed park acreage at build-out as a percentage of city area = 8.3%

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Figure 5.3
Existing Conditions – Neighborhood Parks

Existing Acreage	69.5 acres
Current LOS	1.12 acres /1,000 population
Target LOS	2 acres / 1,000 population
Target Acreage at Build-Out*	270 acres
Acreage to Acquire to meet Target	**201 acres**

Existing acreage is 26% of the target for build-out conditions
**Population of 135,000*

As only five developed Neighborhood Parks exist in Mansfield, they are understandably not well-dispersed. Each of these parks is located in Area 1 or Area 3, though Julian Field and James McKnight West are near the borders of Areas 2 and 4. With each park having a service radius of ½ mile each, only a small portion of the City is currently well-served by Neighborhood Parks (see Map on page 3-14a). An additional 37 acres have been acquired for Neighborhood Parks (8.1 acres in the northern portion of Area 1 and 28.9 acres in Area 4. The acres in Area 4 are to be built by developers as part of the construction of the surrounding neighborhoods, but the development of the 8.1 acre tract is the sole responsibility of the City. For obvious reasons, none of the City's extra territorial jurisdiction is served by Neighborhood Parks; as the City expands, such facilities will need to be provided in these areas as well as currently developed portions of the City where feasible.

When the service radius of Neighborhood Parks is applied to Community Parks that serve as de facto neighborhood parks (see Chapter 3 for a discussion on how Community Parks serve as de facto Neighborhood Parks), the service coverage is somewhat increased, although large areas are still left under served (see Map on page 3-14b)

Community Parks

As of 2009, Mansfield currently has less than one fourth of the acreage for Community Parks needed for the projected build-out population and 51% of the acreage needed for this year:

Figure 5.4
Existing Conditions – Community Parks

Existing Acreage	190.1 acres
Current LOS	3.07 acres /1,000 population
Target LOS	6 acres / 1,000 population
Target Acreage at Build-Out*	810 acres
Acreage to Acquire to meet Target	**620 acres**

Existing acreage is 23.5% of the target for build-out conditions
**Population of 135,000*

Existing Community Parks are fairly centralized within Mansfield; with the exception of Clayton W. Chandler Park, all existing Community Parks are located along the Walnut Creek corridor. While this leads to the desirable situation of having many parks connected by a greenbelt and trail system, it leads to a dearth of Community Park land in the northwest and southern portions of Mansfield. McClendon Park East and James McKnight Park East are currently included in the Community Park category; however, these parks do not currently have all of the necessary Community Park amenities (as listed on page 3-7) and actually function as Special Purpose Parks. Improvements need to be made to these parks for them to officially function as Community Parks and continue to count toward the Community Park acreage figures.

Other Parks

In addition to close-to-home parks, other types of parks are important to the City's parks system. Rather than applying a specific target level of service for each of the three park types (Special Purpose Parks, Linear Parks, and Open Space Preserves & Nature Areas), a total target level of service of **13 acres per 1,000 population** is recommended for other park land in Mansfield. Note that there is no category for Regional Parks as the City of Mansfield does not currently have any Regional Parks. In addition, it is exceedingly difficult to develop a meaningful target LOS for Regional Parks because they are opportunity-based (meaning that they are developed to take advantage of an opportunity rather than to fulfill a defined need) and are multi-jurisdictional (meaning that they are developed and operated with funding from either multiple agencies or a regional agency and serve the populations of multiple cities). Also note that a category "Other Park Facilities" has been included to account for other park land that does not fall within the Special Purpose Park, Linear Park, or Open Space Preserves & Nature Areas Category).

Special Purpose Parks

Special Purpose parks, which are typically constructed as needs are expressed or opportunities arise, provide a considerable proportion of the overall park acreage in Mansfield. Currently, all of the Special Purpose park acreage can be attributed to the provision of athletic facilities as stand-alone parks rather than as part of a Community Park. Examples of this are the Hardy Allmon Soccer Complex, Phillip Thompson Soccer Complex, and Mansfield Sports Complex.

Figure 5.5
Existing Conditions – Special Purpose Parks

Existing Acreage	184.8 acres
Current LOS	2.98 acres /1,000 population
Target LOS	No target

With the addition of select amenities, two of these three Special Purpose Parks (Mansfield Sports Complex and Philip Thompson Soccer Complex) could serve as a high-intensity Community Park and help meet the Community Park needs for certain areas in the City.

Linear Parks

The Linear Park acreage in Mansfield is completely constituted by the Walnut Creek Linear Park, which lies along Walnut Creek between the Hardy Allmon Soccer Complex and James McKnight Park East.

Figure 5.6
Existing Conditions – Linear Parks

Existing Acreage	26.4 acres
Current LOS	0.43 acres /1,000 population
Target LOS	No target

Open Space Preserves & Nature Areas

The nature area acreage in Mansfield is comprised of land in Britton Park, the portion of Loyd Park that is within Mansfield City limits, and additional USACE land between Loyd Park and the Philip Thompson Soccer Complex. While these parks and floodplain land are not managed by the City of Mansfield, the land is still within the City limits and serves the citizens of Mansfield.

Figure 5.7
Existing Conditions – Open Space Preserves & Nature Areas

Existing Acreage	339.5 acres
Current LOS	5.48 acres /1,000 population
Target LOS	No target

Other Park Facilities

The in addition to the above mentioned "other" parks, there are City-owned facilities that do not fall into one of the above categories yet they provide recreational benefit to the community. Three such facilities exist in Mansfield and include Hawaiian Falls, Big League Dreams, and the Mansfield National Golf Course. These facilities attract visitors from all of Mansfield and surrounding communities.

Figure 5.8
Existing Conditions – Other Park Facilities

Existing Acreage	282.8 acres
Current LOS	4.56 acres /1,000 population
Target LOS	No target

Summary of Acreage Needs

Considering the information portrayed in Table 5.1, the City needs to acquire or repurpose 1,741 additional acres of land to accommodate the build-out population of 135,000. Of this, 821 acres should be dedicated to the provision of close-to-home parks – Neighborhood Parks require 201 additional acres and Community Parks require 620 acres (see Figure 5.3 and Figure 5.4).

FACILITY STANDARDS

Facility standards and target Levels of Service (LOS) define the number of facilities recommended to serve each particular type of recreation need. They are expressed as the number of facilities per population size. The target LOS shown are based on comparisons with the national standard and other similar cities in Texas, as well as the actual number of facilities in Mansfield and the amount of use each facility receives.

For the purposes of the Parks, Recreation and Trails Master Plan, only facilities operated by the City or available through joint-use agreement were considered in the development of these target LOS. Joint-use agreements with Mansfield ISD allow the use of selected facilities for City programming[4]. Special Purpose indoor facilities such as the Mansfield Activities Center are included and considered as a part of this Master Plan.

Current Levels of Service

The Current Levels of Service (CLOS) are expressed as the number of current (2009) recreation facilities per population size.

Target Levels of Service

The recommended Levels of Service for recreation facilities are specifically based on demonstrated needs, the actual number of facilities in the City, and the amount of use each facility receives. They are expressed as the number of facilities per population size. The Levels of Service are determined by the current needs, the community's recreation goals, and recognized standards. As with the acreage standards discussed earlier, the facility target LOS figures are adjusted based on Mansfield's unique recreation goals.

The target LOS for each type of facility is determined as a guide to provide the most basic recreation facilities to the community. The target timeframe for each facility is five years, or 2009 to 2014. The target LOS is the projected number of facilities based upon the target standard established for the City.

Developing Target Levels of Service for Centers

The National Recreation and Park Association (NRPA), in their publication Recreation, Park and Open Space Standards and Guidelines, edited by R. A. Lancaster, defines recreation and park standards in this manner:

> "Community recreation and park standards are the means by which an agency can express recreation and park goals and objectives in quantitative terms, which in turn, can be translated into spatial requirements for land and water resources. Through the budget, municipal ordinances, cooperative or joint public-private efforts, these standards are translated into a system for acquisition, development and management of recreation and park resources."

[4] Facilities that are not open for City programming are not included in this assessment because they are not considered to be accessible to the general public.

The publication further describes the role standards have in establishing a base for the amount of land required for various types of park and recreation facilities, in developing the community's acceptable minimum, correlating needs to spatial requirements, and for providing justification for recreational expectations and needs.

National standards are a useful guide in determining minimum requirements; however, the City of Mansfield must establish its own standards in consideration of expressed needs of the residents and the City's economic, administrative, operational, and maintenance capabilities.

Below are the NRPA Standards as well as a summary of benchmark cities in the DFW Region and their current level of service for Community/Recreation Centers and Senior Centers.

National Recreation and Parks Association

- Community Center (20,000 SF) – 1 facility per 20,000 pop.
- Swimming Pool (approx 4,000 SF water surface) – 1 facility per 25,000

Community/Recreation Centers

The benchmarks for Recreation Centers were established by developing ratios of square footage for centers relative to the populations of benchmark cities including Arlington, Richardson, Irving, Grand Prairie, Frisco, Flower Mound, and Burleson.[5] Of the comparison facilities, approximately 66% included some indoor aquatics. Comparison numbers included both built and planned facilities for actual and projected populations. Results ranged from a low of 0.31 square feet per person for larger cities to a high of 2.28 square feet per person for smaller cities. An average of 0.94 square feet per person was used for the purposes of projecting Mansfield's square footage needs for Recreation Centers.

Based upon the projected 135,000 build-out population this data translates to the need of 127,000 square feet. This is based upon the average rate of 0.94 square feet per person described above.

Trends in the industry would suggest that a response to this need would be satisfied by placement of additional regional facilities in the northern and southern portions of the City. The facilities would be 60,000 to 70,000 square feet with a possible neighboring outdoor aquatic component. This would be based on a future adaptive reuse of the current MAC. Over a period of time special interest projects could be free standing or attached to address the full compliments of needs in a mature city.

Senior Centers

Senior facilities are not currently included in any standards that are accepted in the industry. Senior Centers typically transition from reuse of vacated facilities until they have matured to the point of requiring centers designed specifically for their needs. The

[5] These cities were used for comparison because of available data on recreation center square footage and are not all considered to be cities comparable to Mansfield.

communities used as benchmark cities had an average ratio of area per population equaling 0.14 square feet per person. Mansfield currently does not have a dedicated Senior Center or dedicated senior citizen space. Rather, seniors share facilities with other user groups at the MAC. The space allotted does not meet the current needs in the community and was rated as the highest priority for indoor recreation in the Citizen Survey. The trend for new community/recreation centers is the development of dedicated areas for seniors within the center. This provides dedicated space for quieter areas for the seniors while providing access to larger recreation and wellness activities of the community center. This translates to lower capital cost of construction as well as lower operating costs to two buildings. For the very aged, dedicated centers may be proven necessary as the trends for providing services to this growing population segment becomes more defined.

If Mansfield were to develop a standalone senior center for the current population (2009), it would equate to approximately 10,600 square feet. At 135,000 build-out population, that space would expand to approximately 19,000 square feet.

Assessing Recreation Needs

The need for recreation facilities in this report is based upon an average of benchmark cities as well as the actual number of recreation facilities in the City and the amount of use each facility receives. Table 5.2 on the next page summarizes Mansfield's 2009 Current Levels of Service and target standards for each type of facility.

Table 5.2: Recreational Facility Level of Service (LOS) and Table 5.3: Indoor Recreation Facility LOS *on the next page describes a recommended target standard and level of service for recreation facilities expressed as a ratio of the number of facilities per 1,000 population, and/or as a ratio size per population requirements.*

Table 5.2
Recreation Facility Level of Service (LOS)
City of Mansfield Parks, Recreation and Open Space Master Plan

Facility Type	Existing City & School	NRPA Target Strd (1)	2002 LOS for 29,777	2002 Target Strd (2)	2009 LOS for 62,000	2009 Target LOS	Five Year Required addition at (73,000 pop.) (3)
Competitive Facilities							
Baseball (Competitive)	25 fields*	1 / 5,000 pop.	1 / 2707 pop.	1 / 5,000	1 / 2480 pop.	**1/ 5000** pop.	14.60 ~ **14 Fields **** (surplus of 11 fields)
Softball (Competitive)	13 fields*	1 / 5,000 pop.	1 / 7444 pop.	1 / 6,000	1 / 4769 pop.	**1/ 6000** pop.	12.17 ~ **12 Fields** (surplus of 1 fields)
Soccer - BLD not included (Competitive)	12 fields	1 / 10,000 pop.	1 / 2291 pop.	1 / 3,000	1 / 5167 pop.	**1/ 3000** pop.	24.33 ~ **24 Fields** (need for 12 fields)
Football (Competitive)	2 fields	1 / 20,000 pop.	1 / 29777 pop.	1 / 12,000	1 / 31000 pop.	**1/ 25000** pop.	2.92 ~ **3 Fields** (need for 1 fields)
Practice Facilities							
Baseball/Softball	24 backstops (Schools: 23 available)	n/a	1 / 4963 pop.	1 / 4,000	1 / 2583 pop.	**1/ 3000** pop.	24.33 ~ **24 Backstops** (need for 0 backstops)
Multi-purpose Practice Areas	19 fields (Schools: 8 available)	n/a	n/a	1 / 4,000	1 / 3263 pop.	**1/ 3000** pop.	24.33 ~ **24 Areas** (need for 5 areas)
Other Athletic Facilities							
Basketball Goals (Outdoor, Half and Full Courts)	12 goals	1 / 2,500 pop.	1 / 4254 pop.	1 / 1500	1 / 5167 pop.	**1/ 2000** pop.	36.50 ~ **36 Goals** (need for 24 goals)
Tennis Courts	3 courts	1 / 2,000 pop.	1 / 4254 pop.	1 / 3,000	1 / 20667 pop.	**1/ 5000** pop.	14.60 ~ **14 Courts** (need for 11 courts)
Sand Volleyball (Outdoor)	3 courts	1 / 5,000 pop.	1 / 4254	1 / 8,000	1 / 20667 pop.	**1/ 8000** pop.	9.13 ~ **9 Courts** (need for 6 courts)
Racquet Ball	0 courts	1 / 20,000 pop.	0	n/a	0	**1/ 20000** pop.	3.65 ~ **3 Courts** (need for 3 courts)
Gymnasium (Indoor basketball, volleyball etc.)	1 Gym	1 / 20,000 pop.	0	n/a	1 / 62000	**1/ 20000** pop.	3.65 ~ **3 Gyms** (need for 2 gyms)
Non-Athletic Facilities							
Aquatics							
Family Aquatic Center	0 pools	1 / 20,000 pop.	0	1 / 20,000	0	**1/ 30000** pop.	2.43 ~ **2 Centers** (need for 2 centers)
Regional Water Park	1 center	n/a	0	n/a	1 / 62000 pop.	**1/ 50000** pop.	1.46 ~ **1 Center** (need for 0 centers)
Water Spray Park	0 parks	n/a	0	n/a	0	**1/ 30000** pop.	2.43 ~ **2 Parks** (need for 2 parks)
Special Purpose Facilities							
Skate Park	0 skate parks	n/a	0	n/a	0	**1/ 50000** pop.	1.46 ~ **1 Park** (need for 1 park)
Dog Parks	0 dog parks	n/a	0	n/a	0	**1/ 30000** pop.	2.43 ~ **2 Parks** (need for 2 parks)
Golf Courses (18 holes)	1 golf course	n/a	1 / 29777 pop.	1 / 25,000	1 / 62000 pop.	**1/ 50000** pop.	1.46 ~ **1 Course)** (need for 0 courses)
Disc Golf Course (Frisbee)	0 disc golf courses	n/a	0	n/a	0	**1/ 30000** pop.	2.43 ~ **2 Courses)** (need for 2 courses)
General Recreation Facilities							
Paved Hike and Bike Trails	4 miles	n/a	1 m / 11911 pop.	1-2 / 10,000	1 m / 15500 pop.	**1 m / 2000** pop.	36.50 ~ **36 Miles** (need for 32 miles)***
Multi-purpose Courts	1 courts	n/a	0	n/a	1 / 62000 pop.	**n/a**	(as needed)
Playgrounds	10 play units	1 / 1,000 pop.	1 / 5955 pop.	1 / 2,000	1 / 6200 pop.	**1/ 2000** pop.	36.50 ~ **36 Units** (need for 26 units)
Horse Shoe & Washer Pits	10 pits	n/a	n/a	n/a	1 / 6200 pop.	**1/ 6000** pop.	12.17 ~ **12 Pits** (need for 2 pits)
Support Facilities							
Pavilions/Gazebo (Large)	13 units	1 / 2,000 pop.	1 / 7444 pop.	1 / 4,000	1 / 4769 pop.	**1/ 2000** pop.	36.50 ~ **36 Units** (need for 23 units)
Amphitheater	1 unit	n/a	#REF!	n/a	1 / 62000 pop.	**1/ 75000** pop.	#REF! ~ **1 Unit** (need for 0 unit)

* Each of these figures include the eight fields at Big League Dreams which can be used for baseball or softball (though only one field meets the requirements of Select/Colt League baseball

** A decimal need of 0.8 and higher is rounded to the next whole number.

*** With the high demand for trails in most cities, many adopt a standard of 1 mile per 1,000 population

(1) 1995 NRPA standards

(2) City of Mansfield 2002 Adopted Standards

(3) 2013 projected population of 72,813 rounded to 73,000

Table 5.3
Indoor Recreation Facility LOS
City of Mansfield Parks, Recreation and Open Space Master Plan

Facility Type	Existing City & School	Total Existing SqFt	Benchmark Cities SF per Capita	Existing SF per Capita	2009 Target SF per Capita	2009 Target Square Footage	2014 Facility Floorspace Needs (73,000 pop.)
Competitive Facilities							
Recreation Center	1 center	22,000	0.94	0.41	0.94	**58,260** square feet	**70,500** square feet (**48,500** square foot deficit)
Senior Center	0 centers	0*	0.14	0.0	0.14	**8,700** square feet	**10,600** square feet (**10,600** square foot deficit)
Environmental Learning Center	0 centers		**(see Chapter 5 comments)**				**10,000** square feet (**10,000** square foot deficit)

* Shared use with the Mansfield Activities Center

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Key Facility Needs

Table 5.2 on the previous pages shows deficits in the quantity of several recreation facilities in the next five years. These are discussed below in the same categories that these facilities are assessed in Table 5.2

Competitive Facilities

While Mansfield has many high-quality, recently constructed athletic facilities and is mostly meeting the existing needs for such facilities, within the next five years there will be deficiencies in two of the four competitive facility areas: soccer and football. In total, 14 additional competitive facilities are needed.

Figure 5.9
Key Facility Needs – Competitive Facilities

Competitive Facility Needs (2014 or 5 Year Target)*

- Soccer Fields** 12 Fields
- Football Fields 1 Fields

*Deficiencies based on a projected 2014 population of 75,000
****Can potentially be shared use fields

Practice Facilities

There is a need in Mansfield for additional practice facilities to meet the needs of existing and future league and non-league baseball, softball, soccer, and football use. The need for baseball/softball backstops is generally being met, however, this is largely a factor of joint-use agreements with Mansfield ISD. Should this agreement ever become null, the City will have a considerable deficiency of backstops. Also, while there is not a need for backstops in the next five years, this need will arise as the population continues to grow over the next 10 to 15 years depending on varying needs and changing trends.

Figure 5.10
Key Facility Needs – Practice Facilities

Practice Facility Needs (2014 or 5 Year Target)*

- Multi-Purpose Practice Areas** 5 Areas

*Deficiencies based on a projected 2014 population of 75,000
****Open fields designed or usable for football and soccer practice

Other Athletic Facilities

Several non-league use athletic facilities are lacking in Mansfield. Additional units for each of the facility types shown under this category in Table 5.2 are needed within the next five years, as shown in Figure 5.11 below.

Figure 5.11
Key Facility Needs – Other Athletic Facilities

Other Athletic Facility Needs (2014 or 5 Year Target)*

• Outdoor Basketball Goals	24 Goals**
• Tennis Courts	11 Courts
• Sand Volleyball (Outdoor)	6 Courts
• Racquetball Courts	3 Courts
• Gymnasiums***	2 Gyms

*Deficiencies based on a projected 2014 population of 75,000
**12 full courts, 24 half courts, or any combination thereof
***Gyms should include at a minimum the striping, goals, and netting necessary for indoor basketball and volleyball

Non-Athletic Facilities

The term "non-athletic facilities" constitutes many types of facilities that serve both passive and active recreation users. To better illustrate the facility deficiencies, they have been categorized further:

General Recreation Facilities

General recreation facilities include amenities that help Neighborhood and Community Parks meet the needs of the community. Playgrounds and pavilions should be placed in every Neighborhood and Community Park. Larger parks can include multiple units while smaller parks (such as Neighborhood Parks) typically contain only one of each facility type.

Figure 5.12
Key Facility Needs – General Recreation Facilities

General Recreation Facility Needs (2014 or 5 Year Target)*

• Paved Hike & Bike Trails	17 Miles**
• Playgrounds	26 Units
• Horse Shoe & Washer Pits	2 Pits
• Pavilions/Gazebos	23 Units

*Deficiencies based on a projected 2014 population of 75,000
**See also Chapter 7 (page 7 – 6)

Special Purpose Facilities

These facilities are those that are designed to meet specific recreational needs and serve specific user groups. They are considered to be special purpose needs because they provide a place for users to engage in types of activities that require special facilities. Such facilities are often provided in (or as) Special Purpose Parks.

Figure 5.13
Key Facility Needs – Special Purpose Facilities

Special Purpose Facility Needs (2014 or 5 Year Target)*

• Skate Park	1 Park
• Disc Golf Course	2 Courses**
• Dog Parks	2 Parks

*Deficiencies based on a projected 2014 population of 75,000
****A course consists of 18 holes. This need could also be met with a single, 36 hole course or four 9 hole courses. However, two 18 hole courses is preferable as this situation would allow facilities to be spread across the City. Also, 18 hole courses are typically preferred over 9 hole courses by disc golfers.

Aquatic Facilities

Mansfield currently has a destination aquatic park (Hawaiian Falls) that addresses some of the outdoor aquatic needs of the community. Typically cities provide an average of one outdoor facility per 30,000-35,000 population. With the location of Hawaiian Falls in the NW area and the lack of smaller neighborhood aquatic parks, the City may want to consider two additional neighborhood aquatic parks as part of the recreation center. This would provide diversity in size from Hawaiian Falls as well as locations more easily accessible by car or the trail system.

Figure 5.14
Key Facility Needs – Aquatics

Special Purpose Facility Needs (2014 or 5 Year Target)*

• Family Aquatic Center**	2 Parks
• Water Spray Park	2 Parks

*Deficiencies based on a projected 2014 population of 75,000
****Outdoor leisure pool with additional aquatic amenities like slides and splash pads.

Support Facilities

The term “support facilities” constitutes those facilities that serve as the support and holding space for various recreation activities to occur. To better illustrate the facility deficiencies, they have been categorized further:

Support Amenities

Support facilities include amenities that help Neighborhood and Community Parks meet the needs of the community. Pavilions should be placed in every Neighborhood and Community Park. Larger parks can include multiple units while smaller parks (such as Neighborhood Parks) typically contain only one of each facility type. Due to its size and need for parking, amphitheaters are best suited for Community Parks.

Figure 5.15
Key Facility Needs – Support Amenities

Support Amenities Needs (2014 or 5 Year Target)*

- Pavilions — 23 units
- Amphitheater — 0**

*Deficiencies based on a projected 2014 population of 75,000
****The City's only amphitheater is located at Town Park. It is well located along Main Street and easily accessible from the surrounding neighborhood along Walnut Creek Trail.

Recreation, Senior & Environmental Learning Center Facilities

Table 5.3 demonstrates the current and future square footage needs for recreation, senior, and environmental learning center facilities in Mansfield. These needs are demonstrated below.

Figure 5.16
Key Facility Needs

Recreation & Senior Center Facility Needs (2014 and Build Out)

	2014 Need	Deficit	Build-out	Deficit
Recreation Center	70,500	48,500	127,000	105,000
Senior Center	10,600	10,600	19,000	19,000
Environmental Learning Center	10,000	10,000	10,000	10,000

Environmental Learning Center Facilities

Environment learning centers are generally built to support outdoor learning areas. These areas generally are supported by outdoor learning stations. The learning centers are used for experiments, exhibits and lectures where nature may be presented in a variety of methods. For this reason there are no established standards for such centers. If a center contained two lecture labs sized for 40 students per lab with support offices, toilets and storage, the size of such a center would be between 8,000 to 10,000 square feet.

DEMAND-BASED NEEDS ASSESSMENT

Demand-based needs may be summarized as "what people want" and represent what is most desired by the unique population living within Mansfield. Standard-based needs, on the other hand, depict what is needed based on a population number while resource-based needs depict what opportunities are available. The primary source for identifying community-wide, demand-based needs is public involvement – that is, the Citizen Attitude Survey, Focus Group Meetings, and the Public Meeting that occurred as part of the Master Plan process (see Chapter 4). The demand-based needs as expressed through community-wide public input are categorized as follows:

Develop Close-to-Home Parks

Close-to-home park space – including Neighborhood Parks, Community Parks, and sometimes Linear Parks – provide the basic "daily" park needs for Mansfield's citizens. There is strong demand in the community for the provision of additional parks of such types near existing and future neighborhoods. These parks should be easily accessible, include all the necessary amenities (including playgrounds, pavilions, benches, and open play areas – see Chapter 3), and should be placed in such a way that every residence in Mansfield is located no more than a ½ mile (10 minute walk) from a close-to-home park.

Expand the Trail Network

Residents strongly value the trails that are currently provided along Walnut Creek, but they have need for additional trails in the City – both along Walnut Creek and in other parts of Mansfield. Trails that provide recreation as well as transportation linkages that connect neighborhoods, parks, schools, jobs, and shopping areas are in demand in the community. The trail system should provide opportunities for various types of trail users including recreational walkers, runners, recreational cyclists, transportation cyclists, mountain bikers, and inline skaters – either as multi-use trails or as restricted, defined use trails.

Acquire Land for Future Parks & Facilities

Acquire land for the provision of additional Neighborhood and Community Parks, open space, and trail corridors. Strong demand for additional facilities as related through the Citizen Attitude Survey and the Focus Group and Public Meetings requires the acquisition of additional land.

Provide Facilities for Transportation Cycling

Better than four persons to one support both 1) biking to get to work or shopping and 2) widening some thoroughfares for bike lanes (as per the Citizen Attitude Survey). As mentioned in Chapter 4, there is considerably more support for on-road bicycle facilities and for transportation cycling as a whole in Mansfield than in most other North Texas cities. Currently, little provision is made for transportation cycling in the City, other than the existing portion of the Walnut Creek Linear Park trail.

Develop a Community/Recreation Center

Mansfield is quickly outgrowing the space and facilities provided at the Mansfield Activities Center. Demand exists in the community for expanded indoor facilities either as an expansion to the MAC or as a new, standalone Community Center that includes recreational amenities and dedication space for seniors.

Construct Swimming Pools

While the Public Involvement process did not identify swimming pools as being a top priority relative to other types of facilities in Mansfield (see Table 4.5 and Table 4.6), a swimming pool was mentioned by 14% of the Citizen Attitude Survey respondents as being the facility most lacking in the City (making this the third most mentioned lacking facility after a park and multi-use trails). So while it was generally not described as one of the most important, it *was* described as one of the facilities most lacking in the City.

Expand Programming

During the Focus Group Meetings and the Public Meeting, citizens expressed the importance of providing opportunities for the diversity of Mansfield residents. While this applies to the types of parks and trail experiences afforded to users, it is also important to recognize how this need is met through expanded programming. Additional classes, leagues, and other programs for youth, adults, and seniors will help to meet each group's unique needs.

Table 5.4
Prioritized Demand-Based Needs

	Rank
Develop Close-to-Home Parks	1
Expand the Trail Network	2
Acquire Land for Future Parks & Protection of Natural Areas	3
Provide Facilities for Transportation Cycling	4
Develop a Community/Recreation Center	5
Construct Swimming Pools	6
Expand Programming	7

RESOURCE-BASED NEEDS ASSESSMENT

In addition to identifying needs based on standards, benchmarks, and citizen demand, the utilization of opportunities that are presented to the community through its natural resources and the protection of said resources is important. It is reasoned, for example, that the protection of a wooded creek corridor and the provision of a trail running through it is a need that should be addressed because of the existence of the resource itself. In Mansfield, the primary resources to be utilized and protected are creeks and streams, Joe Pool Lake, woodland vegetation, and rural/agricultural landscapes.

Creeks & Streams

Many creeks and streams run their course through Mansfield though the most visible of these is Walnut Creek. Each of these drainage ways provides unique and incredibly valuable environmental services to Mansfield, including habitat for wildlife, water quality protection, flood protection, and connections and linkages between different parts of the City. The City of Mansfield's Engineering Department has made great progress toward protecting these resources through the provisions made in the floodplain ordinance. Additional steps must be taken, however, to completely protect these resources and provide trail connections through them including preventing floodplain reclamation and acquiring easements.

Joe Pool Lake

While Mansfield only has a small segment of the lakeshore in its City limits, Joe Pool Lake provides a valuable opportunity to the community for recreation and conservation. The shoreline is heavily wooded and provides both valuable habitat and recreation opportunities such as trails, bird watching, and environmental education. The lake itself provides opportunities for water sports including skiing, sailing, and kayaking/canoeing. As nearby land develops and park land is dedicated, the City should make efforts to connect neighborhood parks to the shoreline through trails; furthermore, connecting the shoreline to the Walnut Creek Linear Park and other, future trail corridors in Mansfield is one of the City's highest priorities.

Natural Landscapes

Mansfield enjoys a diversity of landscapes within its City limits, including the aforementioned lakeshore, agricultural plains, and wooded areas that are part of the Post Oak Savanna ecoregion. The vegetation of this ecoregion, most notably the large Post Oak trees, is rare in Texas and is quickly disappearing. Efforts should be taken to preserve and protect these beautiful native trees by preserving the following: 1) individual trees, 2) stands of trees, 3) the edges of tree stands by limiting encroachment from development and non-native vegetation, and 4) undergrowth and the forest floor. When full preservation is not possible due to grandfathered development approvals, clear cutting of trees should be prohibited through ordinance. Mitigation should be crafted to specifically meet the qualities of this ecoregion and to avoid introducing species that will overtake and damage the Post Oak Savanna species.

Rural/Agricultural Landscapes

Typically, cities in North Texas are urban, suburban, or rural. Mansfield is in a unique position in that it is experiencing high quality development and economic prosperity while still retaining many of the advantages of a small town including a real downtown and rural/agricultural landscapes. All suburbs in the Metroplex have experienced this dichotomy at some point in their past; however, most have not taken steps to protect the small-town feel of their community – namely protecting rural/agricultural landscapes including crop land, farm houses, barns, silos, and other bits of "rural Americana" that stand as landmarks in Mansfield's history. Protecting such landscapes does not preclude development; rather, it protects key pieces of the landscape for posterity and open space so that future generations may experience the City's proud history.

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Chapter 6

Recommendations

REALIZING THE VISION

Overview of the Vision

The City of Mansfield Parks and Recreation Department (PARD) with the support and advice of the Mansfield Parks Facilities Development Corporation (MPFDC) have done extremely well since the completion of the 2002 Parks Master Plan. Most of the recommendations in the Plan were implemented and culminated in the Parks and Recreation Department receiving the very prestigious Texas Recreation & Parks Society Gold Medal Award for Excellence in Parks & Recreation Management.

Fittingly, the vision established for the 2009 Parks, Recreation and Trails Master Plan is: **"Building on Success."** Success leads to new opportunities to positively impact future generations and to enrich the lives of Mansfield citizens through parks, places, and recreation programs. Building on Success also implies sustaining the excellence of the PARD's achievements while reaching beyond the gold standard for the future.

MASTER PLAN GOALS

In order to achieve this vision of the Master Plan, certain guidelines must be established to ensure that the actions taken and priorities created help the PARD to realize the vision as an end result to their efforts. Eight goals were established for the 2002 Mansfield Parks, Recreation and Open Space Master Plan. These goals have served the PARD well and are still valid as goals for 2009 to measure recommendations and actions; if an action does not serve to forward these goals, it does not help the PARD achieve the vision.

2009 Parks, Trails & Open Space Master Plan Goals

1. Create a park system that will improve the physical form and appearance of the City.
2. Provide an adequate distribution of parks and recreation facilities throughout Mansfield.
3. Provide a variety of recreation facilities and programs to meet the needs and desires of the Mansfield's growing population.
4. Preserve and enhance the Mansfield's historical, cultural, open space and natural resources.
5. Develop a network of pedestrian and bicycle ways for hiking, jogging, and cycling throughout as much of Mansfield as is feasible.
6. Continue to maintain all of the Mansfield parks and recreational facilities in a superior condition.
7. Create mechanisms to work with public and private entities to provide resources to acquire, develop and maintain parks, recreation facilities, services and open space.
8. Maintain a citizen participation process for the evaluation and update of the Master Plan and for subsequent parks, recreation, and open space planning.

COMMITMENTS FOR PARKS, RECREATION, TRAILS AND OPEN SPACE

With the multitude of choices available today, people's priorities when relocating to a new city are determined by the type of lifestyle they desire rather than a specific job. The question then becomes: How do we capture and attract newcomers to Mansfield? It is through an understanding that quality lifestyles are not only about functional infrastructure, safety, and education but are also defined by clean air, access to nature and beautiful surroundings. In addition, priorities amongst many home buyers today include sustainability as achieved through energy and water conservation, either individually or by the city governance. The City of Mansfield is challenged and called upon to make a commitment to Quality, Sustainability and the Triple Bottom-line for its residents.

Quality:

Today's young professionals and their families are drawn to cities by state-of-the-art parks and facilities. These people expect to find amenities and facilities in cities similar to what they experienced during their education at universities and colleges. Attracting and retaining residents, as well as businesses to employ and serve such residents, will depend on providing **high-quality**, state-of-the-art parks and facilities in Mansfield.

Sustainability:

Due to worldwide population growth (the world population officially transitioned from majority rural to majority urban in 2007) and the effects of pollution and over-development in a finite environment, the awareness of the importance of environmental stewardship is no longer a fad, but is rather regarded as a necessity by most people today. Therefore, commit to developing and operating the City in a **sustainable** manner by considering the following:

- In areas of new development and redevelopment, strive to abide by and encourage the principles of new urbanism/traditional neighborhood development (TND), walkability, and denser developments to reduce emissions from auto travel and to encourage the use of alternative means of transportation.
- In environmentally sensitive areas, encourage the practice of conservation development which identifies areas of unique environmental value and allows denser development in one part of a site while reducing development altogether in another, thereby retaining the same net developed units per acre while lessening the environmental impact.
- When developing new indoor facilities, utilize the LEED[1] rating system as a measure to rate the sustainability of structures. Many cities and other governmental agencies in America are committed to achieving LEED certification for public buildings and it is therefore becoming the standard. Developing new facilities in accordance with LEED will serve as a hallmark for the City's commitment to sustainability.

[1] Leadership in Energy and Environmental Design (LEED) is a national rating system for the design, construction, and operation of buildings and sites. The system evaluates performance in five areas: sustainable site development, water conservation, energy efficiency, materials selection, and indoor environmental quality.

- Similarly, apply measures of sustainability, such as those found in LEED, to the development of outdoor recreation and park facilities, as well as streetscape medians. Aim to achieve low energy and water consumption and use recycled, recyclable, or low-chemical materials. Plan for and install native vegetation, which requires less fertilizer and water, to give parks a native, natural and region-specific appearance. Finally, develop maintenance programs that are sustainable and minimize the use of water and fertilizer and utilize low-noise and low-emission maintenance equipment.
- Recognize the value of "ecological services" as provided by various natural elements including vegetation and creeks in terms of (amongst other services) carbon sequestration and flood protection respectively.
- Through supporting sustainability and the "green" movement people assume a sense of purpose through actions described as "taking care of the earth." Such commitment by a community is very powerful when encouraged by officials and supported by city leaders.

Triple Bottom Line:

The successful implementation of the Parks Master Plan's vision "Building on Success" should be measured by an improvement of the Triple Bottom Line – that is, "People, Planet, Profit" or the idea that decisions must be made not only based on economic potential, but also on the ecological and social performance and benefits that result from such decisions. Tied to a commitment to "Quality" and "Sustainability" the Triple Bottom Line means:

- ***Social Performance***: Building a connected and healthy community through easy and close access to parks and open space, recreation opportunities and trail connections (to link neighborhoods, schools, jobs, and shopping).
- ***Ecological Performance***: Recognizing the value of ecological services (e.g. carbon sequestration, natural flood conveyance, habitat preservation, and water quality) which requires the protection of open space.
- ***Economic Performance***: Capitalize on the fact that proximity to parks and open space directly influences property value and recognizing that protected open space and parks add to a city's image and character, which in turn attracts people to the city.

When successfully pioneered by the PARD and the MPFDC, improvement of the Triple Bottom Line should become a measurement for ALL decisions by ALL City departments.




MASTER PLAN RECOMMENDATIONS

This chapter summarizes the findings of the Needs Assessment and recommends a series of actions to improve and expand Mansfield's park system, recreational opportunities, and quality of life. These recommendations stem from the vision outlined earlier – they address acquisition of park land, general improvements to existing parks, the development and provision of recreation facilities, operation and maintenance and City policy. The recommendations should be implemented or initiated over the general life of this master plan, which covers the next five to 10 years (recommended items in this chapter are prioritized in Chapter 8, The Implementation Plan).

The recommendations fall into four general categories:

1. Parks, Open Space and Trails

    a. Land Acquisition
    Acquire land for future parks, park expansion, new recreation facilities, and open space including habitat protection and cultural landscapes where possible.

    b. Park and Trail Development
    Develop parks and trails according to the specific need and in order of priority.

    c. Park Improvements
    Key improvements to improve existing parks.

2. Recreation Facilities
    Provide needed recreational facilities.

    a. Indoor Recreation Facilities
    b. Outdoor Recreation facilities

3. Operations and Maintenance
    Establish procedures and funding for effective operation and maintenance of parks and recreation facilities.

4. City Policy
    a. Floodplain Protection
    b. Park Land Dedication - Examine the City's park land dedication ordinance and refine it to meet the current needs of Mansfield.
    c. Cultural and Natural Landscapes Protection
    d. Overlay Districts

PARKS, OPEN SPACE AND TRAILS

Land Acquisition

As described in Chapter 4: Public Input, the citizens of Mansfield understand the necessity of land acquisition and the value of acquiring land for a park even before it is needed. From the results of the Attitude Survey it is also clear that they demand more parks and park land:

- A ratio of 6.9 to 1 residents (or at least 87%) agreed with the statement: **"Acquire land for future park and open space development."**
- A ratio of 5.3 to 1 residents agreed with the statement: **"Increase the amount of public open space."**

In short the telephone survey, Public Meeting, and Focus Group meetings, revealed that the acquisition of open space and park land rated as one of the highest priorities for the community.

With opportunities decreasing and costs increasing, there is a finite time to acquire adequate acreage that will meet the requirements for parks in the next 10 to 20 years and at build-out conditions. The need to acquire park land as shown in this Parks Master Plan recognizes and strongly recommends that a concerted, targeted and expedited effort be made toward this end.

Acquisition of land should be focused on the provision of neighborhood parks, community parks, linear parks, special purpose parks, and the protection of habitat, cultural landscapes and open space. Land acquisition may include direct purchasing, park land dedication, the establishment of recreation and/or park land easements, the involvement of Conservation Trusts (www.texaslandtrusts.org). Purchasing of Development Rights (which means the purchasing of the right to develop from a property owner, with the sole intent of never developing the land but to place it in a conservation easement forever), and the Transfer of Development Rights (which means that environmentally desirable land be traded for city owned land in areas where development is acceptable and even desirable.)

Desirable locations for park land area to be acquired are shown on the Proposed Parks Maps, and following describes the recommended acquisition of park land per park type:

Land for Neighborhood Parks

About 25 new neighborhood parks are recommended for the entire City at build-out conditions. At a size of 5 to 15 acres per park, this constitutes 125 to 250 acres to be acquired over the next 10 to 15 years and beyond. With a deficit of 201 acres, this will bring the City well into the target standard of 270 acres or 2 acres per 1,000 population at build-out population of 135,000.

The map **Proposed Neighborhood Parks** indicates general geographic locations where future neighborhood parks may be provided. The following is recommended for the acquisition of land for neighborhood parks:

- Target 5 acre + sites that are easily accessible and that have sufficient land that is useful for multi-purpose ball field development.
- Continue the practice of park dedication by developers as new communities are built.
- Consider acquisition of land for neighborhood parks in conjunction with the school district's needs in order to ensure the development of parks and schools adjacent to each other.
- Where possible, acquire land for neighborhood parks close to creeks, in order to provide a creek associated trail connection to other parks and amenities.

The **Existing & Proposed Neighborhood Parks** map on the next page illustrates the distribution of existing and proposed Neighborhood Parks.

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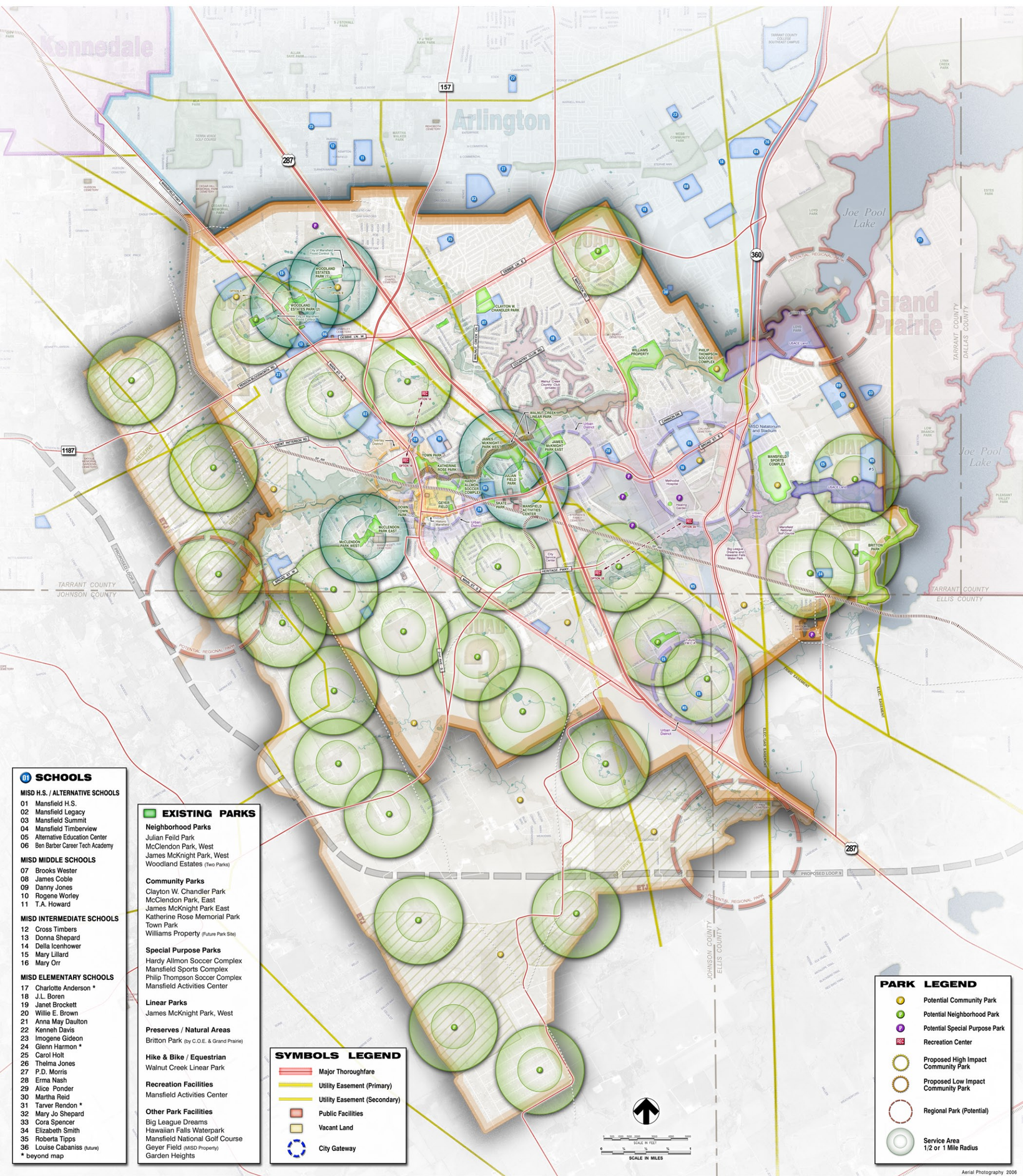

SCHOOLS

MISD H.S. / ALTERNATIVE SCHOOLS

01 Mansfield H.S.
02 Mansfield Legacy
03 Mansfield Summit
04 Mansfield Timberview
05 Alternative Education Center
06 Ben Barber Career Tech Academy

MISD MIDDLE SCHOOLS

07 Brooks Wester
08 James Coble
09 Danny Jones
10 Rogene Worley
11 T.A. Howard

MISD INTERMEDIATE SCHOOLS

12 Cross Timbers
13 Donna Shepard
14 Della Icenhower
15 Mary Lillard
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MISD ELEMENTARY SCHOOLS

17 Charlotte Anderson *
18 J.L. Boren
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21 Anna May Daulton
22 Kenneth Davis
23 Imogene Gideon
24 Glenn Harmon *
25 Carol Holt
26 Thelma Jones
27 P.D. Morris
28 Erma Nash
29 Alice Ponder
30 Martha Reid
31 Tarver Rendon *
32 Mary Jo Shepard
33 Cora Spencer
34 Elizabeth Smith
35 Roberta Tipps
36 Louise Cabaniss (future)

* beyond map

EXISTING PARKS

Neighborhood Parks
Julian Feild Park
McClendon Park, West
James McKnight Park, West
Woodland Estates (Two Parks)

Community Parks
Clayton W. Chandler Park
McClendon Park, East
James McKnight Park East
Katherine Rose Memorial Park
Town Park
Williams Property (Future Park Site)

Special Purpose Parks
Hardy Allmon Soccer Complex
Mansfield Sports Complex
Philip Thompson Soccer Complex
Mansfield Activities Center

Linear Parks
James McKnight Park, West

Preserves / Natural Areas
Britton Park (by C.O.E. & Grand Prairie)

Hike & Bike / Equestrian
Walnut Creek Linear Park

Recreation Facilities
Mansfield Activities Center

Other Park Facilities
Big League Dreams
Hawaiian Falls Waterpark
Mansfield National Golf Course
Geyer Field (MISD Property)
Garden Heights

SYMBOLS LEGEND

- Major Thoroughfare
- Utility Easement (Primary)
- Utility Easement (Secondary)
- Public Facilities
- Vacant Land
- City Gateway

PARK LEGEND

- Potential Community Park
- Potential Neighborhood Park
- Potential Special Purpose Park
- Recreation Center
- Proposed High Impact Community Park
- Proposed Low Impact Community Park
- Regional Park (Potential)
- Service Area 1/2 or 1 Mile Radius

Aerial Photography 2006

September 3, 2009

EXISTING & PROPOSED NEIGHBORHOOD PARKS

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

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Land for Community Parks

Nine (9) additional community parks are recommended for Mansfield at build-out conditions. At a size of 25 to 100 acres, this constitutes 225 to 900 acres to be acquired over the next 10 to 15 years and beyond. With a deficit of 620 acres, this will bring the City closer to the target standard of 810 acres or 6 acres per 1,000 population at build-out population of 135,000.

The **Existing & Proposed Parks** map indicates general geographic locations for future community parks including both high-impact and low-impact use. The following is recommended for the acquisition of land for community parks:

- For high-impact community parks, target land that provides for the practical implementation of ball fields and multi-purpose fields. Due to the need for athletic fields with support structures, high-impact community parks are better suited outside floodplains.
- For low-impact community parks, target land that has natural features and qualities conducive to more passive type activities. Due to its character and function low-impact community parks can very well include land within the floodplain.
- Acquire land large enough to accommodate future growth in the park.

The **Existing & Proposed Community Parks** map on the next page illustrates the distribution of existing and proposed Community Parks.

Land for Special Purpose Parks

The size of one individual Special Purpose Park may vary depending on the specific need and function. Its establishment is based on when the need arises. At present, five types of special purpose parks are recommended at the following areas:

- **Trail heads**
  Acquire land for trail heads between 1 and 3 acres in size to accommodate parking, informational signage and trail gateways. Not all future trail heads require land acquisition. Some may be constructed on land already acquired for neighborhood, community or other park purposes.

- **Healing Gardens**
  Medical facilities, especially hospitals, often require the opportunity for both patients and their visitors to access parks and natural areas. The value of such areas in bringing about healing and a sense of peace and quiet has been documented abundantly. It is recommended to consider identifying land in the medical district of Mansfield to be set aside for the purpose of creating a healing garden that is accessible to the public.

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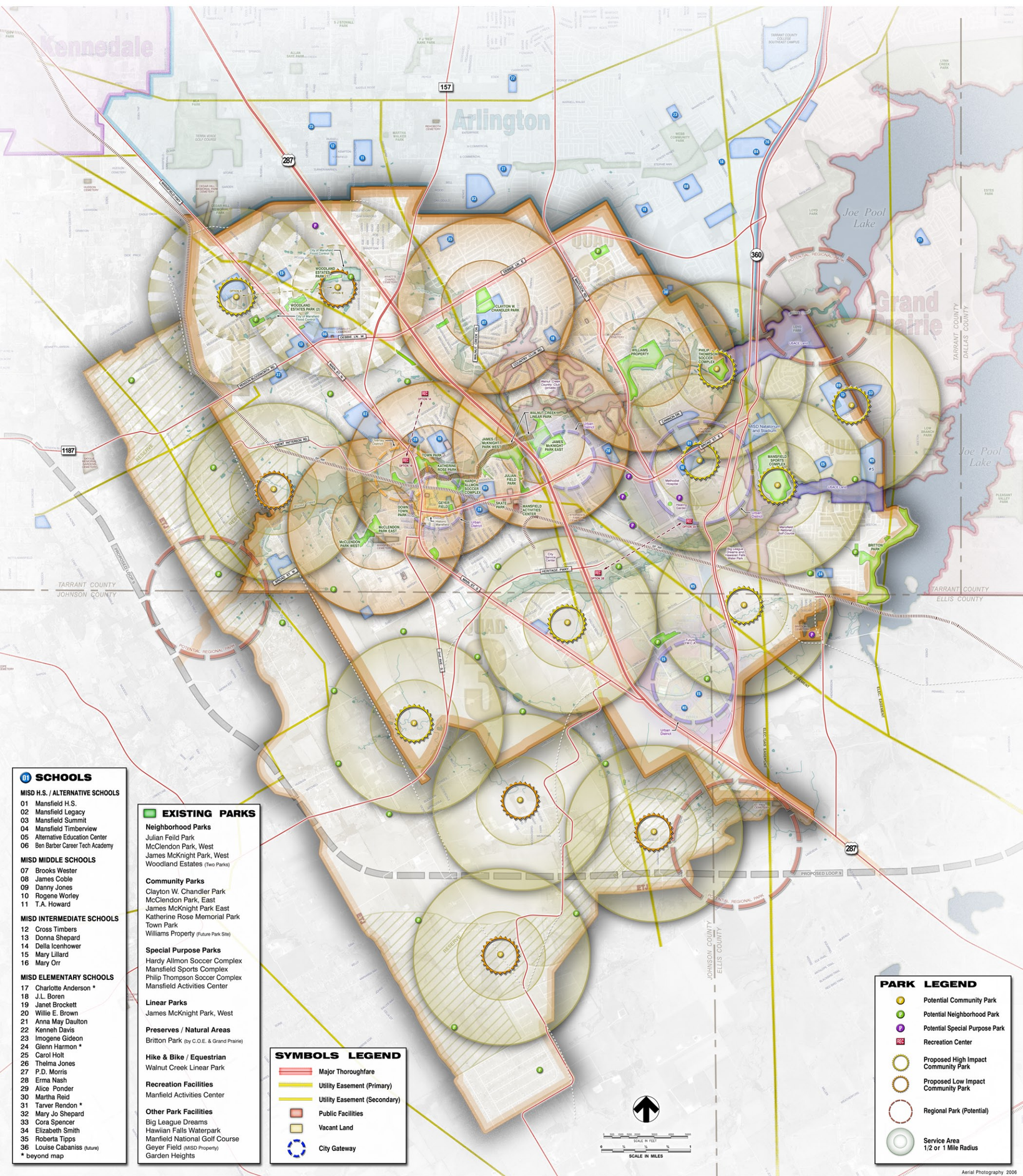

August 21, 2009

EXISTING & PROPOSED COMMUNITY PARKS

CITY OF MANSFIELD, TEXAS

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MANSFIELD TEXAS

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- **Botanical Garden**
  The Attitude Survey reveals strong citizen support for a nature center/botanical garden in a ratio of 4.3 to 1 resident. Botanical gardens holds huge value for communities, especially if they are aesthetically well designed with the incorporation of vistas, views, pathways and seating areas. The value of a botanical garden has the opportunity to combine many activities in one: research, education and recreation. Should an existing City park (e.g. the Williams Property) be deemed appropriate, it might mean that additional land may not be required for a botanical garden/nature center.

- **Community Gardens**
  With the current world wide economic recession, there is renewed interest in the establishment of community gardens in local communities. This current movement, which is even likened to the famed "Victory Gardens" of World War II, encourages people to take control of their economic situation by producing their own fruit and vegetables. The additional motivation for community gardens is that it not only promotes healthy intake of food, but also leads to physical and mental health through the activity of gardening which also encourages social interaction between people. A city can only be seen as responsible when taking this movement serious and providing both land and educational opportunities for the establishment and use of community gardens available to everyone in the community. Considerations for appropriate land include:
  - Quality of soil
  - Access to water and irrigation

  Should floodplain areas be considered for Community Gardens, be cognizant of issues including: potential soil erosion and damage to existing tree cover. It is suggested that the PARD commit to the acquisition of about 20 acres of land for Community Gardens across the City.

- **Parks alongside cemeteries**
  Cemeteries in any city have huge value in providing communities with a connection to the past. Cemeteries are often beautiful tree covered open space areas that are unique destinations in themselves. However, a cemetery without the protection of surrounding park land often loses its context and landscape reference with the result that its value as a destination of cultural, historical and educational value diminishes. It is recommended that land be acquired around all cemeteries whether in city or private ownership. Examples are proposed acquisition of land at Mansfield Cemetery, Calvary Cemetery, Grimsley Cemetery, Britton Cemetery and St. Paul Cemetery.

Land for Linear Parks

Linear Parks are typically called such for the reason that they are located adjacent to a linear landscape feature including a creek and/or utility easement. If land is to be required for a trail only, the following guideline may be followed to determine the need for land acquisition or a trail easement: A trail surface width of 12 feet plus a 3 foot shoulder on each side plus about 15 feet each side of the trail constitutes about 45 to 50

feet. One mile of trail with a trail easement of 50 feet wide, constitutes about 6 acres. It is suggested that the City commits to acquiring 10 acres of land each year. Over a period of five years, this will constitute 50 acres or the possibility for the construction of eight miles of trail.

Open Space, and Natural Areas and Rural/Cultural Landscapes

> ***"Many community leaders feel they must choose between economic growth and open space protection. But no such choice is necessary. Open space protection is good for a community's health, stability, beauty, and quality of life. It is also good for the bottom line."***
>
> \- Will Rogers,
> President: Trust for Public Land; 1999.

The protection of natural areas rated extremely high in the Attitude Survey, with 15.5 to 1 residents that agreed with the statement: **"Preserving environmentally sensitive areas such as natural creek corridors."** This is telling of the community's appreciation of the natural environment and their desire to see it protected and preserved**.** A ratio of 5.3 to 1 residents agreed with the statement: **"Acquire land to protect sites of cultural value in the area where you live."**

Areas that have habitat value and warrant habitat protection typically include creeks, floodplains, creek corridors, wooded areas, areas of topographic change and high lying sites with views. Open space also includes cultural landscapes which are either landscapes with historic value or managed as farmland.

Natural Areas

Walnut Creek, Low Branch and all their tributaries provide unique natural beauty and memorable recreation for the citizens of Mansfield. The value of natural water habitat accessible to the public is immeasurable. The protection of both riparian vegetation and habitat is essential to water quality and wildlife diversity and ultimately, to all citizens of Mansfield (see Appendix: Creeks and Streams).

Natural Landscapes

The north-western part of the City has tremendous value when it comes to its natural landscapes, which comprise large stands of mature post oak trees. Truly unique to Mansfield, every effort possible should be made to protect these beautiful landscapes including applying principles of conservation development (see Appendix), a stringent tree protection ordinance and an overlay district developed and supported by the Planning Department.

Other opportunities for open space land dedication include the following:

- Creek corridors that include a buffer area beyond the 100-year floodline depending on unique site features and wildlife habitat.
- Secondary tributary streams or swales that can create linkage "fingers" to adjacent neighborhoods by means of trail connections.

- Land identified as possessing natural and cultural importance including wetlands and their buffers; moderate and steep slopes; groundwater resources and their recharge areas; woodlands; farmland to ensure the rural character of the City; significant wildlife habitat; historic and archaeological features, and scenic viewsheds.

Regional Parks

The acquisition of land for three Regional Parks are recommended:

Regional Park 1 – (Walnut Creek and West Broad Street)

A truly multi-jurisdictional park, this recommended park is located both inside and outside the ETJ of Mansfield while located in both Tarrant and Johnson Counties. The main feature of this proposed park is the Walnut Creek corridor. Being located adjacent to the proposed future Loop 9, the park will serve as a unique gateway to the City of Mansfield. The acquisition of land for a Regional Park benefits hugely from being multi-jurisdictional. It is thus suggested that about 500 to 800 acres be acquired jointly with the relevant counties and neighboring city.

Regional Park 2 (287 South)

Similar to the previously described Regional Park, this park is also multi-jurisdictional where it spans both Johnson and Ellis Counties. It also provides the opportunity for a unique gateway to the City where it is located alongside the proposed future Loop 9. It is suggested that about 500 to 800 acres be acquired jointly with the relevant counties and neighboring city.

Regional Park 3 (Loyd Park)

The value of this park lies in its ecological quality that provides opportunity for recreation, education and habitat protection. It is located in Mansfield just upstream from where Walnut Creek flows into Joe Pool Lake. Combined with the amenities and size of Loyd Park in Grand Prairie, this has the opportunity to be a true regional park. This park does not appear to require any land acquisition, other than appropriating the US Corps of Engineers land along the creek.

The **Regional Parks** map on the next page illustrates the areas to be acquired for Regional Parks.

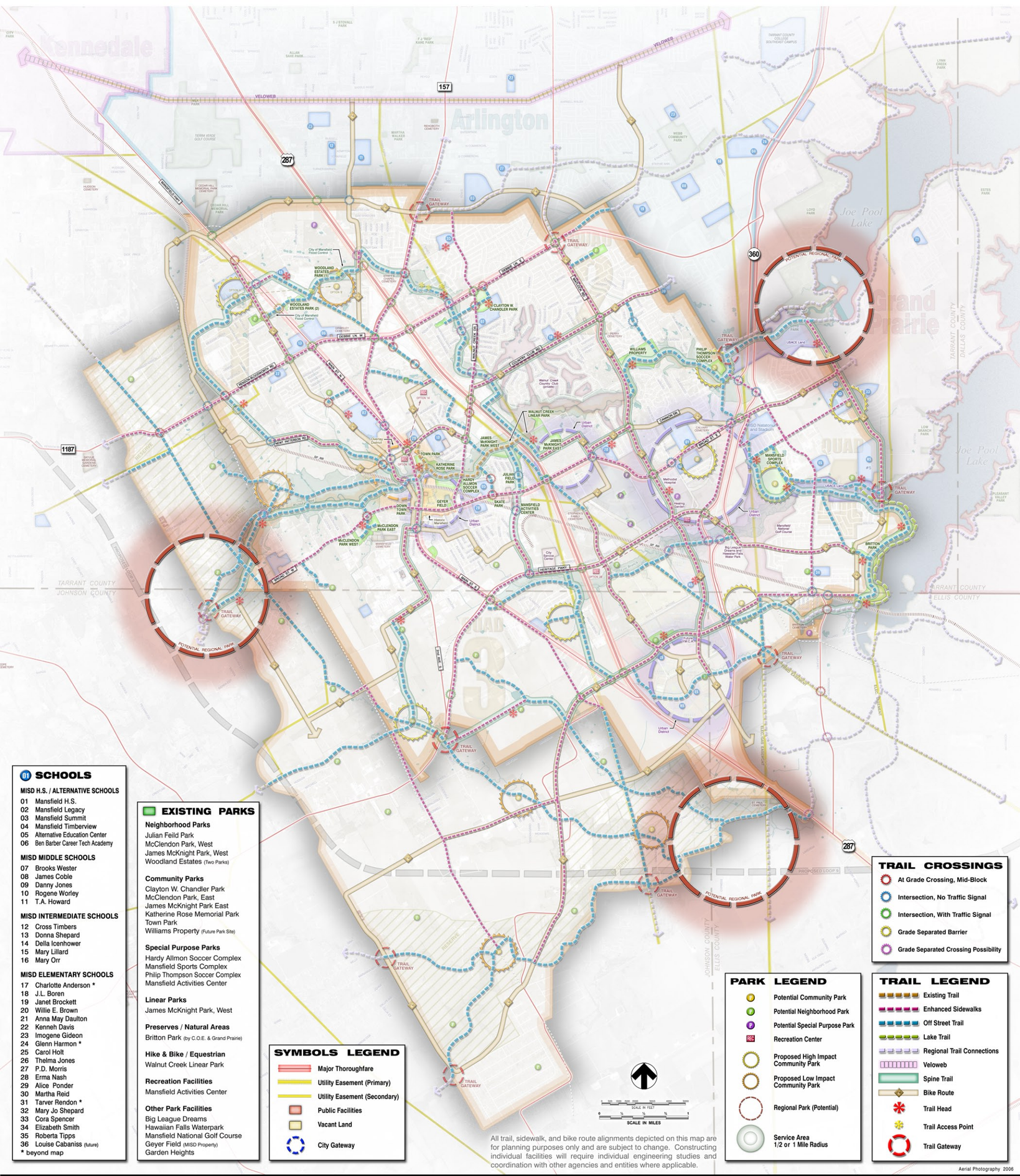
Park and Trail Development

The following section describes general, as well as specific, recommendations for park development in the City of Mansfield.

General Recommendations for Park Development

Key design points that should guide the design of every existing or new park in the City are recommended as follows:

- A design concept for each neighborhood park, incorporating children's play areas, offering solar refuge with shade trees/structures, walkways, hike and bike trails, areas for open play, multi-use play areas, picnic facilities and a park pavilion with a multi-tiered roof.
- Each park should truly celebrate the history and culture of City of Mansfield by incorporating historical plaques and features that allude to the neighborhoods around the park or the circumstances that caused the park to be created.
- Every park should include features for a wide variety of park users and levels of activity. Parks should be multi-faceted, without being over-programmed and over-filled with elements. Natural and unprogrammed areas play a huge role in providing "breathing space" in a park and should be encouraged.
- Parks should incorporate art and should be an example of the sophistication of the City of Mansfield of today and tomorrow.
- Include all the basic facilities that make up an active Community Park with specific reference to the programmed recreation facilities as identified in the needs assessment.
- Consider passive Community Parks as an opportunity to provide additional opportunities for passive recreation whereby the natural components of Mansfield's parks system can be enjoyed by everyone in the community.
- The size of one individual Special Purpose Park may vary depending on the specific need and function.
- Linear Parks are ideal for hike and bike trails, as these parks may be associated with creeks, rail or utility corridors, they provide connectivity to many destination points.
- Within nature areas and open spaces, provide low key facilities with generally passive uses.



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* beyond map

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Garden Heights

SYMBOLS LEGEND

- Major Thoroughfare
- Utility Easement (Primary)
- Utility Easement (Secondary)
- Public Facilities
- Vacant Land
- City Gateway

TRAIL CROSSINGS

- At Grade Crossing, Mid-Block
- Intersection, No Traffic Signal
- Intersection, With Traffic Signal
- Grade Separated Barrier
- Grade Separated Crossing Possibility

PARK LEGEND

- Potential Community Park
- Potential Neighborhood Park
- Potential Special Purpose Park
- Recreation Center
- Proposed High Impact Community Park
- Proposed Low Impact Community Park
- Regional Park (Potential)
- Service Area 1/2 or 1 Mile Radius

TRAIL LEGEND

- Existing Trail
- Enhanced Sidewalks
- Off Street Trail
- Lake Trail
- Regional Trail Connections
- Veloweb
- Spine Trail
- Bike Route
- Trail Head
- Trail Access Point
- Trail Gateway

All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

Aerial Photography 2006

September 3, 2009

REGIONAL PARKS

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

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- At the non-City owned cemeteries, work with owners to provide park facilities such as trails to connect with these valuable cultural resources.
- Enroll the Mansfield National Golf Club in the Audubon Cooperative Sanctuary Program (ACSP), which aims to establish environmental stewardship at golf courses.
- Similarly, encourage private golf course owners to enroll in the Audubon Cooperative Sanctuary Program (ACSP).
- A single loaded road adjacent to all parks is advised in order to protect open space for purposes of informal surveillance and prevent crime in areas that may pose danger for park and open space users. The suggested requirement of single loaded roads along all parks, creeks, and open space is 80% minimum of the boundary between new development and the adjacent park, creek and open space.
- A transparent, wrought iron metal fence between all residential lots and parks and/or open space should be demanded where a single loaded road is not possible.
- Shade should be incorporated into many features of every park. Playgrounds should be covered where feasible, and several covered picnic tables should be included in every park, no matter how small the park.
- All pavilion structures should consist of a multi-tiered roof system to prevent heated air from being trapped under the roof.
- Implement storm water bio-swales to allow for temporary retention of storm water in order to allow for infiltration and bio-filtration of run-off water before the excess water leaves the site.
- Community input should be welcomed and included in the design of every park in the City.
- Where required, provide park lights on photocells as an energy saving measure.

Parks are about green open spaces and trees. It is suggested that the City consider the following in terms of a planting strategy:

- Place preference on the application of drought tolerant landscaping and native plantings including native trees, wildflowers and native grasses.
- Parks should continue to be developed and upgraded in order to reduce maintenance. Automatic irrigation systems attuned to plants with low water requirements should continue to be a key component of Mansfield parks as should simple features that make these parks easy to maintain. As a water saving tool, the ideal is that no irrigation be provided at all; however, even native plants require temporary irrigation for a period of at least two years to ensure effective establishment. When opted for, hand watering with gator bags should be done consistently and in ample quantities.

Use of Native Plants

The use of native plants is a proven tool to save water and reduce maintenance. Adapted to the local environmental conditions including climate and soil, these plants tolerate extreme temperatures and rainfall events very well, while often requiring no fertilizer or pesticides at all. This makes native plants extremely sustainable.

From a “sense of place” and an aesthetic point of view, one of the best ways for any community to express its regional uniqueness, is to use plants native to the area. It is, after all, the natural surroundings, including native plants that determine the unique and

special quality of a place. Recognized by many this has lead to the increased use of shade trees that are native to a specific area.

Curiously, few know about and apply the use of small native trees – often because of a lack of knowledge and often because they are not readily available in the commercial nurseries. It is recommended that the City of Mansfield make a commitment to encourage the use of small native trees, including but not limited to Eve's Necklace (*Sophora affinis*), Indigobush (*Amorpha fruticosa*), Mexian Buck Eye (*Ungnadia speciosa*), Mexican Plum trees (*Prunus mexicana*), Possumhaw trees (*Ilex decidua*), and Texas Red Bud (*Cercis Canadensis var. Texensis*). For the same reason it is recommended that Mansfield not overuse Crape Myrtles in its public spaces. Many communities plant the Crape Myrtle (*Lagerstroemia indica*) for the very fact that it is drought tolerant. However, it is necessary to recognize that the crape myrtle ornamental tree is an exotic plant that is native to Southeast Asia.

The fact that the Crape Myrtle is a practical, drought tolerant small tree with many blossoms and colorful bark, has caused this tree to be overused extensively as the ornamental tree of choice from the western states of Florida and the Carolinas, across the country to California, making the planted landscapes of this immense area uniform and common. In fact, it may be argued that this is one of many contributing factors that have affected the uniqueness of communities including our native wildlife that will less likely nest and find food in a Crape Myrtle.

For purposes of retaining and maintaining its unique North Central Texas character, it is recommended that the City continue to make a concerted effort to promote the use of native plants including trees, shrubs and grasses for both public and private use.

Sustainable Park Facility Development

It is recommended that the City consider the achievement of sustainability to the same level as LEED certification for all future park facilities. Leadership in Energy and Environmental Design, LEED, is a national rating system for the design, construction and operation of buildings and sites. The system evaluates performance in five areas: sustainable site development, water conservation, energy efficiency, materials selection and indoor environmental quality.

Aspects that lend positive, measurable results include: on-site storm water management and permeable paving to prevent increased run-off; native plantings to reduce erosion, water consumption and irrigation dependency; organic maintenance programs to reduce chemicals and pesticides that infiltrate ground water and city utility and treatment systems; photocell systems for lighting to reduce energy costs; selection of sustainable materials (recycled and rapidly renewable resources) to use resources to maximum effect. Such results not only produce benefits for the environment, but for the owner and users as well.

The Sustainable Sites Initiative currently under development by the Lady Bird Johnson Wildflower Center, ASLA, American Botanic Garden and the USGBC aims to provide a

rating system for landscape development that does not necessarily include building. The City is encouraged to stay part of the process and to find ways to apply these very sound principles with all future park development (see also: www.sustainablesites.org)

"One measure of a development project's success should be the increase in the number of songbird species inhabiting a site after it has been developed."
- William McDonough
Dean, School of Architecture, University of Virginia

Specific Recommendations for Park and Trail Development

Neighborhood Parks

General planning and design approach for neighborhood parks:

- Prepare a design concept for each undeveloped neighborhood park that incorporates children's play areas offering solar refuge with shade trees/structures, walkways, hike and bike trails, areas for open play, multi-use play areas, picnic facilities, and a park pavilion with a multi-tiered roof.
- Include the participation of citizens from the neighborhood in the design process.
- Provide good pedestrian access to all parks including signage and a wide, welcoming gateway.
- Develop parks adjacent to existing and future schools with easy access from the school grounds. Not only will this add to the quality of life for the community, but also funding is more likely available through collaborative action.
- Place preference on the application of native plantings including native trees, wildflowers and native grasses.

Community Parks

General planning and design approach for community parks:

- Develop and implement a concept plan for each parcel of land acquired for the purpose of a Community Park.
- Include all the basic facilities that make up a Community Park with specific reference to the recreation facilities as identified in the needs assessment.
- In addition to the recreation facilities which are typical of a Community Park, incorporate children's play areas covered with shade structures, walkways, hike and bike trails, areas for non-athletic, leisure "free play," multi-use play areas, picnic facilities, and a park pavilion with a multi-tiered roof.
- Provide support facilities such as restrooms, parking, etc.
- Provide signage and a uniquely designed gateway.
- Place preference on the application of native plantings including native trees, wildflowers and native grasses.

Community parks, as the name implies, support communities. They are important for providing all the features that one would expect to find in a Neighborhood Park, plus a number and variety of playing fields that support competition and league play. Due to their large size and the variety of activities they support, these are major investments in the parks and recreation system.

Special Purpose Parks

The following describes recommendations for the development of Special Purpose Parks:

- Habitat Protection
  In addition to acquiring the land for habitat protection, develop facilities that encourage nature study, bird watching, nature walks, day and limited overnight camping with restrooms and structures for environmental education including meeting and lecture space.

- Community Gardens
  Develop Community Gardens with all the required support facilities and amenities including but not limited to: storage facilities, green houses for cultivating seedlings, cleaning facilities, irrigation, meeting facilities, etc.

- Botanical Gardens
  Research the purpose, goal and value of Botanical Gardens in communities. Establish a theme and mission for a botanical garden in Mansfield. Develop in conjunction with a environmental learning center.

- Trail Heads/Gateways
  Trail head/gateways are features which not only provide identity, but also may serve as places for useful directional and informational signage, drinking fountains and waste receptacles, as well as restrooms at major trailheads, especially in high use community parks. Trail heads often include parking.

- Cemetery Associated Park Land
  For park land acquired adjacent to cemeteries, provide facilities that are compatible with these destinations. Facilities may include pavilions, benches and walking trails. Children play areas may be provided without interfering with the purpose and intent of the cemetery as a place of quiet reflection. Informational and education signage may refer to the history of the particular cemetery as well as grave sites of important cultural and historical value where applicable.

Linear Parks

Linear parks are characterized by their linear nature that makes them ideal for the implementation of hike and bike trails, which in essence become the "spine" of each particular park. Linear parks may be associated with creeks, railway or utility corridors, and are ideal to create connections between different destination points. Whereas trail development typically includes amenities like trail heads, rest stops, overlooks, benches and light fixtures, linear parks may include additional amenities and facilities e.g. picnic pavilions, playgrounds, basketball, and volleyball courts.

Natural Areas/Cultural Landscapes/Open Space Preserves

Collaborate with Tarrant, Johnson and Ellis Counties, Texas Parks and Wildlife, and Texas Land Trust to preserve areas of natural, cultural and open space value. General guidelines for the preserving these areas include providing low key development with generally passive uses within these earmarked areas. With cognizance of the ecological sensitivity of creeks, design and implement vehicular and pedestrian gateways, a network of hard and soft surface trails, trail heads, pedestrian bridges across the creeks, and interpretational and educational signage pertaining to the value of native plants, cultural landscapes and the benefits of natural parkland, creeks, and drainage ways.

Cemeteries (Non City-Owned)

Cemeteries in any city have huge value in providing communities with a connection to past. Cemeteries are often beautiful tree covered open space areas that are unique destinations in themselves. Trail connections to all cemeteries in the City are recommended. Such connections may include informational signage and benches for quiet contemplation. Informational and educational signage may refer to the history of the particular cemetery and its geographic context describing the surrounding cultural and historical qualities. To ensure success in providing access to the cemeteries, it is recommended that the City work closely with the relevant private entities responsible for the upkeep and maintenance of all cemeteries.

Golf Course

It is recommended to establish and enroll the City-owned golf course as part of the Audubon Cooperative Sanctuary Program (ACSP). This program has the aim to establish environmental stewardship at golf courses. Encourage the owners of private golf courses to do the same.

By their very nature, golf courses provide significant open spaces and opportunities to provide needed wildlife habitat in increasingly urbanized communities across North America. At the same time, golf courses are called to address environmental concerns related to the potential and actual impacts of water consumption and chemical use on local water sources, wildlife species, and native habitats. The ACSP for golf courses seeks to address golf's environmental concerns while maximizing golf course opportunities to provide open space benefits. This highly-regarded education and assistance program promotes participation in comprehensive environmental management, enhancement and protection of existing wildlife habitats, and recognition for those who are engaged in environmentally-responsible projects.
Source: http://www.audubonintemational.org/programs/acss/golf.htm

Develop an organic program of maintenance at the City-owned golf course in response to similarly developed organic programs throughout the parks system in Mansfield and encourage the owners of private golf courses to do the same.

Trail Development

Trails are part of all parks and add connectivity to the parks system as a whole. Mansfield residents are overwhelmingly devotees of trail usage, and the current city trail

system should be expanded. Since trails are so important in Mansfield, this Master Plan devotes an entire chapter to expanding the City's Trails Master Plan (see Chapter 7).

Additional Considerations for Park Development

Park Signage

The City of Mansfield should adopt a name branding system of parks signs. Such identifiable features will add to a sense of place that is unmistakably Mansfield. As new parks are developed and existing ones renovated, it is important to include park signage for each park. Specific considerations include:

- Develop a branding concept for the City's signage, to be applied consistently at all the existing and future parks; a well-conceived and designed signage theme will add to the unique identity and character of the City of Mansfield.
- Based on the branding concept, develop and install identification, informational, interpretative, and directional signage at all City parks.
- Install additional directional signage throughout the City.
- Provide funding to adequately support the design and maintenance of signage.

Annual Tree Planting Program

Tree plantings should be done citywide on an annual basis to ensure the longevity of established, mature shade trees. This strategy goes beyond what is planned for the individual park development; rather, it is an adjunct program which is designed to invest in the value of the parks with young trees that balance the loss of mature trees to natural disaster, disease and age. By providing an annual tree planting program, the parks' futures are ensured with what will in their own time become mature, shade trees for the enjoyment of future generations.

Park Improvements

The following City-wide key improvements to existing parks are recommended during the next 10-year period.

Park Renovation

Park renovation is an investment in the value of existing parks and is important in providing amenities that are safe and reflect current interests and needs.

Specific considerations include:

- Ensure that all improvements meet ADA (American Disabilities Act) requirements.
- Increase shade in all parks by planting additional trees where practical.
- For additional landscape improvements, place preference on the application of native plantings including trees, wildflowers and grasses.
- Provide shade structures at the children's play areas where feasible.
- Provide adequate funding.

It is recommended that one park per year be renovated for the first five years.

Park Maintenance

It is recommended that the Parks Department continue to play an active role in implementing a holistic and sustainable plant management program throughout the parks and grounds. Continue to implement appropriate practices to promote a healthy soil, micro-fauna and root system of all plants. An example includes organic maintenance through ample compost applications. Emphasize native and naturalized plants that are better adapted to the City of Mansfield and North Central Texas region.

Wi-Fi Access

Access to the Internet in parks is popular in many cities. Consider providing Wi-Fi access in Community Parks.

Wi-Fi is short for *wireless fidelity*, which allows the user to connect to the Internet without the need for hard-wire cabling. Wi-Fi-enabled computers use radio technologies to send and receive data within the range of a base station or *hotspot*, which is a connection point for a WiFi network.

Art in Public Places including Parks

Art has a tremendous potential to add additional layers of meaning to the landscape and to encourage contemplation as a manner of passive recreation. It is recommended that the City of Mansfield explores and develops a policy to include environmental and outdoor art in parks and open space. Specific actions include:

1. Pursue a "Percentage for Art Program", where a portion of the funding for all public projects is dedicated to outdoor art.
2. Fund every major park construction project for art. At a minimum, fund at least one installation every 2 to 3 years.
3. Place art at prominent locations, and pursue joint placements with other entities such as local schools.
4. Develop an "Art in the Parks" Master Plan for the entire City and in each park.
5. Consider establishing an arts commission to manage the selection of artists and implementation of art work.

INDOOR RECREATION FACILITIES

The current indoor recreation center is lacking in both size and location to adequately address the needs of Mansfield. In addition, when compared with other benchmark cities noted in this report, Mansfield's average square fee per resident (0.41) was less than half of the average (0.94) of these benchmark cities.

Further support of indoor recreation activity was evidenced by the following pulled from the Public Survey.

- Closely following multiuse trails for walking-jogging (12%) was recreation center with indoor and outdoor aquatics (11%) to the question, **"what would you consider to be the most important recreational facility to construct?"**
- Top priorities to question posed **"if a new center were built include the following"**
    1 – Gymnasium
    2 – Multipurpose Area for Meeting/Parties
    3 – Weight/Cardiovascular Equipment
    4 – Health Assessment Area
    5 – Dance and Aerobics Room
    6 – Indoor Jogging Track
- Senior Center 10% closely followed Trails and Recreation as the third "most important recreational facility to build." This would be consistent with the required sharing of a small part of the MAC by the Seniors when compared to benchmark cities ratio of .14 square feet per residents for Senior Facilities.

All independent objective comparisons indicate that Mansfield should place a high priority on developing multigenerational recreation centers to meet a service level expectation of its citizens. This also supports the continued support and expansion of Senior Center components as part of the comprehensive plan.

Indoor Recreational Facilities Development Priorities

1. Provide a multi-generational indoor center consistent with the expressed wishes of the community and in balance with surrounding comparable cities.
2. Expand the Senior Center

OUTDOOR RECREATION FACILITIES

Outdoor Recreational Facilities Development Priorities

Recommendations for the development of Outdoor Recreational Facilities are as follows:

1. Continue to develop Hike and Bike Trails including Bicycle Routes
2. Develop outdoor Leisure Aquatics
3. Provide outdoor recreation facilities as part of the development of Community and Neighborhood Parks with emphasis on picnic areas, playgrounds, sand volleyball, outdoor basketball and youth soccer fields.

OPERATIONS AND MAINTENANCE

Operations and Maintenance Expenditures

Table 6.1 Mansfield Parks and Recreation Budget *			
	Fiscal Year 2006/2007	Fiscal Year 2007/2008	Fiscal Year 2008/2009
Total General Fund Budget	$30,868,705	$33,029,591	$36,037,082
Parks and Rec. Personnel Services	$910,331 2.9%	$995,528 3.0%	$1,169,118 3.2%
Parks Operations	$641,708 2.1%	$720,061 2.2%	$792,950 2.2%
Parks / General Fund	5.0%	5.2%	5.4%
Recreation Budget	$120,228	$130,139	$143,887
Recreation / General Fund	0.004%	0.004%	0.004%
Total Parks & Recreation Budget	$1,552,040	$1,715,589	$2,105,955
Overall Parks & Recreation Percentage of General Fund	5.0%	5.2%	5.8%

** The Recreation Budget as presented in this table only reflects funds from the General Fund and does not include MPFDC funds; the above Recreation Budget is applied to the Senior Program and Cultural Arts.*

Table 6.2 Comparison of Overall Park Expenditures Relative to General Fund[2]					
City	Overall General Fund	General Fund per Capita	Park Expenditures including recreation	Percent of General Fund	City size in Acres
Mansfield (2009) 59,943 population*	$36,037,082	$601	$2,105,955	5.8%	23,440
Arlington (2007) 364,300 population (actual)	$190,477,000	$523	$16,799,000	8.9%	63,680
Burleson (2008) 33,250 population (actual)	$23, 044,011	$693	$2,444,971[3]	10.6%	15,584
Flower Mound (2009) 62,450 population (budgeted)	$40,761,378	$653	$5,249,387[4]	18.8%	29,440
Fort Worth (2009) 702,850 population (budgeted)	$538,987,152	$767	$36,255,181	6.7%	-
Frisco (2009) 102,225 population (budgeted)	$75,400,711	$738	$8,592,834	11.4%	44,800
Hurst (2009) 38,750 population (budgeted)	$31,541,995	$814	$4,057,183[5]	12.8%	6,336
Irving (2008) 205,600 population (budgeted)	$176,219,118	$857	$11,411,196	6.5%	43,264
Richardson (2008) 97,450 population (actual)	$88,394,749	$907	$10,665,766	12.1%	17,536
Southlake (2008) 26,100 population (budgeted)	$28,917,573	$1,108	$4,140,593	14.3%	14,336
Average**		$784		12.2%	

* Finance Department

** Excluding Mansfield

It is noticeable that Mansfield's Parks and Recreation Budget as a percentage of the overall General Fund, is below the average of 12.2% as compared to the cities above.

[2] Data source: individual city adopted budget or comprehensive annual financial report. Some population data from the Census Bureau's 2005-2007 American Community Survey 3-Year Estimates

[3] Culture and Recreation budget

[4] Community Services budget; excludes library and environmental services

[5] Community Services budget; excludes library and facilities maintenance (citywide)

However the sum of the Park and Recreation Expenditure ($2,105,955) plus the MPFDC funds ($2,256,631) as a percentage of the General Fund comes to 12.1% which is very close to the average.

The following table illustrates the per capita expenditure for parks compared with a number of cities.

Table 6.3
Comparison of Overall Park and Recreation Expenditures
(Park and Recreation Budget plus MPFDC funds)

City	Population	Budgeted / Actual Park Expenditures	Per Capita Expenditure
Mansfield	59,943	$4,362,586	$73
Arlington	364,300	$16,799,000	$46
Burleson	33,250	$2,444,971	$74
Flower Mound	62,450	$5,249,387	$84
Fort Worth	702,850	$36,255,181	$52
Frisco	102,225	$8,592,834	$84
Hurst	38,750	$4,057,183	$105
Irving	205,600	$11,411,196	$56
Richardson	97,450	$10,665,766	$109
Southlake	26,100	$4,140,593	$159
Average			$85*

** Average excluding Mansfield*

Compared to other cities, Mansfield's Park Operations and Maintenance per capita expenditure appears to be below the average of $85 as compared with the above cities' per capita expenditures.

Parks and Recreation Personnel

The Mansfield Parks and Recreation Department staff levels for the 2009 fiscal year are shown in Table 6.4 below. The staff number includes maintenance of park facilities only (recreational programming staff excluded)

Table 6.4
Parks Department Acreage and Personnel Comparisons

City	Overall Budget (1)	Total Park Acres	Overall Budget/ Park Acre	Number of Personnel (FTE) (2);(3)	Total Park Acres/ Staff Member
Mansfield	$4,362,586	850	$5,132	49	17
Arlington	$16,799,000	4,663	$3,603	191	24
Burleson	$2,444,971	358	$6,829	24[6]	15
Flower Mound	$5,249,387	634	$8,280	102.75[7]	6
Fort Worth	$36,255,181	10,827	$3,349	351.6	31
Frisco	$8,592,834	1,330	$6,542	81	16
Hurst	$4,057,183	290	$13,990	25	12
Irving	$11,411,196	1,756	$6,498	265	7
Richardson	$10,665,766	865[8]	$12,330	84	10
Southlake	$4,140,593	675	$6,134	36	19
Average			$7,506(4)		15.56 (4)

(1) Budgets and staff levels for general comparison purposes only. Maintenance of non-park areas such as medians is not included but does impact staff levels.
(2) Excludes Indoor recreation and /or golf course staff.
(3) Includes parks facilities.
(4) Excluding Mansfield.

Compared to other cities, Mansfield's overall Park and Recreation Budget per Park Acre is lower than the average, whereas the total Park Acres per Mansfield Staff Member is higher. From this it appears that Mansfield is slightly under staffed and under budgeted when compared to the other cities.

Operations and Maintenance Approach

In order to ensure future effectiveness and efficiency of the City's parks operations and maintenance programs, the following is recommended for consideration when the need arises:

- Continue funding for an **operations center** to professionally manage all parks, athletic fields, municipal grounds, medians, and rights-of-way maintenance.
- Continue funding **new signage in accordance with standardization of all park name signage**.

[6] Culture & Recreation staff; excludes library (16 FTEs) or municipal pool staff (12 FTEs).
[7] Community Services staff; excludes library (19.5 FTEs) and environmental services (13 FTEs).
[8] In 2007, this figure was 1,598.

- Continue the practice to **standardize informational signage** in all parks (i.e., park operation hours, rental information, no motorized vehicles, etc.).
- **Continue to manage athletic fields** for safety of participants and to maximize utilization of athletic field resources.
- The City should adopt a policy of **minimal interference or maintenance of natural areas** and open space. The goal should be to preserve these areas in their natural state for which a public awareness campaign should be developed.

Parks Operations and Maintenance Facility

A Parks and Recreation maintenance facility should ideally include the following:

- EPA approved storage facilities for chemicals and pesticides
- Above ground fuel storage and fueling station
- Small engines service area and parts storage
- Irrigation parts storage
- Wash rack for cleaning mowing equipment
- Office space for supervisory staff
- Break room and restrooms for department staff
- Parking for staff vehicles and City vehicles
- Storage for seasonal items such as christmas decorations, banners, etc.
- Covered storage for all motorized equipment
- Storage bins for bulk storage of soil amendments
- Greenhouse for propagation and holding of bedding materials

Other parks operations and maintenance issues include:

- The City should continue to develop a plan to implement native plant material with low water requirement in all landscape situations where possible.
- The City should implement an annual tree planting program in all parks to provide for additional shade, to phase the cost for these trees, and to ensure healthy grouping of old and young trees together.
- The City should weigh the cost benefits of establishing a tree farm versus purchasing trees for the propagation of trees native to North Central Texas. These trees are adapted to the local climate and soil conditions and will result in superior tree cover, shade, and drought tolerance.
- The City should implement a practice of producing compost whereby tree and plant clippings are chipped and mulched for re-use as compost on all City property. The purpose is to implement an integrated and organic maintenance approach for the entire City that minimizes reliance on chemicals and pesticides.
- Although the City already has an automated irrigation system, it should study the benefit of investing in a City wide irrigation system that is a computerized central control system radio linked for the efficient management of irrigation.

CITY POLICY

Through comprehensive public participation, the Consulting Team and Staff learned about the community's hopes and aspirations for the future parks and recreation system in Mansfield. Recognizing the PARD's success in the past, the vision for the Parks Master Plan is "Building on Success." This vision, together with the public's needs comprise acquiring and protecting natural habitats, cultural landscapes and open space; the acquisition of adequate park land; development of additional trail connections; and the provision of recreation facilities which relate well to their context. The following describes essential policies that the City of Mansfield requires to respond adequately to the needs and desires as expressed by the public and to ensure the effective implementation of the recommendations contained in this Parks Master Plan. It should be noted however, that many of the policy suggestions, require the support, even leadership of other City departments to ensure their effectiveness and successful implementation.

Policy Issues include:

- Floodplain protection
- Park land dedication
- Cultural and natural landscapes protection
- Overlay districts

Floodplain Protection

The residents expressed tremendous support for the protection of creek corridors in the City of Mansfield as recorded in the Attitude Survey: **15.5 to 1 residents** agreed with the statement: **"Preserving environmentally sensitive areas such as natural creek corridors."**

The protection of the floodplain is indeed seen as a critical necessity for Mansfield. In order to fully protect and preserve the floodplain, three important steps must be taken:

1. Allow the reclamation of the 100 year fully developed hydrological floodplain only on a case-by-case basis and per a set of criteria to be developed by the City of Mansfield. The overall goal is to minimize the reclamation of floodplain that is valuable from a flood conveyance, recreation, public open space, and/or habitat point of view.
2. Acquire floodplain land for public use or otherwise ensure its protection and acquire access easements for linear trails
3. Acquire park land *outside* or adjacent to the floodplain for two reasons: i) the construction of high-intensity recreation facilities without negatively impacting the floodplain; ii) to establish a floodplain protection buffer where deemed desirable as per the proposed Resource Inventory and Preservation Plan; for water quality purposes; and where hazardous conditions are expected due to the future migration of the stream.

This recommendation must be addressed through reasoned engineering concerns through the City's storm water ordinance as well as parallel support in the tree ordinance. The primary theory is that the City has the responsibility to manage storm water and by all floodplain being in the public domain there is much better opportunity for the entire storm drainage system to be managed effectively.

Park Land Dedication

The extent of existing development combined with the pace of current and proposed development in the City of Mansfield will lead to inadequate park land acreage if a concerted, targeted and expedited effort is not made to acquire additional park land. With land continually being slated for residential and other development, time is critical now to acquire adequate acreage that will meet the requirements for parks in the next 10 to 20 years even if those parks are left undeveloped for a number of years.

It is recommended that the Park Dedication Ordinance be revised to include the following considerations:

Basic principles

- Encourage all land and site features as identified in the recommended Ecological Habitat and Cultural Landscape Resource Map, and Preservation Plan to be set aside and ensure their protection and maintenance by the Home Owners Associations or through the involvement of a variety of Conservation Trusts in Texas that have as their aim the conservation of open space (see www.texaslandtrusts.org).
- Provide unimpeded public access to these identified and protected site features through a combination of trails, single loaded roads, and dedicated easements.
- Open space, parks and recreational areas required by the park dedication ordinance should NOT be restricted to the private use and enjoyment of the citizens of the particular development or subdivision.
- Utility easements should NOT be accepted as land dedicated for parks but should be made available for park and trail use where needed.
- In addition to the requirement that each park must have ready access to a public street, it should be required that single loaded roads be established between a subdivision or part thereof and the land set aside for park land and/or open space protected areas.
- Review and update the Park Land Dedication and Park Improvement Fees in terms of Dwelling Units and Non-Residential Development to be in line with the standard used in the industry.

City of Mansfield Park Land Dedication and Park Development Fees

Existing

1. **Conveyance of Land Requirements:**
    a. 1 acre / 100 DU for single family and multifamily development.
    b. Land within floodplains and floodway designated areas shall not be accepted.
2. **Payment in lieu of land:** $500 per DU.
3. **Park Improvement Fees:** $750 per DU
4. **Park Improvements Fees for non-residential development:** none

Revision

The following shows possible funding options as identified by the consultant team that could be considered in review of parkland dedication ordinance revisions (any and all recommended ordinance revisions must be presented to and approved by City Council before they can be enacted):

1. **Conveyance of Land Requirements:**
    a. Increase from 1 acre / 100 DU to 1 acre / 50 DU for single and multi-family development to be in line with industry standards.
    b. Continue the practice of only accepting floodplain land when deemed appropriate by City staff.
2. **Payment in lieu of land: Increase to $1,500 per DU.**
    Based on the cost of the land, e.g.:
    a. Cost of the land = $50,000/acre; conveyance = 1acre/50 DU; then $50,000/50 = $1,000); or
    b. Cost of land = $100,000/acre; conveyance = 1acre/50 DU; then $100,000/50 = $2,000)
    c. Assumed average cost of land at $75,000/acre which yields $1,500 per DU
3. **Park Improvement Fee: Increase to $1,500 per DU.**
    Based on the cost of developing an average neighborhood park
    a. Cost for developing an average neighborhood park in Mansfield = $1.2mil;
    b. One neighborhood park serves 2,500 people (LOS = 2 acres/1,000 population or 1 acre/500); Park size of 5 acres serves 500 people/acre x 5 = 2,500 people;
    c. Cost to develop an average inter-generational neighborhood park: $1.2mil/2,500 = $480/person.
    d. The average household contains 2.77 persons;
    e. Neighborhood park development fee is calculated as:
    $480 x 2.77 = $1,330/DU

New

1. **Add a Park Development Fee** of $1,000 per acre for non-residential development (business, commercial and industrial enterprise). Recognizing that businesses benefit from beautiful and quality environments, many Texas cities

implement a park improvement fee calculated per acre for non-residential development including business, commercial and industrial enterprise.

2. When floodplain land is accepted through the Park Land Dedication Ordinance, require a dedication ratio of 10:1 (10 floodplain acres must be conveyed for every one non-floodplain acre required per the Park Land Dedication Ordinance). This ratio has been developed to address the lower land value of floodplain land.

Table 6. 5
Possible Funding Options as Identified by the Consultant Team That Could be Considered in Review of Parkland Dedication Ordinance Revisions
(Any and all recommended ordinance revisions must be presented to and approved by City Council before they can be enacted.)

	Existing	**Proposed Revision/New**
Conveyance of Land	1 acre / 100 DU*	1 acre / 50 DU
Payment in lieu of land	$500 / DU**	$1,500 / DU
Park Development Fee (single & multi-family)	$750 / DU	$1,500 / DU
Park Development Fee (business, commercial & industrial enterprise)	None	$1,000 / acre
Floodplain Dedication Ratio	1:1	10:1 (floodplain: out-of-floodplain)

* For single and multifamily development
** For both single and multifamily dwelling units

Park Dedication Comparison with other Cities

Park Dedication Comparison (Conveyance of Land Requirements):
- Southlake: 1 acre / 40 DU
- Flower Mound: 1 acre / 25 DU
- Lancaster: 1 acre / 50 DU
- Grapevine: 1 acre / 50 DU
- Colleyville: 1 acre / 25 DU

Dwelling Unit Park Improvement Fee Comparison:
- Southlake: $1,200 fee per gross acre
- Flower Mound: $789 / DU
- Lancaster: $1,400 / DU
- Grapevine: $1,135 average per lot
- Colleyville: $1,802 / DU

Non-residential Park Improvement Fee Comparison:
- Southlake: N/A
- Flower Mound: $1,000 / acre
- Lancaster: N/A
- Grapevine: N/A
- Colleyville: $800 / acre
- North Richland Hills: $1,000 / acre

Cultural and Natural Landscape Protection

The conservation of open space and natural areas makes economical sense. It has been proven that the value of property adjacent or close to open space often has a substantial premium over the value of property in the same vicinity but not identified with the open space. This is additional motivation for the acquisition of park land and park dedication as a matter of principle and policy. Previous pages emphatically described the tremendous lack of parks and open space when compared with local and national standards.

The purpose of the protection of cultural and natural landscapes is to create a community-wide network of open space to allow for an interconnected network of community green spaces, while protecting the integrity and character of the very landscape that makes Mansfield unique. Such cultural and natural landscapes are found in the agricultural history AND present, Blackland prairie, post oak forests, bottom land forests, and creeks. Also, not only are trees important from a habitat and recreation point of view, they also serve as effective mitigation of the City's carbon footprint.

It is recommended that the City commits to the following:

- Recognize the "ecological services" provided by the natural landscape which include amongst others: damage prevention during flood events; erosion protection through well established and deep rooted prairie grasses; water purification through bio-filtration; air purification; carbon sinking and adding to the health and well-being of people.
- Preserve the community-wide network of protected open space as "linked landscapes";
- Create an Ecological Habitat and Cultural Landscape Resource Map as an inventory of the City's cultural and natural landscapes resource.
- Prepare a Preservation Master Plan to ensure the adequate protection of natural habitat and cultural landscapes.
- As part of the Preservation Master Plan, include a study of all creek corridors to establish a protected and integrated riparian corridor system for the City of Mansfield. Among other aspects, the study needs to take the following into account:
  - Flood management in terms of 1% and 0.2% probabilities;
  - Delineation of the 1% floodplain at build-out conditions;
  - Stream bank stability;
  - Flow velocities, valley storage and water quality; and
  - Environmental inventory including riparian vegetation, wildlife, cultural and scenic value.
- Update the City's Comprehensive Plan, Zoning Ordinance, and Subdivision and Land Development Ordinance to make provision for the implementation of the protection of the updated network of protected open space through measures such as Conservation Development.

Overlay Districts

The very essence of an overlay district is to look at a particular area in a comprehensive manner in which recommended implementation measures are to be applied consistently with shared goals and objectives. Two types of Overlay Districts are recommended for the City:

Landscape Protection Overlay Districts

Such Overlay Districts aim to protect landscapes of cultural and/or natural value. The west side of Mansfield is particularly blessed with beautiful tree covered landscapes, and it behooves the City to find tools to protect these aesthetic and ecological assets, one of which is the establishment of Overlay Districts. Specific guidelines for such Overlay Districts may include:

1) Development setbacks from road edges
2) Protection of views and vistas
3) Dark Skies protection
4) General public access by foot and vehicle

Proposed Landscape Protection Overlay Districts for Mansfield include:

- Post Oak Overlay District
- Farmland Overlay District
  Farmland activities occur mainly in the western and southern parts of Mansfield. The manner in which such Overlay Districts may be established could be through conservation easements (an example includes the Connemara Conservancy that manages a working farm in the City of Lancaster), and the purchasing of development rights which means that the right to develop is purchased from the land owner with the understanding that he/she may continue to use the land as was done before, without destroying the intent of its protection.

Roadway Overlay Districts

This type of Overlay District should address architectural and signage standards that aim to create a unique identity and character along a particular stretch of road. An overlay district for rural roads is proposed for the City of Mansfield:

<u>Rural Road Overlay Districts</u>

A huge part of Mansfield's charm lies in its rural and natural landscapes in the western and southern parts of the City. The manner in which many experience such landscapes is by driving along rural roads. Measures to protect the aesthetic quality of rural roads may be similar as those established for Landscape Overlay Districts e.g.:

1) Development setbacks from road edges; and
2) Protection of views and vistas.

Chapter 7

Trails Master Plan

INTRODUCTION

Though it is called a "Trails Master Plan," it includes more than just trails. Enhanced sidewalks and bike routes comprise over half of the recommended mileage of the Trails Master Plan and provide connections between off-street trail segments and opportunities for alternative transportation. This trails master plan considers both the ***recreation*** and the ***transportation*** aspects of trails, sidewalks, and bike routes. Recreation is an important component of this plan because trails open our eyes to the world around us; they connect our neighborhoods to parks and are themselves great sources of enjoyment. No one follows a trail without making some kind of "discovery," be it great or small, personal or otherwise. If there is one medium by which the average citizen can access daily and fully appreciate what Mansfield has, it can all be found in its trails system. Transportation is similarly an important component of this plan because of the rising costs of oil, increased traffic congestion, and the desire by people (including the citizens of Mansfield, as demonstrated by the Citizen Attitude Survey in Chapter 4) to have safe, comfortable alternatives to driving for short distance trips.

Trails Master Plan Development

The Trails Master Plan has been developed as a component of this Parks Master Plan because, in essence, trails provide recreational qualities similar to parks and add connectivity to the parks system as a whole. Mansfield residents are overwhelming devotees of trails and their use for recreational and transportation purposes. The huge success of the Walnut Creek Linear Park provides the impetus and overwhelming support to expand the Linear Park system throughout the City. This Trails Master Plan identifies future trails and trail connections that enhance connectivity to parks, schools, neighborhoods as well as cultural landscapes and natural resources within the city. Mansfield's trail network should afford connections to surrounding cities' trails as well.

In developing the Trails Master Plan, several assumptions informed the decisions and the recommendations made:

- Investments for trails provide a relatively high rate of return economically and in improving quality of life compared to other types of facility development.
- Trails serve both recreation and transportation functions.

- In addition to traditional trails, ***sidewalks*** and ***bike routes*** serve as integral components of the Trails Master Plan and the overall city-wide bicycle and pedestrian system.
- A number of new trail alignments are purposefully along both sides of a creek, especially where the floodplains are relatively wide.
- Creeks are dynamic and seldom stable. For that reason, trail alignments are proposed to be a fair distance away from the creek itself – closer to the edge of the 100 year floodplain, so as to prevent endangerment of the trail investment when creeks change their flow paths during flood events.
- The establishment of trails adds tremendously to bringing awareness and enjoyment of creek environments to the public.

Why Plan for Bikes and Pedestrians in Mansfield?

Mansfield has a wonderful trails system that parallels a portion of Walnut Creek. In conversations with residents of the community, trails were mentioned time and time again as one of the principle things that they would like to see more of in Mansfield. The telephone survey also reveals strong support for bike routes along roads and the use of trails for transportation to and from work, shopping, and home. No matter where one goes in Texas or across the United States, trails are popular, extensively used and enjoyed by the residents of those places. Trails offer benefits such as:

- Use by everyone; from the very young to the very active to the elderly looking for a quiet place to walk and appreciate being outside.
- Trails provide opportunities to engage in exercise in a fun setting, whether by simply walking or through more strenuous use such as running, cycling or rollerblading. They help us lead a healthier lifestyle.
- Trails provide alternative ways to get to key city destinations. They also provide ways to get to work and to retail areas.
- They support economic development by creating attractive greenways that can revitalize areas and enhance neighborhoods. Trails provide access to local businesses, and provide tourism opportunities. A great system of places to walk and ride makes Mansfield an even more attractive place to live and invest in.
- Trails help to preserve greenway areas and help beautify linear park corridors. Imagine how attractive green corridors, such as Walnut Creek, Hog Pen Branch, and Low Branch would be if preserved in its current form.
- Trails help us learn about the history and culture of Mansfield by preserving key historical and natural features and areas, and by making these more accessible and easier to view.

"Walking is the best possible exercise. Habituate yourself to walk very fast."
- Thomas Jefferson

Creating Greenways in Mansfield

A greenway is a long, narrow piece of land for trails and other recreational use. A greenway also allows for commuting via bicycle or foot rather than traditional motorized transportation. Often times a greenway follows some natural linear corridor such as a river front, a creek, a stream valley or a ridgeline; or it can follow a man-made linear corridor such as a railroad right-of-way, a canal or a scenic road. Existing and future trails along many of the larger natural corridors in Mansfield should be considered as greenways.

Views of a beaten path in woodland area along Walnut Creek

Greenway opportunities in Mansfield include Walnut Creek, Hog Pen Branch, and Low Branch. Walnut Creek is a significant tributary in Mansfield that stretches from the western boundary of the City, traversing just north of the historic downtown to the ever so popular Town Park and eastward past Walnut Creek County Club to Joe Pool Lake. This stretch covers approximately +/- 8.25 miles and connects several significant parks and the newly developed Walnut Creek Linear Park, which includes approximately two miles of trails, begins at Town Park, and passes through Katherine Rose Memorial Park, James McKnight Park East, and James McKnight Park West.

Low Branch located in the south central area of Mansfield, located south of Heritage Parkway, beginning just east of Main Street also traverses eastward passing major recreation destinations such as Big League Dreams, Hawaiian Falls and Mansfield National Golf Club. Like the Walnut Creek greenway, its final destination ends at Joe Pool Lake.

Hog Pen Branch, located in northern Mansfield, begins just west of Main Street and extends eastward to HWY 287 through a City-owned flood control area, turning southward past FM157 and ties into Walnut Creek.

"There is nothing like walking to get the feel of a country. A fine landscape is like a piece of music; it must be taken at the right tempo."
- Paul Scott Mowrer

Purpose of the Mansfield Trails Master Plan

This long range plan envisions a system of trails, sidewalks, and bike routes that connect all of Mansfield, allowing one to go from one end of the City to the other in a fun, healthy, and sustainable way. This plan will identify key trail corridors and guide the creation of a City-wide network. A plan such as this will provide guidance on the preferred location for trail corridors and will help the city acquire greenway corridors for trail use. A Citywide hike and bike plan will also provide a framework through which the City of Mansfield and the private sector can work together to jointly create a spectacular network of trails. Finally, this plan will help Mansfield staff, elected officials and citizens make informed decisions as to how to fund trail development in a satisfactory manner.

This Trails Master Plan is flexible, it must continue to be useful as Mansfield grows and changes. The plan will serve for many years but should be periodically updated so as to reflect current conditions within the City of Mansfield and nearby cities.

Principles of the Trails Master Plan

The system of trails and pedestrian connections recommended in this master plan creates an opportunity to enhance not only recreation and transportation opportunities but also to influence the appearance of much of Mansfield. This plan is both visionary and practical. The visionary component foresees a network of beautiful corridors and direct, visible routes that seamlessly allow a user to easily go from anywhere in Mansfield by walking or riding. The practical side envisions connections to all neighborhoods via readily accessible, wide, safe and attractive hike and bike pathways.

The following principles were developed and serve to guide the alignment and layout of both the trails proposed by this document, as well as additional pathways proposed in the future.

- ***Create a citywide network of trails, sidewalks, and bike routes –*** The ultimate goal is to create an interconnected network that allows travel across all of Mansfield. Unconnected trail sections should be united by sidewalks and bike routes into a continuous interconnected system. These facilities can be used for both transportation and recreational use. The City should create facilities that can allow for commuting and short trips to retail and civic destinations.

- ***Connectivity*** – Where possible, trail corridors and alignments (as well as sidewalks and bike routes) should be designed to enhance linkages between parks,

neighborhoods, schools, neighborhood services, and key civic and community destinations. The Citywide system is proposed to connect to other surrounding communities and other regional systems such as the Veloweb and Bowman Branch Trail in south Arlington and future trails along the southern edge of Joe Pool Lake.

- ***Promote a feeling of safety on all trails and routes –*** Trails, sidewalks, and bike routes should provide smooth corridors that feel safe and are visible. Safety is a concern of many residents, whether they are avid or casual recreational cyclists, walkers or pedestrian/bicycle commuters. In many instances historic design decisions have been made to increase vehicular traffic and/or parking capacity and speeds at the expense of cyclists and pedestrians. The lack of continuous sidewalk and bike route systems in Mansfield, especially along busy streets and in older areas of town, reduces connectivity and forces less experienced users to utilize inadequate or dangerous facilities and routes elsewhere.

- ***Provide a variety of facility types*** – Provide facilities (including trails, sidewalks, and bike routes) that are suitable for a variety of activities, including running, walking, cycling and in-line skating. Provide nature trail opportunities where feasible. Consider facilities for water surface (canoe and kayak) trails along the edge of Joe Pool Lake, and up into the mouths of Walnut Creek and Low Branch Creek corridors.

- ***Access –*** Access to the off-street trail system must be maximized as much as is feasible. This may range from simple sidewalk connections to the trails, to complete "trailheads" with parking and comfort facilities such as shade shelters and restrooms where appropriate. The City can encourage use of the trail system by creating easy access to the system.

- ***Character of the City –*** Trail segments and key sidewalk segments should be designed so that they promote the physical and historical character of the City of Mansfield and enhance the physical appearance of the city, whether through new pedestrian features, or simply by revealing natural areas not previously visible to the general public. They should relate to the adjacent neighborhoods and surroundings. These facilities and corridors provide unique opportunities to learn about the history, culture, and accomplishments of Mansfield. Trails provide access to the natural habitat in the City, and should offer ample opportunities to learn about the environment. Include interpretive facilities where feasible to incorporate signs and features that provide opportunities for learning about Mansfield and its cultural and ecological heritage.

- ***Trails should enhance Mansfield's Image –*** The visibility of cyclists and pedestrians in a city creates a sense of human scale, friendliness, and social connectivity. Such visibility also creates a "lifestyle" or "quality of life" image for the community. In short, it is a welcome sight to see people actively moving about the city by foot or by bike. Providing adequate facilities that will attract

cyclists and pedestrians can greatly alter the city's image by exhibiting signs of quality and vitality.

- ***Create relationships and partnerships –*** The City-wide trails system should encourage the creation of public and private partnerships (such as developer agreements, volunteer groups, and corporate sponsorships) that help build the entire system more quickly.

The Parks, Recreation, Open Space and Master Plan recommends that a target level of service of one mile of off-street trail for every 2,000 residents in the City be established. This target goal reflects the high level of interest in trails and the commitment to quality of life that they represent.

The target level of service should be viewed as a performance goal and as a way to measure progress over the previous year. It should not be viewed as the absolute final goal of the City, since over time the city may actually exceed that target level of service. With this target level of service, the following amounts of trails would be required as the population of Mansfield grows.

Current Miles of Trails: **3.5** miles of paved City-owned trails; as well as additional unpaved park trails.

Estimated Current Population 2009: **62,000**
Current Level of Service (paved City-owned trails only): 1 mile per **15,500** residents.

Recommended Target Level of Service: 1 mile per **2,000** residents

- Current 2009 need for **62,000** population – **31** miles required (deficit of **27** miles of trails)
- Year 2014 need for **73,000** population – **36** miles required (deficit of **32**miles)
- Build-out need for **135,000** population - **67.5** miles required.

This recommended Target Level of Service focuses solely on off-street trails and does not include on-street pedestrian improvements which have varying widths and priorities based on demand and opportunity.



USERS AND FACILITY TYPES

Typical Trail and Route Users

From walkers to cyclists to in-line skaters, there are many types of trail and route users that range from the very young to the oldest residents of the City. Each user type has unique facility preferences. Many users prefer off-street trails, which should accommodate those that want to enjoy being outdoors, those wanting a great view, those that want to run or ride a bicycle, or those that simply want to be with others. Trails can even accommodate horseback riding[1] or residents who want to travel via canoe (e.g. along the edge of Joe Pool Lake). Sidewalks along streets provide routes for people that walk for transportation and also provide connections between trails. Bike routes are another facility type that serves both transportation and recreation purposes, connecting neighborhoods, shopping, and employment. Mansfield's trail system should have something for everyone, including the following typical types of trail users.

- ***Walkers seeking exercise and recreation*** – typically relaxed walking along a pleasant corridor; may include senior citizens, parents with children, or someone walking their dog. Walkers may occupy a significant portion of the trail or sidewalk due to walking side by side.

- ***Joggers and runners*** - typically exercise at a higher speed than other trail users. They often prefer softer trail or pavement surfaces such as decomposed granite or asphalt rather than concrete.

- ***In-line skaters*** - use trails for fun and fitness. Due to the swinging motion of their arms to increase momentum, skaters occupy a large cross section of the trail and are better suited for trails rather than sidewalks.

- ***Recreational and inexperienced cyclists*** - typically are interested in exercise and activity, as well as scenic appeal, and therefore typically prefer trails, though will sometimes use bike routes as well.

[1] Current City ordinance prohibits horseback riding in Mansfield.

Ease of access to the trail system through a safe and well-connected bike route system is important. They prefer more interesting trail alignments rather than trails that favor higher speeds. This group may also include children and youth going to school.

- ***Higher speed cyclists and commuters*** - favor bike routes on low-speed, low-traffic roadways over off-street trails. For off-street trails, alignments with shallower curves are favored by these users. Because of their higher speeds, increased trail widths are recommended to reduce conflicts with other trail users.

- ***Mountain bikers*** – typically travel on natural trail surfaces, and prefer trails with challenging terrain.

- ***Equestrian riders*** - require a completely separate trail from the other users to ensure the safety of the riders, other users, and horses.

Facility Types

The City of Mansfield Trails Master Plan is based on a system of off-street trails, enhanced sidewalks, and bike routes (signed shared roadways). Additionally, natural surface trails can be provided as needed and in addition to other off-street trails.

- ***Off-Street Trails –*** Trails which are located in greenways, utility easements, parks, creek corridors, and lake shores. Off-street trails are shared use; they serve walkers, joggers, rollerbladers, and cyclists equally well. These are traditionally the primary component of a trails system and though they can serve as transportation corridors, they are designed with recreational quality as the main consideration.
- ***Enhanced Sidewalks –*** Wide sidewalks along key corridors that enhance pedestrian connections and link off-street trail corridors. While providing sidewalks along all public streets is important, specific locations to provide enhanced sidewalks have been identified as part of this Trails Master Plan.
- ***Bike Routes –*** Routes along public streets that serve to connect key destinations, off-street trails, and provide commuter routes. The facilities provided along each bike route vary from route to route. Facilities can range from directional signage to a striped bicycle lane. Routes requiring facilities other than signage should optimally be provided as streets are built or reconstructed.

Through the provision of multiple facility types, Mansfield's trail system can link community destinations more effectively and can meet the needs of users of all ages, skill levels and environments.

Spine Trails

In addition to the three facility types outlined above, this Trails Master Plan makes recommendations for a network of "spine trails." Spine trail alignments represent facilities that are higher-capacity and higher-priority than other trail facilities in general and that provide major routes across the city. The recommended routes consist of linear corridors across the city and large loops which provide both cross-city access for users as well as continuous recreation opportunities. The spine trail system can be considered an "overlay" to the off-street trail, enhanced sidewalk, and bike route systems rather than an additional system. Table 7.1 list the facility types and recommended minimum corridor widths recommended in this Trails Master Plan.

Table 7.1
Facility Type

Type	Minimum Corridor Width (does not apply to urban areas)
12' Off-Street Trail	32'
8' - 10' Off-Street Trail	21'
8' On-Street Sidewalk (enhanced sidewalk along a spine route – see page 7 – 13)	18'
6' On-Street Sidewalk (enhanced sidewalk – see page 7 – 13)	15'
5' Sidewalk (recommended standard sidewalk width)	10'
Bike Route	14.5' outside drive lane w/ shared lane markings or 5' Bike Lanes[2]

[2] Bike Lanes can be provided where deemed appropriate based on a future Alternative Transportation Master Plan study or individual route engineering studies.

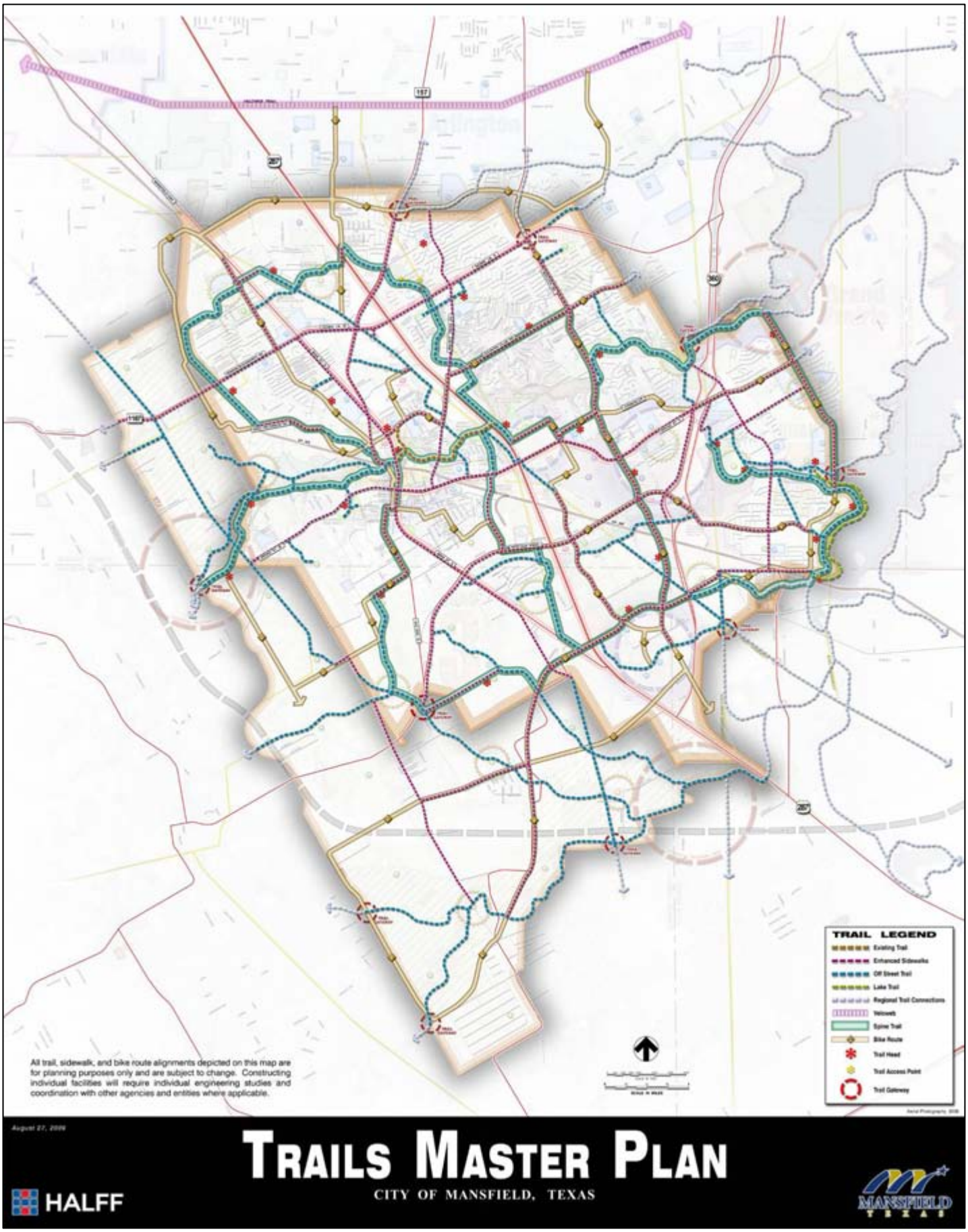
Route & Trail Alignments

The maps shown in the following section illustrate the alignments of each facility type as well as the spine trail system. The routing of each of these facility types was based on several factors, including the preferences of various user types, availability of right-of-way, recreational value, access, and directness. Another determining factor was providing connections between facility types to provide continuous routes for pedestrians and cyclists. The overall Trails Master Plan map on the following page illustrates to comprehensive bicycle and pedestrian network proposed for Mansfield.

Facility Implementation

Many necessary bicycle- and pedestrian-related improvements can be incorporated into the regular maintenance schedule of the existing road system, such as the upgrade of traffic lights, widening of roads and shoulders or addition of lighting with needed repairs.

*The **Trails Master Plan** map on the next page illustrates the distribution of the proposed trails system.*


TRAIL LEGEND
Existing Trail
Enhanced Sidewalks
Off Street Trail
Lake Trail
Regional Trail Connections
Yellowstone
Spine Trail
Bike Route
Trail Head
Trail Access Point
Trail Gateway
All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.
August 27, 2009
TRAILS MASTER PLAN
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD TEXAS

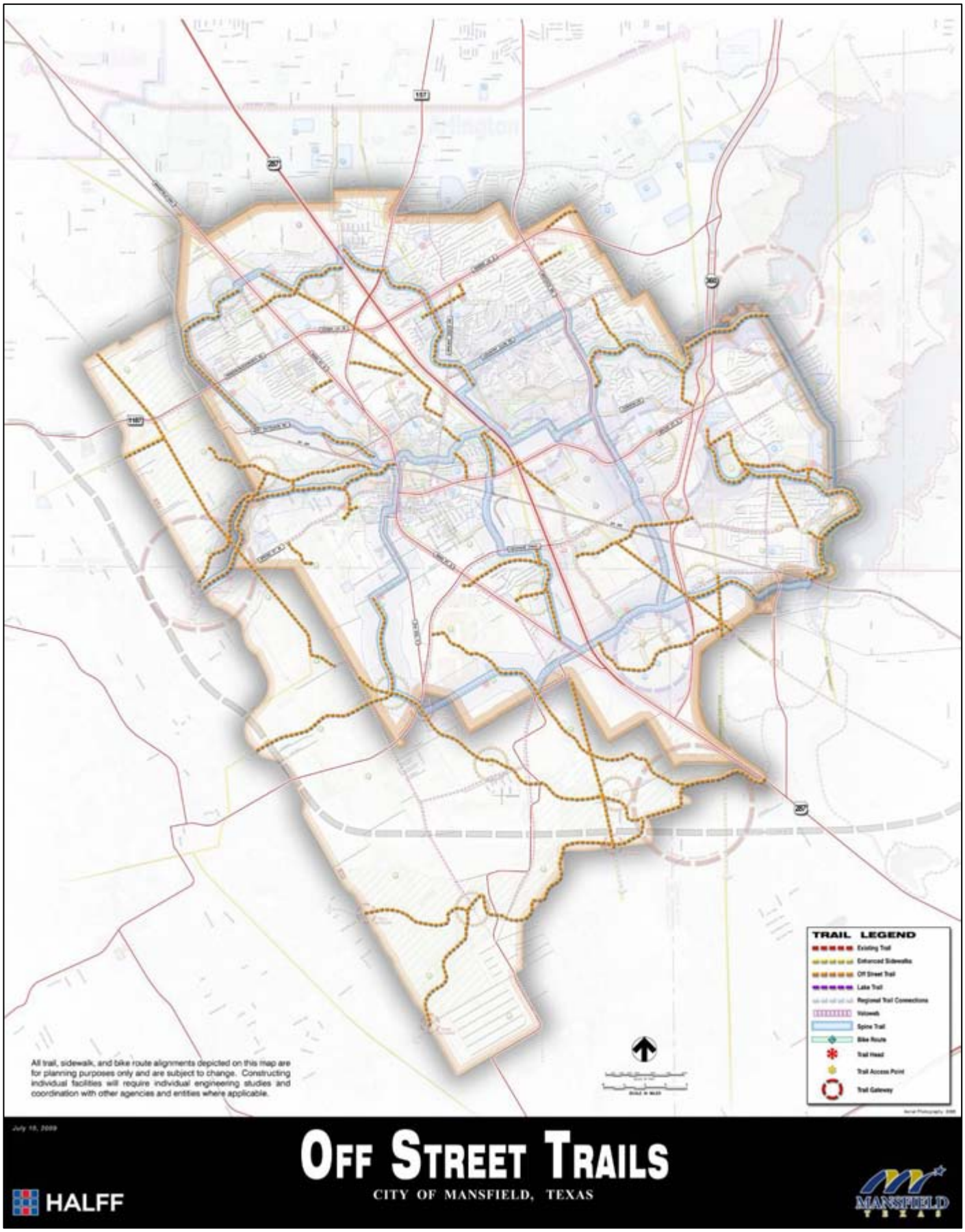
Off-Street Trails

Off-street trails – typically two-way, striped, with concrete pavement – are designed to accommodate a variety of users. These are typically used for jogging, walking and relaxation. Off-street trails typically have a width of 8' to 10' (12' if part of the spine trail system), are constructed with concrete, and may include amenities such as decorative light fixtures, landscaping, ground cover and varying surface treatments at intersections and crosswalks. The overall corridor width should be 32', to allow for at least 3' of soft shoulder on either side of the trail (per AASHTO guidelines) and to provide space for grading, tree protection, trail meandering, overlooks and rest areas, and to maintain the visual integrity of the trail experience. In many cases additional width may be required to accommodate drainage or other utilities. These commonly follow creek corridors and utility easements and connect to major employment and recreational/entertainment districts and other key destination points.

Off-Street Trail Standards

- Required Width In Accordance To Plan: 8' to 10' width (12' wide if part of the spine trail system).
- Surface: Provide 5" thick reinforced concrete and/or brick with City approved sub-base preparation, 3' soft shoulders with prepared sub-base. Increase concrete depth to 6" where heavy maintenance vehicles are expected to cross the trail.
- Access Points: Access shall be no greater than one mile apart, no more than ½ mile walk or ride to an access point.
- Minimum Corridor Width: Provide 32' trail and shoulder corridor
- Other Facilities: Provide parking, banners, lighting, directional and informational signage, kiosks, locator maps, mile and ½ mile markers, water fountains, bicycle racks, benches, litter receptacles and interpretive /historic signage. It is recommended that electrical conduit for lighting be installed at key access points, trail heads and along heavily visited retail/restaurant/entertainment areas for potential future lighting. Key access points and trail heads shall be located in accordance to the Trails Master Plan.

*The **Off-Street Trails** map on the next page illustrates the distribution of the proposed Off-Street Trail system.*


TRAIL LEGEND
Existing Trail
Enhanced Sidewalks
Off Street Trail
Lake Trail
Regional Trail Connections
Volcreek
Spine Trail
Bike Route
Trail Head
Trail Access Point
Trail Gateway
All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.
July 15, 2019
OFF STREET TRAILS
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD
TEXAS

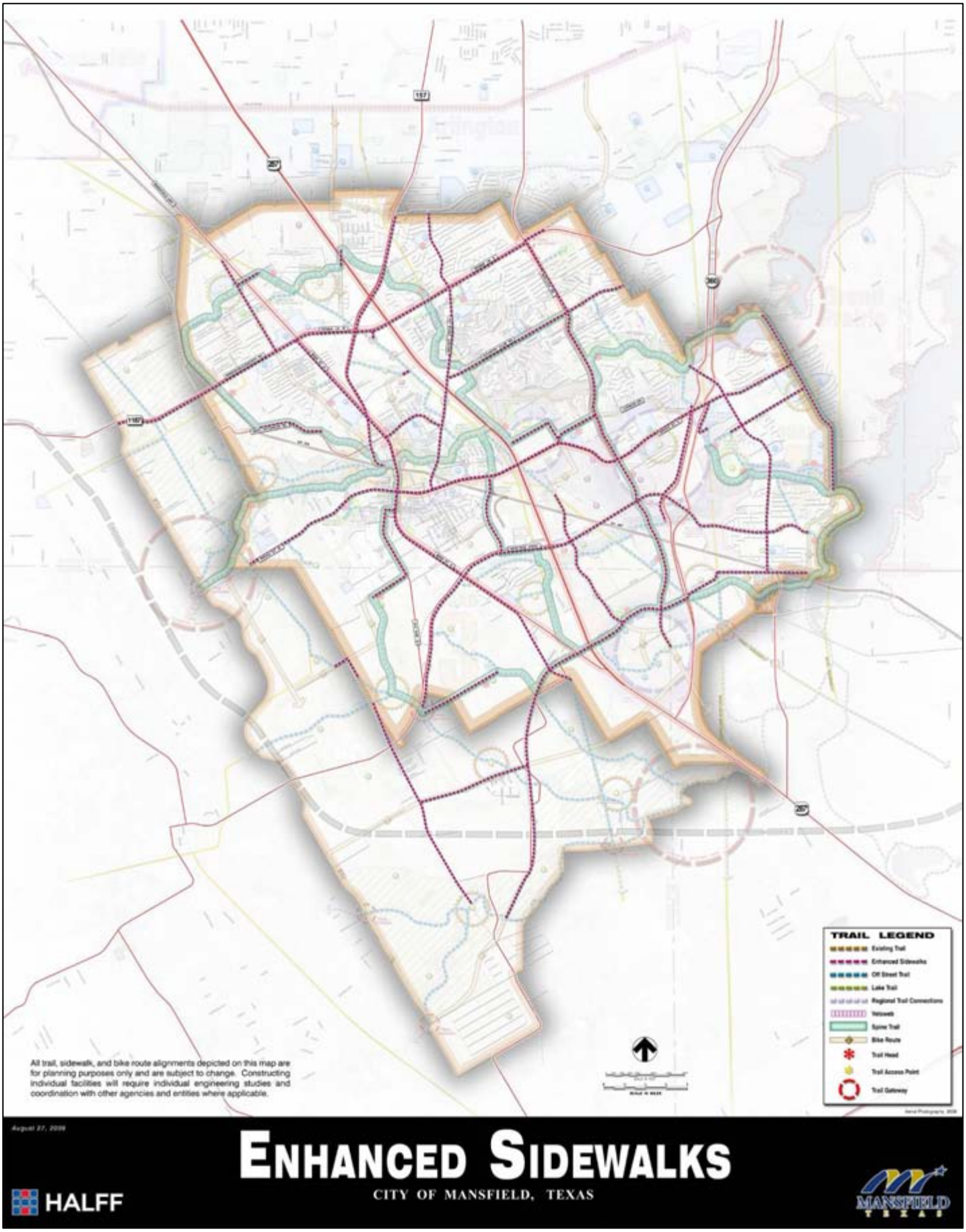
Enhanced Sidewalks

Improvements to the on-street pedestrian system through enhanced sidewalks and trail segments along roads provide the opportunity for Mansfield residents to explore their community in a comfortable and pleasant environment and access shopping areas, work, schools, parks, and off-street trails. Typically used for walking and access to off-street trails and loop spine trails, sidewalks are utilized by a variety of users ranging from the elderly to young children. In addition to connecting off-street trails, sidewalks provide access to schools, parks, churches, shopping centers and places of employment. Sidewalks of varying widths are proposed for Mansfield. The recommended minimum sidewalk width for all public sidewalks in the city is 5'. Along the priority routes shown on the "Enhanced Sidewalks" map on the following page, pedestrian facilities shall be provided as 6' wide sidewalks on both sides of the road. When the "enhanced sidewalk" corridors shown on the following map overlap the "spine trail" corridors, an 8' wide sidewalk should be provided on both sides of the road (see the map on the following page).

Sidewalk Standards

• Required Width In Accordance To the Master Plan	Minimum city-wide standard: 5' Enhanced Sidewalks: 6' Enhanced Sidewalks along Spine Trail routes: 8'
• Surface	Provide 4" thick reinforced concrete and/or brick with City approved sub-base preparation, 2' soft shoulders with prepared sub-base. Increase concrete depth to 6" where heavy maintenance vehicles are expected to cross the trail.
• Minimum Corridor Width	Provide 10' corridor width for a 5' wide sidewalk, a 15' corridor width for a 6' wide sidewalk, and an 18' corridor width for an 8' wide sidewalk. In urban areas, these corridors can be narrower.
• Other Facilities	Provide lighting where appropriate, directional and informational signage, kiosks, locator maps, mile and ½ mile markers, water fountains, bicycle racks, interpretive/historic signage to be placed at key access points and trail heads. Key access points shall be located in accordance to the Trails Master Plan.

*The **Enhanced Sidewalks** map on the next page illustrates the distribution of the proposed sidewalk improvements.*


TRAIL LEGEND
Existing Trail
Enhanced Sidewalks
Off Street Trail
Lake Trail
Regional Trail Connections
Yellowb
Spine Trail
Bike Route
Trail Head
Trail Access Point
Trail Gateway
All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.
August 27, 2009
ENHANCED SIDEWALKS
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD TEXAS

Bike Routes (Signed Shared Roadways)

A City-wide system of bike routes in Mansfield will provide connections between regional loop spine trails, off street trails, and community destinations such as Historic Downtown, Big League Dreams, Hawaiian Falls, the future Shops at Broad, and numerous parks and schools located within Mansfield. In order to safely provide cycling opportunities, special provisions along roadways designated as bike routes must to be made. Specifically, a bike lane or a wide outside, shared lane with a "sharrow" marking should be installed. The use of each of these facility types depends on the roadway configuration.

Shared Lanes/Sharrows

On lower-speed, lower-traffic volume roads (typically where the posted speed limit is 40 miles per hour – approximately twice the speed at which many cyclists travel – or less), the preferred bike facility is the use of a wide outside lane (14.5' minimum) that is designated as shared-use for cars and bikes. Such a designation is made by installing a "sharrow" marking on the pavement approximately one-third of the way from the face of the curb to the far stripe of the outside lane (or center stripe on two-lane roads). A sharrow consists of a double-chevron above an outline of a bicycle and alerts motorists of possibly cyclists on the road and designates bike routes for cyclists. Shared lanes and sharrows are ideal for lower-speed, lower-traffic roads for three primary reasons:

- Bike lanes along lower-traffic roads often collect debris because cars do not drive in them. In shared lanes, cars drive on the save pavement as cyclists, dispersing debris away from where cyclists will ride.
- Cyclists and motorists alike are typically less alert on lower-speed, lower traffic roads. In addition, bike lanes can give a false-sense of security for cyclists. Shared lanes, on the other hand, remove the division between cars and bikes and thereby increase alertness of both motorists and cyclists.
- Bike lanes can present the incorrect belief of motorists that cyclists are only allowed to ride in the road where a bike lane is present which, by that same logic, means that if there is not a bike lane a cyclists should not be riding in the road. While this is incorrect and cyclists are allowed on any road unless signage directs otherwise (per State of Texas law), the use of sharrows and shared lanes designates areas where cyclists are more likely but is not as likely to present an incorrect belief that cyclists are only allowed on designated portions of roadways.

Shared lanes with sharrows should be used on roadways designated as local collectors, minor collectors, and major collectors (C2U, C3U, and C4U respectively) as designated on the City of Mansfield's Master Thoroughfare Plan (October 2006).

Bike Lanes

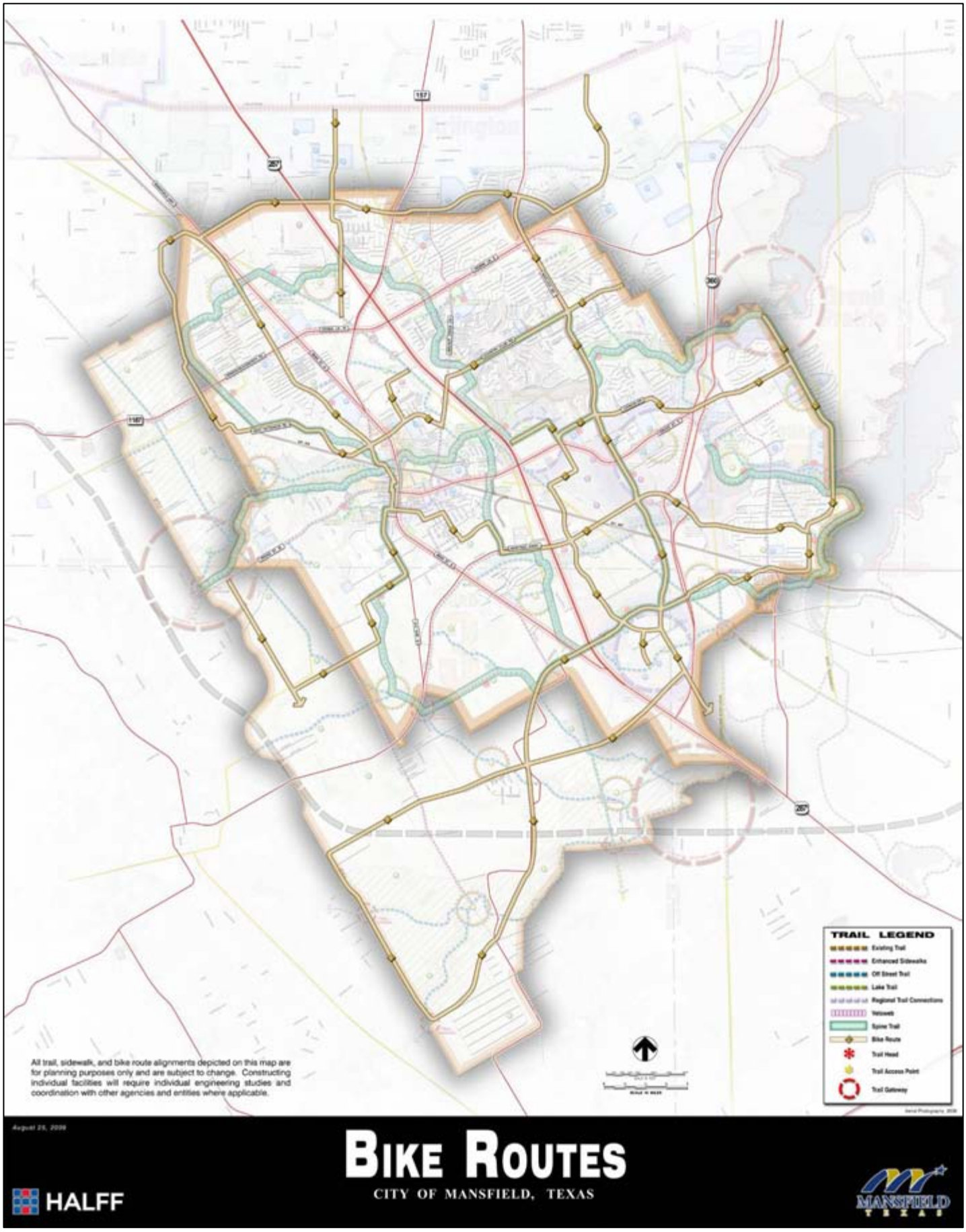
While shared lanes and sharrows are generally preferred for on-street bicycling, bike lanes still serve a purpose in Mansfield's bike route system. In some instances, special circumstances might call for the provision of bike lanes. The identification of specific locations for bike lanes is beyond the scope of this Master Plan and should be included in a future Alternative Transportation Master Plan study. When a striped bike lane is used, the minimum standard width for such facilities is 4' from the face of the curb, but the desired width is usually 5' from the face of the curb. It should therefore be attempted to exceed the minimum width wherever possible. Bike Routes should generally not be placed on roadways with multiple intersections or driveways, as each intersection or driveway creates a conflict point between cyclists and motor vehicles.

Parking alongside an on-street bicycle lane is strongly discouraged; however, if parking has to be added, it should stand separately from the bike lane. That is, the parking aisle should not encroach upon and should be in addition to the 4 to 5' wide bike lane. On one-way streets, a bike lane is only necessary on one side of the road. In these instances, parking may be located on the opposite side of the road from the bike lane to minimize potential conflicts between cars and bicycles. Intersections need to be laid out in a way that makes motorists aware of the cyclists' intentions well in advance by installing specific markings on the road in addition to warning signs whenever motorists will have to cross over an on-street bike lane, e.g. to enter a right-turn lane. As discussed above, bike lanes can be used in special circumstances and their specific locations should be identified in a future study.

Street Enhancements and Bike Route Standards

• Recommended Shared Lane Width	14.5' shared outside lane with a sharrow marking on the pavement approximately one-third of the way from the curb face to the far lane stripe (approximately 5 feet from the curb face).
• Recommended Bike Lane Width	5' bike lane.
• Surface	Pavement surfaces should be smooth, uniform in width and free of utility covers/lids, wide cracks, joints or drop offs at the edge.
• Other Facilities	Provide "No Parking" signage where appropriate. Provide directional, informational signage and bike lane symbols posted in the rights-of-way, no greater than 1,500' apart. Provide locator maps, mile and ½ mile markers, bicycle safe grates, bike racks at trail heads and interpretive/historic signage.

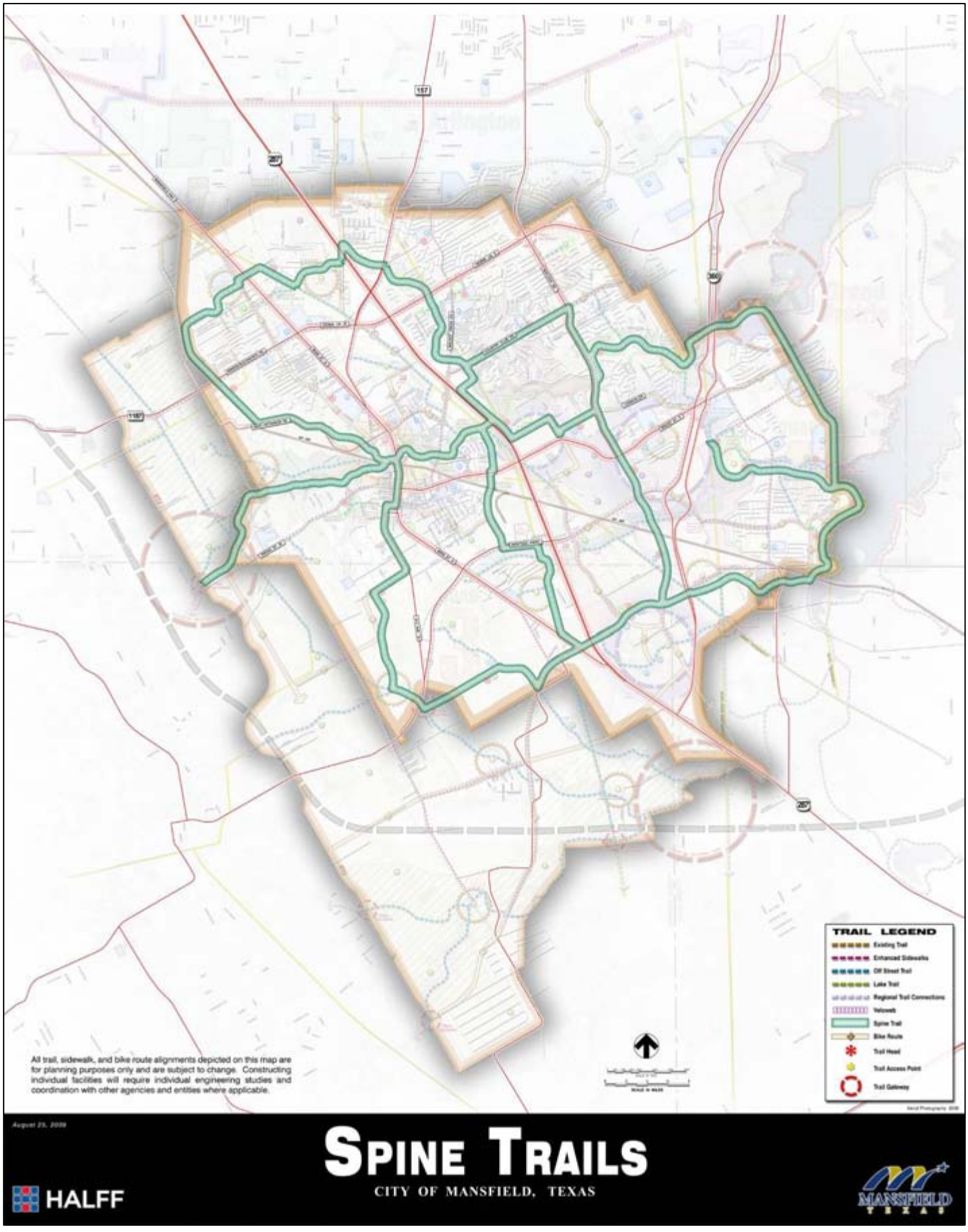
*The **Bike Routes** map on the next page illustrates the distribution of the proposed Bike Route system.*


TRAIL LEGEND
Existing Trail
Enhanced Sidewalks
Off Street Trail
Lake Trail
Regional Trail Connections
Yelloweb
Spine Trail
Bike Route
Trail Head
Trail Access Point
Trail Gateway
All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.
August 25, 2009
BIKE ROUTES
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD TEXAS

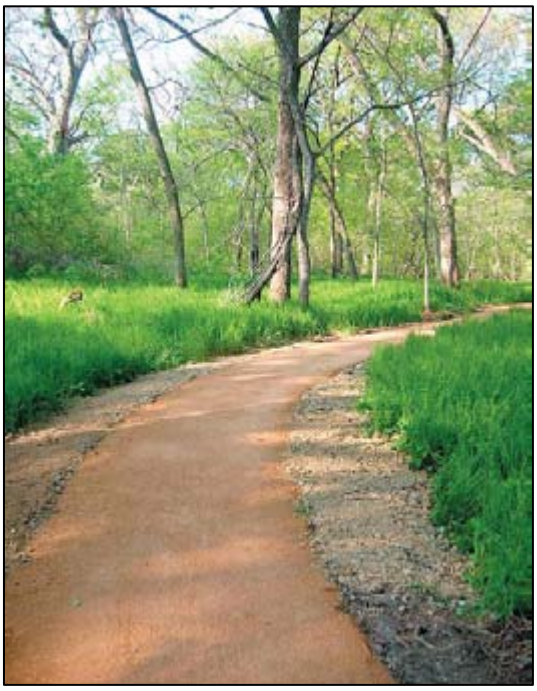
Spine Trails

As discussed earlier, spine trails act as an "overlay" to other facility types and are intended to provide convenient access from one part of the City to another. In essence, these trails become the "spine" system for the City, providing an easy route to travel longer distances. Along spine trails, users should have minimal conflict with automobile traffic. Spine trails are designed to be shared-use, to accommodate two-way bicycle, pedestrian, and rollerblading traffic, and to accommodate maintenance and emergency vehicles. The specific facility type provided along a spine trail depends on the type of facility that the spine trail overlays (see the explanation on page 7-9). When the spine trail is an off-street trail, the facility should be 12 feet wide, 5 inches thick, and made of reinforced concrete with 3 foot wide soft surface shoulders on each side. When the spine trail is along a street and takes the shape of an enhanced sidewalk, the facility should be an 8' wide sidewalk on one side of the street and a 6' wide sidewalk on the other side. These facilities are discussed on pages 7-15 and 7-17.

*The **Spine Trails** map on the next page illustrates the distribution of the proposed Spine Trail system.*


TRAIL LEGEND
Existing Trail
Enhanced Sidewalks
Off Street Trail
Lake Trail
Regional Trail Connections
Yellowtail
Spine Trail
Bike Route
Trail Head
Trail Access Point
Trail Gateway
All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.
August 23, 2019
SPINE TRAILS
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD TEXAS

Natural Surface Trails



In addition to paved off-street trails, enhanced sidewalks, bike routes, and the spine trail system, natural surface trails can also play an important role in Mansfield's trail system. Natural surface primarily serve hikers, walkers and runners. Because of the natural irregularity of these trails, they may not meet ADAAG standards. Some of the trails may be appropriate for mountain bikers and/or equestrians as well. Natural surface trails generally have their own rights-of-way, with minimal conflict with automobile traffic. Common materials include decomposed granite, recycled concrete flexible base, rock/crusher fines, wood shavings, earth, etc. These types of materials are appropriate for use in environmentally sensitive areas, such as the USACE property along Walnut Creek at Joe Pool Lake and the western limits of Walnut Creek in Mansfield and on slopes greater than 3% to minimize erosion. The provision of natural surface trails is opportunity based, meaning that the location and alignment of such trails must be determined on a case-by-case basis and should be in addition to paved trails as being the primary tool to create connectivity.

Natural Surface Trail Standards

• Required Width	Varies - 4' to 6' width
• Surface	Provide 4" minimum depth, 5" maximum depth of decomposed granite or recycled concrete flexible base, compacted to 95% density with geo-textile filter fabric, other surfaces such as 4" of mulch/wood shavings free of thorns and stickers, rock/crusher fines at a depth of 4" with geo-textile filter fabric.
• Access Points	Provide linkage to environmentally sensitive areas by natural surface trails that connect to regional or community trails every ½ mile walk or ride where appropriate.
• Minimum Corridor Width	Varies - 10' to 20' width
• Other Facilities	Provide directional and informational signage, kiosks, locator maps, mile and ½ mile markers and interpretive signage.

DESIGN GUIDELINES

To facilitate the future development of trails, sidewalks, and bike routes in Mansfield, it is recommended that the City adopts customized design standards in written and graphic format and make these accessible to all applicable builders and developers.

Design standards are an important component for a working trail system because they outline the recommended minimum requirements and additional support items for all types of trails. The most well known bicycle and pedestrian facility standards or guidelines are published by the American Association of State Highway and Transportation Officials (AASHTO). All trails, bike lanes and sidewalks should meet minimum AASHTO standards but where possible, those standards should be exceeded. This is especially true for multi-use trails, signage, lighting, traffic signals and detectors.

Proposed Design Standards for trail and bicycle route facility development in Mansfield can be found in Appendix C.

Listed below are some sources for the most commonly used standards for bicycle and pedestrian facility design. This plan shall comply with current and up to date standards:

- AASHTO (American Association of State Highway and Transportation Officials)
- ADAAG (Americans with Disabilities Act Accessibility Guidelines)
- TTI (Texas Transportation Institute)
- TMUTCD (Texas Manual on Uniform Traffic Control Devices)
- TxDOT (Texas Department of Transportation)
- TAS (Texas Accessibility Standards)
- ITE (Institution of Transportation Engineers)

All trails should be designed to meet ADAAG standards, AASHTO standards, TMUTCD standards, TxDOT standards and other State and Federal guidelines.

TRAIL ROADWAY CROSSINGS

Like most trails built in urban areas, Mansfield's trails must cross roadways at certain points. These roadway crossings may be designed at, below, or above-grade. At-grade crossings create a potentially high level of conflict between trail users and motorists. However, well-designed crossings have not historically posed a safety problem, as evidenced by the thousands of successful trails around the United States with at-grade crossings. Designing safe grade crossings is a key to safe implementation of this Trails Master Plan. Trail-roadway crossings should comply with the AASHTO, TxDOT and TMUTCD standards.

In some cases, a required trail crossing may be so dangerous or expensive (e.g., to build an undercrossing or overcrossing) that they affect the feasibility of the entire alignment. However, in most cases, trail crossings can be properly designed at-grade to a reasonable degree of safety and to meet existing traffic and safety standards.

Evaluation of trail crossings involves analysis of vehicular and trail user traffic patterns including speeds, street width, traffic volumes (average daily traffic, peak hour traffic), line of sight and trail user profile (age distribution, destinations). The most appropriate trail-roadway crossing option should be based on the best available information and must be verified and/or refined through the actual engineering and construction document stages. Engineering studies should be done to determine the appropriate level of traffic control and design.

Basic Trail Crossing Prototypes

The proposed intersection approach in this plan is based on established standards and published technical reports. The trail crossings fit into one of four basic categories:

Type 1: Unprotected/Marked

Unprotected/marked crossings include trail crossings of residential, collector, and sometimes major arterial streets or railroad tracks.

Type 2: Existing Intersections

Trails that emerge near existing intersections may be routed to these locations, provided that sufficient protection is provided at the existing intersection.

Type 3: Signalized/Controlled

Trail crossings require signals or other control measures due to traffic volumes, speeds and trail usage.

Type 4: Grade-separated

Bridges or under-crossings provide the maximum level of safety but also generally are the most expensive and have rights-of-way, maintenance and other public safety considerations. There are a number of bridges recommended for crossing creeks in Mansfield.

Type 1: Unprotected/Marked Crossings

An unprotected crossing is a midblock crossing or a crossing at an intersection without traffic signals or stop signs that consists only of a crosswalk and signing. The approach to designing crossings at mid-block locations depends on an evaluation of vehicular traffic, line of sight, trail traffic, use patterns, vehicle speed, road type and width and other safety issues such as the proximity of schools. The following thresholds outlined below recommend where unprotected crossings (crossings without traffic signals or stop signs) may be acceptable:

Table 7.2
Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT** < 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Posted Speed Limit†			Posted Speed Limit†			Posted Speed Limit†			Posted Speed Limit†		
	< 30 mph	35 mph	40 mph	< 30 mph	35 mph	40 mph	< 30 mph	35 mph	40 mph	< 30 mph	35 mph	40 mph
Two Lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three Lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median‡	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

Source: modified from: *Federal Highway Administration. Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations. FHWA Publication Number: HRT-04-100. September 2005.*

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median.

** ADT = Average daily trips

† Where the speed limit exceeds 40 mph, marked crosswalks alone should not be used at un-signalized locations.

‡ The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Minimum line of sight for unprotected crossings (on level grade)[3]:

25 mph zone: 155 feet

35 mph zone: 250 feet

45 mph zone: 360 feet

Wherever unprotected crossings are necessary, crosswalks and warning signs ("Bike Xing") should be provided to warn motorists. Stop signs and slowing techniques (bollards/ geometry) should be used on the trail approach. Care should be taken to keep vegetation and other obstacles out of the sight line for motorists and trail users. Engineering studies should be done to determine the appropriate level of traffic control and design.

The top of the crosswalk is flat and typically made of asphalt, patterned concrete, or brick pavers. Brick or unit pavers should be discouraged because of potential problems related to pedestrians, bicycles and ADAAG requirements for a continuous, smooth, vibration-free surface. Tactile treatments are needed at the sidewalk/street boundary so that visually impaired pedestrians can identify the edge of the street. Costs can range from $5,000 to $20,000 per crosswalk, depending on the width of the street, the drainage improvements affected and the materials used for construction.

Type 1 Unprotected Crossing
(Katy Trail – Dallas, TX)

A flashing yellow beacon costing between $15,000 and $30,000, may be used, preferably one that is activated by the trail user rather than operating continuously. Some jurisdictions have successfully used a flashing beacon activated by motion detectors on the trail, triggering the beacon as trail users approach the intersection. This equipment, while slightly more expensive, helps keep motorists alert.

Crossings of higher volume arterials over 15,000 average daily vehicle trips (ADT) may be unprotected in some circumstances. For example, if they have 85th percentile speeds of 30 mph or less and have only two lanes of traffic, such crossings would not be appropriate if a significant number of school children used the trail.

[3] Texas Department of Transportation. *Roadway Design Manual.* March 2009.

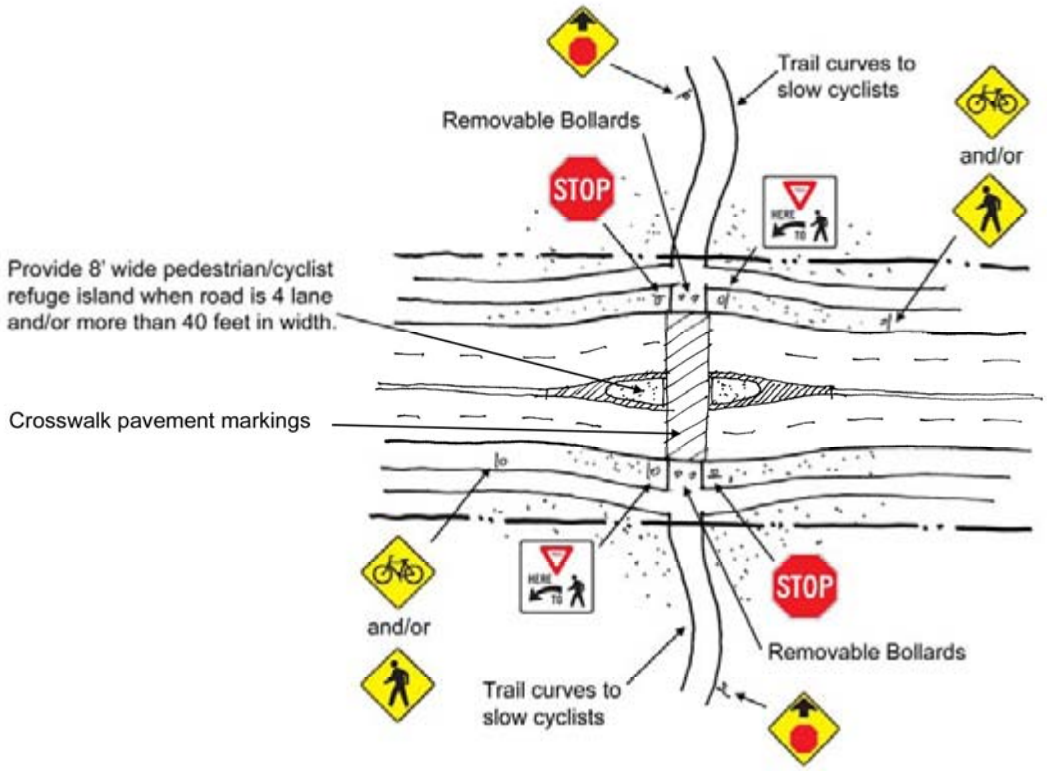


Figure 7.1 ***Type 1 Crossing***
N.T.S. **Plan View**

Type 2: Existing Intersections

When a trail approaches a street within 500 feet of an existing signalized intersection with pedestrian crosswalks, (See Figure 7.1) users are typically diverted to the signalized intersection for safety purposes. For this option to be effective, barriers and signing are needed to direct trail users to the signalized crossings. In most cases, signal modifications would be made to add pedestrian detection and to comply with the ADAAG. In many cases, such as on most sidewalks parallel to roadways, crossings are simply part of the existing intersection and are not a significant problem for trail users.

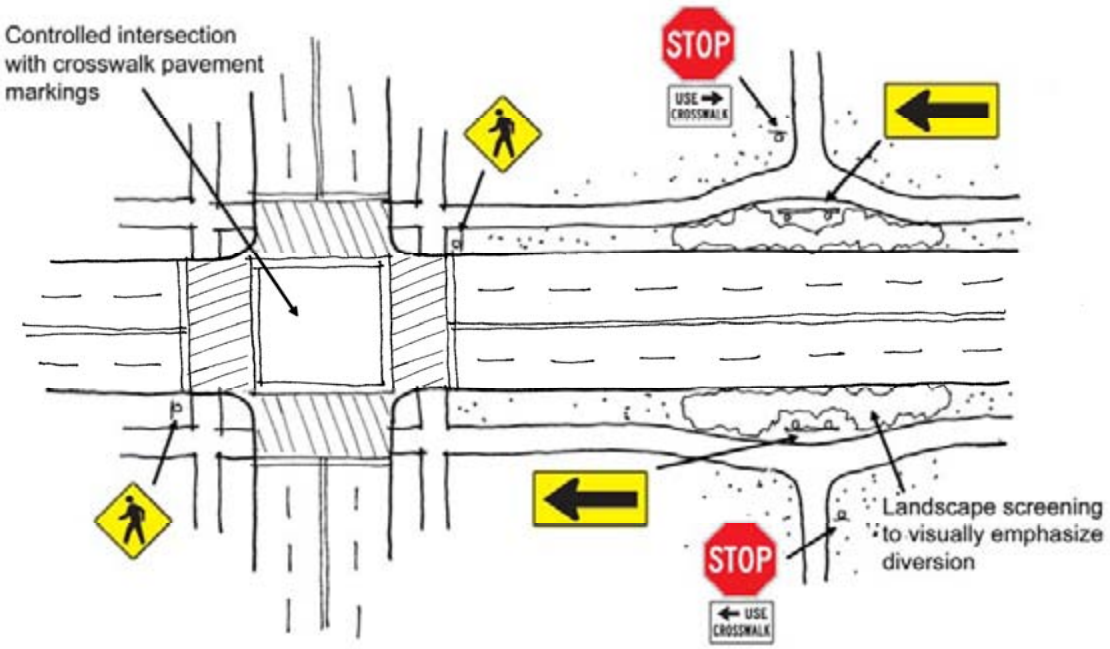


Figure 7.2 ***Type 2 Crossing***
N.T.S. **Plan View**

Type 3: Signalized/Controlled Crossings

New signalized crossings (See Figure 7.2) are recommended for crossings more than 500 feet from an existing signalized intersection and where speed limits are 40 mph and above and/or ADT exceeds 15,000 vehicles (see Table 7.2 for when an unprotected crossing is insufficient). Each crossing, regardless of traffic speed or volume, requires additional review by a registered Texas professional engineer to identify sight lines, potential impacts on traffic progression, timing with adjacent signals, capacity and safety.

Trail signals are normally activated by push buttons, but also may be triggered by motion detectors. The maximum delay for activation of the signal should be one minute, with minimum crossing times determined by the width of the street. The signals may rest on flashing yellow or green for motorists when not activated, and should be supplemented by standard advanced warning signs. Typical costs for a signalized crossing range from $150,000 to $250,000.

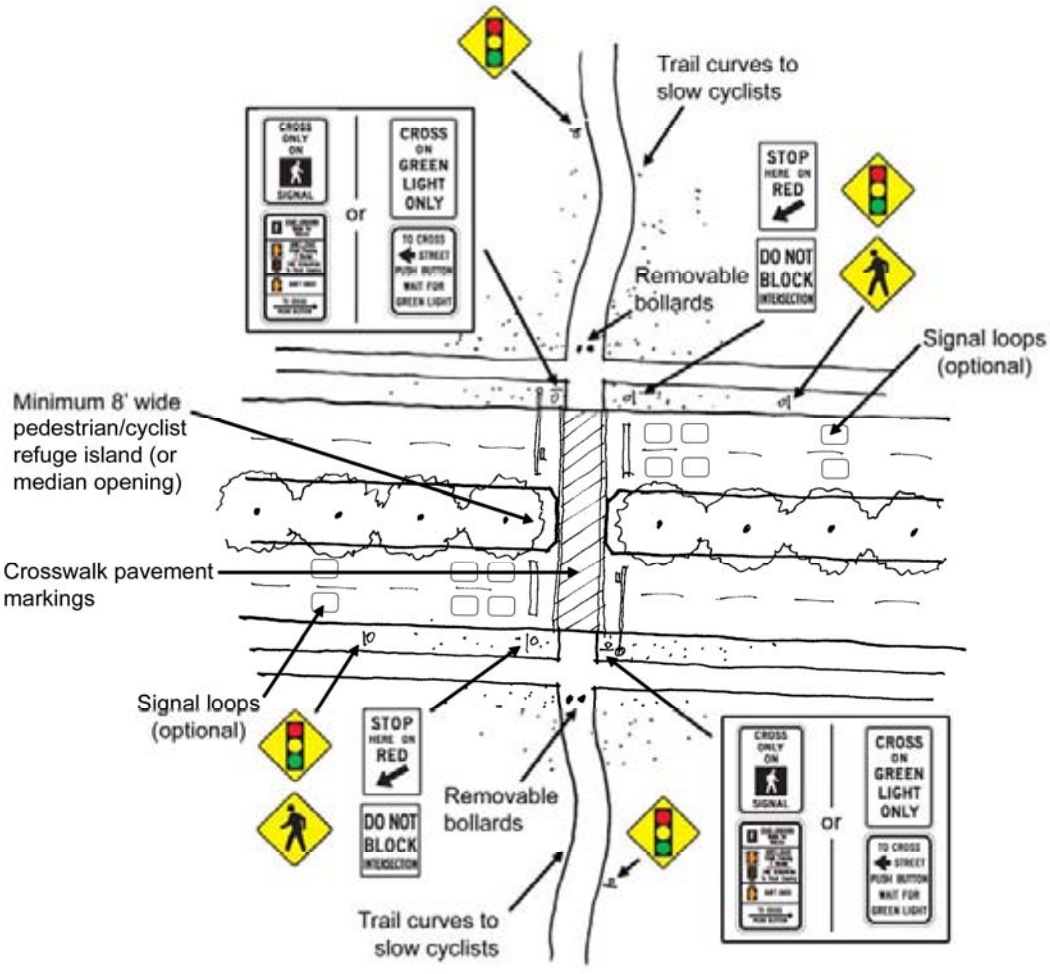


Figure 7.3 ***Type 3 Crossing (Option 1)***
N.T.S. **Plan View**

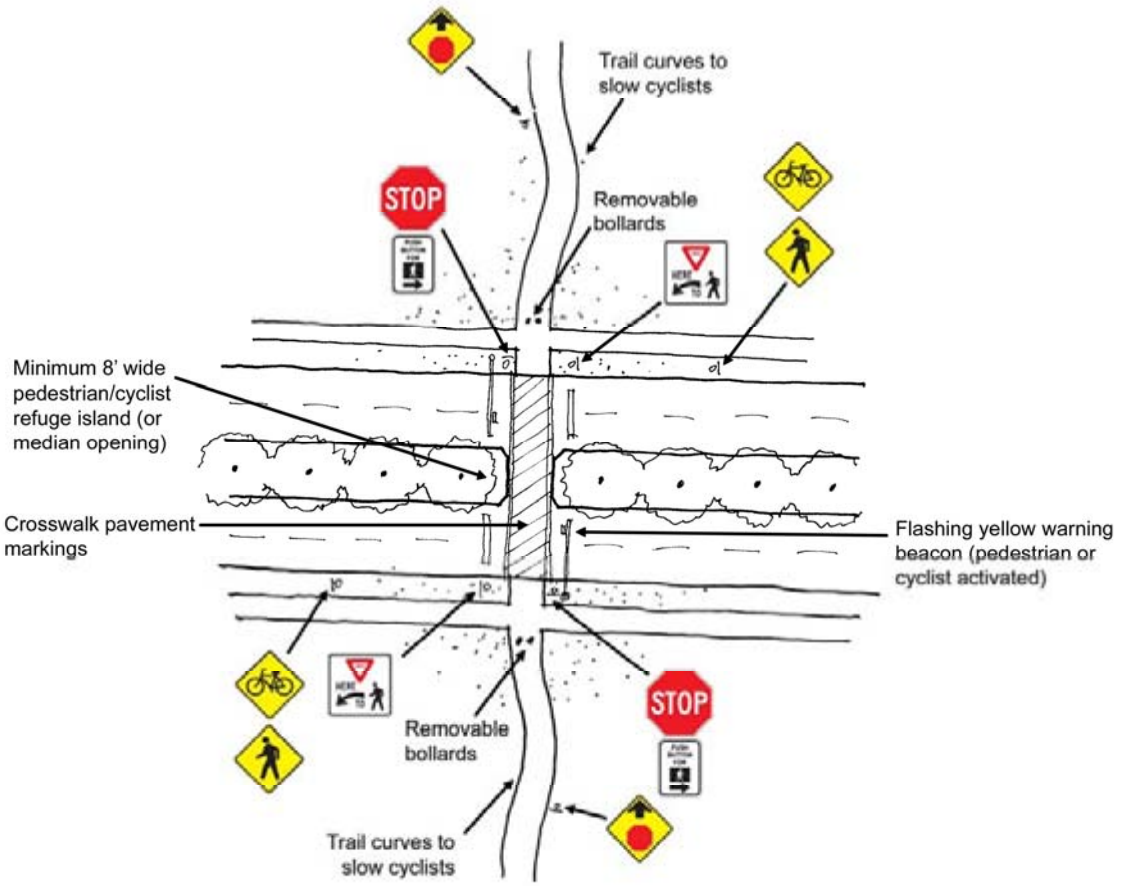


Figure 7.4 ***Type 3 Crossing (Option 2)***
N.T.S. **Plan View**

Type 4: Grade-separated Crossings

Grade-separated crossings may be needed where ADT exceeds 25,000 vehicles, and 85th percentile speeds exceed 45 mph. Safety is a major concern with both over-crossings and under-crossings. In both cases, trail users may be temporarily out of sight from public view and may have poor visibility themselves. Under-crossings, like parking garages, have the reputation of being places where crimes occur. Most crime on trails, however, appears to have more in common with the general crime rate of the community and the overall usage of the trail than any specific design feature.

Design and operation measures are available which can address trail user concerns. For example, an under-crossing can be designed to be spacious, well lit, equipped with emergency cell phones at each end and completely visible for its entire length prior to entering. Other potential problems with under-crossings include conflicts with utilities, drainage, flood control and maintenance requirements. Over-crossings pose potential concerns about visual impact and functional appeal.

SIGNING AND STRIPING AT ROADWAY CROSSINGS

Crossing features for all roadways include warning signs both for vehicles and trail users. The type, location and other criteria are identified in the Texas Manual for Uniform Traffic Control Devices (TMUTCD). Adequate warning distance is based on vehicle speeds and line of sight. Signage should be highly visible; catching the attention of motorists accustomed to roadway signs may require additional alerting devices such as a flashing light, roadway striping or changes in pavement texture. Signing for trail users must include a standard stop sign and pavement marking, sometimes combined with other features such as bollards or a kink in the trail to slow bicyclists. Care must be taken not to place too many signs at crossings as they tend to overwhelm the user and lose their impact.

Directional signing may be useful for trail users and motorists alike. For motorists, a sign reading "Bicycle Trail Xing" along with a Mansfield trail emblem or logo helps both warn and promote use of the trail itself. For trail users, directional signs and street names at crossings help direct people to their destinations.

A number of striping patterns have emerged over the years to delineate trail crossings. A median stripe on the trail approach will help to organize and warn trail users. The actual crosswalk striping is a matter of local and State preference, and may be accompanied by pavement treatments to help warn and slow motorists. The effectiveness of crosswalk striping is highly related to local customs and regulations. In communities where motorists do not typically yield to pedestrians in crosswalks, additional measures may be required. Table 7.3 notes some of the most common signs that may be required on the Mansfield Trails system.

Table 7.3 Commonly Used Trail Signage				
Item	**Location**	**Color**	**AASHTO Designation**	**TMUTCD Designation**
No Motor Vehicles	Entrances to trail	B on W	R44A	R5-3
Use Ped Signal/Yield to Peds	At crosswalks; where sidewalks are being used	B on W	N/A	R9-5 , R9-6
Bike Lane Ahead: Right Lane Bikes Only	At beginning of bike lanes	B on W	N/A	R3-16, R3-17
STOP, YIELD	At trail intersections with roads	W on R	R1-2	R1-1, R1-2
Bicycle Crossing	For motorists at trail crossings	B on Y	W79	W11-1
Turns and Curves	At turns and curves which exceed 20 mph design specifications	B on Y	W1,2,3; W4,5,6,14 W56,57	W1-1,2 W1-4,5 W1-6
Trail Intersections	At trail intersections where no STOP or YIELD required, or sight lines limited	B on Y	W7,8,9	W2-1, W2-2 W2-3, W2-3 W2-4, W2-5
STOP Ahead	Where STOP sign is obscured	B,R on Y	W17	W3-1
Signal Ahead	Where signal is obscured	B,R,G on Y	YW41	W3-3
Pedestrian Crossing	Where pedestrian walkway crosses trail	B on Y	W54	W11A-2
Directional Signs	At intersections where access to major destinations is available	W on G	G7, G8	D1-1b(r/l), D1-1c
Trail Regulations / Bikes Reduce Speed & Call Out Before Passing	All trail entrances	B on W	n/a	n/a
Multi-purpose Trail: Bikes Yield to Pedestrians	All trail entrances	n/a	n/a	n/a
Please Stay On Trail	In environmentally-sensitive areas or where the trail travels on private property	n/a	n/a	n/a
Trail Closed: No Entry Until Made Accessible & Safe for Public Use	Where trail or access points closed due to hazardous conditions	n/a	n/a	n/a

BRIDGES

Bridges should be at least as wide as the trail; preferably one to two feet wider on each side. This is so pedestrians can stop and view the creek without obstructing the trail. Any bridge that is specifically designated for bicycle traffic must have appropriate railing for cyclists. Texas has adopted the AASHTO Bridge Design Specifications requirement that railing of bridges that are designated for bicycle traffic should be a minimum of 54 inches high with the same restrictions on openings as for pedestrian railing.[4] Pedestrian railing openings between horizontal or vertical members must be small enough that a 6-inch sphere cannot pass through them in the lower 27 inches. For the portion of pedestrian railing that is higher than 27 inches, openings may be spaced such that an 8-inch sphere cannot pass through them. Decking material should be firm and stable. Bridge approaches and span should not exceed 5% slope for ADAAG access.

Bridges should accommodate maintenance vehicles if necessary. Bridge structures should be located out of the 100-year floodplain where possible. Footings should be located on the outside of the stream channel at the top of the stream bank. The bridge should not impede fish passage or constrict the floodway. All bridges and footings in the stream corridor will need to be designed by a Texas Registered Geotechnical or Structural Engineer. Cost, design and environmental compatibility will dictate which structure is best for the trail corridor.

[4] Texas Department of Transportation, 2003-1 Revision of the *Bridge Railing Manual*, Chapter 5. Pedestrian, Bicycle, and ADA Requirements for Bridge Railing (2003)

TRAIL FEATURES

In order for the Mansfield trails system to be a successful community amenity, the trails should appeal to a wide variety of users. To achieve this, the trails should be designed to provide a high level of user conveniences. The demographics of the community include a high percentage of both elderly and young. These groups will use the trail more often if amenities are provided. Recommended trail amenities include:

- **Benches**: Utilize powder coated metal or recycled plastic composites for benches.
- **Bike Racks**: Bicycle parking should be located in a visible station, close to the building entrance and in parks adjacent to parking. Bicycle parking should not be located in remote areas.
- **Milepost Markers**: Milepost markers shall occur at ¼ mile intervals. Milepost markers greatly increase the use of the trail by walkers, joggers and cyclists looking for set workout distances. It is recommended to incorporate milepost markers onto fixed concrete bollards well outside the travel path. Signage should be consistent with other trail signage.
- **Litter Receptacles**: Litter receptacles shall be provided at trail heads, access points and rest areas where benches are provided. The trail should establish the National Park Service ethic of "pack it in, pack it out."

Trail Entrance Marker at Town Park

- **Dog Waste Pickup Stations**: Dog waste bag dispensers should be placed at trail heads and key neighborhood access points along the route. Signs should be placed along the trail notifying dog owners to pick up after their dogs.
- **Information Kiosks**: Trail head stations should provide trail users with information along with the rules and regulations of the trail. Involving school children and civic organizations in the research, design and construction of these kiosks would be an excellent community activity.
- **Directional Signage**: The directional signage should impart a unique theme so trail users know which trail they are following and where it goes. The Grist Mill

as has been adopted for the Walnut Creek Linear Park as its theme for the trail corridors. Themes should be designated for other trail corridors as well. The theme can be conveyed in a variety of ways: engraved stone, medallions, bollards and mile markers. A central information installation at trail heads and major crossroads also helps users find their way and acknowledge the rules of the trail. They are also useful for interpretive education about plant and animal life, ecosystems and local history.

- **Restrooms**: Should be placed where appropriate at major trail heads.

Materials used for amenities should receive approval from the City of Mansfield Parks and Recreation Department.

A safety railing is provided along the trail to prevent access to a relatively dangerous creek side cliff.

MAINTENANCE AND SAFETY

Trail Maintenance

Effective trail maintenance is critical to the overall success and safety of trails in Mansfield. Maintenance activities typically include pavement stabilization, landscape maintenance, facility upkeep, sign replacement, mowing, litter removal and painting. A successful maintenance program requires vigilance and continuity, as well as involving a high level of resident participation. Routine maintenance on a year-round basis will not only improve trail safety, but will also prolong the life of the trail. Good trail maintenance continually attracts trail users. The benefits of a good trail maintenance program include:

Trails are appropriate for all age groups, including the young.

- A high standard of maintenance is an effective advertisement to promote the trail as a city, regional and state recreational resource.
- Good maintenance deters vandalism, litter and encroachments.
- Good maintenance promotes positive public relations between the adjacent land owners and managing agency.
- Good maintenance makes enforcement of regulations on the trail more efficient. Local clubs and interest groups will take pride in "their" trail and will be more apt to assist in protection of the trail.
- A proactive maintenance policy improves safety along the trail.
- Good maintenance protects the tax payer's investments.

Ongoing trail maintenance includes the following activities:

Quality Control

Quality control of the trail maintenance is the responsibility of the city. The city shall provide appropriate equipment, material and labor to achieve good maintenance on a reoccurring basis.

Trail and Soil Stabilization

Protect trail stability by maintaining proper levels of backfill, profile and contours of the subgrade. Maintain soil surfaces suitable for turf establishment. Repair and re-establish grades in settled, eroded and damaged areas. The grade of the soil adjacent to the edge of the trail shall be maintained no higher than flush to the surface of the trail and no lower than a half inch from the surface of the trail. Soil levels and grades adjacent to trail surfaces shall comply with ADAAG standards. Maintenance shall be performed periodically and often enough to assure safety of the trail user and to maximize the life of the trail.

Vegetation

Off-street trails require an unobstructed soft shoulder along both sides of the trail primarily to preclude any obstructions or hazards to cyclists. These soft shoulders also provide space for people to step off the trail if necessary. In general, soft shoulders should be 3' wide in order to provide safe, unobstructed space, to maintain good visibility, and to avoid creating the feeling of an enclosed space. Vegetation is encouraged beyond this 3' shoulder in order to provide visual interest and shade. Under-story vegetation within the 3' shoulders of an off-street trail should not be allowed to grow higher than 6" (six inches). Vegetation along sidewalks can be allowed to grow up to 24" in height since these facilities are intended for pedestrians only.

A well maintained trail and parks system is important in making users feel safe.

Tree species selection and placement should be made that minimizes vegetative litter on the trail and root uplifting of pavement. Vertical clearance along the trail should be checked on a reoccurring schedule, and any overhanging branches shall be pruned to a minimum vertical clearance of 10 feet.

Basic measures shall be taken to protect the trail investment. This includes mowing along both sides of the trail to prevent invasion of plants into the pavement area. The standards for mowing shall be the same for like areas of similar public spaces.

Vegetation control should be accomplished by mechanical means or hand labor. Some species may require spot application of State-approved herbicide.

Surfacing

Concrete is the recommended surface material for paved off-street trails. Cracks, ruts and water damage to the concrete surface shall be repaired periodically and often enough to maintain barrier-free access established by the Americans with Disability Act.

Where drainage problems exist along the trail, ditches and drainage structures shall be kept clear of debris to prevent washouts along the trail and maintain positive drainage flow. Checks for erosion along the trail shall be made on a reoccurring schedule and immediately after any storm that brings flooding to the local area. The use of trails with natural soft surfaces, such as decomposed granite and earthen trails, should be minimized and/or prohibited during wet conditions.

The trail surface shall be kept free of debris, broken glass and other sharp objects, loose gravel, leaves and stray branches. Trail surfaces shall be swept on a routine basis and as soon as practical after a storm event. Soft shoulders should be well maintained to assure safety and maximize their usability.

Doggie litter receptacles located along trails provide for a clean and friendly environment.

Litter and Illegal Dumping

Staff or volunteers should remove litter along the trail. Litter receptacles should be placed at access points such as trail heads, rest areas and picnic areas.

Illegal dumping should be controlled by vehicle barriers, regulatory signage and fines as much as possible. When it does occur, it shall be removed as soon as possible in order to prevent further dumping. Neighborhood volunteers, friends groups, i.e. "Friends of ____ Trail", or "Adopt a Trail", alternative community service crews and inmate labor should be considered in addition to maintenance staff.

Signage

Directional, informational and safety signage shall be replaced along the trail as signs become damaged or are missing. The following table summarizes a recommended maintenance schedule for the proposed trails in Mansfield. These guidelines address

maintenance for off-street trails. On-street facilities, such as sidewalks and bike lanes, should be maintained per the standards of the City of Mansfield.

Table 7.4
Maintenance Schedule

Item	Frequency
Inspections	Scheduled on a routine basis
Signage Replacement	Immediately upon damage, deterioration, or are missing
Pavement Markings Replacement	Immediately upon damage, deterioration, or are missing
Major damage response (fallen trees, washouts, flooding)	Schedule as soon as practical
Pavement Sealing, Potholes	As needed to maintain ADA accessibility standards
Introduced tree and shrub plantings, trimming	Scheduled on a routine basis
Culvert Inspection	Scheduled on a routine basis and after major storms
Cleaning Ditches	As needed
Trash/Litter Pick-up	Weekly during high use; twice monthly during low use
Lighting Luminary Repair	Immediately upon damage, deterioration or are missing
Pavement Sweeping/Blowing	Scheduled on a routine basis and after major storms
Maintaining culvert inlets	Scheduled on a routine basis and after major storms
Shoulder plant trimming (weeds, trees, brambles)	Scheduled on a routine basis
Water barrier maintenance (earthen trails)	Annually
Site furnishings, replace damaged components	Immediately upon damage, deterioration or are missing
Graffiti Removal	Immediately or as soon as practical
Fencing Repair	Immediately upon damage, deterioration or are missing
Shrub/Tree Irrigation for introduced planting areas	Weekly during summer months until plants are established
Trail and Soil Stabilization	Scheduled on a routine basis.

Safety

Law Enforcement

A primary concern of law enforcement is good access to trail routes for police patrols and emergency service vehicles. The trails will accommodate this need by providing controlled access points and a continuous trail with sufficient width to accommodate emergency service vehicles. Additional law enforcement measures appropriate for trail facilities include:

- Provide fire and police departments with a map of the trail, along with access points and keys or combinations to locked gates and/or bollards.
- Locate mileposts every ¼ mile and identify markers on maps.
- Promote 'Cells on Trails' program through the Police Department
- Provide an easily identifiable numbering system occurring on 500' intervals and embedded on the trail surface which is identified through GPS mapping and utilized through the Police Dispatch system.
- Provide bicycle racks at key destinations and at trail heads. Bicycle racks shall allow for both frame and wheels to be locked.
- Post "Trail-User Ethics" signs at trail heads and in unobtrusive areas.

Volunteer citizen patrols can provide a valuable interface and support function to law enforcement officers.

Community Involvement with Safety on the Trail

The most effective and most visible deterrent to illegal activity in a trail corridor will be the presence of legitimate trail users. As a general pattern, introducing legitimate use into an area tends to drive out illegitimate use. Effective enforcement goes beyond law enforcement officers and should involve the entire community. There are several components to accomplishing this as outlined on the following page:

Police officers provide an added security presence on trails.

- Good Access To The Trail – Wherever feasible, public access to the trail system should be provided. Access ranges from providing conveniently located trail heads along trails, to building sidewalks to accommodate access from private developments adjacent to trails. Access points shall be inviting and signed so as to welcome the public onto the trails.

- Good Visibility From Adjacent Neighbors – Neighbors adjacent to trails potentially provide 24-hour surveillance of the trails and can become the city's biggest ally. Though some screening and setback of any trail is needed for privacy of adjacent neighbors, completely blocking out visual access of a trail from neighborhood view should be discouraged. Good visual access allows the neighbor's "eyes on the trail," and avoids a visual barrier on the trail.

- High Level Of Maintenance - A well maintained trail system communicates an image that expresses the community's pride and that the citizens care about the city where they live. This message by itself will discourage undesirable activity along the trails.

- Programmed Events – Events along trails will increase public awareness of the trail system and thereby bring more people to the trails. A friends group in support of the development of the trail system should be formed. This group can help initiate numerous public events along the trails in an effort to raise public awareness and increase support for the trails. Events might include a daylong trail clean up or a series of short interpretive walks led by the friends group. Friends groups can also assist the city with public support of future funding applications.

- Community Projects – The support generated through the friends group could be further capitalized on by involving neighbors and friends of the trails in a community project along the trails. Ideas for community projects that have been successful on other trail projects include volunteer planting events, art projects (often associated with adjacent schools), interpretive research projects, or even bridge building events. These community projects are the strongest means of creating a sense of ownership along the trails that are perhaps the strongest single deterrent to undesirable activity along a trail.

- Infrastructure For Public Safety – As a general rule, infrastructure, such as emergency call boxes, lighting, and in some cases, remote video monitoring, may be considered as a final line of defense against safety issues on a trail. Generally, infrastructure is expensive and may involve 24-hour remote monitoring. In the few instances where remote video monitoring equipment has been installed, vandalism has not been a problem. More importantly, these features may represent an additional liability hazard if they are not properly maintained and monitored.

- Adopt-a-Trail Program – Businesses, educational institutions and residential communities will abut the trails. As neighbors to the trails, they often see the benefit of their involvement in trail development and maintenance. Developers view trails as an integral piece of their campus. Property owners adjacent to trails often become willing to take on some level of responsibility for the trail. Creation of an Adopt-A-Trail program should be explored to capitalize on this opportunity and help build civic pride.

POLICY AND CODE RECOMMENDATIONS

Development Recommendations

Successful implementation of the Trails Master Plan will require the protection of existing trail connections and the preservation of planned trail corridors throughout the city. Although many of the trail corridors are intended to utilize public lands consistent with the goals and policies of the Trails Plan, acquisition of trail corridors on private lands will be necessary to successfully implement the Trails Plan.

The City of Mansfield's goal is to build the trail system with the cooperation of private developers and landowners where possible.

Many options are available to the city, public agencies, non-profits and private landowners to ensure the protection / preservation of these critical trail corridors. The objective of the Trails Plan is to provide a menu of available options to both public agencies and private landowners, promoting flexibility and creativity in the negotiation process. Careful crafting of transactions between private landowners and public agencies can and should produce mutually beneficial results.

Potential trail corridor located adjacent rail line.

The City should work to abandon the old road bridge and preserve it to provide pedestrian connection across Walnut Creek along North Street.

New Development – Preservations & Dedications

The preservation of trail corridors and greenways in conjunction with or independent of the open space dedication required from new residential development should be incorporated in the City Code. Rights-of-way preservation for pedestrian paths, bikeways and multiple use trails could be required of new residential development

The old trestle bridge crossing provides a scenic glimpse of Mansfield's history.

consistent with the Engineering Standards and/or this Trails Plan. An offer of dedication is required when a reasonable relationship is demonstrated between the need for the dedication and the characteristics and impacts of the proposed development. Public rights-of-way along all creeks, drainage ways, and natural corridors should be established as a basic principle to ensure the protection and enjoyment of greenways.

Young adolescents share a rural roadway

The City Code could also provide incentives to new development to encourage implementation of the Trails Plan. Reductions in fee waivers are specific incentives for public trail reservations and dedications beyond that required of any new development. Additional flexibility could be provided for new development, promoting the highest quality development in concert with the public need and benefit derived from creative and innovative development proposals. This flexibility might come by allowing reductions in required off-street parking and flexibility in internal project circulation layout, which is justified with the reservation / dedication of lands in support of the planned recreational trail network. For example, general office use requires 1 parking space for every 300 square feet, so a 15,000 square foot development requires a minimum of 50 parking spaces. However, if the developer dedicates a 20-40 foot wide easement for trail development, the city might reduce the required parking to 1 space for every 400 square feet yielding a minimum of 38 parking spaces.

Newly improved city infrastructure provides opportunities for the city to expand its trail system.

Potential trail corridor located along city utility easement.

Existing Development

In cases where trail corridors shown on the Trails Plan intersect with existing developed areas, the acquisition of lands will be necessary to create connectivity with adjoining trail corridors. Acquisition can be accomplished through a variety of forms – outright purchase of property, purchase of

easements, donations or condemnation. All varieties of acquisition will be employed, while always seeking the most cost effective method to secure appropriate public interest when necessary and warranted. Public – private negotiations for outright purchase of private lands will be necessary in some instances; however, the purchase of easements or partial / restricted property rights at less cost to the public will be encouraged.

Further Studies

In order to achieve the full benefit of bicycle facilities, it is recommended that the City of Mansfield develop an Alternative Transportation Master Plan (ATMP). The ATMP should focus specifically on bicycle transportation but should also consider pedestrian transportation needs. The bicycle route alignments shown in this Trails Master Plan should be refined, specific engineering details should be created, and a detailed implementation strategy should be developed as part of the ATMP. Along with the Thoroughfare Master Plan, the ATMP can serve as part of an overall Comprehensive Transportation Master Plan.

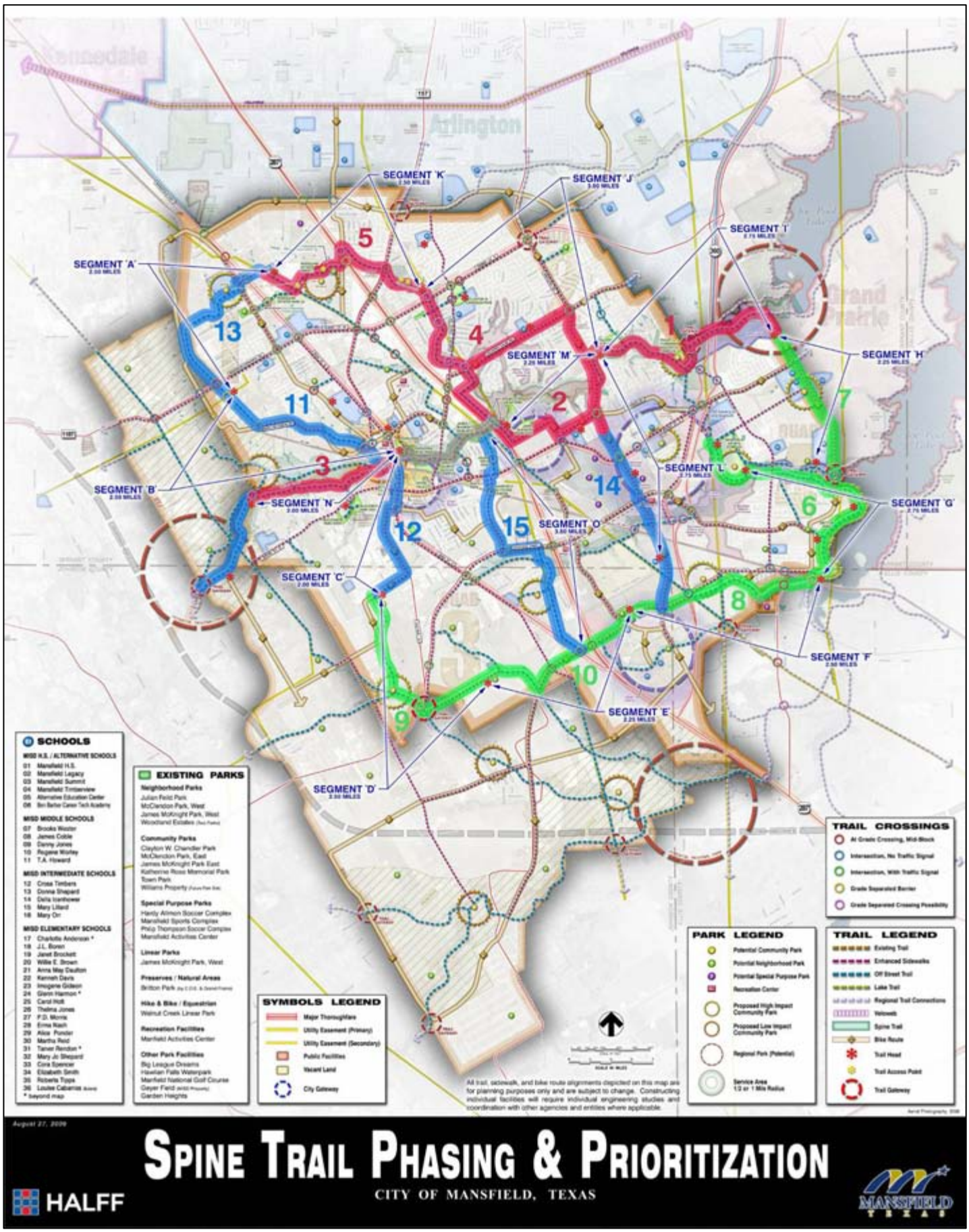
PROJECT PRIORITIES, PHASING & COST ESTIMATES

Prioritization Criteria

Cost estimates and prioritization schemes have been developed for the spine trail segments of the Trails Master Plan (detailed cost estimates have not been developed for other bike routes, off-street trails, sidewalks, or natural surface trails). For each priority project there is a detailed project sheet (shown at the end of the chapter), depicting the estimated project cost and scope. Additionally, detailed maps in Appendix D illustrate the alignments of these priority projects. The prioritization criteria chosen to evaluate the trail corridors include:

- **Connectivity and User Generators:** How many user generators does the project connect to within close proximity of the project, such as schools, parks, employment and commercial districts? Does the segment provide or improve access across barriers?
- **Proximity and Population Served:** Relative to the alignment of the trail, does the trail have negative or positive impacts for the trail user or the homeowner? How close is the trail located to existing single family and multi-family homes? (Are there protective barriers/screens such as fences or berms? Is the trail located within the 100 year floodplain?
- **Network Completion:** To what degree does this project fill in a missing gap in the trail and pathway system?
- **Availability of Rights-Of-Way:** Relative to the proposed trail corridor is it located within public rights-of-way or private ownership? Are there other potential players that own land within the trail corridor? How easily can this land be acquired?
- **Ease of Implementation:** How difficult will it be to implement this project? This criterion takes into account topography, vegetation density, number of creek and traffic conflicts and crossings, etc., as well as political and economic constraints. The general support of trails help make the planning and implementation phase easier and with minimal conflict or opposition.

*The **Spine Trail Phasing & Prioritization** map on the next page illustrates the segments and segment prioritization of the proposed spine trail system.*


SEGMENT 'A'
SEGMENT 'B'
SEGMENT 'C'
SEGMENT 'D'
SEGMENT 'E'
SEGMENT 'F'
SEGMENT 'G'
SEGMENT 'H'
SEGMENT 'I'
SEGMENT 'J'
SEGMENT 'K'
SEGMENT 'L'
SEGMENT 'M'
SEGMENT 'N'
SEGMENT 'O'
SCHOOLS
EXISTING PARKS
SYMBOLS LEGEND
PARK LEGEND
TRAIL LEGEND
TRAIL CROSSINGS
SPINE TRAIL PHASING & PRIORITIZATION
CITY OF MANSFIELD, TEXAS
HALFF
MANSFIELD TEXAS

Project Phasing

The trail projects are grouped into three phases and shown as follows:

- **Phase 1** (*shown in red on the previous map*) projects are the top priority pathway and trail projects for short-term project implementation and are targeted for completion in the next five years.
- **Phase 2** (*shown in green on the previous map*) projects are mid-term projects planned for implementation between 5 and 10 years.
- **Phase 3** (*shown in blue on the previous map*) projects are long-term projects for implementation in the 10+ year timeframe after Trails Plan adoption. These are projects that generally supplement the trail and pathway system or may provide potential pathways over a longer period of time as land uses and regional planning boundaries change.

The project phases may change according to available funds, changing priorities, other roadway projects that coincide with new development and redevelopment opportunities or other factors. Timing of projects is difficult to pinpoint exactly, due to dependence on competitive funding sources, timing of roadway and development projects and the overall economy. Street enhancements, including enhanced sidewalks and bike routes, should be developed and improved during scheduled roadway projects.

It should be noted that the purpose of this exercise is to understand the relative priority of projects so that the city may appropriate available funding to the highest priority projects. Phase 1 and 2 projects also are important and may be implemented at any point in time as part of a development or city project. The project-phase rankings should be considered a "living document" and frequently reviewed every 3 to 5 years to ensure they reflect current city priorities.

The Action Plan on the next few pages provides a summary of the cost and phasing of the implementation of the spine trail component of the Trails Master Plan.

Action Plan

The Action Plan recommends a phasing scheme for the spine trail component of the Trails Master Plan together with a dollar amount attached. A large amount of funding is required to accomplish the goal of a truly integrated and well connected trail system, but with vision, commitment and a concerted effort to secure funding from available sources, the network of trails will be accomplished over time.

Each spine trail type is divided into functional trail sections (Segments A through O), which helps to guide the implementation of the trails plan over time. These trail sections are presented later in this chapter.

An approximate cost and phasing for each spine trail segment are presented on the following pages.

Based on the implementation strategy, the short term (1 to 5 years), medium term (6 to 10 years), and long term (11 years and beyond) implementation trail segments are summarized as follows:

Table 7.5 Action Plan: Years 2009 to 2020 and beyond		
Phase 1 – Years 2009 to 2014		
Spine Trails	**Trail Length (in miles)**	**Cost**
• Segment "I"	2.75	$2,035,245
• Segment "M"	2.25	$995,976
• Segment "N"	2.00	$1,991,925
• Segment "J"	3.50	$2,228,220
• Segment "K"	2.50	$1,987,425
TOTAL	**13.00**	**$9,238,791**
Phase 2 - Years 2015 to 2020		
Spine Trails	**Trail Length (in miles)**	**Cost**
• Segment "G"	2.75	$2,623,500
• Segment "H"	2.25	$995,550
• Segment "F"	2.50	$1,030,125
• Segment "D"	2.50	$1,480,373
• Segment "E"	2.25	$1,196,010
TOTAL	**12.25**	**$7,325,558**
Phase 3 - Years 2020 and beyond		
Spine Trails	**Trail Length (in miles)**	**Cost**
• Segment "B"	2.50	$1,407,983
• Segment "C"	2.00	$878,337
• Segment "A"	2.50	$1,630,275
• Segment "L"	2.75	$1,232,604
• Segment "O"	3.50	$1,786,546
TOTAL	**13.25**	**$6,935,745**
GRAND TOTAL	**38.50**	**$23,500,094**

Estimated Long-Term Costs

The candidate projects are recommended to be implemented over the next 20 years or as funding becomes available. Some of the more expensive projects may take longer to implement.

The total implementation cost for all trail, enhanced sidewalk, and bike route facilities recommended in this Trails Master Plan is estimated at $87.9 million. Approximately $23.5 million is for spine trails (see cost projects in the following section), $29.2 million for other off-street trails, $32.7 million for enhanced sidewalks, and $2.5 million for bike routes. Many trails and street improvements may be implemented as part of other infrastructure projects as they occur. Many of the projects can be funded with Federal, State, and regional transportation, safety, and/or air quality grants. Trails provide additional benefits for the region and local employers by serving as commuter corridors, making the projects eligible for funding programs for secondary trails. However, some of the trails are purely recreational in nature, thereby limiting their qualification for federally designated money and must be supplemented or wholly funded by local or private sources.

Table 7.6
Estimated Trails Master Plan Implementation Costs

Facility Type	Cost per Mile	Total Cost
Spine Trails	Varies (see table 7.5)	$23.5 million
Other Off-Street Trails*	$600,000	$29.2 million
Other Enhanced Sidewalks**	$470,000	$32.7 million
Bicycle Routes***	$40,000	$2.5 million
TOTAL		**$87.9 million**

*Estimated cost per mile for a 10' wide trail. Includes design, testing, administration, and miscellaneous costs as well as a 20% contingency.

** Estimated cost per mile for two 6' wide sidewalks (one on each side of the street). Includes design, testing, administration, and miscellaneous costs as well as a 20% contingency.

*** Average cost. Costs can range from $20,000 per mile for a signed route; to $50,000 per mile for a route with shared lanes, signage, and Sharrows; up to $100,000 per mile for striped 5' bike lanes and signage. Includes design, testing, administration, and miscellaneous costs as well as a 20% contingency.

It is important to note that many of the funding sources are highly competitive, and therefore it is impossible to determine exactly which projects will be funded by which funding sources. Timing of projects is also difficult to pinpoint exactly, due to dependence on competitive funding sources, timing of roadway and development projects and the overall economy.

Maintenance Cost

Maintenance guidelines are found the *Maintenance and Safety* section beginning on page 7 – 37. Table 7.6 summarizes estimated maintenance costs for a fully realized Mansfield Trail system.

Table 7.7
Annual Maintenance Costs

Trail Type	Miles*	Cost/mile	Total
Spine Trails	40.3**	$6,000	$270,000
Other Off-Street Trails	48.7	$4,000	$194,800
Other Enhanced Sidewalks	69.5	$1,000	$69,500
Bicycle Routes	63.5	***	***
TOTAL	**222**		**$534,300**

*Approximate estimation. Actual miles will be determined after detailed planning process and engineering analysis.
**Includes the existing Walnut Creek Linear Park main trail
***Bicycle route maintenance cost/mile depends on facility type (signed route, shared lane with Sharrow markings, or bike lane). These facility types shall be determined in future engineering studies.

PROJECT SUMMARY SHEETS

Cost projections for each of the spine trail priority segments are shown on the following pages. Implementation costs may vary considerably based on the type of material used for the trail, the number of bridges or drainage crossings that are required, and the types of amenities that are included in each trail segment. Each projection also includes a contingency amount, since all trails in this plan are at a pre-design stage. Projections also include an allowance for surveying, design and construction administration associated with the design of each trail.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: A 2.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-			
Total Length lf.:	**13200**	Enhanced SW -l	**2,000**	Off Street -lf.		**11,200**
Potential Development Cost						
	Item	**Quantity**	**Unit**	**Unit Price**		**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	6,637	CY	$12.00	$	79,644
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	134,400	SF	$5.00	$	672,000
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	333	CY	$12.00	$	4,000
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	16,000	SF	$5.00	$	80,000
4	On Street Bicycle Markings	4,000	LF	$3.00	$	12,000
5	Trail Striping	11,200	LF	$3.00	$	33,600
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$	7,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	22	EA	$1,000.00	$	22,400
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	6	EA	$20,000.00	$	112,000
9	Trail directional/safety signs (assume 1 every 500 linear feet)	26	EA	$500.00	$	13,200
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$	15,000
11	Intersection crosswalk striping	4	EA	$1,000.00	$	4,000
12	Intersection accessible ramps	8	EA	$1,500.00	$	12,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$	-
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	264,000	SF	$0.15	$	39,600
15	Signalize Crossings	2	EA	$15,000.00	$	30,000
Subtotal Base Construction Cost			0	$0		**$ 1,136,944**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$	12,500
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	8	EA	$5,500	$	46,667
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**70,667**
Subtotal Construction Cost					**$**	**1,207,611**
Design, Testing, Administration, Misc. Costs (15%)					$	181,142
Contingency at Pre-Design Level (20%)					$	241,522
Total					**$**	**1,630,275**
Estimated Cost per Linear Foot					**$**	**309**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: B 2.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

			On Street - lf.	-		
Total Length lf.:		**13200**	Enhanced SW -l	**5,100**	Off Street -lf.	**8,100**
Potential Development Cost						
	Item		**Quantity**	**Unit**	**Unit Price**	**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)		4,800	CY	$12.00	$ 57,600
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material		97,200	SF	$5.00	$ 486,000
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)		850	CY	$12.00	$ 10,200
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material		40,800	SF	$5.00	$ 204,000
4	On Street Bicycle Markings		10,200	LF	$3.00	$ 30,600
5	Trail Striping		8,100	LF	$3.00	$ 24,300
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)		5	EA	$1,500.00	$ 7,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet		16	EA	$1,000.00	$ 16,200
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)		4	EA	$20,000.00	$ 81,000
9	Trail directional/safety signs (assume 1 every 500 linear feet)		26	EA	$500.00	$ 13,200
10	Major trail access point sign (1 every 2640 linear feet)		5	EA	$3,000.00	$ 15,000
11	Intersection crosswalk striping		0	EA	$1,000.00	$ -
12	Intersection accessible ramps		0	EA	$1,500.00	$ -
13	Bridge Crossing (Assumes (1) - 100' span)		0	EA	$180,000.00	$ -
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)		264,000	SF	$0.15	$ 39,600
15	Signalize Crossings		0	EA	$15,000.00	$ -
Subtotal Base Construction Cost				0	$0	**$ 985,200**
				0	$0	
AMENITY COSTS				**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)		5	EA	$2,500	$ 12,500
A2	Kiosks (1 per trail head)		1	EA	$6,500	$ 6,500
A3	Drinking Fountain		1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement		6	EA	$5,500	$ 33,750
A5	Soft/Natural Surface Trails			SF	$3.50	$ -
Subtotal Amenity Construction Costs						**$ 57,750**
Subtotal Construction Cost						**$ 1,042,950**
Design, Testing, Administration,Misc. Costs (15%)						$ 156,443
Contingency at Pre-Design Level (20%)						$ 208,590
Total						**$ 1,407,983**
Estimated Cost per Linear Foot						**$ 267**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: C 2 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

			On Street - lf.	-		
Total Length lf.:		**10560**	Enhanced SW -l	**10,560**	Off Street -lf.	**-**
Potential Development Cost						
	Item		**Quantity**	**Unit**	**Unit Price**	**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)		0	CY	$12.00	$ -
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material		0	SF	$5.00	$ -
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)		1,760	CY	$12.00	$ 21,120
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material		84,480	SF	$5.00	$ 422,400
4	On Street Bicycle Markings		21,120	LF	$3.00	$ 63,360
5	Trail Striping		0	LF	$3.00	$ -
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)		4	EA	$1,500.00	$ 6,000
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet		0	EA	$1,000.00	$ -
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)		0	EA	$20,000.00	$ -
9	Trail directional/safety signs (assume 1 every 500 linear feet)		21	EA	$500.00	$ 10,560
10	Major trail access point sign (1 every 2640 linear feet)		4	EA	$3,000.00	$ 12,000
11	Intersection crosswalk striping		8	EA	$1,000.00	$ 8,000
12	Intersection accessible ramps		16	EA	$1,500.00	$ 24,000
13	Bridge Crossing (Assumes (1) - 100' span)		0	EA	$180,000.00	$ -
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)		211,200	SF	$0.15	$ 31,680
15	Signalize Crossings		2	EA	$15,000.00	$ 30,000
Subtotal Base Construction Cost				0	$0	**$ 629,120**
				0	$0	
AMENITY COSTS				**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)		4	EA	$2,500	$ 10,000
A2	Kiosks (1 per trail head)		1	EA	$6,500	$ 6,500
A3	Drinking Fountain		1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement		0	EA	$5,500	$ -
A5	Soft/Natural Surface Trails			SF	$3.50	$ -
Subtotal Amenity Construction Costs						**$ 21,500**
Subtotal Construction Cost						**$ 650,620**
Design, Testing, Administration,Misc. Costs (15%)						$ 97,593
Contingency at Pre-Design Level (20%)						$ 130,124
Total						**$ 878,337**
Estimated Cost per Linear Foot						**$ 166**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: D 2.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

			On Street - lf.	-		
Total Length lf.:	**13200**		Enhanced SW -l	**4,300**	Off Street -lf.	**8,900**
Potential Development Cost						
	Item	**Quantity**	**Unit**	**Unit Price**		**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	5,274	CY	$12.00	$	63,289
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	106,800	SF	$5.00	$	534,000
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	717	CY	$12.00	$	8,600
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	34,400	SF	$5.00	$	172,000
4	On Street Bicycle Markings	8,600	LF	$3.00	$	25,800
5	Trail Striping	8,900	LF	$3.00	$	26,700
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$	7,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	18	EA	$1,000.00	$	17,800
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	4	EA	$20,000.00	$	89,000
9	Trail directional/safety signs (assume 1 every 500 linear feet)	26	EA	$500.00	$	13,200
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$	15,000
11	Intersection crosswalk striping	2	EA	$1,000.00	$	2,000
12	Intersection accessible ramps	4	EA	$1,500.00	$	6,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$	-
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	264,000	SF	$0.15	$	39,600
15	Signalize Crossings	1	EA	$15,000.00	$	15,000
Subtotal Base Construction Cost			0	$0	**$**	**1,035,489**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$	12,500
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	7	EA	$5,500	$	37,083
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**61,083**
Subtotal Construction Cost					**$**	**1,096,572**
Design, Testing, Administration,Misc. Costs (15%)					$	164,486
Contingency at Pre-Design Level (20%)					$	219,314
Total					**$**	**1,480,373**
Estimated Cost per Linear Foot					**$**	**280**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: E 2.25 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

			On Street - lf.	-		
Total Length lf.:	**11880**		Enhanced SW -l	**7,800**	Off Street -lf.	**4,080**
Potential Development Cost						
	Item	**Quantity**	**Unit**	**Unit Price**		**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	2,418	CY	$12.00	$	29,013
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	48,960	SF	$5.00	$	244,800
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	1,300	CY	$12.00	$	15,600
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	62,400	SF	$5.00	$	312,000
4	On Street Bicycle Markings	15,600	LF	$3.00	$	46,800
5	Trail Striping	4,080	LF	$3.00	$	12,240
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$	6,750
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	8	EA	$1,000.00	$	8,160
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	2	EA	$20,000.00	$	40,800
9	Trail directional/safety signs (assume 1 every 500 linear feet)	24	EA	$500.00	$	11,880
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$	13,500
11	Intersection crosswalk striping	6	EA	$1,000.00	$	6,000
12	Intersection accessible ramps	12	EA	$1,500.00	$	18,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$	-
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	237,600	SF	$0.15	$	35,640
15	Signalize Crossings	3	EA	$15,000.00	$	45,000
Subtotal Base Construction Cost			0	$0	**$**	**846,183**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$	11,250
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	3	EA	$5,500	$	17,000
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**39,750**
Subtotal Construction Cost					**$**	**885,933**
Design, Testing, Administration,Misc. Costs (15%)					$	132,890
Contingency at Pre-Design Level (20%)					$	177,187
Total					**$**	**1,196,010**
Estimated Cost per Linear Foot					**$**	**227**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: F

1.75 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-		
Total Length lf.:	**9240**	Enhanced SW -l	**4,000**	Off Street -lf.	**5,240**

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	3,105	CY	$12.00	$ 37,262
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	62,880	SF	$5.00	$ 314,400
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	667	CY	$12.00	$ 8,000
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	32,000	SF	$5.00	$ 160,000
4	On Street Bicycle Markings	8,000	LF	$3.00	$ 24,000
5	Trail Striping	5,240	LF	$3.00	$ 15,720
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	4	EA	$1,500.00	$ 5,250
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	10	EA	$1,000.00	$ 10,480
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	3	EA	$20,000.00	$ 52,400
9	Trail directional/safety signs (assume 1 every 500 linear feet)	18	EA	$500.00	$ 9,240
10	Major trail access point sign (1 every 2640 linear feet)	4	EA	$3,000.00	$ 10,500
11	Intersection crosswalk striping	4	EA	$1,000.00	$ 4,000
12	Intersection accessible ramps	8	EA	$1,500.00	$ 12,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$ -
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	184,800	SF	$0.15	$ 27,720
15	Signalize Crossings	2	EA	$15,000.00	$ 30,000
Subtotal Base Construction Cost			0	$0	**$ 720,972**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	4	EA	$2,500	$ 8,750
A2	Kiosks (1 per trail head)	1	EA	$6,500	$ 6,500
A3	Drinking Fountain	1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	4	EA	$5,500	$ 21,833
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 42,083**
Subtotal Construction Cost					**$ 763,056**
Design, Testing, Administration,Misc. Costs (15%)					$ 114,458
Contingency at Pre-Design Level (20%)					$ 152,611
Total					**$ 1,030,125**
Estimated Cost per Linear Foot					**$ 195**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: G 2.75 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

			On Street - lf.	-		
Total Length lf.:	**14520**		Enhanced SW -l	-	Off Street -lf.	**14,520**

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	8,604	CY	$12.00	$ 103,253
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	174,240	SF	$5.00	$ 871,200
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	0	CY	$12.00	$ -
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	0	SF	$5.00	$ -
4	On Street Bicycle Markings	0	LF	$3.00	$ -
5	Trail Striping	14,520	LF	$3.00	$ 43,560
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	6	EA	$1,500.00	$ 8,250
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	29	EA	$1,000.00	$ 29,040
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	7	EA	$20,000.00	$ 145,200
9	Trail directional/safety signs (assume 1 every 500 linear feet)	29	EA	$500.00	$ 14,520
10	Major trail access point sign (1 every 2640 linear feet)	6	EA	$3,000.00	$ 16,500
11	Intersection crosswalk striping	2	EA	$1,000.00	$ 2,000
12	Intersection accessible ramps	4	EA	$1,500.00	$ 6,000
13	Bridge Crossing (Assumes (1) - 100' span)	3	EA	$180,000.00	$ 540,000
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	290,400	SF	$0.15	$ 43,560
15	Signalize Crossings	0	EA	$15,000.00	$ -
Subtotal Base Construction Cost			0	$0	**$ 1,823,083**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	6	EA	$2,500	$ 13,750
A2	Kiosks (1 per trail head)	4	EA	$6,500	$ 26,000
A3	Drinking Fountain	4	EA	$5,000	$ 20,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	11	EA	$5,500	$ 60,500
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 120,250**
Subtotal Construction Cost					**$ 1,943,333**
Design, Testing, Administration,Misc. Costs (15%)					$ 291,500
Contingency at Pre-Design Level (20%)					$ 388,667
Total					**$ 2,623,500**
Estimated Cost per Linear Foot					**$ 497**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: H 2.25 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-			
Total Length lf.:	**11880**	Enhanced SW -l	**11,000**	Off Street -lf.		**880**
Potential Development Cost						
	Item	**Quantity**	**Unit**	**Unit Price**		**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	521	CY	$12.00	$	6,258
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	10,560	SF	$5.00	$	52,800
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	1,833	CY	$12.00	$	22,000
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	88,000	SF	$5.00	$	440,000
4	On Street Bicycle Markings	22,000	LF	$3.00	$	66,000
5	Trail Striping	880	LF	$3.00	$	2,640
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$	6,750
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	2	EA	$1,000.00	$	1,760
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	0	EA	$20,000.00	$	8,800
9	Trail directional/safety signs (assume 1 every 500 linear feet)	24	EA	$500.00	$	11,880
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$	13,500
11	Intersection crosswalk striping	7	EA	$1,000.00	$	7,000
12	Intersection accessible ramps	14	EA	$1,500.00	$	21,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$	-
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	237,600	SF	$0.15	$	35,640
15	Signalize Crossings	1	EA	$15,000.00	$	15,000
Subtotal Base Construction Cost			0	$0	**$**	**711,028**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$	11,250
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	1	EA	$5,500	$	3,667
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**26,417**
Subtotal Construction Cost					**$**	**737,444**
Design, Testing, Administration,Misc. Costs (15%)					$	110,617
Contingency at Pre-Design Level (20%)					$	147,489
Total					**$**	**995,550**
Estimated Cost per Linear Foot					**$**	**189**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: I 2.75 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

Total Length lf.:	**14520**	On Street - lf. Enhanced SW -l	**- 1,600**	Off Street -lf.		**12,920**

Potential Development Cost

	Item	Quantity	Unit	Unit Price		Amount
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	7,656	CY	$12.00	$	91,876
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	155,040	SF	$5.00	$	775,200
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	267	CY	$12.00	$	3,200
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	12,800	SF	$5.00	$	64,000
4	On Street Bicycle Markings	3,200	LF	$3.00	$	9,600
5	Trail Striping	12,920	LF	$3.00	$	38,760
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	6	EA	$1,500.00	$	8,250
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	26	EA	$1,000.00	$	25,840
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	6	EA	$20,000.00	$	129,200
9	Trail directional/safety signs (assume 1 every 500 linear feet)	29	EA	$500.00	$	14,520
10	Major trail access point sign (1 every 2640 linear feet)	6	EA	$3,000.00	$	16,500
11	Intersection crosswalk striping	7	EA	$1,000.00	$	7,000
12	Intersection accessible ramps	14	EA	$1,500.00	$	21,000
13	Bridge Crossing (Assumes (1) - 100' span)	1	EA	$180,000.00	$	180,000
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	290,400	SF	$0.15	$	43,560
15	Signalize Crossings	0	EA	$15,000.00	$	-
Subtotal Base Construction Cost			0	$0		**$ 1,428,506**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	6	EA	$2,500	$	13,750
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	10	EA	$5,500	$	53,833
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**79,083**
Subtotal Construction Cost					**$**	**1,507,589**

Design, Testing, Administration,Misc. Costs (15%)	$	226,138
Contingency at Pre-Design Level (20%)	$	301,518
Total	**$**	**2,035,245**
Estimated Cost per Linear Foot	**$**	**385**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment:J 3.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-			
Total Length lf.:	**18480**	Enhanced SW -l	**12,600**	Off Street -lf.		**5,880**
Potential Development Cost						
	Item	**Quantity**	**Unit**	**Unit Price**		**Amount**
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	3,484	CY	$12.00	$	41,813
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	70,560	SF	$5.00	$	352,800
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	2,100	CY	$12.00	$	25,200
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	100,800	SF	$5.00	$	504,000
4	On Street Bicycle Markings	25,200	LF	$3.00	$	75,600
5	Trail Striping	5,880	LF	$3.00	$	17,640
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	7	EA	$1,500.00	$	10,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	12	EA	$1,000.00	$	11,760
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	3	EA	$20,000.00	$	58,800
9	Trail directional/safety signs (assume 1 every 500 linear feet)	37	EA	$500.00	$	18,480
10	Major trail access point sign (1 every 2640 linear feet)	7	EA	$3,000.00	$	21,000
11	Intersection crosswalk striping	11	EA	$1,000.00	$	11,000
12	Intersection accessible ramps	22	EA	$1,500.00	$	33,000
13	Bridge Crossing (Assumes (1) - 100' span)	2	EA	$180,000.00	$	360,000
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	369,600	SF	$0.15	$	55,440
15	Signalize Crossings		EA	$15,000.00	$	-
Subtotal Base Construction Cost			0	$0		**$ 1,597,033**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	7	EA	$2,500	$	17,500
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	4	EA	$5,500	$	24,500
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**53,500**
Subtotal Construction Cost					**$**	**1,650,533**
Design, Testing, Administration,Misc. Costs (15%)					$	247,580
Contingency at Pre-Design Level (20%)					$	330,107
Total					**$**	**2,228,220**
Estimated Cost per Linear Foot					**$**	**422**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: K 2.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-		
Total Length lf.:	**13200**	Enhanced SW -l	-	Off Street -lf.	**13,200**

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	7,822	CY	$12.00	$ 93,867
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	158,400	SF	$5.00	$ 792,000
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	0	CY	$12.00	$ -
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	0	SF	$5.00	$ -
4	On Street Bicycle Markings	0	LF	$3.00	$ -
5	Trail Striping	13,200	LF	$3.00	$ 39,600
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$ 7,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	26	EA	$1,000.00	$ 26,400
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	7	EA	$20,000.00	$ 132,000
9	Trail directional/safety signs (assume 1 every 500 linear feet)	26	EA	$500.00	$ 13,200
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$ 15,000
11	Intersection crosswalk striping	6	EA	$1,000.00	$ 6,000
12	Intersection accessible ramps	12	EA	$1,500.00	$ 18,000
13	Bridge Crossing (Assumes (1) - 100' span)	1	EA	$180,000.00	$ 180,000
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	264,000	SF	$0.15	$ 39,600
15	Signalize Crossings	2	EA	$15,000.00	$ 30,000
Subtotal Base Construction Cost			0	$0	**$ 1,393,167**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$ 12,500
A2	Kiosks (1 per trail head)	1	EA	$6,500	$ 6,500
A3	Drinking Fountain	1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	10	EA	$5,500	$ 55,000
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 79,000**
Subtotal Construction Cost					**$ 1,472,167**

Design, Testing, Administration,Misc. Costs (15%)	$ 220,825
Contingency at Pre-Design Level (20%)	$ 294,433
Total	**$ 1,987,425**
Estimated Cost per Linear Foot	**$ 376**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: L — 2.75 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-		
Total Length lf.:	**14520**	Enhanced SW -l	**14,520**	Off Street -lf.	-

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	0	CY	$12.00	$ -
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	0	SF	$5.00	$ -
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	2,420	CY	$12.00	$ 29,040
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	116,160	SF	$5.00	$ 580,800
4	On Street Bicycle Markings	29,040	LF	$3.00	$ 87,120
5	Trail Striping	0	LF	$3.00	$ -
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	6	EA	$1,500.00	$ 8,250
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	0	EA	$1,000.00	$ -
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	0	EA	$20,000.00	$ -
9	Trail directional/safety signs (assume 1 every 500 linear feet)	29	EA	$500.00	$ 14,520
10	Major trail access point sign (1 every 2640 linear feet)	6	EA	$3,000.00	$ 16,500
11	Intersection crosswalk striping	12	EA	$1,000.00	$ 12,000
12	Intersection accessible ramps	24	EA	$1,500.00	$ 36,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$ -
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	290,400	SF	$0.15	$ 43,560
15	Signalize Crossings	4	EA	$15,000.00	$ 60,000
Subtotal Base Construction Cost			0	$0	**$ 887,790**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	6	EA	$2,500	$ 13,750
A2	Kiosks (1 per trail head)	1	EA	$6,500	$ 6,500
A3	Drinking Fountain	1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	0	EA	$5,500	$ -
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 25,250**
Subtotal Construction Cost					**$ 913,040**

Design, Testing, Administration,Misc. Costs (15%)	$ 136,956
Contingency at Pre-Design Level (20%)	$ 182,608
Total	**$ 1,232,604**
Estimated Cost per Linear Foot	**$ 233**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: M 2.25 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-			
Total Length lf.:	**11880**	Enhanced SW -l	**11,880**	Off Street -lf.		-

Potential Development Cost

	Item	Quantity	Unit	Unit Price		Amount
BASE COSTS						
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	0	CY	$12.00	$	-
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	0	SF	$5.00	$	-
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	1,980	CY	$12.00	$	23,760
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	95,040	SF	$5.00	$	475,200
4	On Street Bicycle Markings	23,760	LF	$3.00	$	71,280
5	Trail Striping	0	LF	$3.00	$	-
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$	6,750
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	0	EA	$1,000.00	$	-
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	0	EA	$20,000.00	$	-
9	Trail directional/safety signs (assume 1 every 500 linear feet)	24	EA	$500.00	$	11,880
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$	13,500
11	Intersection crosswalk striping	8	EA	$1,000.00	$	8,000
12	Intersection accessible ramps	16	EA	$1,500.00	$	24,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$	-
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	237,600	SF	$0.15	$	35,640
15	Signalize Crossings	3	EA	$15,000.00	$	45,000
Subtotal Base Construction Cost			0	$0	**$**	**715,010**
			0	$0		
AMENITY COSTS			**0**	**$0**		
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$	11,250
A2	Kiosks (1 per trail head)	1	EA	$6,500	$	6,500
A3	Drinking Fountain	1	EA	$5,000	$	5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	0	EA	$5,500	$	-
A5	Soft/Natural Surface Trails		SF	$3.50	$	-
Subtotal Amenity Construction Costs					**$**	**22,750**
Subtotal Construction Cost					**$**	**737,760**
Design, Testing, Administration,Misc. Costs (15%)					$	110,664
Contingency at Pre-Design Level (20%)					$	147,552
Total					**$**	**995,976**
Estimated Cost per Linear Foot					**$**	**189**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 6/1/2009

Main Spine Loop Concrete Trail- 12' width

Segment: N 2.25 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

		On Street - lf.	-		
Total Length lf.:	**11880**	Enhanced SW -l	-	Off Street -lf.	**11,880**

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	7,040	CY	$12.00	$ 84,480
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	142,560	SF	$5.00	$ 712,800
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	0	CY	$12.00	$ -
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	0	SF	$5.00	$ -
4	On Street Bicycle Markings	0	LF	$3.00	$ -
5	Trail Striping	11,880	LF	$3.00	$ 35,640
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	5	EA	$1,500.00	$ 6,750
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	24	EA	$1,000.00	$ 23,760
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	6	EA	$20,000.00	$ 118,800
9	Trail directional/safety signs (assume 1 every 500 linear feet)	24	EA	$500.00	$ 11,880
10	Major trail access point sign (1 every 2640 linear feet)	5	EA	$3,000.00	$ 13,500
11	Intersection crosswalk striping	0	EA	$1,000.00	$ -
12	Intersection accessible ramps	0	EA	$1,500.00	$ -
13	Bridge Crossing (Assumes (1) - 100' span)	2	EA	$180,000.00	$ 360,000
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	237,600	SF	$0.15	$ 35,640
15	Signalize Crossings	0	EA	$15,000.00	$ -
Subtotal Base Construction Cost			0	$0	**$ 1,403,250**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	5	EA	$2,500	$ 11,250
A2	Kiosks (1 per trail head)	1	EA	$6,500	$ 6,500
A3	Drinking Fountain	1	EA	$5,000	$ 5,000
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	9	EA	$5,500	$ 49,500
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 72,250**
Subtotal Construction Cost					**$ 1,475,500**

Design, Testing, Administration,Misc. Costs (15%)	$ 221,325
Contingency at Pre-Design Level (20%)	$ 295,100
Total	**$ 1,991,925**
Estimated Cost per Linear Foot	**$ 377**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

City of Mansfield Trails Master Plan 8/20/2009

Main Spine Loop Concrete Trail- 12' width

Segment: O 3.5 miles

Description: Planned as major trails connecting the city. The off-street portion of this segment shall consist of a 12' wide concrete all weather trail and shall make up the majority of the main trail spine. The 12' trail shall be centerline striped, straight to curvilinear in alignment as the corridor permits. This alignment may also include enhanced sidewalk improvements which shall consist of an 8' wide concrete paved walk on either side of the street (only one 8' wide walk is included in this cost estimate), and/or a shared on-street lanes with "Sharrows" bicycle route markings/signage or a marked bike lane to allow for continuous trail route. The trail loop may include amenities at intersections, access nodes and trail heads. Additional amenities such as shade structure, parking, landscape enhancements and additional bench seating is not included and will be developed as part of future improvements.

Total Length lf.:	**18480**	On Street - lf.	**-**		
		Enhanced SW -l	**8,300**	Off Street -lf.	**8,450**

Potential Development Cost

	Item	Quantity	Unit	Unit Price	Amount
BASE COSTS					
1	Grading Allowance (with .5' average of grading to be permitted over a 32' wide corridor)	5,007	CY	$12.00	$ 60,089
2	Concrete Path, 5 to 6 inch depth, 12' width, includes base material	101,400	SF	$5.00	$ 507,000
3	Grading Allowance (with .25' average of grading to be permitted over a 18' wide corridor)	1,383	CY	$12.00	$ 16,600
3	Enhance Sidewalk, 5 inch depth, 8' width, includes base material	66,400	SF	$5.00	$ 332,000
4	On Street Bicycle Markings	16,600	LF	$3.00	$ 49,800
5	Trail Striping	8,450	LF	$3.00	$ 25,350
6	Trail Mile and 1/2 Mile Marker (1 every 2640 linear feet)	7	EA	$1,500.00	$ 10,500
7	Culverts (12" diam. Max. for local drainage only). Allowance for one every 500 linear feet	17	EA	$1,000.00	$ 16,900
8	Major drainage culverts (36" to 48" box culvert, assume one every 2000 linear feet)	4	EA	$20,000.00	$ 84,500
9	Trail directional/safety signs (assume 1 every 500 linear feet)	37	EA	$500.00	$ 18,480
10	Major trail access point sign (1 every 2640 linear feet)	7	EA	$3,000.00	$ 21,000
11	Intersection crosswalk striping	7	EA	$1,000.00	$ 7,000
12	Intersection accessible ramps	14	EA	$1,500.00	$ 21,000
13	Bridge Crossing (Assumes (1) - 100' span)	0	EA	$180,000.00	$ -
14	Turf Re-establishment (allowance - assumes 10' on either side of trail)	369,600	SF	$0.15	$ 55,440
15	Signalize Crossings	3	EA	$15,000.00	$ 45,000
Subtotal Base Construction Cost			0	$0	**$ 1,270,659**
			0	$0	
AMENITY COSTS			**0**	**$0**	
A1	Security lighting at access point (1 pole per access point)	7	EA	$2,500	$ 17,500
A2	Kiosks (1 per trail head)	0	EA	$6,500	$ -
A3	Drinking Fountain	0	EA	$5,000	$ -
A4	Bench Nodes 4 per mile, includes bench, trash receptacle and decorative pavement	6	EA	$5,500	$ 35,208
A5	Soft/Natural Surface Trails		SF	$3.50	$ -
Subtotal Amenity Construction Costs					**$ 52,708**
Subtotal Construction Cost					**$ 1,323,367**
Design, Testing, Administration,Misc. Costs (15%)					$ 198,505
Contingency at Pre-Design Level (20%)					$ 264,673
Total					**$ 1,786,546**
Estimated Cost per Linear Foot					**$ 338**

Note: *Order of Magnitude Estimate only, without detailed design.*
This estimate is intended only to establish a range of potential costs for this construction effort.
Costs shown are in 2009 dollars.

Chapter 8

Implementation

INTRODUCTION

The aim of the Parks, Recreation and Trails Master Plan is to provide a "roadmap" to fulfill the vision for the City. This chapter prioritizes the recommendations and identifies potential sources of funding. Prioritization is based on information received from public input as well as from the needs assessment pertaining to facility and acreage standards shown in Chapter 6.

The criteria used to prioritize the park and recreation needs in Mansfield are as follows:

- Level of need based on citizen input (demand based need);
- Level of need based on standards assessments (standard based need); and
- Opportunities for recreation facilities and parks based on existing physical conditions in Mansfield (resource based need) e.g. the natural and rural landscapes (including the undulating tree covered landscape on the western side of the city), Walnut Creek that bisects the City and other smaller creek corridors, proximity to Joe Pool Lake, and the Historical Downtown.

HIGH PRIORITY FACILITY NEEDS

Prioritization of facility needs involves a process that weighs a number of factors. Particularly, such factors include current trends, regional trends, citizen input, PARD staff input, as well as Planning Team consultant input, all considered along with target standards. The citizen input, while offering direction and guidance, does not alone produce a resultant list of priorities. The citizen responses are tempered by consideration of other factors that impact each facility choice. This process seeks to arrive at the best assessment of need and response for Mansfield and its citizens taken as a whole. For this reason, it is important to understand that the survey results tables do not directly correlate with the overall, citywide ranked priorities.

A summary of key facility and programming needs in Mansfield is as follows:

Figure 8.1
Overall Parks, Recreation, Open Space Priorities & Trails

Overarching Priority

Acquiring land to:

1. Preserve & provide access to open space and natural landscapes
2. Develop future parks and recreation facilities

Outdoor Facilities

1. Hike and bike trails & bike routes
2. Outdoor leisure aquatics
3. Provide outdoor recreation facilities as part of the development of Community and Neighborhood Parks with emphasis on picnic areas, playgrounds, sand volleyball, outdoor basketball, and youth soccer fields

Indoor Facilities

1. Provide a multi-generational indoor recreation center consistent with the expressed wishes of the community and in balance with surrounding comparable cities
2. Expand the existing Senior Facility

2009-2020 ACTION PLAN

Recommendations and Implementation of the Parks, Recreation, Open Space and Trails Master Plan

The Action Plan is one of the most important components of the Master Plan. In the Action Plan, the recommendations made in the Master Plan are transformed into concrete action items, are prioritized, and are given estimated costs. For parks, these action items include the development of land already acquired and dedicated for parks, the acquisition of additional land for new parks, and the general improvement of existing parks. For facilities, these action items address both the dry side components of recreation centers as well as the leisure and wellness aquatic needs of the community. The majority of the action items shown on the Action Plan should be implemented or initiated over the general life of this Master Plan, which covers the next five to 10 years. However, the Master Plan also includes other longer range action items. The Action Plan contains action items distributed among three priority categories:

- **High Priority Actions** - List of top priority action items to be completed or initiated over the next five years.
- **Medium Priority Actions** - List of action items to be completed or initiated in five to 10 years.
- **Long-Range Actions** - List of action items to be initiated in 10 or more years.

It is important to note that the Action Plan is not intended to serve as a business plan. The intent of this action plan is to support and assist the MPFDC in updating their existing business plan.

Below are the estimated total associated costs for the high priority action items, which reflect needed improvements for the 2009 to 2014 time period based on target levels of service for the City and forecasted population growth. It is important to note that the "Estimated Cost" column reflects the actual cost of improvement while the "MPFDC/PARD-Assumed Cost" column reflects the cost burden that would be assumed by the Mansfield Park Facilities Development Corporation and the Parks and Recreation Department.

Table 8.1
High Priority Actions & Associated Costs
(based on assumed needs for 2009 to 2014*)

	Units	Estimated Cost (2014 Dollars)	MPFDC/PARD-Assumed Cost
Total Land Acquisition	790 acres	$198,750,000	$45,150,000
Park Development and Improvement		$61,930,000	$53,880,000
Development of Recreational and Maintenance Facilities		$27,995,000	$27,995,000
Consultancy Studies		$875,000	$650,000
Total Associated Costs for High Priority Actions		$289,550,000	$127,675,000

** High Priority Actions are based on target levels of service for the City and forecasted population growth between 2009 and 2014.*

Table 8.2: Action Plan Years 2009 – 2020 and Beyond to 2035 *on the next page summarizes the basic actions and tasks required over the next 10 years and beyond in order for Mansfield to reach the most critical of the target goals as established in the Parks, Recreation, Open Space and Trails Master Plan.*

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Table 8.2

Action Plan Years 2009 - 2020 and beyond to 2035

City of Mansfield Park, Recreation and Trails Master Plan

This document is a tool and guideline for planning and grant application purposes only. Projects will be completed when and if funding is available; all appropriate projects will be presented to City Council and the Mansfield Park Facilities Development Corporation (MPFDC) for their future prioritization and approval prior to project implementation.

Priority	Action	Additional Acreage	Facility Type	Estimated Cost for Preferred Improvement Level (2014 Dollars)	Main Source of Funding	PARD-assumed Cost	Additional and Other Potential Funding Sources	Other City Department/ Institution involvement
High Priority (1 to 5 Year) Actions & Associated Costs								
	Policy Actions							
1-5 years	**Park Land Dedication Ordinance Revision** - Revise the Park Land Dedication Ordinance to meet regional standards			$0		$0		Planning Department
1-5 years	**Floodplain Ordinance Revision** - Revise the Floodplain Ordinance to disallow all reclamation of the floodplain at build-out conditions.			$0		$0		Engineering Department
1-5 years	**Arts Selection Committee** - Form an official Arts Selection Committee of citizens from the local arts community to select artists for commission and to approve public art pieces.			$0		$0		Cultural Arts Board
	Land Acquisition							
1-5 years	**Neighborhood Parks** - Acquire about 80 acres for 10 future neighborhood parks @ 5 to 10 acres per park (~ 8 acres).	80 acres	**Neighborhood Park**	$8,000,000	Park Land Dedication	$0	Park Land Dedication	
1-5 years	**Community Parks - High Impact** - Acquire about 140 acres for 2 future high impact community parks @ 25 - 100 acres per park (~ 70 acres).	140 acres	**Community Park**	$14,000,000	CIP, Grant Funding	$14,000,000	Private Donations, MISD assistance, Grant Funding including Tarrant and Johnson County Grant Funds	
1-5 years	**Community Parks - Low Impact** - Acquire about 140 acres for 2 future low impact community parks @ 25 - 100 acres per park (~ 70 acres).	140 acres	**Community Park**	$14,000,000	CIP, Grant Funding	$14,000,000	Private Donations, MISD assistance, Grant Funding including Tarrant and Johnson County Grant Funds	
1-5 years	**Special Purpose Parks** - Acquire about 30 acres for special purpose parks including **trail heads**, **trail gateways**, and other as yet unforeseen special purpose use.	30 acres	**Special Purpose Park**	$3,000,000	CIP, Grant Funding	$3,000,000	Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	
1-5 years	**Linear Parks** - Acquire about 50 acres for trail connections; One mile of trail with a trail easement of 50 feet wide, constitutes about 6 acres. 50 acres allows the possibility for constructing about 8 miles of trail.	50 acres	**Linear Park**	$5,000,000	CIP, Grant Funding	$5,000,000	Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	
1-5 years	**Open Space Dedication and/or Protection (in 100 year Floodplain)** - Land acquisition for **open space preservation (assumed $20,000 per acre).**	200 acres	**Open Space**	$4,000,000	Floodplain Ordinance	$4,000,000	CIP, Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	Planning, Engineering,
1-5 years	**Open Space Acquisition & Protection Buffer (out of 100 year Floodplain)** - Land acquisition for **open space preservation** (areas of **cultural and natural value)**.	50 acres	**Open Space**	$5,000,000	CIP, Grant Funding, Tarrant, Ellis, and Johnson County Grant Funds	$5,000,000	CIP, Park Land Dedication, Private Donations	
1-5 years	**Regional Parks - Park 1 (along Walnut Creek and West Broad Street) -** Acquire about 650 acres jointly with the neighboring city and Tarrant and Johnson Counties.	650 acres	**Special Purpose Park**	$65,000,000	CIP, Grant Funding; joint effort with neighboring city and counties	$50,000	Tarrant and Johnson County Grant Funds; PARD commitment: Administration & consultant fee	
1-5 years	**Regional Parks - Park 2 (along 287 South)** - Acquire about 650 acres jointly with the neighboring city and Johnson and Ellis Counties.	650 acres	**Special Purpose Park**	$65,000,000	CIP, Grant Funding; joint effort with neighboring city and counties	$50,000	Private Donations, Johnson and Ellis County Grant Funds; PARD commitment: Administration & consultant fee	
1-5 years	**Regional Parks - Park 3 (Loyd Park)** - No acquisition required.	210 acres	**Special Purpose Park**	$15,750,000	Corps of Engineers agreement.	$50,000		
	Subtotal Land Acquisition (excluding Regional Parks): 1-5 years	**690 acres**		**$198,750,000**		**$45,150,000**		
	Park Development and Improvement							
1-5 years	**Eight New Neighborhood Parks** - Develop 8 neighborhood parks at $1,250,000 per park over a period of 5 years.		**Neighborhood Park**	$10,000,000	CIP	$10,000,000		
1-5 years	**Oliver-Williams Community Park** - Develop the Williams Property into a low-impact community park with an Environmental Learning/Nature Center and Botanical Gardens		**Community Park**	$4,500,000	CIP, Grant Funding	$4,500,000	TPWD Outdoor Grant, Private Donations, explore MISD assistance	
1-5 years	**One New High Impact Community Park** - Develop 1 community park at $15,000,000 per park, over a period of 5 years.		**Community Park**	$15,000,000	CIP, Grant Funding	$15,000,000	TPWD Outdoor Grant, Private Donations, explore MISD assistance	
1-5 years	**One New Low Impact Community Park** - Develop 1 community park at $4,500,000 per park, over a period of 5 years.		**Community Park**	$4,500,000	CIP, Grant Funding	$4,500,000	TPWD Outdoor Grant, Private Donations, explore MISD assistance	
1-5 years	**Neighborhood Park Improvement** - See recommendations as per Chapter 3 (two parks @ $250,000 per park).		**Neighborhood Park**	$500,000	CIP	$500,000	TPWD Outdoor Grant, explore MISD assistance	
1-5 years	**Community Park Improvement** - See recommendations as per Chapter 3 (Add ball fields, soccer fields, pavilions, and parking to address comprehensive needs).		**Community Park**	$2,000,000	CIP	$2,000,000	TPWD Outdoor Grant, explore MISD assistance	
1-5 years	**Special Purpose Park -** Develop a park that includes Skateboarding facilities and other related amenities.	**Using existing funding**	**Special Purpose Park**	$750,000	CIP	$750,000	TPWD Outdoor Grant, Private Donations	
1-5 years	**Hike and Bike Trails** (Developer driven) **-** Develop 10 miles of trails at $800,000 per mile over a period of 5 years.		**Hike and Bike Trails**	$8,000,000	Park Development Fee	$0		
1-5 years	**Hike and Bike Trails** (City driven) **-** Develop 10 miles of trails at $800,000 per mile over a period of 5 years.		**Hike and Bike Trails**	$8,000,000	CIP, Grant Funding	$8,000,000	TPWD Outdoor Grant, Private Donations	
1-5 years	**Trail Heads and Trail Gateways -** Develop 2 trail heads and gateways at $750,000 per unit, over a period of 5 years.		**Hike and Bike Trails**	$1,500,000	CIP	$1,500,000	TPWD Outdoor Grant, Private Donations	
1-5 years	**Trail Bridges -** Develop 5 pedestrian bridges along the trail system at a cost of $250,000 per bridge.		**Hike and Bike Trails**	$1,250,000	CIP	$1,250,000	TPWD Outdoor Grant, Private Donations	
1-5 years	**Tree Planting** - Implement a focused tree planting program at $50,000 per year for all parks.		**Citywide**	$250,000	Tree Mitigation Fund	$250,000	Private Donations, TPWD grant	
1-5 years	**Public Art** - Provide for environmental and outdoor art in parks, recreation, and open space facilities. Develop a fund which collects 1% of the budget of all public facility development and improvement.	**Varies**	**Citywide**	$50,000	CIP	$0	Private Donations	Chamber of Commerce, City Arts Commission
1-5 years	**Subtotal**			**$56,300,000**		**$48,250,000**		
1-5 years	**Maintenance budget for parks and recreation facilities** - Calculated at 2-4% per year of overall preferred development cost; rounded to 2% per year for 5 years = 10%.			$5,630,000	General Fund, Half Cent Sales Tax	$5,630,000		
	Subtotal Park Development and Improvement: 1-5 years			**$61,930,000**		**$53,880,000**		
	Development of Recreational and Maintenance Facilities							
Ongoing	**Sport Fields** - Accounted for in the development and improvement of community parks.						TPWD Outdoor Grant, Private Donations, explore MISD assistance	
Ongoing	**Support Facilities** - Playgrounds, Pavilions, Picnic Facilities, Park Restrooms etc. are accounted for in the above park development and improvement.						TPWD Outdoor Grant, Private Donations	
1-5 years	**Multi-Generation Recreation / Aquatic Center** - This includes all project development costs projected in advance (does not include land acquisition costs).			$25,200,000	CIP	$25,200,000	TPWD Grant, Private Donations, explore MISD assistance, Economic Development Corporation Funds	
1-5 years	**MAC renovation** - Renovate the Mansfield Activities Center into an expanded Senior Center.			$250,000	CIP	$250,000	Economic Development Corporation Funds	
1-5 years	**Subtotal**			**$25,450,000**		**$25,450,000**		
1-5 years	**Maintenance budget for parks and recreation facilities** - Calculated at 2-4% per year of development cost; rounded to 2% per year for 5 years = 10%.			$2,545,000	General Fund, Half Cent Sales Tax	$2,545,000		
	Subtotal Development of Recreational and Maintenance Facilities: 1-5 years			**$27,995,000**		**$27,995,000**		
	Recommended Consultancy Studies							
1-5 years	**Bicycle & Pedestrian Master Plan** - Prepare a comprehensive City wide Bicycle & Pedestrian Master Plan utilizing streets and natural and manmade corridors to provide a network of pedestrian and bike connections.			$200,000		$200,000	CIP, TPWD Outdoor Grant, Private Donations, Bond Funds, Other City Departments	Planning, Engineering (Transportation Plan)
1-5 years	**Preservation Master Plan -** Prepare a comprehensive City wide Preservation Master Plan, with recommendations for the use, protection and management of valuable and vulnerable natural and cultural resources within the City of Mansfield, including an **Ecological Habitat and Cultural Landscape Resource Map** and a **Creek Corridor Study** to establish an integrated riparian corridor system within the City as part of this Preservation Master Plan.			$300,000		$300,000	CIP, TPWD Outdoor Grant, Private Donations, Bond Funds, Other City Departments	Planning, Engineering (Flood Hazard & Floodplain Management),

Table 8.2
Action Plan Years 2009 - 2020 and beyond to 2035
City of Mansfield Park, Recreation and Trails Master Plan

This document is a tool and guideline for planning and grant application purposes only. Projects will be completed when and if funding is available; all appropriate projects will be presented to City Council and the Mansfield Park Facilities Development Corporation (MPFDC) for their future prioritization and approval prior to project implementation.

Priority	Action	Additional Acreage	Facility Type	Estimated Cost for Preferred Improvement Level (2014 Dollars)	Main Source of Funding	PARD-assumed Cost	Additional and Other Potential Funding Sources	Other City Department/ Institution involvement
1-5 years	**Landscape Protection Overlay District Master Plan** - Develop an overlay district master plan that includes development and management standards for the protection of the aesthetic and cultural quality of farmland and Post Oak forests in Mansfield and its ETJ.			$100,000		$100,000	CIP, TPWD Outdoor Grant, Private Donations, Bond Funds, Other City Departments	Planning,
1-5 years	**Rural Road Overlay District Master Plan** - Develop an overlay district master plan for rural roads, in order to protect the aesthetic and cultural quality of rural roads in Mansfield and its ETJ.			$125,000	Planning Budget	$0	CIP, TPWD Outdoor Grant, Private Donations, Bond Funds, Other City Departments	Planning, Engineering (Transportation Plan),
1-5 years	**Park Wayfinding Master Plan** - Develop a Master Plan that addresses signage for all parks, trails and recreation facilities in terms of wayfinding, directional and informational signage, including park name, gateway monuments mile markers etc.			$150,000		$50,000	CIP, TPWD Outdoor Grant, Private Donations, Bond Funds	Planning
	Subtotal Recommended Studies			**$875,000**		**$650,000**		
Summary of Associated Costs for High Priority (2009 to 2014) Actions								
Total Land Acquisition		**690 acres**		**$198,750,000**		**$45,150,000**		
Total Associated Costs: Park Development and Improvement				**$61,930,000**		**$53,880,000**		
Total Associated Costs: Development or Recreational and Maintenance Facilities				**$27,995,000**		**$27,995,000**		
Total Associated Costs: Consultancy Studies				**$875,000**		**$650,000**		
Total Associated Costs for High Priority (2009 to 2014) Actions				**$289,550,000**		**$127,675,000**		

Notes:
Costs shown are 2014 values at a pre-design level, and will vary as more detailed design occurs. List is for guidance in planning, and not all items may be implemented.
Land costs are estimated at an average of $100,000 per acre at an estimated 2014 value. Land costs shown are general estimates intended to establish allowances and will vary.
Grants and donations may reduce the cost of each item significantly.

5 to 10 Year Priority Actions & Associated Costs

	Land Acquisition							
5-10 years	**Neighborhood Parks** - Acquire about 80 acres for 10 future neighborhood parks @ 5 to 10 acres per park (~ 8 acres).	80 acres	**Neighborhood Park**	$8,000,000	Park Land Dedication	$0	Park Land Dedication, CIP, Private Donations, Tarrant and Johnson County Grant Funds	
5-10 years	**Community Parks - High Impact** - Acquire about 140 acres for 2 future high impact community parks @ 25 - 100 acres per park (~ 70 acres).	140 acres	**Community Park**	$14,000,000	CIP	$14,000,000	Park Land Dedication, Private Donations, MISD assistance, Tarrant and Johnson County and other Grant Funds	
5-10 years	**Community Parks - Low Impact** - Acquire about 140 acres for 2 future low impact community parks @ 25 - 100 acres per park (~ 70 acres).	140 acres	**Community Park**	$14,000,000	CIP	$14,000,000	Park Land Dedication, Private Donations, MISD assistance, Tarrant and Johnson County and other Grant Funds	
5-10 years	**Special Purpose Parks** - Acquire about 50 acres for special purpose parks including **trail heads**, **trail gateways**, and other as yet unforeseen special purpose use.	30 acres	**Special Purpose Park**	$3,000,000	CIP, Grant Funding	$3,000,000	Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	
5-10 years	**Linear Parks** - Acquire about 50 acres for trail connections; One mile of trail with a trail easement of 50 feet wide, constitutes about 6 acres. 50 acres allows the possibility for constructing about 8 miles of trail.	50 acres	**Special Purpose Park**	$5,000,000	CIP, Grant Funding	$5,000,000	Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	
5-10 years	**Open Space Dedication and/or Protection (in 100 year Floodplain)** - Land acquisition for **open space preservation** and **proposed Regional Parks (assumed $10,000 per acre).**	200 acres	**Open Space**	$2,000,000	Floodplain Ordinance Revision	$0	CIP, Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	Planning, Engineering,
5-10 years	**Open Space Acquisition & Protection Buffer (out of 100 year Floodplain)** - Land acquisition for **open space preservation** (areas of **cultural and natural value)**.	50 acres	**Open Space**	$5,000,000	CIP, Grant Funding	$5,000,000	Park Land Dedication, Private Donations, Tarrant and Johnson County Grant Funds	
	Subtotal Land Acquisition: 5-10 years	**690 acres**		**$51,000,000**		**$41,000,000**		
	Park Development and Improvement							
5-10 years	**Eight New Neighborhood Parks** - Develop 8 neighborhood parks at $1,250,000 per park over a period of 5 years.		**Neighborhood Park**	$10,000,000	CIP	$10,000,000		
5-10 years	**One New High Impact Community Park** - Develop 1 community park at $15,000,000 per park, over a period of 5 years.		**Community Park**	$15,000,000	CIP, Grant Funding	$15,000,000	TPWD Outdoor Grant, Private Donations, explore MISD assistance	
5-10 years	**One New Low Impact Community Park** - Develop 1 community park at $4,500,000 per park, over a period of 5 years.		**Community Park**	$4,500,000	CIP, Grant Funding	$4,500,000	TPWD Outdoor Grant, Private Donations, explore MISD assistance	
5-10 years	**Neighborhood Park Improvement** - See recommendations as per Chapter 3 (two parks @ $250,000 per park).		**Neighborhood Park**	$500,000	CIP	$500,000	TPWD Outdoor Grant, explore MISD assistance	
5-10 years	**Community Park Improvement** - See recommendations as per Chapter 3 (Add ball fields, soccer fields, pavilions, and parking to address comprehensive needs).		**Community Park**	$2,000,000	CIP	$2,000,000	TPWD Outdoor Grant, explore MISD assistance	
5-10 years	**Special Purpose Parks** - Develop Special Purpose Parks as needed		**Special Purpose Park**	$1,000,000	CIP	$1,000,000	CIP, TPWD Outdoor Grant, Private Donations	
5-10 years	**Hike and Bike Trails** (developer driven) - Develop 15 miles of trails at $800,000 per mile, over a period of 5 years.		**Hike and Bike Trails**	$12,000,000	Park Development Fee	$0	CIP, TPWD Outdoor Grant, Private Donations	
5-10 years	**Hike and Bike Trails** (City driven) - Develop 15 miles of trails at $800,000 per mile, over a period of 5 years.		**Hike and Bike Trails**	$12,000,000	CIP, Grant Funding	$12,000,000	CIP, TPWD Outdoor Grant, Private Donations	
5-10 years	**Trail Heads and Trail Gateways** - Develop 2 trail heads and gateways at $750,000 per unit over a period of 5 years.		**Hike and Bike Trails**	$1,500,000	CIP	$1,500,000	CIP, TPWD Outdoor Grant, Private Donations	
5-10 years	**Trail Bridges** - Develop 5 pedestrian bridges along the trail system at a cost of $250,000 per bridge.		**Hike and Bike Trails**	$1,250,000	CIP	$1,250,000	TPWD Outdoor Grant, Private Donations	
5-10 years	**Tree Planting** - Implement a focused tree planting program at $50,000 per year for all parks.		**Citywide**	$250,000	CIP	$250,000	CIP, Private Donations, TPWD grant	
5-10 years	**Public Art** - Provide for environmental and outdoor art in parks and open spaces.		**Citywide**	$50,000	Private Donations	$0		
5-10 years	**Subtotal**			**$60,050,000**		**$48,000,000**		
5-10 years	**Maintenance budget for parks and recreation facilities** - Calculated at 2-4% per year of development cost; rounded to 2% per year for 5 years = 10%.			$6,005,000	General Fund	$6,535,000		
	Subtotal Park Development and Improvement: 5-10 years			**$66,055,000**		**$54,535,000**		
	Development of Recreational and Maintenance Facilities							
Ongoing	**Sport Fields** - Accounted for in the development and improvement of community parks.						CIP, TPWD Outdoor Grant, Private Donations, explore MISD assistance	
Ongoing	**Support Facilities** - Playgrounds, Pavilions, Picnic Facilities, Park Restrooms etc. are accounted for in the above park development and improvement.						CIP, TPWD Outdoor Grant, Private Donations	
5-10 years	**Regional Multi-Generation Recreation / Aquatic Center** - Develop a second regional center. This includes all project development costs (does not include land acquisition costs).			$25,200,000	CIP	$25,200,000	CIP, TPWD Grant, Private Donations, explore MISD assistance, Economic Development Corporation Funds	
5-10 years	**Environmental Learning/Nature Center** - Develop a second Environmental Learning Center containing two lecture labs sized for forty students per lab with support offices, toilets and storage (between 8,000 to 10,000 SF).			$500,000	CIP	$500,000	CIP, TPWD Outdoor Grant, Private Donations, explore MISD assistance	
5-10 years	**Amphitheater** - Develop an additional amphitheater with elevated performance stage, shaded spectator seating, restrooms, parking, water and electricity and concession vendor accommodations.			$1,250,000	CIP	$1,250,000	CIP, TPWD Outdoor Grant, Private Donations, explore MISD assistance	
5-10 years	**Park Maintenance Facility** - Develop the future parks operation and maintenance facility (See Chapter 7).			$5,000,000	CIP	$5,000,000		
5-10 years	**Subtotal**			**$31,950,000**		**$31,950,000**		
5-10 years	**Maintenance budget for parks and recreation facilities** - Calculated at 2-4% per year of development cost; rounded to 2% per year for 5 years = 10%.			$3,195,000	General Fund	$3,195,000		
	Subtotal Development of Recreational and Maintenance Facilities: 5-10 years			**$35,145,000**		**$35,145,000**		
Summary of Associated Costs for 2015 to 2020 Actions								
Total Land Acquisition		**690 acres**		**$51,000,000**		**$41,000,000**		
Total Associated Costs: Park Development and Improvement				**$66,055,000**		**$54,535,000**		
Total Associated Costs: Development or Recreational and Maintenance Facilities				**$35,145,000**		**$35,145,000**		
Total Associated Costs: Consultancy Studies				**$0**		**$0**		
Total Associated Costs for 2015 to 2020 Actions		**690 acres**		**$152,200,000**		**$130,680,000**		
Total Associated Costs for 2009 to 2020 Actions		**1,380 acres**		**$441,750,000**		**$258,355,000**		

Table 8.2

Action Plan Years 2009 - 2020 and beyond to 2035

City of Mansfield Park, Recreation and Trails Master Plan

This document is a tool and guideline for planning and grant application purposes only. Projects will be completed when and if funding is available; all appropriate projects will be presented to City Council and the Mansfield Park Facilities Development Corporation (MPFDC) for their future prioritization and approval prior to project implementation.

Priority	Action	Additional Acreage	Facility Type	Estimated Cost for Preferred Improvement Level (2014 Dollars)	Main Source of Funding	PARD-assumed Cost	Additional and Other Potential Funding Sources	Other City Department/ Institution involvement
Future Actions over a period of 15 years from 2020 to 2035								
	Future Land Acquisition							
10-25 years	**Neighborhood Parks** - Acquire about 40 acres for 5 future neighborhood parks @ 5 to 10 acres per park (~ 8 acres)	40 acres	**Neighborhood Park**					
10-25 years	**Community Parks** - Acquire about 70 acres for 1 future community park @ 25 - 80+ acres per park (~ 70 acres).	70 acres	**Community Park**					
10-25 years	**Special Purpose Parks** - Acquire about 50 acres for special purpose parks including **trail heads**, **trail gateways**, and other as yet unforeseen special purpose use.	30 acres	**Hike and Bike Trails**					
10-25 years	**Open Space Dedication and/or Protection (in 100 year Floodplain)** - Land acquisition for **open space preservation** and **proposed Regional Parks.**	200 acres	**Open Space**					
10-25 years	**Open Space Acquisition & Protection Buffer (out of 100 year Floodplain)** - Land acquisition for **open space preservation** (areas of **cultural and natural value)**.	50 acres	**Special Purpose Park**					
	Subtotal Future Land Acquisition	**390 acres**						
	Future Park Development and Improvement							
10-25 years	**Develop 10 neighborhood parks** - Develop 10 neighborhood parks.		**Neighborhood Park**					
10-25 years	**Four New Community Parks** - Develop 4 community parks at $15,000,000 per park		**Community Park**					
10-25 years	**Park Improvement** - Ongoing park improvement of two parks per year.		**Neighborhood Park**					
10-25 years	**Develop Linear Parks** - As yet undetermined.		**Linear Park**					
10-25 years	**Develop Special Purpose Parks** - As yet undetermined.		**Special Purpose Park**					
10-25 years	**Hike and Bike Trails -** Develop hike and bike trails.		**Hike and Bike Trails**					
10-25 years	**Trail Heads and Trail Gateways -** Develop 4 trail heads and gateways at $600,000 per unit, over a period of 15 years.		**Hike and Bike Trails**					
10-25 years	**Tree Planting** - Continue tree planting program for all parks (+/- 400 trees per year).		**Citywide**					
10-25 years	**Public Art** - Provide for environmental & outdoor art in parks and open spaces on an ongoing basis.		**Citywide**					
10-25 years	**Community Gardens -** Develop 10 acres of community gardens and a Farmers' Market Pavilion in an established Community Parks.		**Special Purpose Park**				TPWD Outdoor Grant, Private Donations	
	Future Development of Recreational and Maintenance Facilities							
Ongoing	**Sport Fields** - Accounted for in the development and improvement of community parks.							
Ongoing	**Support Facilities** - Playgrounds, Pavilions, Picnic Facilities, Park Restrooms etc. are accounted for in the above park development and improvement.							
Ongoing	**Park Maintenance Facility** - Additions to the parks operation and maintenance facility.							
	Recommended Consultancy Studies							
10-25 years	**Community Gardens Master Plan** - Develop a Master Plan that addresses the conceptualization, implementation, operations, maintenance and marketing of Community Gardens.						CIP, TPWD Outdoor Grant, Private Donations, Bond Funds	Planning

Total Land Acquisition for 2020 to 2035	**390**	**acres**
Total Land Acquisition for 2009 to 2035	**1,770**	**acres**
Total Land Acquisition over a 25 year period excluding Regional Parks		

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Land Acquisition & Acreage Need

The table below summarizes the acreage acquisition recommended as per Table 8.1 on the previous pages and compares this acquisition with the standards-based acreage needs as identified in Chapter 6: Needs Assessment. Table 8.2 illustrates the similarity between the recommended acreage acquisition and the results of the standards-based needs assessment.

Table 8.3
Land Acquisition Recommendation Compared to Acreage Need

Park Type	Approximate Acreage Acquisition as per Action Plan	Standards-Based Acreage required at build-out population*
Neighborhood Parks	200	201
Community Parks	630	620
Sub-Total	**830**	**821**
Special Purpose Parks	90	Variable
Linear Parks	100	Variable
Natural Areas / Open Space	750	Variable
Sub-Total	**940**	**921**
TOTAL	**1,770**	**1,741**

** Acreage required per target level of service additional to 2009 existing acreage - See Table 5.1*

Implementing the Action Plan with Vision and Commitment

A large amount of funding is required to accomplish the goal of the Action Plan, but with vision, commitment, and a concerted effort to secure funding from available sources, many of the recommendations can be accomplished.

The very purpose of this Parks, Recreation and Trails Master Plan is to provide the City with the vision to motivate the citizens of Mansfield to support, participate, and collaborate with park development, recreation and open space programs.

> ***"To accomplish great things, we must not only act, but also dream; not only plan, but also believe."***
>
> \- Anatole France
> Nobel Prize winner for Literature in 1921

FUNDING AND IMPLEMENTATION STRATEGIES

Optimization of Existing Resources

While the optimization of existing resources has always been a desirable practice in the public sector, it has become an even higher priority in today's economy. These resources can be physical, human, and even intangible, but they can and should become a priority for the community.

Park and recreation professionals have long been the initiators of such approaches with the general public being the recipients of their efforts. The PARD is fortunate to have a staff that is well-motivated and skilled in such optimization approaches.

Optimization Strategies

The following list outlines strategies that can be embraced by an agency that lays the ground work for optimization. The PARD, with the information secured through this planning effort, is well aligned to incorporate these strategies.

- Reflect the Important Needs and Issues of a Community. Regardless of how a department or area of responsibility defines "community," it is critical that the needs identified are ones that specifically and strongly reflect those needs and issues that are important to that community.

- From Individual Services to Community Wide Benefits and Outcomes.
  In surveys conducted across the nation, individuals are consistently able to cite the role and importance that parks and recreation plays in their own lives. While this is most positive for public parks and recreation, it doesn't mean that a department should place individual services and programs ahead of the more beneficial and widespread community outcomes. The special events undertaken by the PARD are an excellent example of transforming individual attributes to community-wide impact.

- Outcomes over Activity. The development of a comprehensive program plan along with individual program planning should address and include the important outcomes to be accrued from this program first rather than focusing upon what activities might be offered or appropriate.

- From Full Service to Facilitator. Residents within a community have a multitude of recreational interests and public parks and recreation staff have program ideas of their own. When these suggestions and ideas are coupled with the customer-service orientation of most public parks and recreation departments, it can result in a proliferation of direct program services. While these expressions of interests and ability by staff are assets for a department, it is critical to maintain a balance between offering programs and services to residents and making people aware and helping to secure access to existing activities, programs, and facilities provided by others in the community.

Optimization through Organizations

In addition, there are also existing practices that can be utilized including the following:

- Adopt-A-Park: Individuals or small groups of people such as existing clubs and organizations, agree to provide resources for a particular park or trail; resources could be financial or volunteer time and effort.
- Friends' Groups: Non-profit organizations that work on behalf of park sites to assist with daily programs, special events, fund raising, and public education. These groups serve as important links to local communities and park user groups as well.
- Park Foundations: Private, non-profit organizations that raise and secure funds for either parks and recreation agencies as a whole or specific park locations
- Youth Service Providers: A variety of youth organizations (Boys and Girls Scouts, 4-H, and even schools) have a requirement for community service and more formalized arrangements with such organizations can result in a number of worthwhile community projects.
- Service groups in communities such as Rotary, Kiwanis, and others often seek specific projects or days of service for their members.
- Partnerships with Interest or Volunteer Groups that are typically non-profit organizations keenly interested in particular subjects e.g. aesthetics, theater, art, and human interaction with nature including wildlife and native plants. Such Volunteer Groups are often willing to contribute time and energy free of charge for the betterment of public spaces within a city.
- Sponsorship through Businesses is a means to secure funding through businesses operating in Mansfield. Entities can contribute through a Foundation (once established) or directly support the PARD's construction or programming efforts.

Designating an individual(s) within a department to identify potential projects, create relationships with various organizations, and provide support for their efforts is a prime way to optimize these existing resources. As Mansfield grows, plans should be made to secure the services of a full-time staff member directed towards both individual and organizational volunteer efforts.

Shared Resources and Agreements

Shared resources (of personell, facilities, and expertise) established by agreements between two or more entities can serve to optimize existing resources in ways that are very beneficial to a community, its residents, and it finances. Some of these opportunities include:

- Joint Programs: There are a number of options in Mansfield for programs to be jointly planned and executed by two or more entities, i.e. wellness activities with local hospitals, special events with Chamber of Commerce.
- Social Issue Action: When a community is faced with a critical or important social issue such as increasing the high school graduation rate or supporting independent living among the elderly, there is an opportunity for several entities

to join forces and undertake initiatives to address the issue. Such an approach enhances the ability of seeking and receiving grant funding as well.

- Joint Facility Usage: The most common and efficient agreements for optimizing existing resources is to share facilities. The agency with the most facilities is often school districts and departments across the country have formal agreements most often involving use of school facilities and fields.

Funding Sources

City Generated Funding Sources

General Fund Expenditures are primarily used for improvements or repairs to existing parks and facilities. Typical general fund expenditures are for smaller repair and replacement efforts.

Bond Funds are primarily targeted for new facilities.

Electric Utility Partnerships can be established for utility easement trails. This partnership typically does not involve monetary contributions. However it does include use agreements for easements held by utility companies.

Water Utility Bill Contributions – residents of the City can choose to add a small amount to their water collection bills to fund park improvements. Abilene has used a $1.00 a month contribution to raise over $470,000 since 1987 and has used that funding to replace playgrounds throughout that city.

Half Cent Sales Tax Funds –During 2007, this funding came to $3.1 million and $3.4 million respectively.

Park Donations Funds can be used for applicable projects, equipment, and general facility improvements.

Park Development Fee Funds – This funding is a revenue source the City receives from developers based on the City's Park Land Dedication Ordinance. During 2007, this funding came to $538,000.

Tree Mitigation Funds – The source of such a fund results when a city levies fines against developers for removing quality trees for development. The revenue generated is used to plant trees and to irrigate City properties enhancing the City.

Governmental Grant Sources

State Government

A variety of grant sources exist, but three general sources account for most of the major potential sources of grants for parks in Texas. These include programs administered by the Texas Parks and Wildlife Department (TPWD), the Texas Department of Transportation, and the Department of the Interior through the Urban Parks and

Recreation Recovery (UPARR) program. The following is an overview of major grant programs.

TPWD – Texas Recreation and Parks Account (TRPA) funds the following grants:

1. ***Outdoor Recreation Grants (TPWD)***
   This program provides 50% matching grant funds to municipalities, counties, municipal utility districts (MUDs) and other local units of government with a population less than 500,000 to acquire and develop parkland or to renovate existing public recreation areas. There are two funding cycles per year with a maximum award of $500,000. Eligible sponsors include cities, counties, MUDs, river authorities, and other special districts. Projects must be completed within three years of approval. Application deadlines are January 31st and July 31st each year (the master plan submission deadline is 60 days prior to application deadline). Award notifications occur six months after deadlines.

2. ***Indoor Recreation (Facility) Grants (TPWD)***
   This program provides 50% matching grant funds to municipalities, counties, MUDs and other local units of government with a population less than 500,000 to construct recreation centers, community centers, nature centers and other facilities (buildings). The grant maximum is $750,000 per application. The application deadline is July 31st each year (with master plan submission deadline 60 days prior to application deadline). Award notifications occur the following January.

Community Outdoor Outreach Program (CO-OP) Grants (TPWD)
The CO-OP grant helps to introduce under-served populations to the services, programs, and sites of the Texas Parks and Wildlife Department. This is not a land acquisition or construction grant; this is only for programs. Grants are awarded to non-profit organizations, schools, municipalities, counties, cities, and other tax-exempt groups. Minimum grant requests are $5,000 and maximum grant requests are $50,000. The application deadline is February 1st and October 1st with awards on April 15th and December 15th.

The purpose of the Community Outdoor Outreach Program (CO-OP) is to expose participants to environmental and conservation programs as well as outdoor recreation activities.

Recreational Trail Grants (TPWD)
TPWD administers the National Recreational Trails Fund in Texas under the approval of the Federal Highway Administration (FHWA). This federally funded program receives its funding from a portion of federal gas taxes paid on fuel used in non-highway recreational vehicles. The grants can be up to 80% of project costs with a maximum of $200,000 for non-motorized trail grants. Currently there is not a maximum amount for motorized trail grants.[1] Funds can be spent on both motorized and non-motorized

[1] The contact number for motorized trail grant funding availability is 512-389-8224

recreational trail projects such as the construction of new recreational trails, to improve existing trails, to develop trailheads or trailside facilities, and to acquire trail corridors. Application deadline is May 1st each year.

Land & Water Conservation Fund (LWCF) Grants (TPWD)
TPWD administers the Texas apportionments of LWCF through the Texas Recreation and Parks Account. If an entity is applying for an Indoor Grant, Outdoor Grant, or Small Community Grant, TPWD may consider the application for LWCF funding. No separate application is required.

Regional Park Grants Administered by TPWD
This grant program was created to assist local governments with the acquisition and development of multi-jurisdictional public recreation areas in the metropolitan areas of the State. It allows cities, counties, water districts, and other units of local government to acquire and develop parkland. The program provides 50% matching fund, reimbursement grants to eligible local governments for both active recreation and conservation opportunities. The submission deadline for master plans is 60 days prior to the application deadline. Grants are awarded yearly by Texas Parks and Wildlife Commission when funds are available. There is no ceiling on matching amounts but grant awards are dependent on the number of applicants and the availability of funds. Past recipients for the Regional Park Grant have ranged from $750,000 to $1,200,000. **This program is currently inactive but may be reinstated in 2009.** In past years, the deadline was January 31st each year.

Local Government

Sustainable Development Funding Program
The North Central Texas Council of Governments (NCTCOG) Sustainable Development Funding Program was created by its policy body, the Regional Transportation Council, to encourage public/private partnerships that positively address existing transportation system capacity, rail access, air quality concerns, and/or mixed land uses. By allocating transportation funds to land use projects promoting alternative transportation modes or reduced automobile use, NCTCOG and its regional partners are working to address mounting air quality, congestion, and quality of life issues.

The program is designed to foster growth and development in and around historic downtowns and "Main Streets," infill areas, and passenger rail lines and stations. To support this effort, the Regional Transportation Council designated $41 million in 2009 for sustainable infrastructure and planning projects throughout the region. The deadline to submit grant applications is October 2, 2009. Types of projects include:

- Infrastructure:
  An infrastructure project is a construction project that provides public infrastructure in the public right-of-way and can be used to support private vertical development. Examples include pedestrian amenities, landscaping, intersection improvements, lighting, street construction, traffic signalization, etc.
- Planning:

Planning projects include market, housing, and economic analyses, transit station planning, Transit Oriented Development (TOD) Planning, general planning (subdivision regulations, creation of new code/zoning regulations, master planning, updates to pedestrian and/or bicycle plans, etc.), and others.

Regional Transportation Council Partnership Program
Through the Local Air Quality Program, NCTCOG's Regional Transportation Council will fund transportation projects that address the new air quality standard, including traffic signal timing, trip reduction, air quality outreach and marketing programs, vanpool programs, bicycle/pedestrian regional connections, high-emitting-vehicle programs, diesel freight programs, off-road construction vehicle emissions reduction programs, park-and-ride facilities, and other air quality strategies.

Transportation Enhancement Program Funds Available
Through the Statewide Transportation Enhancement Program, the Texas Department of Transportation made funds available during 2006 for construction of non-traditional transportation projects such as bicycle routes, pedestrian safety, and landscaping of transportation facilities. NCTCOG reviewed the projects within the Metropolitan Planning Area for eligibility, ranked the projects, and provided the state-required Letter of Transportation Improvement Program Placement.

The Program provides monetary support for transportation activities designed to strengthen the cultural, aesthetic, and environmental aspects of the transportation system. Funding is on a cost reimbursement basis, and projects selected are eligible for reimbursement of up to 80% of allowable cost. This funding program is not available on a yearly basis but intermittently, usually five year periods apart. The next opportunity for funding under this program will be in 2010.

Federal Government

National Park Service (NPS) Programs include the Land and Water Conservation Fund (LWCF) and the Urban Park and Recreation Recovery Act (UPARR), which provide funds for parks and recreation. Congress appropriates both funds. Typically, the funding sources have supported traditional parks rather than linear systems. Funding for the State of Texas exceeded $1.2 million in 2008.

Environmental Protection Agency can provide funding for projects with money collected in pollution settlements.

Other Private and Quasi Private Funding Sources

Partnering with Developers and Private Land Owners is possible by implementing park land dedication rules, whether voluntary or mandatory. Such an ordinance provides a vehicle for development of parks, open space, and trails as land is developed in a city. Mansfield has such an ordinance in place and needs to update it on a regular basis as recommended in Chapter 6 of the Parks, Recreation, Open Space and Trails Master Plan. The purpose of an up-to-date dedication ordinance is to ensure sufficient funding so that tangible rather than token park improvements are made.

Other Foundation and Company Grants assist in direct funding for projects, while others exist to help citizen efforts gets established with small seed funds or technical and publicity assistance. Before applying for any grant, it is crucial to review *The Foundation Directory* and *The Foundation Grants Index* published by the Foundation Center to learn if a particular project fits the requirements of the foundation.

Grants for Greenways is a national listing that provides descriptions of a broad spectrum of both general and specific groups who provide technical and financial support for greenway interests.

National Endowment for the Humanities (NEH)

As part of its *We the People* initiative, the NEH has a grant program designed to help institutions and organizations secure long-term improvements in and support for humanities activities that explore significant themes and events in American history, thereby advancing knowledge of the founding principles of the United States in their full historical and institutional context.

Grants may be used to support long-term costs such as construction and renovation, purchase of equipment, acquisitions, and conservation of collections. Grants may also be used to establish or enhance endowments that generate expendable earnings for program activities.

Because of the matching requirements, these NEH grants also strengthen the humanities by encouraging nonfederal sources of support. Applications are welcome from colleges and universities, museums, public libraries, research institutions, historical societies and historic sites, public television and radio stations, scholarly associations, state humanities councils, and other nonprofit entities. Programs that involve the collaboration of multiple institutions are eligible, as well, but one institution must serve as the lead agent and formal applicant of record.

PARD MARKETING IMPLEMENTATION

Marketing should aim to bring the Master Plan vision in clear focus for the community. The benefits of parks, recreation, and open space facilities and programs to the citizens of Mansfield are significant. Using parks and other City facilities can lead to a healthier and satisfying life style. In turn, better park facilities can lead to an improved perception of the City and the quality of life features it provides.

It is always critical to remember that marketing refers to an overall focal area that incorporates target markets and their preferences. A subset of marketing is promotion, the more direct communication with the public.

Promotion of Department Facilities and Area Programs

A plan to "market" park facilities, programs, and events should be a key component of the continued growth and expansion of the Mansfield PARD. From the City's perspective, marketing essentially refers to getting the word out and letting the residents

of Mansfield know about the PARD's Vision **"Building on Success,"** key facilities and programs that are available. Promotion is extremely important in that it communicates the value of the services that the City is providing to residents of Mansfield.

The PARD is encouraged to continue to include the following components in their marketing plan:

- Distribution of promotional materials, including flyers and seasonal newspaper inserts;
- Seasonal recreational programming brochures;
- A regularly updated internet website;
- Periodic presentations to the City Council regarding parks, recreation and open space facilities;
- Regular promotional events; and
- Periodic public announcements and special features on local radio and television to discuss new features and programs provided by the PARD.

Web site enhancement – many cities today are relying on sophisticated websites to promote park facilities, recreation programs, and special events. Mansfield's website is functional and provides information similar to most parks departments. The PARD should strive to enhance the website constantly as technology advances. The website should be interesting, dynamic, and to some degree have new features periodically that keep it up to date.

The website could include pages on the following items (some of these are already on the website but could be re-arranged to provide a dynamic promotional tool for the PARD):

- ***Existing Parks – facilities available within each park***. Information from the Parks, Recreation and Trails Master Plan document can be added to the website for a quick description of each park. Include 360 panoramic views from specific locations in parks.
- ***Planned Improvements*** – Continue to provide information on planned improvements, including a copy of the overall Master Plan summary in a downloadable format.
- ***Special Facilities*** – Continue to provide information on meeting rooms, fitness facilities, gymnasiums and aquatic areas; include hours of operation and cost, special events, and photographs of the facilities.
- ***Sports League Information*** – Continue to assist associations in establishing their own sites and provide links to those sites.
- ***Upcoming Events*** – Continue to provide information on upcoming events.
- ***Programs Currently Offered*** – Continue to provide information on programs offered by Mansfield's PARD.
- ***Rental Information*** – Continue to provide rental rates and photographs of each facility. Outdoor pavilions can also be included on the website.
- ***Contact and Comment Section*** – Continue to provide location for contact information as well as a place for citizen comments.

POLICIES & ORDINANCES

Ordinance Support for Trail System Development

Utilization of the existing Park Land Dedication Ordinance is an important tool to assist in the implementation of a City-wide trail system. Trail corridors can be integrated into developments as the development goes through the platting process. Land for trail corridors can be donated in a fashion similar to the dedication of land for traditional parks. Each adjacent development can be required to construct its portion of the overall trail system or other trails that connect to the main trail network.

The Mansfield Park Facilities Development Corporation (MPFDC)

All revisions to the Parks, Recreation and Trails Master Plan require a recommendation from the MPFDC and approval of the City Council. City Staff should present significant changes to the Master Plan and provide brief summaries of annual updates to the documentation. This will provide the MPFDC with comprehensive information to assist with development decisions.

Joint Planning with the Neighboring Cities of Arlington, Kennedale and Grand Prairie

Establish joint planning efforts with these neighboring cities to provide additional options to address recreation needs in Mansfield especially trail connections across city boundaries specifically toward Joe Pool Lake.

Joint Planning with Mansfield ISD

Establish joint planning review sessions with Mansfield ISD to allow for coordination of facilities usage and development.

Joint Planning with Tarrant, Johnson and Ellis Counties

Continue joint planning efforts with Tarrant, Johnson and Ellis Counties to provide additional options to address recreation needs in Mansfield.

Specific Policy Actions

1. Pro-actively search for park lands to target for acquisition, prioritized each year over the next five years.

2. Establish a City ordinance that requires a minimum of 80% compliance for single loaded roads (roads with development along one side only, with park land on the other) along all future parks, buffers, floodplains, and open space. Single loaded roads allow for accessible parks that are safe and inviting. Safety is generally achieved by the informal surveillance provided by the residents overlooking the park.

3. Establish a City ordinance that requires transparent metal rod fences in lieu of solid wood fences along private properties bordering parks, trails, creek corridors, and open space so as to contribute to a sense of openness and safety.

4. Endorse the need for the preservation of open space throughout the City.

5. Adopt policies, which emphasize the importance of preservation and protection of the City's tree cover in addition to and complementing the City's existing tree ordinance.

6. Adopt policies, which emphasize the importance of preservation and protection of the City's creek system in addition to and complementing the City's existing creek ordinance.

7. Establish a City ordinance that mandates the donation of floodplain lands along creeks. Such land is not developable yet provides habitat and corridors of movement for fauna and the opportunity for use as open space, greenways, and trails.

8. Establish a City ordinance that mandates no reclamation of any floodplain land for purposes of residential and non-residential development.

9. Continue to work directly and continuously with the Mansfield Independent School District to acquire land for neighborhood parks in conjunction with school district property acquisitions and to develop park facilities that can be used jointly by school children and residents. In Mansfield, this is achieved through the Parks Department's representative on the City's development review authority.

10. Identify future school sites that may be developed jointly with the school district as publicly accessible parklands.

11. Establish a formal process and agreements for working directly and continuously with the various utility districts and other City departments that can assist in acquiring parks lands or in jointly developing facilities. These include the City's Engineering and Development Services Departments and other important departments and personnel.

12. Endorse the park to population ratios established by this Parks, Recreation and Trails Master Plan to guide the acquisition and development of parks in all sectors of the City. For Neighborhood and Community Parks, these are two acres and six acres per 1,000 population respectively.

13. Require all new development adjacent to existing or proposed trails in the Parks, Recreation and Trails Master Plan to provide connections to both existing and proposed trails to ensure that everyone in the City is within walking distance of a trail that links with the overall City trail network.

14. Establish standards for developing land adjacent to linear park corridors. These include helping to fund linear parks, providing pedestrian connections to the parks, minimum amounts of landscaping along those corridors, and signage regulations adjacent to or within the linear park corridors.

15. Continue to ensure that adequate maintenance personnel are provided to take care of park lands in the City. Expect and provide an exceptional level of care.

16. Pursue alternative methods of funding park system and programming improvement, such as partnerships with non-governmental entities, grant funding sources, establishing "Friends of…" organizations, and contracting out programs or operations. Consider these and other methods only where feasible and financially sound.

Other City Plans

The success of the Parks, Recreation and Trails Master Plan implementation goes hand-in-hand with other City plans and ordinances e.g. Comprehensive Plan; Drainage and Flood Management Plan/Storm Water Management Ordinance; and Thoroughfare Plan. The parks, recreation, trail and open space concepts and ideas of the Master Plan to be addressed by these documents include the following:

1. Comprehensive Plan:
   - Single loaded roads;
   - Transparent metal fencing; and
   - Protection of unique features in the City.

2. Storm Water Management Ordinance
   - Creek corridor protection; and
   - No platting allowed further to the creek than the edge of the Flood Prevention Management Area (FPMA).

3. Thoroughfare Plan:
   - Creek crossings should make allowance for 11 to 12' free board below bridge to allow for under-bridge trail connections, which is important to consider for any future bridges and the upgrade of existing bridges; and
   - Recognition and incorporation of farm and country roads as legitimate options and the protection thereof.
   - Adopt the entire Trails Master Plan into the Thoroughfare Plan as alternative transportation routes.
   - Ensure adequate right-of-way acquisition for safe and efficient design of roads and trails.

PLAN UPDATES

The 2009 Mansfield Parks, Recreation and Trails Master Plan is a guide to be used by the City to develop and expand the existing parks, recreation and open system for future needs over the next five to 10 and up to 25 years. With land being finite and getting more expensive every day, the need for land acquisition and landscape protection is based on build-out condition, in order to ensure enough park land to provide future recreation facilities, whereas landscape protection ensures the long term and sustainable continuation of ecological services provided by nature.

Since trends and fashion for what is vogue change over time, the Plan also addresses a shorter term need, e.g. five to 10 years, with indoor recreation facilities flexible enough to allow for future remodeling and change. These and other changes are anticipated during the time frame of this plan, including:

- Population may increase more rapidly than projected;
- The community may indicate a special need for a facility not listed in the recommendations; and
- Development of recommendations will occur which will in turn stimulate and inspire other needs.

The Texas Parks and Wildlife Department stipulates the following for park master plans: *"The park, recreation, and open space master plans must cover at least a ten year period after which a completely new plan is required. Plans must be updated every two years to remain eligible. As a minimum, updates should include a summary of accomplishments, new public input, most recent inventory data, and updated needs, priorities, and new implementation plan. Demographics, population projections, goals and objectives, standards, and maps should also be updated if appropriate. Priorities should be updated as high priority items are accomplished and lower priorities move up. A new resolution is not required when updating priorities; however if priorities are revised or change, a new resolution adopting the new priorities, is required."*

A review and update of this Parks, Recreation and Trails Master Plan by City staff should be conducted every two years or when a significant change does occur. These updates can be published in short report format and attached to this Parks, Recreation and Trails Master Plan for easy use. Four key areas for focus of these periodic reviews are as follows:

Facility Inventory - An inventory of new facilities should be recorded as well as any significant improvements of facilities controlled by Mansfield Independent School District whenever such facilities may become available for public use.

Facility Use - Facility use is a key factor in determining the need for renovation of additional facilities. Updates on league participation of sports facilities should be prepared each season with data from each association. Changes in participation of those outside the City limits as well as the citizens of Mansfield should be recorded.

Public Involvement - As mentioned previously, this Parks, Recreation and Trails Master Plan reflects current population and attitudes as expressed by the citizens of Mansfield. However, over time, those attitudes and interests may change as the City changes. Periodic surveys are recommended to provide a current account of the attitudes of the citizens and additional direction from the public on issues that may arise.

Action Plan - As items from the action plan are implemented, updates should be made to this prioritized list to provide a current schedule for City staff.

> ***"The future belongs to those who believe in the beauty of their dreams."***
>
> - Eleanor Roosevelt,
> U.S. Diplomat and Politician, (1884-1962)

Appendix A

Citizen Attitude Survey Cumulative Results

CITY OF MANSFIELD
2008 PARKS AND RECREATION
ATTITUDE SURVEY CUMULATIVE RESULTS

PROJECT 06012008 RAYMOND TURCO & ASSOCIATES SEPTEMBER 2008

MY NAME IS _____ AND I'M WITH RAYMAR RESEARCH. WE ARE NOT A DIRECT MARKETING FIRM AND THIS IS NOT A SALES CALL. WE ARE A PUBLIC OPINION RESEARCH FIRM, CONDUCTING A SURVEY ABOUT ISSUES IN YOUR COMMUNITY. WOULD IT BE ALL RIGHT IF I TOOK A FEW MINUTES OF YOUR TIME TO ASK YOU A FEW QUESTIONS?

AREA

DATE_____ SHEET NO._____

AREA I	23%
AREA II	53%
AREA III	13%
AREA IV	11%

SEX

MALE	50%
FEMALE	50%

1. FIRST, HOW SATISFIED OR DISSATISFIED ARE YOU WITH THE QUALITY OF PARKS AND RECREATION IN YOUR CITY?

VERY SATISFIED	42%
SATISFIED	51%
DISSATISFIED	3%
VERY DISSATISFIED	1%
NO OPINION	2%

2. AND HOW LONG HAVE YOU LIVED AT YOUR PRESENT LOCATION?

UNDER 1 YEAR	6%
2 - 4 YEARS	28%
5 - 7 YEARS	18%
8 - 10 YEARS	16%
OVER 10 YEARS	32%
REFUSE TO ANSWER	0%

3. DURING THE TIME YOU HAVE LIVED HERE, DO YOU FEEL THAT THE QUALITY OF PARKS AND RECREATION IN YOUR CITY HAS IMPROVED, STAYED ABOUT THE SAME, OR DECLINED?

IMPROVED	79%
SAME	19%
WORSE	1%
REFUSE TO ANSWER	2%

4. HOW FREQUENTLY DO YOU OR ANY MEMBER OF YOUR HOUSEHOLD PARTICIPATE IN THE FOLLOWING ACTIVITIES? YOUR RESPONSES SHOULD BE ALWAYS, OFTEN, SELDOM, OR NEVER . . . .

	A	O	S	N	NO
A) FITNESS/EXERCISE LIKE RUNNING, JAZZERCIZE, YOGA ETC.	15%	39%	28%	18%	0%
B) TEAM SPORTS, LIKE BASEBALL, SOCCER ETC.	13%	18%	17%	51%	0%
C) INDIVIDUAL SPORTS LIKE GOLF, TENNIS, BOXING, ETC.	11%	17%	23%	49%	0%
D) FINE ARTS LIKE PAINTING, DRAWING ETC.	4%	15%	23%	57%	0%
E) PERFORMING ARTS LIKE MUSIC, DRAMA ETC.	7%	22%	26%	44%	0%
F) CRAFTS LIKE POTTERY, WEAVING ETC.	2%	11%	17%	69%	0%
G) EXCURSIONS, LIKE TOURS, TRIPS ETC.	5%	32%	36%	27%	0%
H) OUTDOOR RECREATION LIKE CAMPING, FISHING, BOATING ETC.	7%	28%	35%	29%	1%
I) SOCIAL ACTIVITIES LIKE DANCES, COOKING, CARD PLAYING ETC.	8%	30%	35%	27%	0%
J) LEISURE AQUATICS	5%	26%	26%	42%	1%
K) FITNESS AQUATICS	3%	13%	26%	57%	0%

5. PLEASE TELL ME WHICH OF THE FOLLOWING CITY PARKS, ATHLETIC FACILITIES, OR RECREATION CENTER YOU GENERALLY VISIT? IF YOU HAVEN'T VISITED ANY OF THESE FACILITIES IN THE PAST 12 MONTHS, TELL ME THAT ALSO. (CIRCLE ALL THAT APPLY)

TOWN PARK	42%	KATHERINE ROSE MEMORIAL PARK	77%
JULIAN FIELD PARK . . .	8%	CLAYTON CHANDLER PARK	7%
MCCLENDON PARK WEST . . .	16%	MANSFIELD SPORTS COMPLEX	42%
MCCLENDON PARK EAST . . .	14%	HARDY ALLMON SOCCER FIELDS	15%
JAMES MCKNIGHT PARK EAST .	30%	HAWAIIAN FALLS	34%
PHILLIP THOMPSON PARK . .	11%	WALNUT CREEK LINEAR PARK	46%
BIG LEAGUE DREAMS	27%	MANSFIELD NATIONAL	26%
HAVEN'T VISITED ANY . . .	9%		

6. IN YOUR PART OF TOWN, WHAT ONE RECREATIONAL FACILITY WOULD YOU SAY THE CITY IS LACKING?

A park (17%), multi use trails (16%), pool (14%), recreation center (11%)

7. THE CITY IS CURRENTLY IN THE PROCESS OF UPDATING ITS MASTER DEVELOPMENT PLAN FOR ITS PARK AND RECREATION SYSTEM. WHEN COMPLETED, THE PLAN WOULD MAKE RECOMMENDATIONS FOR ADDITIONAL FACILITIES AND OTHER SERVICES. LET ME READ YOU A SERIES OF STATEMENTS ABOUT POTENTIAL FUTURE PARK DEPARTMENT ACTIONS. PLEASE TELL ME HOW STRONGLY YOU AGREE OR DISAGREE WITH EACH: I THINK MANSFIELD SHOULD . . . .

	SA	A	D	SD	NO
A) INCREASE THE AMOUNT OF PUBLIC OPEN SPACE	23%	57%	14%	1%	5%
B) PLACE ART IN PARKS AND OTHER PUBLIC SPACES	10%	55%	25%	3%	8%
C) PRESERVE ENVIRONMENTALLY SENSITIVE AREAS SUCH AS NATURAL CREEK CORRIDORS	36%	57%	5%	1%	1%
D) DESIGN AND DEVELOP MORE PARKS & FACILITIES THAT FOCUS ON PASSIVE EXPERIENCES/ACTIVITIES	12%	59%	18%	1%	9%
E) DESIGN AND DEVELOP MORE INDOOR FACILITIES	11%	56%	26%	2%	5%

THAT FOCUS ON RECREATIONAL ACTIVITIES

		SA	A	D	SD	NO
F)	CONSTRUCT FACILITIES IN ACCORDANCE WITH THE DEMAND AS NEW RESIDENTS MOVE INTO THE CITY	13%	74%	10%	1%	2%
G)	ACQUIRE LAND TO PROTECT SITES OF CULTURAL VALUE IN THE AREA WHERE YOU LIVE	14%	65%	14%	1%	5%
H)	ACQUIRE LAND FOR FUTURE PARK AND OPEN SPACE DEVELOPMENT	16%	70%	10%	1%	2%
I)	BEAUTIFY MEDIANS AND ENTRYWAYS THROUGHOUT THE CITY	23%	57%	16%	1%	3%
J)	CONSTRUCT RENTAL PICNIC/REUNION PAVILIONS THROUGHOUT THE CITY	7%	67%	21%	1%	4%
K)	CONSTRUCT A CULTURAL/PERFORMING ARTS CENTER	13%	51%	26%	2%	7%
L)	PLANT MORE TREES IN THE CITY	20%	63%	14%	1%	2%
M)	CONSTRUCT A TENNIS CENTER	9%	43%	36%	3%	10%
N)	CONSTRUCT A NATURE CENTER OR BOTANICAL GARDENS	23%	55%	17%	1%	4%

8. THE UPDATED MASTER PLAN WOULD MAKE RECOMMENDATIONS FOR ATHLETIC FACILITIES AS WELL AS ITEMS THAT ALLOW ONE TO ENJOY PARKS WITHOUT BEING ATHLETIC. LET'S FIRST TALK ABOUT OUTDOOR COMPETITIVE SPORTS FACILITIES. PLEASE TELL ME HOW IMPORTANT OR UNIMPORTANT YOU THINK IT WOULD BE TO EITHER BUILD OR CONSTRUCT ADDITIONAL _____ IN MANSFIELD?

	VI	I	U	VU	NO
A-01) ADULT BASEBALL FIELDS	4%	26%	51%	15%	4%
B-02) YOUTH BASEBALL FIELDS	12%	42%	33%	10%	2%
C-03) YOUTH SOFTBALL FIELDS	10%	41%	36%	9%	3%
D-04) UNDER 8 SOCCER FIELDS	9%	48%	30%	9%	4%
E-05) UNDER 12 SOCCER FIELDS	9%	49%	29%	8%	4%
F-06) UNDER 16 SOCCER FIELDS	9%	46%	33%	8%	4%
G-07) ADULT SOCCER FIELDS	3%	34%	47%	9%	6%
H-08) TENNIS COURTS	8%	43%	35%	8%	6%
I-09) YOUTH FOOTBALL FIELDS	7%	50%	30%	7%	5%
J-10) ADULT FLAG FOOTBALL FIELDS	2%	27%	53%	11%	6%
K-11) ADULT KICKBALL FIELDS	1%	19%	61%	12%	6%
M-13) IN-LINE HOCKEY RINK	5%	29%	49%	10%	7%
N-14) IN-LINE SKATING RINK	3%	42%	41%	8%	5%
O-15) SKATEBOARD PARK	6%	43%	37%	10%	3%
Q-17) CRICKET FIELD	1%	8%	68%	18%	5%
R-18) SQUASH FIELD	1%	7%	66%	19%	7%
S-19) LACROSSE FIELD	1%	13%	62%	18%	5%
T-20) ICE HOCKEY RINK	7%	32%	45%	13%	3%
U-21) RACQUETBALL OR HANDBALL COURTS	5%	50%	33%	7%	4%
V-22) SAND VOLLEYBALL COURTS	6%	56%	28%	8%	2%

9. THESE NEXT ITEMS FOCUS ON FACILITIES THAT ADDRESS NON-COMPETITIVE RECREATION ACTIVITIES THAT ARE TYPICALLY ENJOYED OUTDOORS. AGAIN, PLEASE TELL ME HOW IMPORTANT OR UNIMPORTANT YOU THINK IT WOULD BE TO EITHER BUILD OR CONSTRUCT ADDITIONAL _____ IN MANSFIELD?

	VI	I	U	VU	NO
A-23) HORSESHOE PITS	4%	33%	50%	11%	1%
B-24) DISC GOLF COURSE	5%	29%	51%	10%	5%
C-25) MULTI-USE TRAILS FOR WALKING/JOGGING	37%	50%	10%	3%	0%
D-26) ROAD BIKING LANES	29%	51%	12%	6%	2%
E-27) MOUNTAIN BIKING TRAILS	14%	48%	28%	7%	3%
F-28) EVENT PICNIC/REUNION PAVILIONS	16%	62%	16%	4%	2%
G-29) PLAYGROUNDS	14%	59%	12%	3%	1%
H-30) FAMILY PICNIC AREAS	19%	65%	11%	3%	1%
I-31) NATURAL HABITAT/NATURE AREAS	24%	60%	12%	3%	1%
J-32) SHUFFLEBOARD COURTS	2%	28%	55%	11%	4%
K-33) BIRD WATCHING FACILITY	5%	39%	42%	10%	4%
L-34) EQUESTRIAN TRAILS	6%	36%	45%	8%	4%
M-35) EXERCISE STATIONS ALONG TRAILS	8%	46%	36%	6%	3%
N-36) OUTDOOR FESTIVAL AREA	13%	58%	21%	5%	3%
O-37) A DOG PARK	16%	45%	31%	7%	2%
P-38) OUTDOOR SWIMMING POOL	17%	45%	29%	16%	3%
Q-39) OUTDOOR PERFORMANCE AMPHITHEATER	12%	53%	26%	4%	3%
R-40) A CHILDREN'S WATER SPRAY PARK	14%	41%	36%	6%	3%

10. THESE NEXT FEW ITEMS ADDRESS INDOOR RECREATION NEEDS. PLEASE TELL ME HOW IMPORTANT OR UNIMPORTANT YOU THINK IT WOULD BE TO EITHER BUILD OR CONSTRUCT ADDITIONAL _____ IN MANSFIELD?

	VI	I	U	VU	NO
A-41) INDOOR VOLLEYBALL COURTS	6%	40%	40%	10%	4%
B-42) GYMNASTICS ROOM	5%	50%	35%	7%	2%
C-43) GYMNASIUM/INDOOR BASKETBALL COURTS	7%	56%	28%	7%	2%
D-44) INDOOR CARDIO/WEIGHT TRAINING AREA	10%	53%	30%	5%	1%
E-45) AEROBICS ROOM	8%	52%	32%	6%	2%
F-46) DANCE INSTRUCTION ROOM	7%	41%	41%	8%	4%
G-47) MARTIAL ARTS AREA	3%	41%	45%	7%	4%
H-48) GAME ROOM (I.E. POOL, FOOSBALL, ETC)	4%	44%	42%	8%	2%
I-49) INDOOR JOGGING TRACK	10%	48%	32%	7%	2%
J-50) SENIOR CENTER	25%	52%	17%	4%	1%
K-51) NATATORIUM/INDOOR SWIMMING FACILITY	11%	37%	39%	9%	4%
L-52) RECREATION CENTER WITH FITNESS AREA/WEIGHT TRAINING AND AEROBIC STUDIOS BUT NO AQUATICS	9%	50%	32%	7%	3%
M-53) RECREATION CENTERS WITH INDOOR AND OUTDOOR AQUATICS	11%	45%	34%	6%	4%

11. NOW I WOULD LIKE TO READ YOU THE ENTIRE LIST OF ATHLETIC AND NONATHLETIC ITEMS. THIS TIME, PLEASE TELL ME (01-53) WHAT YOU WOULD YOU CONSIDER TO BE THE MOST IMPORTANT RECREATIONAL FACILITY TO CONSTRUCT?

Multi-use trails for walking-jogging (12%), recreation centers with indoor and outdoor aquatics (11%), senior center (10%)

12. THE CITY CURRENTLY OPERATES THE MANSFIELD ACTIVITIES CENTER AND IS CONSIDERING WHETHER OR NOT TO CONSTRUCT A SECOND SUCH FACILITY. IF SUCH A FACILITY WAS CONSTRUCTED, IT COULD INCLUDE VARIOUS TYPES OF WET OR DRY AMENITIES. PLEASE TELL ME HOW STRONGLY YOU WOULD SUPPORT OR OPPOSE THE FOLLOWING BEING INCLUDED IN A RECREATION CENTER . . . .

		SS	S	O	SO	NO
A)	GYMNASIUMS	21%	56%	14%	5%	3%
B)	COMPUTER LABS	19%	49%	23%	6%	2%
C)	WEIGHT/CARDIOVASCULAR EQUIPMENT ROOM	20%	54%	19%	4%	3%
D)	MULTI-PURPOSE ROOMS FOR MEETINGS OR PARTY RENTALS	16%	59%	19%	4%	2%
E)	INDOOR JOGGING TRACK	16%	51%	27%	5%	2%
F)	KITCHEN/DINING AREA	8%	57%	26%	6%	3%
G)	GAMEROOM, WITH BILLIARD TABLES, TABLE TENNIS, ETC.	9%	54%	29%	5%	2%
H)	FAMILY LOCKER ROOMS	9%	57%	26%	5%	2%
I)	ROCK CLIMBING WALL	10%	44%	36%	6%	3%
J)	CONCESSION AREA	9%	59%	26%	4%	2%
K)	INDOOR LEISURE POOL WITH WADING AREA, WATER PLAY AREA,	15%	45%	31%	7%	2%
L)	HEALTH ASSESSMENT AREAS	14%	57%	23%	4%	2%
M)	FITNESS/LAP LANE POOL	14%	49%	29%	6%	2%
N)	CURRENT CHANNEL	7%	31%	37%	8%	17%
O)	DANCE AND AEROBIC ROOMS	10%	58%	24%	4%	4%
P)	RACQUET/HANDBALL COURTS	9%	56%	26%	5%	3%

13. THESE NEXT STATEMENTS DEAL WITH BEAUTIFICATION EFFORTS IN THE CITY. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH EACH . . .

		SA	A	D	SD	NO
A)	I AM SATISFIED WITH HOW STREETS AND INTERSECTIONS ARE LANDSCAPED IN MANSFIELD	12%	60%	24%	4%	0%
B)	I BELIEVE THE CITY SHOULD PLANT MORE TREES AND LANDSCAPING ALONG STREETS AND INTERSECTIONS	23%	50%	21%	2%	3%
C)	I WOULD SUPPORT THE CITY DEVELOPING POINTS TO WHERE RESIDENTS COULD ACCESS CREEK AREAS	16%	55%	21%	3%	4%
D)	I DO NOT BELIEVE THAT LANDSCAPING CITY STREETS AND INTERSECTIONS IS ALL THAT IMPORTANT	1%	16%	67%	13%	2%
E)	IMPROVED LANDSCAPING OF CITY STREETS WILL HELP TO IMPROVE OUR CITY IMAGE	25%	59%	13%	1%	2%
F)	I SUPPORT THE CITY ENHANCING ITS “GATEWAYS TO THE CITY” SO THAT PEOPLE KNOW THEY ARE COMING INTO MANSFIELD	27%	58%	11%	1%	2%

14. NOW LET'S TALK ABOUT TRAILS. HOW STRONGLY WOULD YOU SUPPORT OR OPPOSE A CITY-WIDE TRAIL SYSTEM IN MANSFIELD, THAT ALLOWED THE FOLLOWING.

		SS	S	O	SO	NO
A)	HORSEBACK RIDING	12%	41%	34%	8%	4%
B)	RECREATIONAL WALKING OR HIKING	42%	49%	7%	1%	1%
C)	RECREATIONAL BICYCLING	34%	57%	7%	1%	2%

D)	NATURE TRAIL	12%	58%	7%	1%	1%
E)	INLINE SKATING	12%	51%	29%	5%	3%
F)	MOUNTAIN BIKING	17%	47%	29%	4%	3%
G)	WIDEN SOME THOROUGHFARES FOR BIKE LANES	25%	53%	16%	3%	2%
H)	RIDING TO GET TO WORK OR A STORE	22%	55%	16%	2%	5%
I)	CONNECTIONS TO NEARBY SCHOOLS	25%	57%	13%	2%	2%

15. THESE LAST FEW QUESTIONS ARE JUST FOR CLASSIFICATION PURPOSES. WHICH OF THE FOLLOWING AGE GROUPS DO YOU COME UNDER?

LESS THAN 25 YEARS . . 2%
26 - 35 YEARS . . . 14%
36 - 45 YEARS . . . 29%
46 - 55 YEARS . . . 24%
56 - 65 YEARS . . . 18%
OVER 65 YEARS . . . 13%
REFUSED TO ANSWER . . 0%

16. PLEASE TELL ME IF YOU HAVE CHILDREN UNDER THE AGE OF 18 AT HOME (IF YES: IN WHICH OF THE FOLLOWING GROUPS DO THEY COME UNDER?

0 – 4 YEARS 19%
5 – 9 YEARS 20%
10 – 14 YEARS 27%
15 – 19 YEARS 18%
NO CHILDREN 45%
REFUSE TO ANSWER . . 1%

17. DO YOU BELONG TO AN ATHLETIC ASSOCIATION IN THE CITY OF MANSFIELD?

YES 33%
NO 67%
REFUSE TO ANSWER . . 0%

THAT'S THE END OF OUR SURVEY BUT COULD I CHECK TO SEE IF I DIALED THE CORRECT NUMBER. I DIALED _____. AND COULD I HAVE YOUR FIRST NAME, ONLY IN CASE MY SUPERVISOR HAS TO VERIFY THIS INTERVIEW?_____. THANK YOU AND HAVE A NICE EVENING.

CALLER INI._____ SHEET NUMBER _____ ZIPCODE_____ SURVEY LENGTH_____

Appendix B

Focus Group & Public Meetings Notes

Focus Group Meetings

Focus Group Meeting #1: Senior Citizens

Question 1: What is good about Mansfield?

1) Senior Center
2) Retail Business
3) Nice quiet atmosphere
4) Hospitals/stores close
    a. Convenient access
5) Safety
6) Small town feel – Big town amenities
7) Affordable housing
8) City helps all groups- seniors, kids, all demographic
9) Recreation for youth
10) Good MAC director- helpful star
    a. (Susanne)
11) Groups uniting- keep safe and close in
    a. Community- caring community
12) Courteous People
13) MAC- seniors can get out, (bus) affordable lunch
    a. Quality of programs for seniors
14) Reasonable prices restaurants
15) Improvement of parks- amenities for all
    a. Maintenance is great
16) Aquatic facilities
17) MAC food- excellent and cost effective
18) Good Leadership
19) Good Library
20) School Systems

Organized by theme, people in this focus group think that the following items summarize what is good about Mansfield. The numbers associated with each item correspond with a response as numbered above:

A.	People of Mansfield	8,10,12,18,11,5
B.	Facilities	1,4,9,13,15,16,17,20
C.	Non-City Services	2,4,7,14,11,21
D.	City Image	3,5,6

Question 2: What outcomes would you like to see for seniors? What would you like to see happen?

1) Courtesy of its citizens
2) Transportation for seniors/public
3) Happy-healthy- exercise classes
    a. Emotion and physical
4) Less traffic
5) Become more active
6) Have a new center- more space fore painting- programming
7) Temperature adjustment
    a. Facility focused on specific groups- individualized/ groups
    b. Get in each others way
    c. Separate facility
8) Companionship
9) Senior discount/benefits
10) New friends
11) How attract more senior involvement
12) Outreach to seniors
13) Seniors be informed
14) Learn new skills
15) Handicap accessible- improvements
16) Keep mind active- provide more mental and physical stimulation
17) Expand meals on wheels program
18) Healthcare- Health fairs
    a. Occur more often

Question 3. What do you hope for the future? What can the PARD do? What wisdom would you impart on youth?

1) Public transportation
2) Provide active lifestyle
3) Trails, ball fields- Keep Improving
4) Good Education
5) Family values- sit down w/children
6) Family time
7) Respect for others
8) Good safe place- healthy society
9) Encourage spiritual growth
10) Bring Business/work opportunities here
11) Raise driving age to 18
12) Safety in transportation
13) Be caring, active, work hard, follow dreams
14) Good leadership
15) More outreach/advertising
16) Don't take American fore granted- appreciation
17) Parental Control over TV programs

Miscellaneous Comments

1) More Space
2) Parking expansion
3) More advertisement
4) More involvement @ MAC
5) Family like furnishings-warmer atmosphere
6) Kitchen sinks/appliances larger
7) Dedicated seniors room
8) Dedicated senior's space and handicap accessible

Focus Group Meeting #2: Business & Civic Leaders

Question 1: What makes Mansfield Unique?

1) Parks and Trails
2) Small Town Feel
3) Location in Metroplex and State
4) Progressive City Leadership
5) Quiet and Peaceful
6) Scenery
7) Everything is here
8) Willingness to improve
9) Community Events
10) Quality of life
11) Volunteer Organizations
12) Open Space
13) Diverse population
14) Schools
15) Good Growth
16) Safe Environment
17) Community Pride
18) Support for Youth Sports
19) City Planning
20) City Commitment to Volunteerism
21) Affordable Living
22) Opportunity for Kids
23) Potential
24) Variety of Recreation

Organized by theme, people in this focus group think that the following items summarize what is good about Mansfield. The numbers associated with each item correspond with a response as numbered above:

A. People	4,11,13,17,19,20,8
B. Location	3,5,7,15,16,21
C. Environment	6,12,16
D. Amenities	1,6,7,9,12,14,22,24

E. Culture 2,4,5,7,8,10,11,13,17,18,19,23

Question 2: What outcomes would you like to see?

1) Outdoor Performance to showcase skills
2) Fulfillment
3) An admired youth assoc.
4) Provide fun, fun whole some learning environment
5) Flexible use facility
6) Tournament opportunities
7) Quality programs
8) City beautification
9) Community outreach
    a. Self fulfillment and wholesome feeling
10) Be positively active
11) Expose community to music
12) Exposure to variety
13) Improving life skills
14) Higher quality, unique
    a. Experience and reputation
15) Keep kids here
16) Safety and fun
17) Community responsibility and stewardship
18) Broaden kids horizons
19) Prevent childhood obesity
20) Confidence
21) Green thinking city
22) Community Pride

Question 3: What things can the City do to help achieve these outcomes?

1) Provide adequate trash and recycling receptacles
2) Adequate practice and game space/fields
3) Flexible use facility
4) Update and expansion of facilities
5) Additional Storage
6) Improve existing facilities to keep up w/ demand
7) PARD keep up the good work (people)
8) Expand amphitheater
    a. Stage size
    b. Seating
    c. Acoustic shells
9) More pavilions
10) Environmental awareness
    a. Educate
    b. Encourage recycling
11) Emergency phone

12) Resource Mngr
    a. Recycling specialist
13) More Community Services
14) Student involvement
15) Improved security
16) More open grass areas
    a. Multi purpose open space
17) Meeting areas
18) Expanded parks
19) More volunteer opportunities
20) Continue Park/green space
    a. Dedication
21) Weather warning system
    a. Community wide
22) Trail lighting
23) Increased police presence

Question 4: What Cities would you benchmark Mansfield against?

1) Southlake (location)
2) Coppell
3) Cedar Hill (sports complex)
4) Redlands, CA (performance area)
5) Frisco (sports team)
6) Austin (environment)
7) Rockwall (recycling, volunteer)
8) Bass Hall (venue)
9) Big Spring (multi-use park)

Focus Group Meeting #3: Sports, Arts & Environmental Groups

Question 1: What is special about Mansfield?

1) Small Community feel
2) Variety of outdoor activity opportunities
3) School System
4) Location
5) Culture progressive attitude
6) Location
7) Open spaces/room to grow
8) School District- Drives Housing
9) Safe Community
10) Sense of History
11) Small town feel
    a. Big town feel
12) Home Town Friendliness
13) Accessibility to metro areas

14) Passion of People
15) Involved community
16) Foresight
17) Benefit of past pan
    a. Good foresight
18) Parks System
19) Lifestyles of morals, values & ethics

Organized by theme, people in this focus group think that the following items summarize what is good about Mansfield. The numbers associated with each item correspond with a response as numbered above:

A. People	1,5,12,14,15,17,16,19
B. Physical Location	4,7,13
C. Amenities	3,7,2,6,8,11,18
D. City Services	5,7,2,8,18,11

Question 2: What outcomes would you like to see?

1) Events – active community (quality)
2) Healthy active lifestyles
3) Commercial development
4) Leisure- oriented
    a. Recreation (integration)
5) Historic Mansfield
    a. Identifiable destination
6) Historic District Economic Development (comprehensive)
7) Educational awareness of Mansfield's history
8) Make downtown a park
9) Space for athletic programming
    a. City/ISD cooperation
    b. For children healthy/active
    c. Formal/informal activities
10) Safety for children
11) Accessibility of equipment at parks
    a. Special needs
12) Enhance QOL and Property Values of Community
13) Kid friendly
14) More services for all ages
    a. Ind. Fine arts and recreation
15) Benefits of Kids
    a. Stay in Mansfield
16) Connection to History
17) Facilities needed to keep kids and activities in Mansfield
18) Mixed use development
19) Special needs Park- All accessible,
    a. Meet all citizen needs- diverse
20) Meet today's diverse needs

21) Active and passive activities to meet diverse needs
22) Keep needed facilities local (dog park)
23) Create amenities for leisure activities
    a. Adult/senior activities
24) Tourist Destination
25) Arboretum/botanical garden
    a. Educational
26) More community involvement and cooperation
27) Interpretive signage
28) Enhanced citizen ownership of parks
29) Building preservation

Question 3: What can the PARD do to help your organization meet its goals?

1) Communication – plan implementation
2) Communication of what is going on
3) Include all demographics/ community- inclusive
4) Larger gathering areas theater, resf, amphitheater
5) Partnerships/grants facilities
    a. IE: Nokia Center, etc.
    b. Community service groups
6) More youth facilities
7) Communication/Advertise to citizens
8) Advertise Town Park
    a. Centralized large park
9) Historical park
    a. Educational value
    b. Living history
10) Downtown Park
    a. Connect downtown w/ trail
11) WiFi historic downtown
12) Develop park w/ education and interpretation
13) Multi purpose area in historic downtown
14) Upgrade exist playground
    a. equipment
15) Preserve open spaces
    a. Sustainable areas (enviro. green)
    b. Native landscaping
16) Discovery Park
    a. "Community Build" Park
        i. Themed w/trails
    b. Components
17) N/a
18) Extend trail system
19) Go play equipment
20) Great parks dept.

Question 4: What do you think the City should aspire to?

1) Want to be unique
2) Spring, TX- historical aspect
    a. Project nature/environment
3) RockHill, SC- strong history, compact downtown
    a. Historical building for retail, etc
4) Weatherford – historical aspect
    a. Parks, history
5) Fort Worth- downtown tourism
6) Addison parks- accessibility
    a. Connectivity w/in and to other cities
7) Granbury- historical downtown, other amenities- lake, etc
    a. Culture
8) Dillion, Frisco, Co – large gathering area- parks, restaurants, recreating in one area- connectivity
9) Scottsdale, AZ- park every 2 ½ mi and connecting trails
    a. Rec services
    b. Rec staff in parks
10) Tot Lots- w/ in community
11) Flagstaff- pedestrian friendly
12) Garland- cultural arts

Public Meeting

Group #1: Parks & Trails

What are necessary components of the various park types?

Neighborhood Parks

1. Playgrounds
2. Natural Plants
3. Seating
4. Access
5. Trails
6. Water
7. Water Fountain
8. Splash Parks
9. Play Equip
10. Seating/Shade
11. Swings
12. Play Equip
13. small trail
14. handicap access
15. lighting
16. shade/seating
17. puppy mit
18. water
19. play equip
20. picnic
21. courts
22. bike lanes
23. sidewalks
24. track (small)
25. pond nature- water
26. plants/trees
27. school access
28. distance markers
29. dog
30. trails

31. tot lot
32. water/pool
33. trees, shade
34. seating
35. tot lot
36. play area
37. safe/access
38. open space
39. pavilions/picnic areas
40. shade/seating
41. BBQ
42. restrooms
43. small trail

Community Parks

1. Trails
    a. Bike (mount rec)
    b. Hiking
    c. Sep. walking trail
2. Shade
3. Competition/Risk
4. Dirt Trail
5. Pavilions
6. Restrooms
7. Water
8. Fit
9. Water fountain
10. Restrooms
11. Clean
12. Tennis
13. Community Swim
14. Open Area
15. Swings
16. dog park
17. tennis-light
18. circuit training
19. water
20. restrooms
21. storage
22. seating/shade (pavilions)
23. BBQ grills
24. Nice/Big playgrounds
25. all age play equip
    a. safety town
26. swings
27. water/splash parks
28. picnic/pavilions
29. shade
30. BBQ
31. bathrooms
32. sandbox
33. restrooms
34. band shell
35. storage/practice area
36. nature center
37. large open space
38. history
39. gathering area
40. large pavilion
41. parking
42. outdoor cooking BBQ
43. restrooms
44. fish ponds
45. parking
46. large pavilions
47. water fountains
48. splash pads

Special Purpose Parks

1. mount bike
2. skate park
3. tennis
4. golf
5. all age park
6. dog park
7. Dog
8. Skate board
9. tennis
10. racquet club
11. Frisbee golf
12. equestrian trails
13. skateboard
14. all access park
15. seniors park
16. dog
17. music (aspiring musicians)
18. formal gardens
19. lake park activities
    a. boating/canoeing/ kayak
    b. fishing
20. skate board
21. BMX park

22. equist. Trails
23. all access park
24. Equestrian

Trail Activities

1. Mountain Bike
2. Education
3. Fit (running)
    a. Hiking
    b. Walking
4. Connections
5. Lighting
6. Parking
7. Horse Back Riding
8. Rec. Biking
9. walk
10. bike
11. jog
12. nature (observe)
13. skate lane
14. posted rules
15. passing rules
16. coded lanes
17. Bike (all)
18. walking
19. skating
20. equist. Trails
21. hiking
22. info.on the nature trail
23. walking
24. run
25. biking
26. access points
27. connectivity
28. bike
29. walk
30. exercise station
31. skating
32. separate bike trails
33. safety
34. walking/run
35. bike
36. dog
37. jog
38. lighting
39. seating
40. access

Group #2: Open Space & Natural Areas

What is important about these areas?

1. Trails in Natural Area
    a. Mtn. Biking
    b. Low-intensity areas
    c. No motor vehicles
2. Expand Linear Park and Trail
    a. Improve access from east side
3. Standing water
    a. Drainage areas
    b. Trash
    c. Mosquito's
4. ELC/ Botanical Gdn
    a. Nice
    b. Cost effective
5. Multi-activity nature park
    a. Like river legacy
6. trails
    a. education signage
    b. intersection b/w models
    c. mtn biking trals.
        i. Hiking and equestrian options
    d. Safety lighting issues
7. Open Space is:
    a. Natural variety of plans and wildlife
    b. Flood plains
    c. Quiet
8. Don't clear land for park Consider tot lots (small residential lands)
9. Small botanical gdn.
    a. Like Grapevine
10. Maintain Pub. Access and natural shoreline
11. equally distribute open space
12. utilize drainage areas
13. more accessible open space
14. Open space
    a. Relaxing comforting
    b. Enjoy view of nature
    c. Area to sit and read, etc
15. Accessible to picnic areas
16. Affordable ELC
    a. Small Botanical gdns near other parks and trails
17. New open space
    a. West side
    b. Along creeks

    c. East of 360, toward lake
18. Open space preservation necessary
19. Tie in Joe Pool
20. Picnic areas not always usable
    a. Heat
    b. Burn ban (grills)
21. Focus amenities on trails, benches, look outs
22. More specialized native areas
    a. Wildflowers
    b. Desert landscape
23. educational signage- good
24. Small botanic gdn
    a. Space for concerts
25. New open space
    a. Wooded
    b. Flowers
    c. Pond (take advantage of natural terrain)
26. Land between golf course and sports complex
27. More open space for today's and tomorrow's population
28. Take advantage of small pieces of land- make accessible
29. Things to do
    a. Walk
    b. Mtn. Bike
    c. Hike/jog
    d. Meditate
    e. View nature
    f. Demonstration garden
    g. Escape from the city
30. Good Lighting
    a. For people and wildlife
31. Amenities
    a. Trash bins
    b. Water (drinking)
    c. Benches
    d. Scenic overlook
    e. Educational signs
    f. Trees, plants, geological
    g. Feeding stations
    h. Maintain mutt mitts (replenish)
32. Dog Park
33. New Land
    a. Creeks
    b. Wooded
    c. Topography
    d. Easily accessible
34. wildflower areas

a. diversity

Group #3: Recreation Center

What amenities & activities would you like to see at a recreation center? What would you change about the current recreation center.

Amenities

1. Aquatics (lap swimming)
2. Racquetball
3. meeting rooms
4. tennis facility (near rec ctr)
5. locker rooms
6. gym w/ more multiuse possibilities
7. more business friendly, rooms w/ AV equip
8. child care
9. Racquetball
10. indoor tennis
11. volleyball
12. indoor playground
13. improved aesthetic
    a. better atmosphere for parents
14. coffee/juice bar
15. healthy options
16. outdoor court on property b-ball
17. more outdoor b-ball- @ parks, schools
18. partner w/school library for pgms/access
19. Playground (indoor/ outdoor MCD's)
20. security (safe feeling)
21. cardio/free weight gym area
22. group fitness(i.e. turbo kick)
23. affordable fitness facility
24. aquatics (lap pool, water fit, adult time only)
25. more for adults
26. multi purpose gymnasiums
27. rock climbing wall
28. racquetball cts
29. benefit of fitness facility would serve community b/c of inc. availability (expanded hours)
30. racquetball
31. cardio(free weights)
    a. wellness center
32. indoor walking track
33. group fitness facilities
34. catering kitchen
35. adequate parking
36. indoor aquatics
    a. More reg. swimming but side components ok.
37. high visibility area- aesthetically pleasing
38. Tie into trail system (reduce pkg needs)
39. partnership w/juice park
    a. i.e. Jamba Juice
40. Don't put everything on one side of the city
    a. Don't neglect west side of town
41. spinning room
42. aerobics facilities
43. affordable fitness
44. meeting rooms
    a. made accessible through sep. entrance
45. indoor track
46. facility (rec ctr) in other part of town
47. Keep up w/growth- diversity locations
48. Public Pool (aquatics)
49. Indoor walking track
50. performance area (maybe staging)
51. Recital Hall-performance arts
52. built in speaker system

Change

1. room scheduling
2. more room around court (multi- use)
3. Take rec to ppl
4. duplicate and put on other town
5. use school prop as ext. MAC facilities
    a. (gym/class space) joint use
6. joint funding of school playgrounds
7. volunteers doing no cost pgms
    a. i.e. bike repairs
8. Add bike lanes
9. community ctrs
    a. bring in community –boy scouts
10. make it larger
11. more mtg rooms
12. more gym space and or fitness rooms
13. Needs to be bigger
14. more walking space
15. more rooms
16. more parking
17. more info readily available
    a. What else is going on?
    b. Daily schedule
18. clarity of who pgms are for
    a. (youth vs. adult)
19. Indoor activities in gym
    a. i.e. badminton
20. healthier snacks
21. Activities like yoga/fitness for young teens- not just 18+
22. recitals
23. membership awareness
    a. Don't know about memb. Structure
24. enclosed play area
25. can make noise

Activities

1. Planned b-day parties
2. roller skating
3. More competitive/ athletic events
    a. Road race
    b. Mountain biking
    c. SK
    d. Walking(families)
        i. Walkathon
4. More sr. pgms
5. arts and crafts for adults
6. fitness (get fit0 not threatening power walking not boot camp)
7. overnight trips-adults
8. more programs for adults and entire families
9. walking area
10. wrestling
11. multi-use space
    a. b.ball
    b. v. ball
    c. Indoor soccer, etc.
12. Fitness, group
    a. Yoga Pilates
13. more community partnerships to bring amenities to city
    a. (i.e. YMCA + City)
14. Spinning
15. Performing arts

Group #4: Athletics & Outdoor Activities

What outdoor activities are most important in Mansfield?

1. Running
2. Biking
3. Mountain biking
4. mountain biking
5. running
6. cycling
7. baseball
8. soccer
9. Mountain biking
10. Regular Biking
11. biking
12. walking
13. jogging
14. tennis
15. walk dog
16. soccer
17. softball
18. tennis
19. biking
20. walking
21. jogging
22. horse back riding
23. swimming
24. Golf
25. Tennis biking
26. walking
27. soccer
28. T-Ball
29. Softball
30. family picnic
31. fishing
32. Inline skating

Are there enough of all types of athletic facilities in the City? What is lacking?

1. Not spread out enough
2. Dirt/Nature Trails
3. More use of schools facilities
4. more creation centers
5. connect walking /bike trails
6. playgrounds- more
7. putt-putt course
8. dog park
9. Bike lane
10. dog park
11. dirt trails
12. skate park
13. public pool
14. multi purpose trails
15. tennis courts
16. camping grounds
17. ADA playgrounds
18. Mountain bike trails
19. L xx? Trails
20. Nature Trails
21. Bike trails/ Street lanes
22. tennis courts
23. joint use/MISD
24. practice facilities
25. multipurpose space
26. pavilions
27. neighborhood parks
28. Dirt Trails
29. Multi use trails
30. easy access to parks
31. bike lanes on roads
32. playgrounds
33. neighborhood parks
34. trail connections
35. fitness stations on trails
36. interpretive signs
37. plants
38. downtown parks
39. mile markers/gps
40. visual/ hearing ?
41. Accessibility to playgrounds
42. trail head markers
43. mountain bikes and trails
44. nature trails
45. longer linear trails
46. places to eat
47. playground at athletic facilities
48. pocket parking along trail
49. pavilion
50. playground
51. benches
52. swimming pools
53. reasonable cost
54. indoor pool
55. Tennis courts
56. maintain bike trail

57. dog park
58. swimming pools
59. fitness stations on trail

Are there any athletics or outdoor activities whose needs are not being met?

1. Hiking/Biking
2. Hiking/Biking events
3. Triathlon
4. Annual athletic events
    a. Bike rallies
    b.5Ks
5. Adult golf lessons
6. Disc Golf
7. Rec Center
8. Tennis lessons
9. little league baseball
10. water aerobics
11. swimming
12. tennis
13. mountain biking

Group #5: Arts & Culture

What roles can the public & performing arts play in Mansfield?

1. History is culture
    a. Markers-learn about Mansfield
2. Practical art- functional
    a. Benches
3. Expanding N.O.T.T.
4. R.R. Museum
    a. Any museum
5. events give identity to the city
6. the black history of Mansfield
7. What is Mansfield Niche?
8. Like F.W. botanical gardens
9. Bigger Music Amphitheater
10. You go to FW/D to see plays/museums
11. Functional art in the park
12. indoor theater, not huge, intimate
13. not private
14. inexpensive local art
15. partner w/ MISD, fine art dept
    a. swimming
16. Concerts in the garden
    a. Symphony
    b.local artists
17. races, running, ect., bile, mountain bike
    a. marathons
    b.working w/ surrounding areas
18. adding races to current events
19. keep kids activities
20. kids art camp
21. local art gallery
22. sculpture art in parks
23. like in the park in pantego
24. sculptures around town
25. local artist
26. contest for local artists
27. classes in the park
    a. yoga, etc
28. do something w/ vacant building D.T
    a. gallery
29. pay small fee
30. local history
31. performing arts in the parks
32. continue shuttle service
33. great fireworks @ Rock 4th
34. Farrbest theater open-up
35. any theater
36. small fees/ donations
37. quality performances
38. theater classes
39. discovery park, educational
    a. local interest
    b.tastefully subsided
40. Movies in the parks are good
41. Diversity fest
42. Plano, music, performing music

43. sculptures in the art
44. N.O.T.T. is good
45. locat talent
46. plays in the park
47. local artist
48. fees, small fees
49. local galleries
50. exhibits
51. keep festivals and expand
52. diversity
53. History-grist mill, the creek
54. Tie the history in
55. Functional art in park, w/history
56. bring in diff. cultures
57. ref. diff. time zones w/ clocks in thep arks
58. dedication plaques in parks
59. can improve
60. the symphony
61. art galleries
62. the library
    a. using it for local art
63. bike fest
64. races
65. art competitions
66. local competitions
67. open Farr Best theater
68. The History
    a. Restore the history
69. Talent contest
70. local school bands
71. coordinating w/ mom's day in park
72. kite fest
    a. balloon fest
73. independent films
74. shak. In the park
75. good quality
76. staged reading
77. healthy concessions, to subs.
78. theater
79. tasteful art
80. communicating events
81. teachers
    a. extra credit community services
82. lessons learned. Ask why

Group #6: The Uniqueness of Mansfield

What makes Mansfield Unique? What efforts should the City take to maintain and improve the uniqueness of Mansfield?

1. Small town feel
2. quality amenities
3. input on future growth
4. schools
5. lack of mutli-family apts
    a. open space
6. community activities and events
    a. festivals
7. limited highways
8. location
9. town park amph
10. heavy res based proximity to retail
11. small town country feel
12. trees
13. good school system
14. good location
15. higher development standard
16. kiosks and landscaped medians
17. open to new ideas
18. new development and amenities
19. progressive growth and standards
20. good infrastructure
21. keep single family as primary residential
    a. no apts
22. festivals and events
    a. wine music festivals
23. "real downtown"
24. gold
25. quality residential
26. small town w/a lot of open areas
27. park system
28. like trail system
29. landscaped median

30. good vehicular access
31. live work and play here!
32. openness of city
33. development along 287
34. see more tennis courts
    a. Variety of athletic act.
35. rose park
36. convenience
37. friendly people
    a. good neighbors
38. Coop. City Govt./services
39. Clean Community
40. festivals/events
41. opportunities for volunteering
42. great responsive city staff
43. volunteer groups
44. schools and bedroom community
45. city support
46. large community w/ small town feel
47. preservation of green space
48. strong city standards
    a. i.e. signage
49. Several open space areas
50. active citizen/chamber
51. everything is here
52. location
    a. Near DFW
53. A county system
    a. Dallas, Tarrant, Ellis, Johnson
54. pecan festivals and others
55. sidewalk and jogging system
56. accessibility/trails/ walks
57. access to job centers
58. schools
59. suburban country feel but still close to the big city!
60. location/access
61. able to help build the community
62. friendly community
63. shopping and retail opportunities
64. big league dreams/other large amenities
65. very festive community
66. expansive growth
67. large open community/large lots
68. limited apt development
69. progressive city govt.
70. council listens to its citizens
71. community paper “citizen”
72. recreation center and its fees $25/yr
73. open to diversity /community
74. NOG: need comprehensive street/trail system
    a. Equal sampling of parks
75. small town feel
76. people
77. good road system
    a. limited traffic
78. city keeping up with growth
79. progressive ideas
80. feels like home
81. convenience/proximity
82. historical downtown
83. undeveloped west side openness
84. location/proximity to Ft. Worth/Dallas
85. Diversity of shopping
86. landscaped medians
87. good athletic fields/ number of fields
88. school system
89. supportive council
90. M.E.B.D helping w/ economic growth
91. has a lot of rest. No fine dinning

Appendix C

Trail, Sidewalk & Bike Route Design Standards

The following standards shall be applied to the development of trails, pedestrian improvements, bike routes, and other bike facilities.

Hard Surface Trails

1. Design Objectives

   - The alignment should follow the contours of the land and the natural drainage patterns. The trail should not appear to be carved out of the terrain.
   - Trails should be gentle, curvilinear, and may include a combination of radii and straight segments. Serpentine or sinuous trail alignments are not desirable and should be limited to instances where tree preservation necessitates such alignments.
   - Meanders in trails should appear to have a purpose and should not be haphazard or irregular.
   - Create functional, efficient, trail alignments that present and preserve the natural terrain and vegetation to the greatest extent possible.
   - Locate intersections at natural focal points such as scenic vistas and convenient access points. Design 90° trail intersections with inside turn radii at a minimum of 10'-0". Larger turn radii may be preferable when trails intersect at planting beds, signage or other focal points.
   - Where conditions apply, trails shall align with existing or future crosswalks at streets. These intersections shall incorporate handicap accessible ramps that meet the design criteria of the Americans with Disabilities Act Accessibilities Guidelines.

2. Design Standards

   a. Prepared Sub-grade: Over excavate unstable subgrade soils where encountered and replace with city approved fill material. Compact all fill to 95% standard proctor @ -0% to +6% optimum. Remove all topsoil prior to subgrade preparation and use in finish grading work along trail edges after concrete has cured. Import additional soil backfill as needed for trail edges to provide a minimum 3-foot wide trail shoulder (AASHTO standard) and an embankment blended with existing grade on both sides of the trail. All embankments must be constructed at mowable slopes, 4:1 grade or less.

   b. Pavement Structure: The standard pavement is reinforced 5" to 6" Portland cement concrete (SEE CITY GENERAL DESIGN STANDARD for PAVING) with a transverse medium broom finish. Redwood or pressure treated board expansion joints shall be placed in the trail at an

interval of 40’ in 8’ and 10’ wide trails and 50’ to 60’ in 12’ wide trails. Expansion joints shall be topped and sealed with a self-leveling elastomeric joint compound, flush with the top surface of pavement on both sides of the joint. Contraction joints shall be placed at intervals equal to the trail width and shall be of a depth of one-fourth the pavement thickness. The joints shall be saw-cut one-fourth inch wide. For optimum user comfort, the finished surface of trails should not vary more than 0.02’ from the lower edge of an 8’ long straight edge when laid on the surface in any direction. The concrete thickness of all trails and sidewalks shall be 5” minimum depth and 6” minimum depth where heavy maintenance vehicles are expected to cross over the trail. The reinforcement shall be #3 (minimum) deformed steel bar at a maximum of 12” on center, both ways and supported on plastic chairs placed 24” on center both ways. Welded wire mesh is not acceptable.

c. Width & Clearance: Trails on which a mix of bicycle, pedestrian, other non-motorized transportation and large maintenance vehicles that are required to navigate steep grades, shall be 12’ in width. Otherwise 10’ width is adequate where space is limited due to terrain and available right-of-way. The minimum width of a bicycle trail is 10’ for maintenance access and passing room for cyclists.

The optimum vertical clearance of obstructions over a trail is 10’ or higher, which accommodates maintenance, patrol, and emergency vehicle access. All underpasses and tunnels should be a minimum of 10’ in height. If vertical clearances under bridges and other structures are less than 10’, the clearance shall be clearly posted with warning signage to alert approaching trail users.

A 3’ minimum wide graded shoulder should be constructed and maintained adjacent to both sides of the trail surface. Two feet is the minimum width in addition to the adjacent graded area for steep inclines. A 3’ width clearance should be provided from trees, poles, walls, fences, guardrails, etc. or their lateral obstructions whenever possible. In instances where trees or other obstacles may encroach within this space, warning signage should be provided. A 5’ lateral separation is desirable from any embankment that the cyclist would have difficulty encountering. If this is not possible, a positive barrier such as dense shrubbery, safety railing, walls or fencing shall be provided. All barrier material shall conform to City of Mansfield standards.

d. Design Speed: In general, a minimum design speed of 20 mph should be used when trail grades do not exceed 5%. It is the intent of the plan to design accessible routes linking all destinations and nodes within the city. It is at the discretion of the city to allow for the creation of alternate routes to destinations that may exceed those standards established by ADAAG. In those instances where strong prevailing tail winds exist or trail grades

may exceed 5%, a design speed of 30 mph is advisable. Speed bumps or similar surface obstructions intended to slow down cyclists would pose a trip hazard for other trail users and should never be used.

e. Soft surface paths and trails are not to be used by cyclists except for designated mountain biking trails to limit soil erosion.

f. Horizontal Alignment & Super-Elevation: The use of super-elevated trails shall be limited to help alleviate drainage or to alleviate extreme conditions. Trails shall not exceed a 2% cross-slope. The city may allow for the construction of additional and alternate routes that exceed the standards established within ADAAG, provided however, the super-elevation does not exceed a 5% slope. Minimum radius varies depending on cross-slope.

When curves of lesser radii than those recommended must be used on bicycle trails because of limited right-of-way, topographical or other considerations, standard curve warning signs and supplemental pavement markings should be installed in accordance with the TMUTCD. It is advisable to widen the trail in order to increase the lateral space available to cyclists as they lean to the inside of the turn. The amount of widening should be limited to a maximum of 4'.

Cyclists frequently ride abreast of each other on trails. On narrow trails cyclists have a tendency to ride near the middle of the path. For these reasons and because of the serious consequences of a head-on bicycle crash, lateral clearances on horizontal curves should be widened through the curve, installing a non-skid yellow center stripe, installing a "curve ahead" warning sign in accordance with the TMUTCD or a combination of these alternatives.

g. Grade: Longitudinal gradients on trails shall not exceed 5% except in unusual circumstances. In cases where the minimum grade must be exceeded, an alternate trail route must be constructed providing ADAAG standards. The absolute maximum gradient for a trail intended for bike usage is 8%.

Grades of up to 5% are acceptable for bridges with 10 ft shoulders or paths where a leveling off at the base of the incline permits adequate recovery before an intersection or other conflict point. Bridges constructed with a wood surface shall not exceed a 2% slope with the exception of the camber on pre-fabricated bridges. Concrete surfaces on bridges can exceed 2% to a maximum of 5% if the exit off of the bridge has an adequate deceleration area prior to encountering an intersection of any kind or to decelerate prior to a curve in the alignment of the trail.

h. Drainage: The cross-slope of areas adjacent to trails should be a minimum of 2% to provide for drainage. Trail pavement surfaces shall not exceed a cross slope of 2% in order to maintain compliance with ADAAG standards.

Sloping in one direction instead of crowning is preferred because it simplifies drainage, surface construction, and maintenance. An even surface is essential to prevent water ponding and ice formation. Culverts and other drainage and piping should be extended laterally at least 10 feet from the downhill side of a trail or path.

While not preferred, many trails will be located in floodplains. In floodplains, trail rights-of-way or easements shall be located on the highest elevation within the designated floodplain while maintaining a 3' soft shoulder on both sides.

Where a trail is constructed on the side of a hill, a ditch or sizable swale of dimensions suitable for the safety of cyclists and for the volume of water expected shall be constructed on the uphill side to intercept the hillside drainage (See Figure 6). Where necessary, catch basins with cross culverts (pipe structures built underneath the trail) shall be provided to convey the intercepted water under the path. The length of cross culverts should be extended to include the clear zone as well as the trail width and should be backfilled to provide an uninterrupted clear zone. Drainage grates and manhole covers should be located outside of the travel path of bicyclists and wheelchair users. To assist in draining the area adjacent to the trail, the design should include considerations for preserving the natural ground cover. Seeding, mulching and sodding of adjacent slopes, swales and other erosion-prone areas shall accompany trail construction and shall be implemented by the trail builder. Where trails pass underneath highway bridges, existing deck drain discharges must be routed or reconstructed so that deck runoff will not discharge upon or flow across the bike path. Deck drainage can create ice and algae on the pavement as well as erode the pavement surface.

Soft Surface Trails

1. Design Objectives

- Materials should provide a stable surface and remain relatively dry.
- Color should be earth tone to blend with the natural environment and to minimize visual impact.
- Design for wheelchair accessibility wherever practical, with trail widths no less than 48 inches. In cases where a 48-inch wide trail is designed, ensure that the adequate wheelchair passing areas are provided per ADAAG standards.

- Minimize erosion of surface material at side drainage locations to limit washing, i.e., provide concrete pans or other erosion mitigating devices as approved by the city.

2. Design Standards

   a. Prepared Sub-grade – Compact on-site material where approved by the City Engineer. Over-excavate if unstable sub-soils are encountered and replace with City-approved fill material. Compact all fill areas to 95% standard proctor @ 0% to +6% optimum moisture content. Remove all topsoil prior to subgrade preparation. The use of a geotextile fabric under the aggregate fines where installed in wet or unstable areas is recommended.

   b. Trail Surface – 3/8 inch diameter crushed and compacted aggregate fines, such as crushed or decomposed granite with adequate binder, minimum 4 inch depth.

   c. Width & Clearance – Standard width for two-way trails is 6 feet with a minimum width of 4 feet.

   d. Grade, Sight Distance, Drainage – Refer to above;

   e. For natural surface trails that will be located in environmentally sensitive areas, several measures are recommended to lessen the impact of the trail and trail users on the area (see Figure C.1):
      1. The riparian setback should be as wide as possible: 30’ - 50’ recommended.
      2. Slope the trail away from the waterway or pre-treat trail run-off with a trailside swale.
      3. Limit vegetation removal.
      4. Remove invasive plant species.
      5. Use the trail as an opportunity to restore and enhance the waterway or environmentally sensitive area.

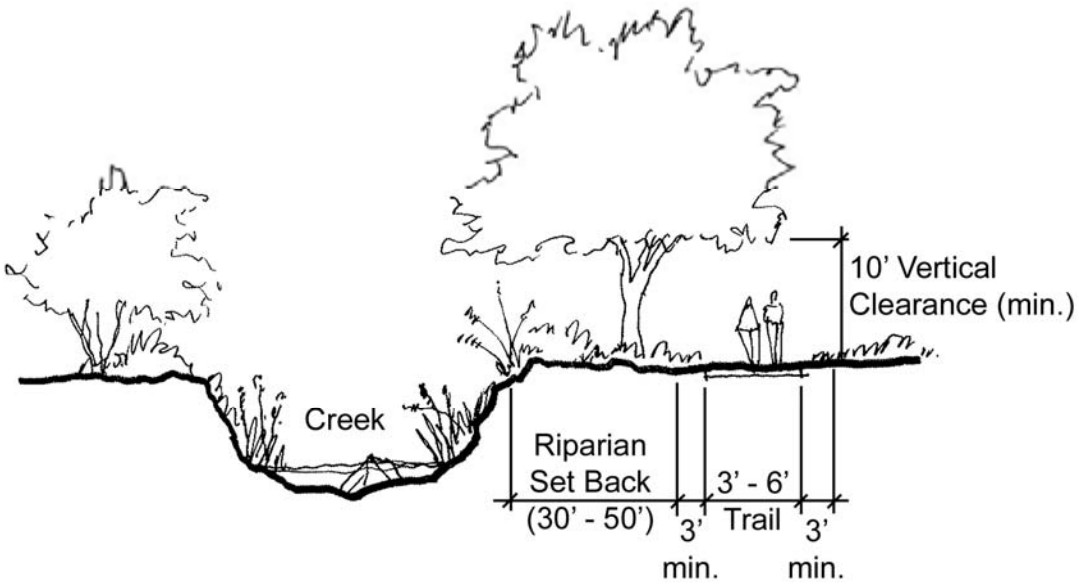

Figure C.1 ***Natural Surface Trail Adjacent to Stream Corridor***
N.T.S. **Section View**

f. Trails can vary in width and type depending on the existing topographic and environmental constraints. They should take into account issues like drainage, erosion, slope/grade, presence of waterways, vegetation, riparian and habitat areas, environmental requirements and regulations. In some cases the proposed trails will have to address slope concerns during the design and construction (see Figure C.2)

g. Areas with earthen walking trails (i.e., parks and natural areas) should also provide a complimentary accessible route that meets or exceeds ADAAG standards.

h. Figure C.3 illustrates a typical soft-surface trail design that is appropriate for foot trails in steep and inclined areas. This type of trail with a typical width of 3'-6' is designed to accommodate walkers, hikers and runners, depending on available space. The foot trail will be an earthen or other "soft" surface, so it is not appropriate for most bicyclists, nor will it meet ADAAG requirements. The trails should be designed with adequate drainage to prevent channeling and erosion.

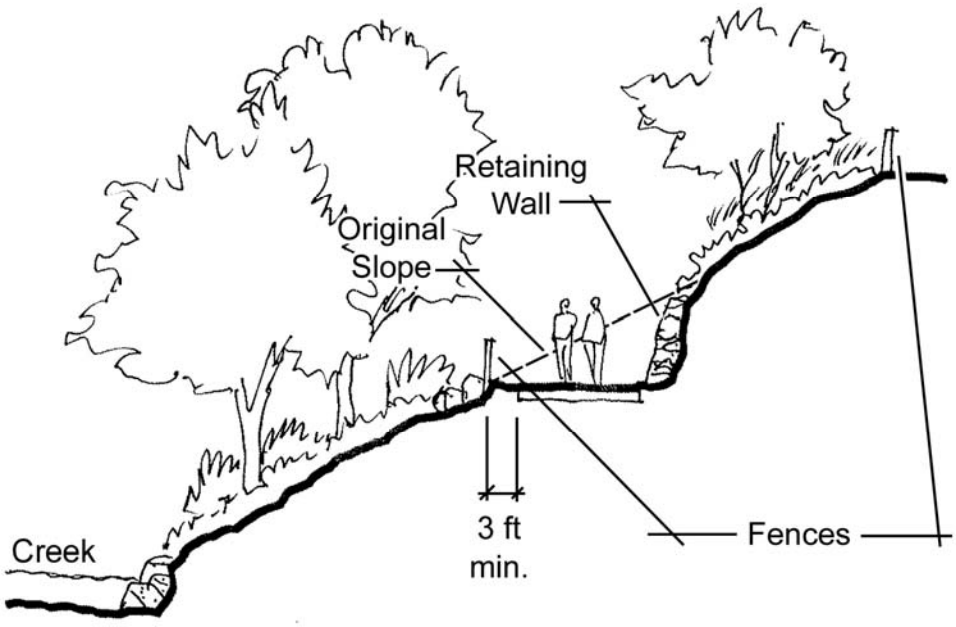

Figure C.2 ***Foot Trail along Slope***
N.T.S. **Section View**

Pedestrian Bridges and Low Water Crossings

1. Design Objectives
   - Trail crossings over creeks and drainage ways generally shall be by bridge.
   - Prefabricated bridges require approval by the City. Bridges shall be of an arched truss design if in compliance with ADAAG longitudinal slope criteria. The minimum width of clear deck shall be 2' wider than the approaching trail. All bridge foundation and abutment designs shall be sealed by a registered Texas professional engineer and approved by the City.
   - Design bridges that are sturdy, safe, vandal-resistant, and easily maintained.
   - Deck surface shall have good skid resistance.
   - Stabilize deck to minimize vibrations.
   - Railing should be free of splinters and provide a smooth, clean surface to the touch.
   - Railing design should allow views to creeks for persons of all heights, yet prevent anyone from falling through.
   - Scale of bridge should be in keeping with its surroundings.
   - Bridge color should blend with the natural environment or tie into the color scheme of adjacent development.
   - Integrate design with other elements throughout the corridor.
   - Low water crossings may be used at small stream crossings with the approval of the Engineering Department.

2. Design Standards

a. All bridge designs to be sealed by a registered Texas professional engineer and approved by the City. Low water crossings shall not exceed 4'-0" from path to flowline of the waterway or ravine unless approved by the City Engineer. Low water crossings shall have a widened shoulder to 5' on both sides of the trail. The headwall structure under the trail shall have gently sloping wingwalls constructed with the headwall no steeper than 8:1. The pipe ends shall be finished at the same repose of slope as the wingwalls. Any crossing exceeding this 4'-0" separation to permit the construction of ADAAG-compliant trail approaches to the crossing shall require a bridge.

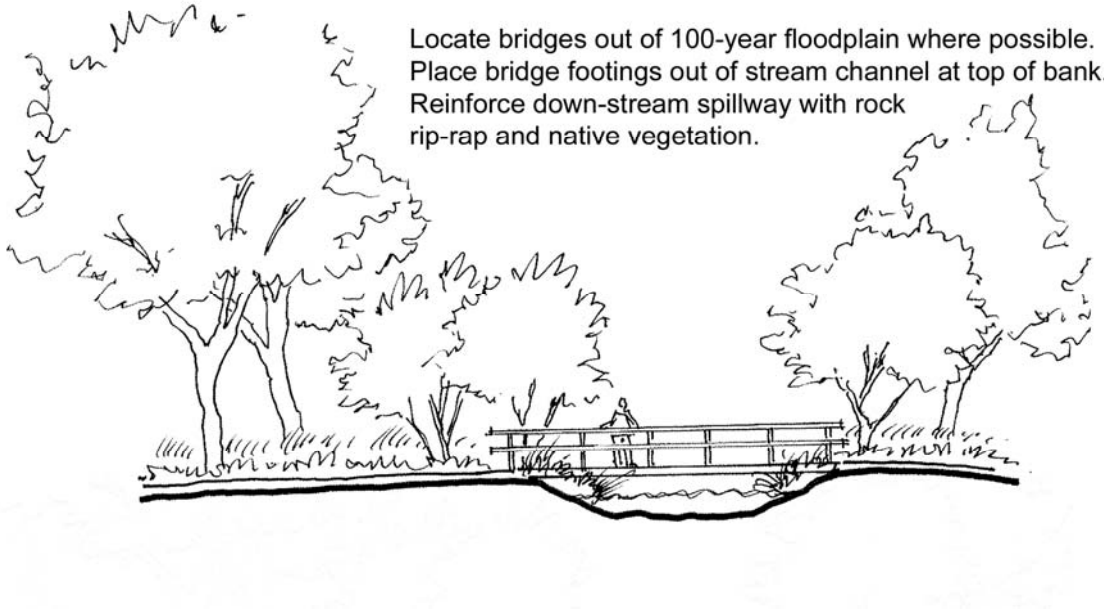

Figure C.3 ***Crossing of Major Stream or Drainage***
N.T.S. **Section View**

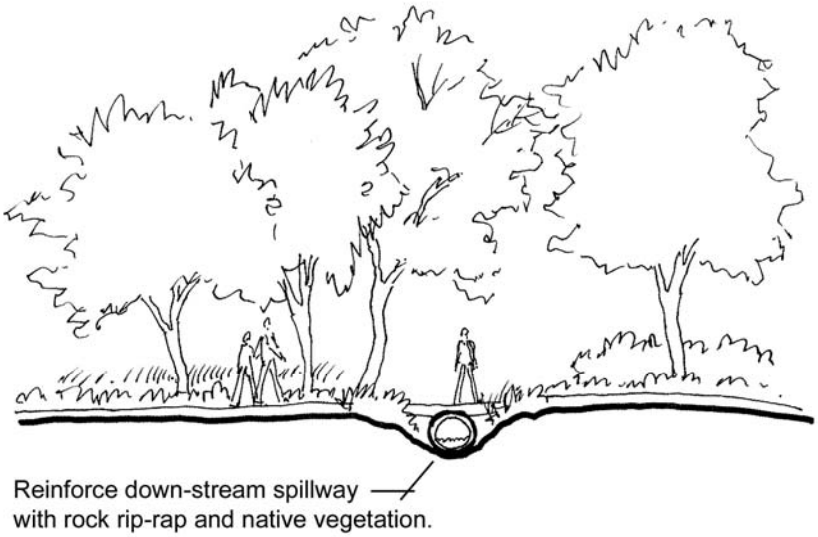

Figure C.4 ***Low Water Crossing of Minor Stream or Drainage***
N.T.S. **Section View**

Culvert Outfall Structures

1. Design Objectives
   - Many existing culvert pipe structures may need modification to meet trail safety and aesthetic standards. Culvert outfalls shall occur on the downhill side of trails.
   - Outfall structures shall have an aesthetic appearance by adding stone veneer or concrete form liners to provide a more aesthetically pleasing appearance.

2. Design Standards
   a. A registered Texas professional engineer shall design and size all outfall pipes.

Underpass Structures

1. Design Objectives
   - Underpasses provide safety and continuity by eliminating the need for users to interact with and/or cross busy streets.

2. Design Standards
   a. Underpasses shall be constructed according to minimum vertical and horizontal clearances. All modified underpasses should meet these requirements. In situations where the underpass is straight (allowing clear visibility) two-way traffic can be accommodated.

Trail Safety Railing

1. Design Objectives

- Railings are required in situations where bicyclists or pedestrians may fall down an embankment or other vertical displacement.

2. Design Standards
   a. Railings, fences or barriers on either side of a trail structure should extend 4 feet higher than the trail surface and should have smooth rub rails attached at handlebar height (3.5 feet) made of smooth metal or similar material. Railing ends shall be angled downwards and flared away from the trail at both ends of the railing to prevent cyclists and pedestrians from catching on the railing.

Signed Shared Roadways (Bike Routes)

1. Design Objectives
   - Provide through and direct travel in bicycle demand corridors.
   - Connect discontinuous segments of shared-use trails, bike lanes and or routes.
   - Provide a common route for cyclists through a high demand corridor.
   - Provide extensions along local neighborhood streets and collectors that lead to commercial areas, places of employment, educational facilities, parks and other community facilities.

2. Design Standards
   a. Bike route signs may be used on streets with bike lanes and shared lanes as well as on shared-use trails.
   b. Route signs should include destination information, yet be legible to moving cyclists.
   c. Minor trail signs shall be located at all intersections where the bike route changes direction.
   d. Additional route signs should be located in accordance with AASHTO and TMUTCD standards.
   e. Adjust utility covers to grade, install bicycle safe drainage grates, and fill potholes to provide a smooth surface.
   f. Curb lane widths shall generally meet or exceed a width of 14 feet.
   g. The use of bike lanes and shared lanes with "sharrow" markings depends on the type of roadway on which a bike lane is located. For lower-traffic volume roadways, a wide outside, shared lane with a sharrow marking is preferred. In special locations to be determined by a future Bicycle Master Plan study, a designated bike lane with a preferred width of 5' but not less than 4' can be used. Generally, a shared lane with sharrow markings shall be used for the following road sections: C2U, C3U, and C4U when a bike route is present.[1]

[1] These road section designations refer to the sections established in the City of Mansfield's Master Thoroughfare Plan (October 2006).

Trail heads; Major, Secondary and Minor

1. Design Objectives
   - Provide transition between motorized and non-motorized transportation and recreational systems.
   - Create a unique entry to the trail system through hardscape and landscape aesthetics that support themes established by the Trails Plan.
   - Encourage utilization of trail and bicycle routes as alternative transportation paths within the city.
   - Provide access to a variety of nodes, streets, and trails.
   - Utilize existing facilities such as schools, civic facilities (library, city hall, etc.) and parks as trail heads.
   - Establish a hierarchy of trail heads ranging from major, secondary and minor.
   - Encourage shared use of parking when appropriate and when such shared use would not have a negative impact on the parking availability of the primary parking lot user.

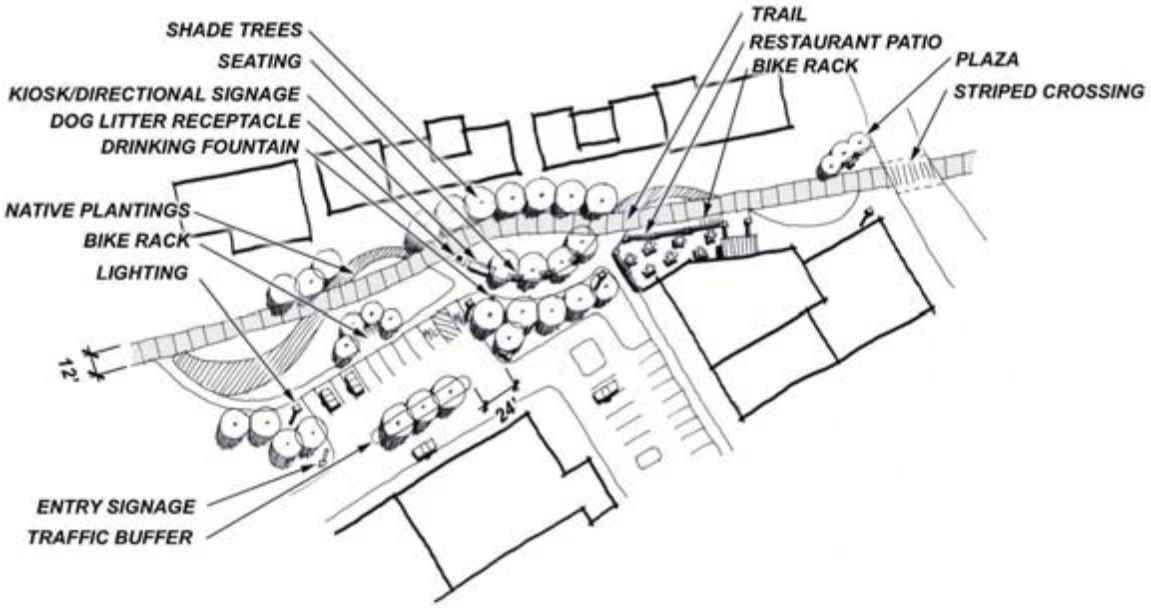

Figure C.5 ***Typical Trail Head – Built Urban Environment***
N.T.S. **Plan View**

2. Trail Head Design Standards
   a. A minimum of 10 parking spaces and 1 handicap space shall be provided at major trail heads. A minimum five spaces and one handicapped space shall be provided at minor trail heads. In both instances, the handicapped parking space must be van accessible. Sidewalks shall connect handicap spaces to the trails, and the parking lot shall be signed for trail head usage.

b. Bike racks approved by the city shall be provided at a ratio of one bike space for every two parking spaces. No less than five bike spaces shall be provided in a rack at any trail head.
c. One drinking fountain approved by the City shall be provided within 30' of benches and bike racks. Drinking fountains shall be per the City of Mansfield's standard, or approved equal. Drinking fountains shall comply with city standard specifications.
d. One bench approved by the City for every three parking spaces shall be provided, with minimum four benches provided.
e. Parking lots and trail intersections shall be lighted to a minimum of ½ footcandle with appropriate commercial light fixture and no spillover to adjacent property.
f. Trails which terminate at trail heads shall receive landscape traffic control measures for buffering and direction of pedestrian and bicycle traffic.
g. Trail heads shall provide one canopy tree per two parking spaces with a minimum of five trees required. Three ornamental trees shall equal one canopy tree. (See Landscape Ordinance for minimum sizes and specifications for shade and ornamental trees).
h. Trail heads shall be identified by trail markers.

3. Trail Access Point Design Standards

a. Parking is not required at trail access points.
b. One bike rack (holding capacity of five bikes) shall be provided at any trail access points.
c. No drinking fountains need to be provided.
d. One bench approved by the city shall be provided.
e. Trails which terminate at trail access points shall receive landscape traffic control measures for buffering and direction of pedestrian and bicycle traffic.

Modifications to Standard Street Sections

In addition to adopting standards for trail, sidewalk, and bike route design, modifications to the City's Standard Street Sections must be made to accommodate the types of pedestrian and bicycle facilities recommended in the previous section. Modifications are made for three reasons:

- To provide adequate space for on-street pedestrian improvements,
- To provide a wide outside lane for shared lane use, and
- To provide adequate space for a bike lane where used.

Proposed sections to be adopted by the City of Mansfield are shown on the following pages.

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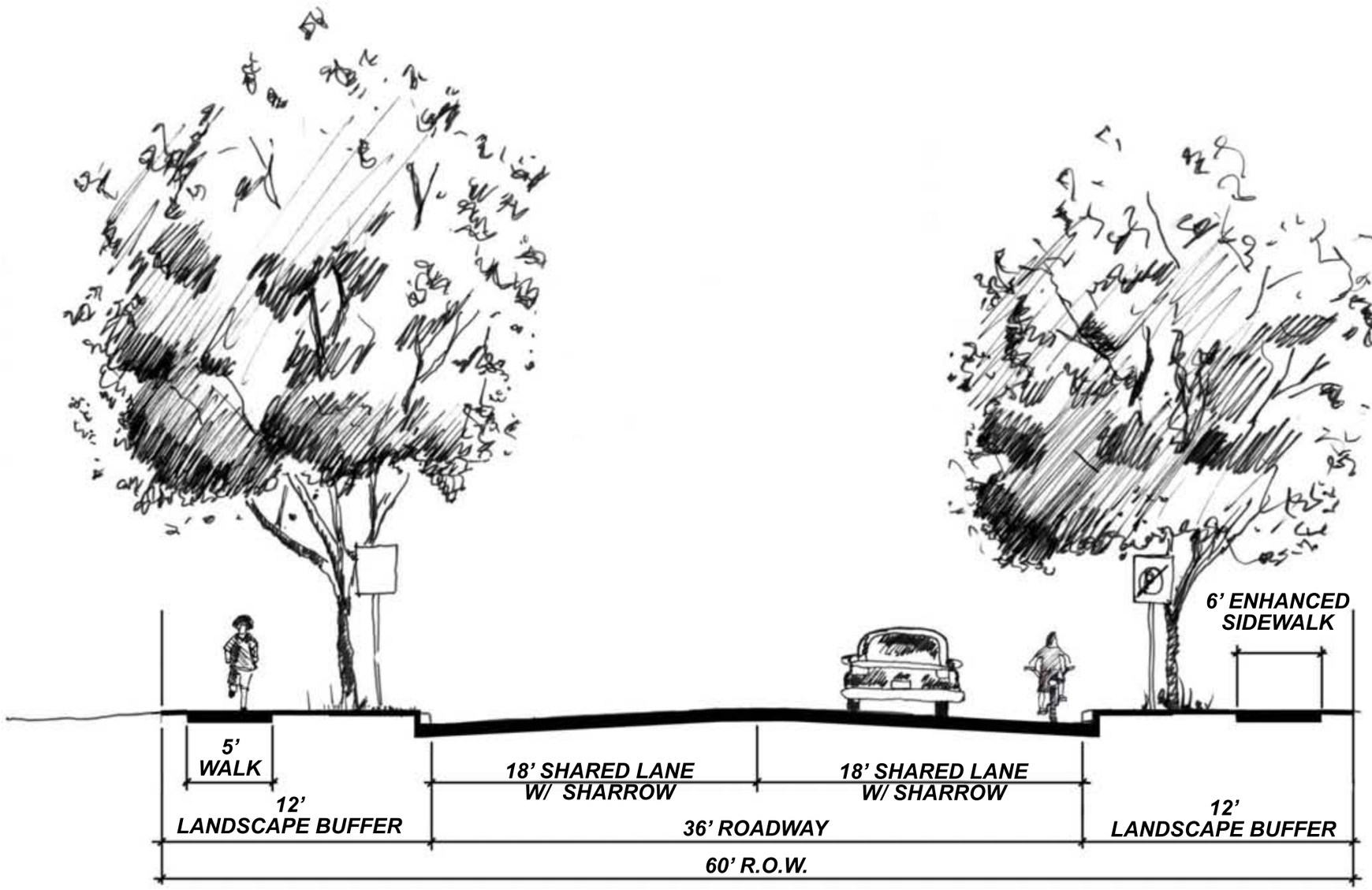


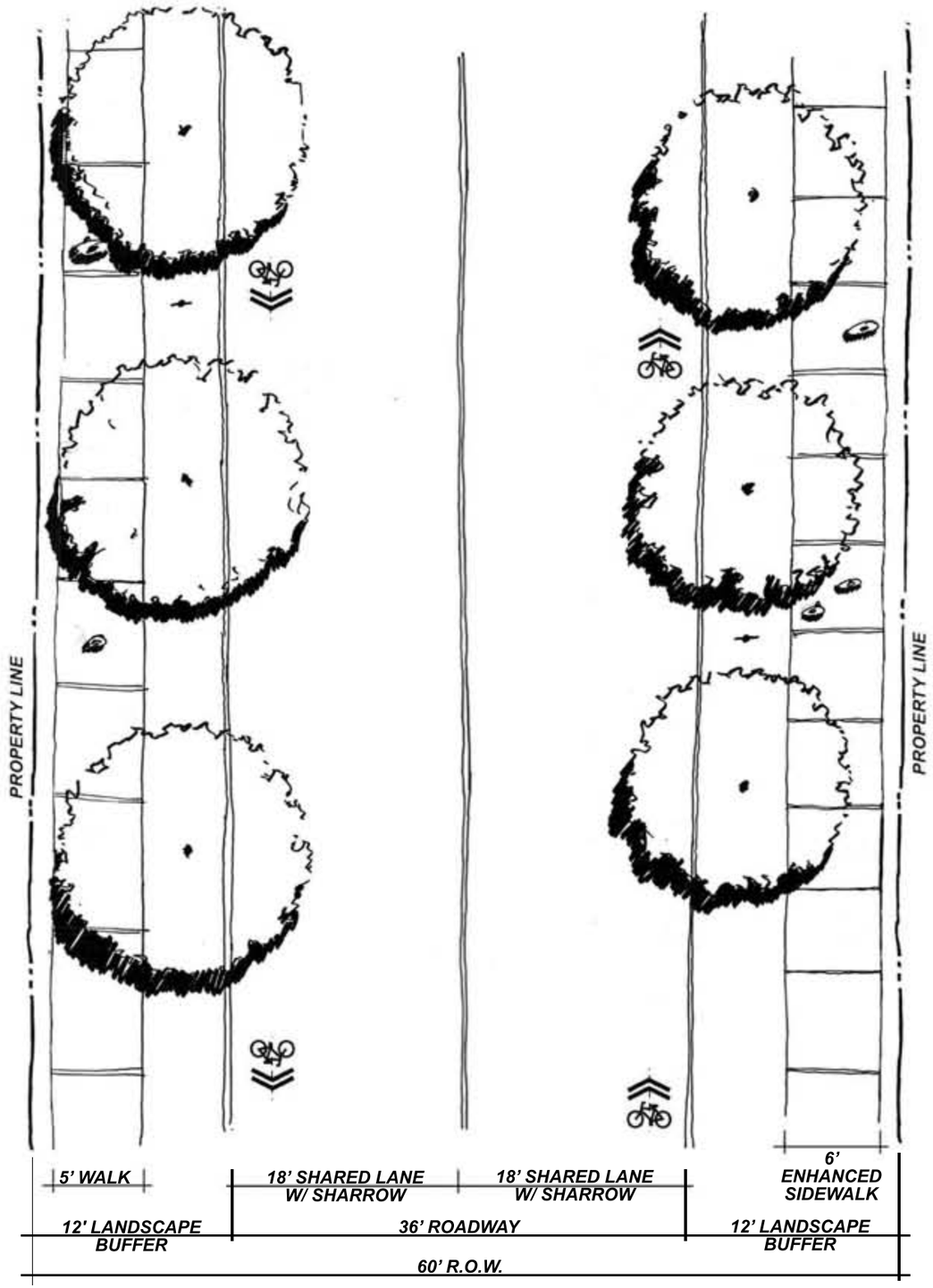
October 2009

LOCAL COLLECTOR (C2U 60' R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS



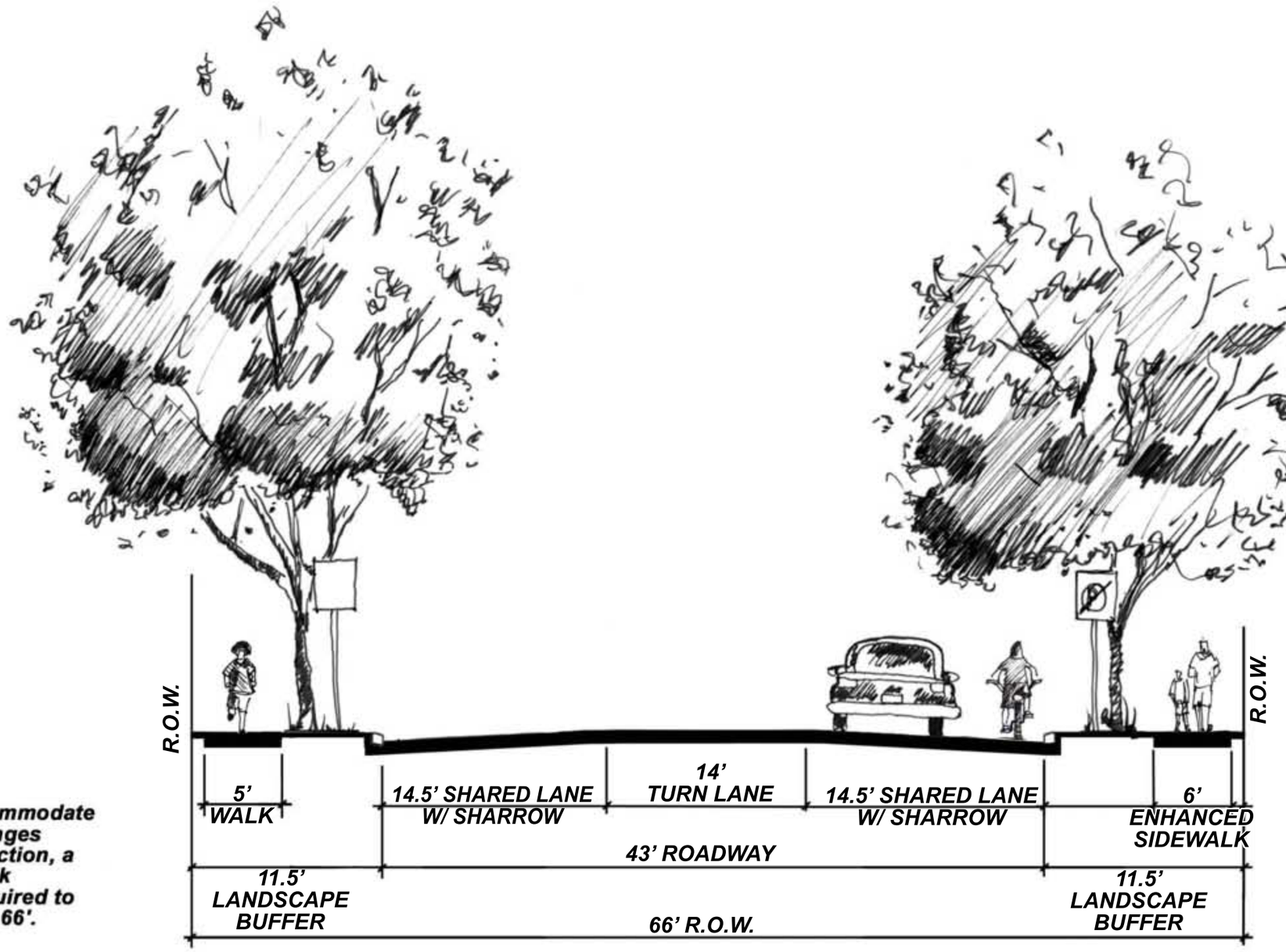
October 2009

LOCAL COLLECTOR (C2U 60' R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS



NOTE: In order to accommodate the recommended changes shown in this street section, a right-of-way or sidewalk easement must be acquired to provide a total span of 66'.

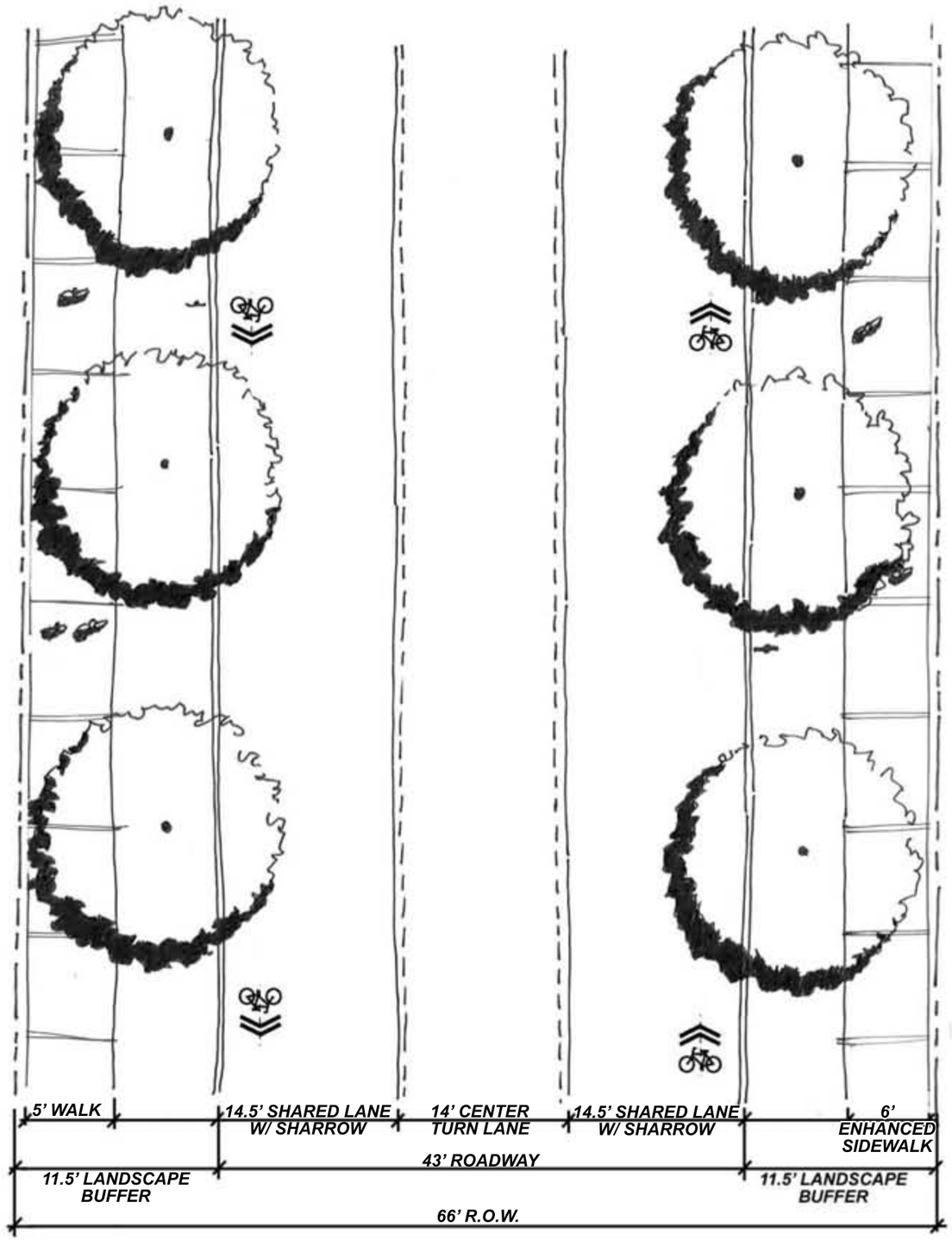
October 2009

HALFF

MINOR COLLECTOR (C3U 66' R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

MANSFIELD TEXAS



NOTE: In order to accommodate the recommended changes shown in this street section, a right-of-way or sidewalk easement must be acquired to provide a total span of 66'.

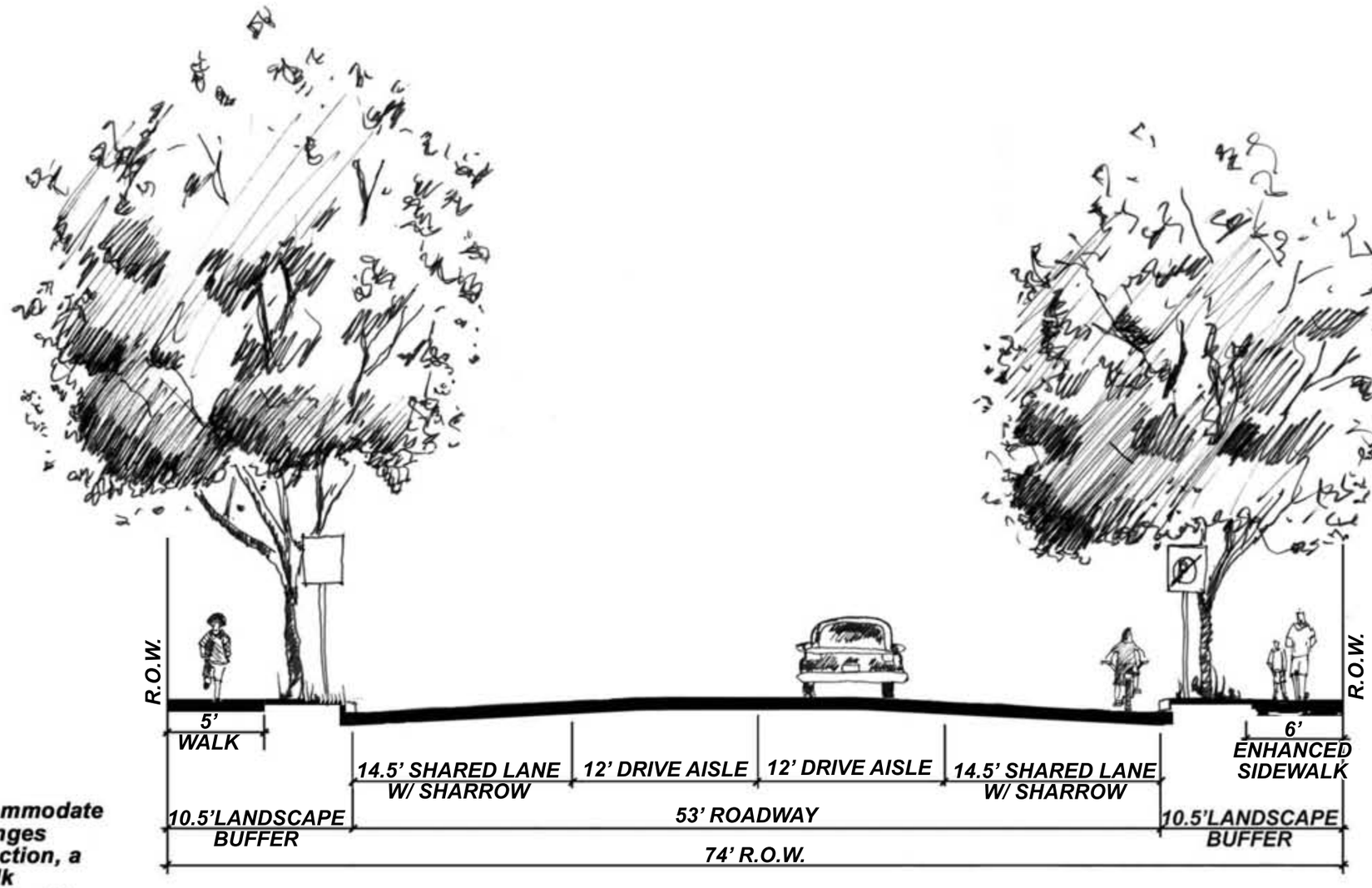
October 2009

MINOR COLLECTOR (C3U 66' R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS



NOTE: In order to accommodate the recommended changes shown in this street section, a right-of-way or sidewalk easement must be acquired to provide a total span of 74'.

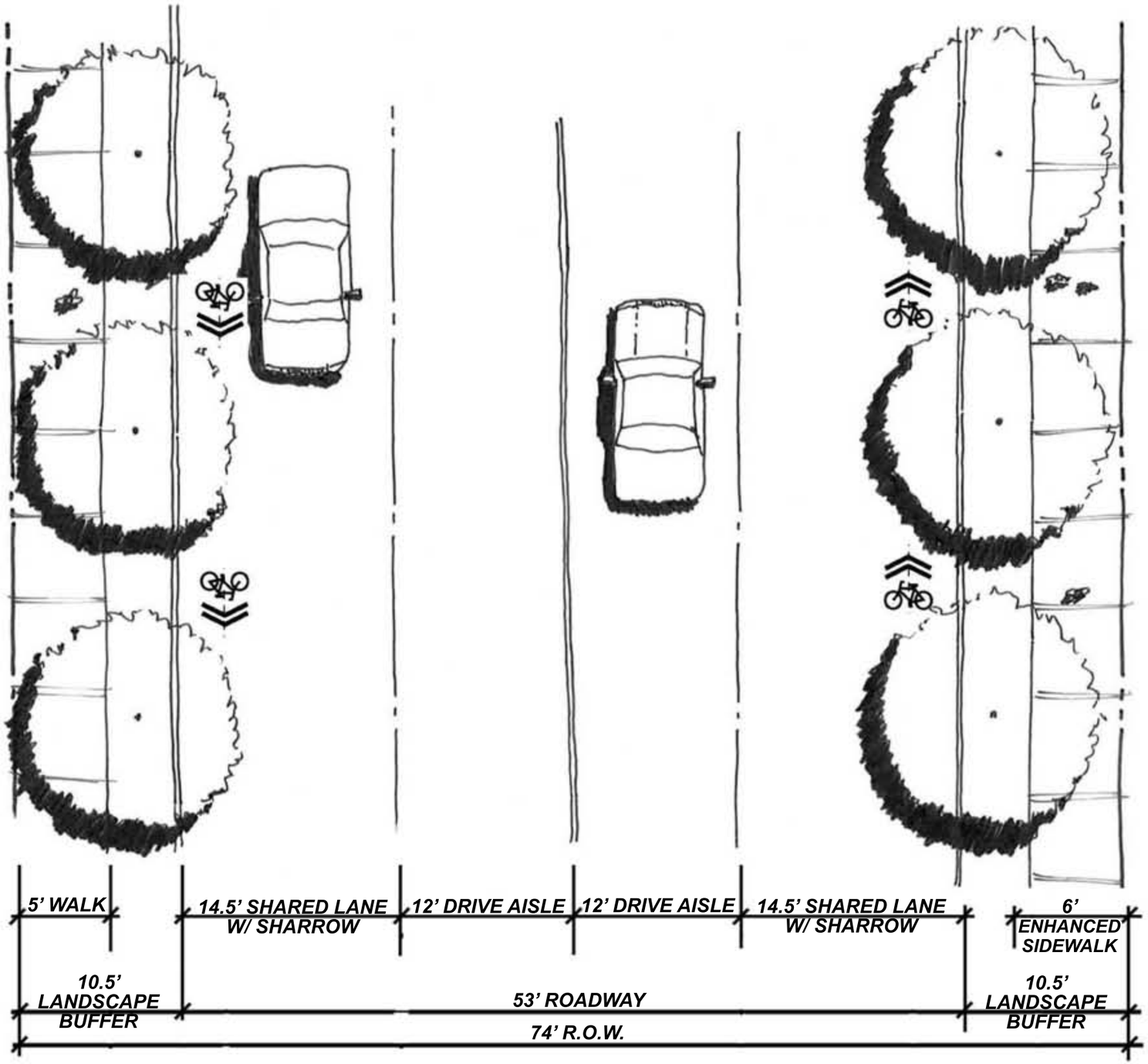
October 2009

MAJOR COLLECTOR (C4U 74’ R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS



NOTE: In order to accommodate the recommended changes shown in this street section, a right-of-way or sidewalk easement must be acquired to provide a total span of 74'.

October 2009

MAJOR COLLECTOR (C4U 74' R.O.W. W/ SHARROW)

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

Appendix D

Trail Master Plan Plates

The plates on the following pages are intended to provide a more detailed view of the Trails Master Plan discussed in Chapter 7.

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TRAILS MASTER PLAN

PARKS & TRAILS

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

LEGENDS

01 SCHOOLS

MISD H.S. / ALTERNATIVE SCHOOLS

01 Mansfield H.S.
02 Mansfield Legacy
03 Mansfield Summit
04 Mansfield Timberview
05 Alternative Education Center
06 Ben Barber Career Tech Academy

MISD MIDDLE SCHOOLS

07 Brooks Wester
08 James Coble
09 Danny Jones
10 Rogene Worley
11 T.A. Howard

MISD INTERMEDIATE SCHOOLS

12 Cross Timbers
13 Donna Shepard
14 Della Icenhower
15 Mary Lillard
16 Mary Orr

MISD ELEMENTARY SCHOOLS

17 Charlotte Anderson *
18 J.L. Boren
19 Janet Brockett
20 Willie E. Brown
21 Anna May Daulton
22 Kenneh Davis
23 Imogene Gideon
24 Glenn Harmon *
25 Carol Holt
26 Thelma Jones
27 P.D. Morris
28 Erma Nash
29 Alice Ponder
30 Martha Reid
31 Tarver Rendon *
32 Mary Jo Shepard
33 Cora Spencer
34 Elizabeth Smith
35 Roberta Tipps
36 Louise Cabaniss (future)

* beyond map

EXISTING PARKS

Neighborhood Parks

Julian Feild Park
McClendon Park, West
James McKnight Park, West
Woodland Estates (Two Parks)

Community Parks

Clayton W. Chandler Park
McClendon Park, East
James McKnight Park East
Katherine Rose Memorial Park
Town Park
Williams Property (Future Park Site)

Special Purpose Parks

Hardy Allmon Soccer Complex
Mansfield Sports Complex
Philip Thompson Soccer Complex
Mansfield Activities Center

Linear Parks

James McKnight Park, West

Preserves / Natural Areas

Britton Park (by C.O.E. & Grand Prairie)

Hike & Bike / Equestrian

Walnut Creek Linear Park

Recreation Facilities

Mansfield Activities Center

Other Park Facilities

Big League Dreams
Hawaiian Falls Waterpark
Mansfield National Golf Course
Geyer Field (MISD Property)
Garden Heights

SYMBOLS LEGEND

- Major Thoroughfare
- Utility Easement (Primary)
- Utility Easement (Secondary)
- Public Facilities
- Vacant Land
- City Gateway

TRAIL CROSSINGS

- At Grade Crossing, Mid-Block
- Intersection, No Traffic Signal
- Intersection, With Traffic Signal
- Grade Separated Barrier
- Grade Separated Crossing Possibility

PARK LEGEND

- Potential Community Park
- Potential Neighborhood Park
- Potential Special Purpose Park
- Recreation Center
- Proposed High Impact Community Park
- Proposed Low Impact Community Park
- Regional Park (Potential)
- Service Area 1/2 or 1 Mile Radius

TRAIL LEGEND

- Existing Trail
- Enhanced Sidewalks
- Off Street Trail
- Lake Trail
- Regional Trail Connections
- Veloweb
- Spine Trail
- Bike Route
- Trail Head
- Trail Access Point
- Trail Gateway

September 9, 2009

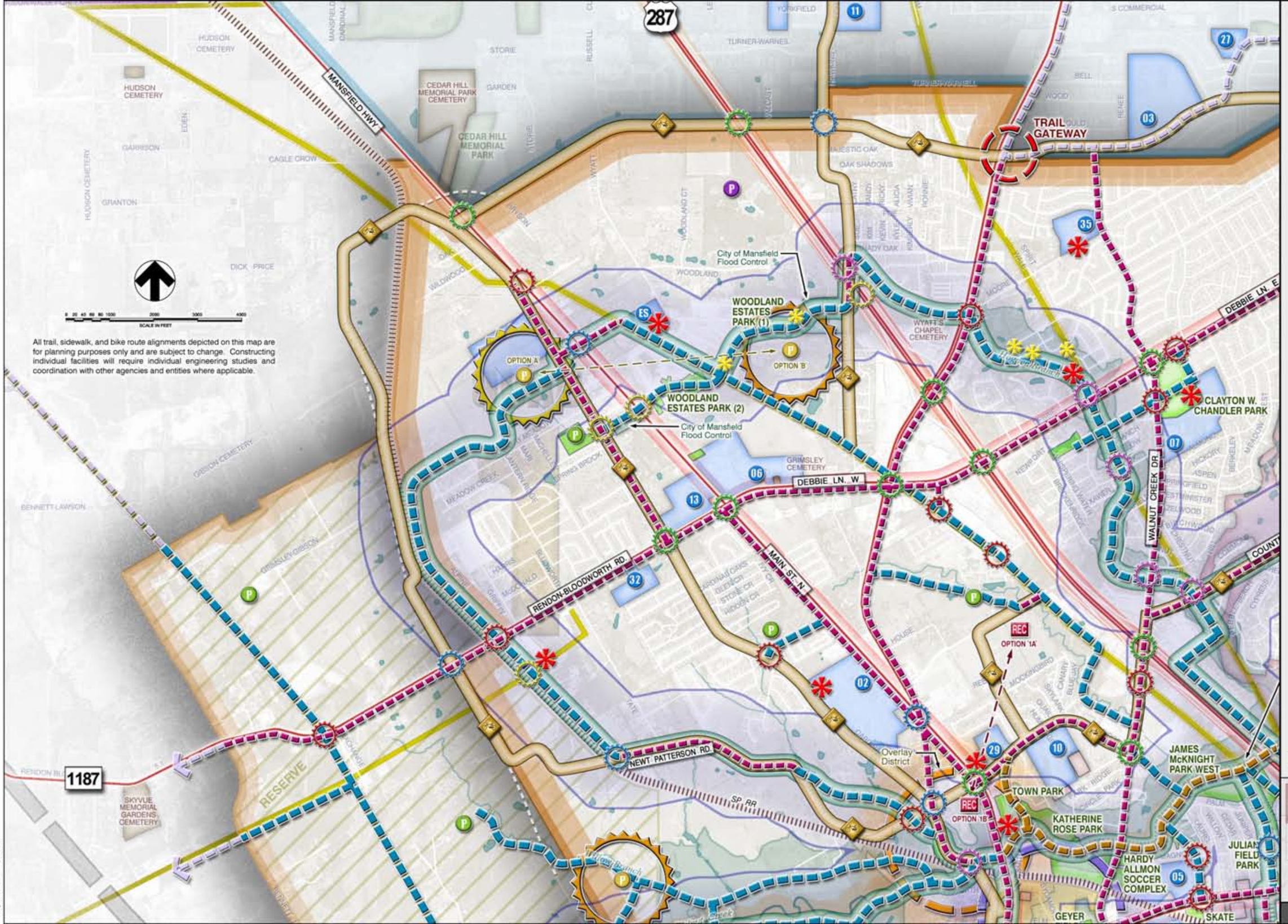
Parks & Trails Master Plan

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

MAP 'A'



All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

SCALE IN FEET

September 9, 2009

Parks & Trails Master Plan

CITY OF MANSFIELD, TEXAS

HALFF

All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

SCALE IN FEET

0 20 40 60 80 1000 2000 3000 4000

MANSFIELD TEXAS

A B C D E

MAP 'B'

September 9, 2009

TRAIL GATEWAY

DEBBIE LN. E

MATLOCK RD.

CLAYTON W. CHANDLER PARK

COUNTRY CLUB RD.

Walnut Creek Country Club (private)

WILLIAMS PROPERTY

PHILIP THOMPSON SOCCER COMPLEX

WALNUT CREEK LINEAR PARK

Urban District

JAMES McKNIGHT PARK WEST

JAMES McKNIGHT PARK EAST

JULIAN FIELD PARK

SKATE

CANNON DR.

BROAD ST. E

CALVARY CEMETERY

Methodist Hospital

Healing

360

POTENTIAL REGIONAL PARK

Joe Pool Lake

LOYD PARK

USACE Land

MISD Natatorium and Stadium

MANSFIELD SPORTS COMPLEX

#5

LOW BRANCH PARK

TARRANT COUNTY

DALLAS COUNTY

Grand Prairie

Parks & Trails Master Plan

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD TEXAS

MAP 'C'

TARRANT COUNTY
JOHNSON COUNTY

PROPOSED LOOP 9

ETJ

POTENTIAL REGIONAL PARK

TRAIL GATEWAY

BROAD ST. W

McCLENDON PARK WEST

McCLENDON PARK EAST

DOWN TOWN PARK

GEYER FIELD

SOCCER COMPLEX

SKATE PARK

Historic Mansfield

Urban District

MAIN ST. S

2nd AVE. S

TRAIL GATEWAY

SCALE IN FEET

All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

September 9, 2009

Parks & Trails Master Plan

CITY OF MANSFIELD, TEXAS

HALFF

MANSFIELD
TEXAS

MAP 'D'

SKATE PARK

MANSFIELD ACTIVITIES CENTER

STEPHEN'S FAMILY CEMETERY

Healing Garden

REC OPTION '2A'

Urban District

Mansfield National Golf Course

TRAIL GATEWAY

BRITTON PARK

SP RR

City Service Center

HERITAGE PWKY

REC OPTION '2B'

Big League Dreams and Hawaiian Falls Water Park

Future Y.M.C.A

BRITTON CEMETERY

TRAIL GATEWAY

TRWD EASEMENT

ELEC. EASEMENT

ELEC./GAS EASEMENT

Urban District

ST. PAUL CEMETERY

PENWELL PLACE

SCALE IN FEET

All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

September 9, 2009

HALFF

PARKS & TRAILS MASTER PLAN

CITY OF MANSFIELD, TEXAS

TRAIL GATEWAY

TRAIL GATEWAY

TRAIL GATEWAY

RESERVE

RESERVE

POTENTIAL REGIONAL PAR

JOHNSON COUNTY

ELLIS COUNTY

SCALE IN FEET

All trail, sidewalk, and bike route alignments depicted on this map are for planning purposes only and are subject to change. Constructing individual facilities will require individual engineering studies and coordination with other agencies and entities where applicable.

MANSFIELD TEXAS

A B C D E

MAP 'E'

September 9, 2009

Appendix E

Creeks and Streams

The Value of Creeks and Streams in the Urban and Semi-Urban Environments

Water availability for domestic, industrial, agriculture, as well as ecological use is important from a quantity *and* quality point of view. In fact, water has become a scarce commodity which has far-reaching impacts on the future of all communities, especially in Texas. Uncontrolled land development, water overuse, and pollution continue to impact this precious and primary life supporting element. Planning on all levels should be cognizant of the effects of our actions on the future of water availability.

Communities need to realize that good stewardship of water is crucial to ensure sustainable economic growth including safety, health, and welfare to everyone. Ideally, state, county, and municipal planning should take place on a watershed scale where the source, use, and disposal of water are all integrated. The goal of such an approach is sustained availability of good quality water, effective flood management, and ecologically healthy environments, with tremendous recreational opportunities.

Specific tools to achieve effective watershed management include the protection of riparian/ creek buffers and integrated storm water management.

Ponds and have tremendous recreational, ecological and aesthetic value as seen by this image at the Williams Property.

Buffers Along Creeks and Drainage Ways

References:

Riparian Buffer Strategies for Urban Watersheds: Metropolitan Washington Council of Governments; 1995.

Stream Corridor Restoration: The Federal Interagency Stream Restoration Working Group.

The Mansfield Parks, Recreation and Open Space Master Plan recommends that riparian buffers be established along all creeks and drainage ways in the City of Mansfield and its ETJ as a measure to protect the fully developed 100 year flood area and an additional three-zone buffer system as an important resource for the City. The value of such corridors is manifold and includes the following:

- Flood conveyance and management
  - Natural streams have developed over time to absorb flood waters and to release them gradually once the flood has subsided. In fact, wetlands and riparian vegetation act as "sponges" that take up the water, hold it and release it slowly as it drains through the vegetation. Maintaining the natural vegetation within creek corridors contributes to less intense floods, less erosion, and more stable stream banks.
- Creek morphology
  - Creeks and drainage ways are by nature dynamic which means that they change course over time as the rushing water of large floods carves its way through the landscape. A proper riparian buffer allows for this dynamic change without impacting property and structures.
  - Upstream development typically leads to higher intensity floods that increase the 100 year floodline over time. A wide riparian and creek buffer take into account the future elevated 100 year floodline based on fully developed and built-out land use conditions in the watershed.
- Safety
  - Structures within creek corridors including buildings, bridges, and dams are all potentially in danger of being damaged or destroyed during floods, depending on the size of the particular flood event. Where bridges and dams by their very nature are built within corridors, habitable structures should be located outside the built-out 100 year floodline as a safety precaution.
  - Wide riparian corridors have a definite positive effect on dam safety – well established riparian corridors upstream of a dam decrease the chance of dam failure: Should a dam failure occur the resultant downstream damage will be reduced with the floodwater absorbed by the wide riparian corridor.
- Health and water quality
  - Water quality in streams and creeks is typically a factor of the quality of water entering the system and the manner in which vegetation in the watershed "cleans" the runoff before it enters the creek. The excessive use of fertilizers and pesticides within a watershed, leads to low water quality entering the streams and creeks. In an intact system, vegetation, especially native grasses, filtrate the

runoff prior to entering the creek and stream. However, it is crucial that the riparian buffer is in place to ensure such filtration.
    - Riparian buffers lead to reduced nutrient load of streams which effects water quality. This, in turn, prevents the development of algae blooms in lakes.
    - Riparian buffers prevent excessive sediment loads in streams which, in turn, decrease the possibility of sedimentation of lakes.
    - An ecologically intact creek and drainage way system has a natural predator and prey system in place whereby insects like mosquitoes are preyed upon by reptiles, birds and bats. However, habitat disturbance through excessive erosion and concrete lined channels causes a loss in the predator species which leads to excessive insect populations. With the West Nile virus on everyone's mind it is thus important to keep the creek corridors healthy by encouraging the protection of the riparian vegetation.
- Economy
    - Economic sense is important in the protection of structures by their construction outside the 100 year floodline based on built-out conditions.
    - Stable stream banks preclude expensive measures to prevent or fix failing stream banks.
    - Reduced flood damage means fewer costs.
    - Property facing or adjacent to open space is more desirable and expensive which leads to increased tax income.
- Ecology and habitat preservation
    - Riparian buffers typically preserve some of the natural breeding, foraging, and resting areas of native animals and bird species.
    - Riparian vegetation adds to the diversity of life within streams, wetlands, and lakes.
    - The edges where two ecological zones meet are extremely important from a vegetation and wildlife dynamic point of view. Animals from the one zone may forage in the one while resting in the other, and plants are often adapted to that specific edge zone. The edges of creeks and other water bodies are thus important where the water and land ecosystems are supportive, enriching, and dependant on each other.
    - The variety of habitats within creek corridors leads to greater diversity of wildlife.
    - Riparian vegetation typically includes multi-layered habitats including trees, shrubs, grass, and herbaceous plant material.
    - Riparian vegetation provides a variety of functions related to aquatic habitat including:
        - Providing food source for species of the aquatic food chain;
        - Regulating light and temperature entering the water body. Many species have a low tolerance for temperature or light change beyond the normal range;
        - Maintaining oxygen concentrations in water through temperature regulation;
        - Preventing sediment from inundating water bodies, which interferes with fish behavior and destroys benthic habitat.
- Recreation
    - Creek corridors provide visually appealing environments.

- The linear nature of creeks and drainage ways render them ideal for hike and bike trails.
- Linear creek corridors with an associated trail system link various destinations within the City with better interaction between neighborhoods, schools, and parks.
- The variety of wildlife found within creek corridors leads to the opportunity for wildlife viewing, including birding.

- Education
  - A myriad of natural processes is very visible along creeks and creek banks, all of which is ideal for educational purposes.
  - Students and the public may learn about the vegetation and wildlife of both terrestrial and aquatic environments, the process of natural erosion and deposition, stream morphology, and water quality.
- Utilities
  - Areas that parallel creek corridors provide the opportunity for utility corridors with permeable surfaces including water, sewer, overhead power, and telephone lines.
  - Such utilities should be located outside the 100 floodline at built-out conditions to prevent future damage that may result from floods.
  - Measures must be taken to prevent impacts on the recreation and habitat integrity within the creek corridors. Disturbance of vegetation must be minimized during the construction phase of placing the utilities.

The vegetation within the creek buffer of Mansfield creeks is generally well established with large, mature trees and dense grass cover. In this particular image, the floodplain has been planted with a grove of pecan trees in the Williams Property.

Riparian Buffer Criteria

The ability of a riparian/creek buffer to realize its many benefits depends on how well it is planned, designed and maintained. As development is considered for properties, the following provide some criteria in this regard.

Riparian buffer dimension

For creek corridors, a wide riparian buffer is an essential component of any protection strategy. A network of buffers acts as the right-of-way for a creek and functions as an integral part of the creek ecosystem. The primary criteria for buffer sizing should be ecological but may also include economic and legal factors. However, the danger is that economic and legal considerations may compromise the very essence of what constitutes a healthy ecological creek corridor. With creek corridors in the City of Mansfield considered a crucial natural resource all factors should be considered when establishing the riparian buffer dimension, including habitat integrity, ecological services, recreation, and aesthetics including views and vistas. Due to unique local conditions, the riparian buffer may vary as deemed appropriate.

Three-zone buffer system

The primary aim of the buffer system is to protect the core of creek corridors including the stream channel, its banks, the 100 year flood area with vegetation adapted to flood conditions, as well as an upland buffer area that is crucial for the health of creek systems. Protecting the entire area below the 100 year floodline together with an upland buffer, ensures the protection of current creek conditions, as well as the anticipated changed conditions in the future. The upland buffer outside the 100 year floodline is divided into 3 lateral zones: stream side, middle zone and outer zone. Each zone performs a different function, with a different vegetative target and management scheme.

1. The stream side zone has the function to protect the physical and ecological integrity of the stream associated ecosystem. It adds visual and ecological protection through preservation of views, wildlife habitat, and noise abatement. The vegetation target is the pre-development natural condition including range land with low key recreational development including hike, bike, and equestrian trails.

2. The middle zone provides additional distance between upland development and the stream ecosystem and is available for utilities with no impervious surfaces, open space development including ball fields and golf courses, and storm water management including retention/ detention basins. The vegetative target is natural pre-development conditions or unfertilized dry land cultivation and range land.

3. The outer zone is available for a parkway collector street system. Such a parkway has four major functions. First, it will serve as a buffer between development with potentially manicured landscapes and the natural creek corridor environment. Secondly, it will provide easy access for maintenance. Thirdly, the parkway will improve local traffic circulation. Fourthly, the parkway will provide a leisurely route connecting the parks, schools and neighborhoods along the creek corridor. The pleasing vistas along the creek corridor allow for scenic drives and improved

neighborhoods. In fact, similar projects in other cities have enhanced property values along the route.

Drainage area

It is recommended that creek corridors and riparian buffers are applied to all creeks and streams from a point at which the creek or stream drains a surface area of 100 acres or greater. For any drainage area smaller than 100 acres, it is recommended that the practices as defined in the iSWM (Integrated Stormwater Management) design manuals for construction and for site development as prepared by NCTCOG (North Central Council of Governments) should be applied.

Buffer crossings

Major objectives for riparian buffers are to maintain an unbroken corridor of riparian habitat and to allow for upstream and downstream movement of both aquatic (including a fish passage) and terrestrial wildlife along the creek corridor. Where linear forms of development such as roads, bridges, underground utilities, enclosed storm drains, or outfall channels must cross the stream or the buffer, measures must be put in place to minimize blocking the aquatic and terrestrial wildlife passageway including extended bridge spans.

Buffer management

The general vegetation target for the land that involves the 100 year flood plain and upland buffer is pre-agricultural development/ modifications. Treated correctly, such vegetation cover requires the minimum management effort. In order for the burden to not fall on the City or individual landowner, it is recommended that management be done by one of the many Texas Land Trusts that will have an interest in such land. (see www.texaslandtrusts.org)

No Rise in Base Flood Elevation

It is recommended that the reclamation of the 100 year floodplain at fully developed conditions should be permitted only if it can be demonstrated that there will be no rise in the base flood elevation of fully developed watershed conditions. The FEMA "floodway" concept contained in the National Flood Insurance Program allows up to a one foot rise in flood elevations assuming current development conditions only. However, reclamation which allows a rise in the flood elevation could predictably create adverse impacts either upstream or downstream. Also, without due consideration of future upstream build-out conditions, which imply increased impervious surfaces with higher volumes surface runoff over shorter periods of time, areas that appear adequately protected with the "No Rise in Base Flood Elevation" may be compromised in the future.

Creek Confluences

Creek confluences typically have unique natural and visual qualities due to the increased channel length per surface areas, widened floodplain, the potential occurrence of wetlands, dense stands of trees, and increased wildlife. Such areas, also referred to as "ecological nodes", call for their special protection in the form of nature parks and nature preserves.

Watershed Management Plan

As much as it is important to ensure the protection of the creek and drainage way corridors and nodes, it is also vitally important to follow a watershed wide approach to stormwater management and landuse planning. Watershed management suggests measures in place that aim to decrease the amount of hard and impervious surfaces which result in higher frequency and intensity of runoff, as well as water detention that absorbs the runoff peaks allowing it to drain slowly and over time into the creek system. Together with watershed wide measures, proper site design of each and every development is essential to obtain the best results.

The manner in which development occurs in the watershed is crucial. Due consideration should be given to every component that may contribute to increased runoff volumes and intensity. Two complimentary tools that are effective to achieve watershed management are Integrated Stormwater Management and Conservation Development.

Creek corridor vegetation with multi-height biomass is extremely important to the ecological health of wildlife habitat as seen along Walnut Creek.

Integrated Stormwater Management

Recognizing the importance of water quantity and quality, the North Central Texas Council of Governments, developed iSWM (Integrated Stormwater Management) design manuals for construction and for site development that assist cities and counties to achieve their goals of water quality protection, streambank protection, and flood control. They also help communities meet their construction and post-construction obligations under state storm water permits, current and emerging. (see http://iswm.nctcog.org/)

The Integrated Storm Water Management (iSWM™) Approach

Source: http://iswm.nctcog.org/index.asp

Development and redevelopment by their nature increase the amount of imperviousness in our surrounding environment. This increased imperviousness translates into loss of natural areas, more sources for pollution in runoff, and heightened flooding risks. To help mitigate these impacts, more than 60 local governments are cooperating to proactively create sound storm water management guidance for the region through the integrated Storm Water Management (iSWM)™ program.

The iSWM™ design manuals for construction and for site development are cooperative initiatives that assist cities and counties to achieve their goals of water quality protection, streambank protection, and flood control by managing stormwater on a site-by-site basis throughout all phases of development.. They also help communities meet their construction and post-construction obligations under state storm water permits, current and emerging.

- The iSWM™ Design Manual for Construction contains a systematic methodology for creating an effective storm water pollution prevention plan for construction sites and detailed information for the design, installation, and maintenance of practices to reduce the release of sediment and other pollutants resulting from construction activities. The Design Manual for construction is also intended to assist public and private entities in compliance with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit, TXR 150000, issued by the Texas Council on Environmental Quality (TCEQ).

  Cities in the region are encouraged to officially adopt the Design Manual for Construction and require compliance with the provisions of the Design Manual within their jurisdictions. Adoption of the Design Manual for Construction will fulfill the major requirements of the "Construction Site Storm Water Runoff Control" Minimum Measure of TPDES General Permit TXR040000 for Small Municipal Separate Storm Sewer Systems.

- The iSWM™ Design Manual for Site Development is a step-by-step detailed instructional document to guide developers and government agencies on the control and management of storm water quality and quantity. It is a practical manual oriented to implementation in everyday practice.

  It calls for the consideration of storm water issues at the conceptual stages of projects and provides tools to achieve the goals of water quality protection, streambank protection, and flood control. Its adoption in the region will simplify engineering designs, minimize local government plan review efforts, facilitate multi-jurisdictional drainage analysis, and enable regional training opportunities.

Further Studies

Reference: Linear Greenbelt Park Study: City of Allen, Texas; 1986.

For purposes of establishing an integrated riparian corridor and greenbelt system for the City of Mansfield, a Creek and Linear Greenbelt Park Study is recommended. It is recommended that such a study include the following components:

1. Floodplain Delineation
   The flood plains of all creeks defined and delineated as the area inundated by either the 100 year flood based on a fully developed watershed condition, or the maximum flood on record, whichever reaches the higher water elevation.

2. Environmental Inventory and Analysis
   Study areas to include:
   a. Physical features (geology, topography, soils, climate);
   b. Biological features (vegetation and wildlife);
   c. Man-made features (history, archaeology, streets, buildings and utilities); and
   d. Scenic values.

3. Stream segments
   Homogenous segments with similar landform, unique water features, common vegetation, wildlife habitat, scenic features, and divisions made by existing roadways.

4. Stream Corridor Delineation
   Delineation of the 1% and 0.2% flood events.

5. Stream Corridor Alternatives
   Flood plain and stream corridor management

6. Implementation Strategy
   Supporting and additional information may include:
   a. social, cultural, legal, and governmental influences;
   b. land use planning along creek corridors;
   c. funding;
   d. public participation; and
   e. landownership issues.

The Linear Greenbelt Park Study that was conducted for the City of Allen in 1986 is proof that early planning efforts lead to superior city development conditions. Based on this 1986 study, the City of Allen has ordinances and regulations in place that ensure the optimal protection and use of creek corridors. The end result 20 years later is a noticeable quality of life experience for its citizens that surpasses may other cities in the region. The vision for the City of Mansfield is to build on the experience of this Texas city and to incorporate exemplary and functional practices that will ensure the protection of its natural resources for the enjoyment and appreciation of future generations.

Appendix F

Alternative Development Strategies

Typical suburban development is not a sustainable model for Mansfield. By that, it is meant that it is not environmentally, economically, or socially sustainable over the long run for the community because it does not make efficient use of the land, does not create unique places, and does not stand the test of time (buildings are not designed to last 100 years). With typical subdivisions and shopping centers come high rates of vehicular travel, expanded carbon footprints, inefficient use of land, decreased mental and physical health, and the plague of "sameness"; that is, a loss of uniqueness within the City. Alternative development strategies are available to the City to ensure that Mansfield remains unique and retains its cultural landscapes, small-town feel, and attractiveness to new residents. While there are many factors that determine the quality and suitability for varying development strategies, the two main factors for determining good development strategies are walkability and context sensitivity. That is, that a development strategy focuses on the needs of people rather than cars and is sensitive to the landscape in which it is being applied. There are many tools by which to achieve good development, but a few of them, namely Conservation Planning and Design, New Urbanism, and Cultural Landscape Preservation are discussed in the following pages.

References:

1. Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities by Howard Frumkin, Lawrence Frank, and Richard Joseph Jackson
2. Suburban Nation: The Rise of Sprawl and the Decline of the American Dream, by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck

Conservation Planning & Design

A Case for Conservation Planning and Design

With extracts from: Arendt, R.; Growing Greener, Putting Conservation into Local Plans and Ordinances; Island Press; 1999 and http://www.greenerprospects.com/growinggreener.pdf

The Conservation Planning and Design Concept

Each time a property is developed into a residential subdivision, an opportunity exists for adding land to a community-wide network of open space. Although such opportunities are seldom taken in many municipalities, this situation could be reversed fairly easily by making several small but significant changes to three basic local land-use documents - the comprehensive plan, the zoning ordinance and the subdivision and land development ordinance. Simply stated, Conservation Design rearranges the development on each parcel as it is being planned so that half (or more) of the buildable land is set aside as open space. Without controversial "down zoning," the same number of homes can be built in a less land-consumptive manner, allowing the balance of the property to be permanently protected and added to an interconnected network of community green

spaces. This "density-neutral" approach provides a fair and equitable way to balance conservation and development objectives.

Conservation Planning and Design are attractive to cities since they are relatively easy to implement, do not involve public costs, do not diminish landowner equity, and are not onerous to developers.

Why change from conventional subdivision planning and design?

Conventional Subdivision Planning and Design as applied in most of the USA, generally refers to residential development in which all the developable land is divided into house lots or streets. The only open space is typically undevelopable wetlands, steep slopes, and storm water management areas. There are no amenable places to walk, open meadows for wildlife, or playing fields for children. Furthermore, almost all of the land has been cleared, graded, and converted into lawns or private back yards. As a result, residents of conventional subdivisions depend upon their cars even more to bring them social and recreational opportunities. Conservation Planning and Design offers social and recreational advantages over conventional layouts in several distinct ways.

Benefits of Conservation Planning and Design

The benefits of Conservation Planning and Design is threefold:

- Environmental and ecological benefits
- Social and recreational benefits
- Economic Benefits

Environmental and ecological benefits

In addition to preventing intrusions into inherently unbuildable locations such as wetland and floodplains, conservation subdivision design also protects terrestrial habitats and upland buffers alongside wetlands, water bodies, and watercourses, areas that would ordinarily be cleared, graded, and covered with houses, lawns, and driveways in a conventional development.

The environmental and ecological benefits to employing conservation subdivision design instead of conventional layouts include wildlife management, water quality protection, greater aquifer recharge, and environmentally sensitive sewage treatment and disposal.

Social and recreational benefits

Conservation Planning and Design offer social and recreational advantages over conventional layouts in several distinct ways.

- Pedestrian friendly neighborhoods,
- Community-wide greenways and trails,
- Increased interaction within the community due to the footpath system that connects the homes with interesting places to visit.

Economic Benefits

- Lower costs including reduced infrastructure engineering and construction costs, for example shorter roads, less wetland/creek crossings, less stormwater management facilities and less wood clearing.
- Value appreciation; it has been proven that properties within Conservation Planned and Designed communities appreciate markedly more than their counterparts in conventional communities.
- Reduced Demand for New Public Parkland; The natural areas that are preserved and the recreational amenities that are provided in Conservation Planned and Designed communities help to reduce the demand for public open space, parkland, playing fields, and other areas for active and passive recreation. Current deficiencies with regard to such public amenities will inevitable grow larger as population continues to rise. To the extent that each new development meets some of its own local needs, pressure on local governments will be lessened in this regard, a factor that may make such designs more attractive to local reviewing bodies.

New Urbanism

New urbanism refers to a movement dedicated to improving the human experience of the urban fabric and functionality of our cities. It addresses manifold problems relative to the way typical cities function in the United States of America. The problems that our cities face include tremendous waste and misdirection of resources. Firstly, our most precious resource, time; secondly, the costs and loss of productivity from time spent in auto traffic; thirdly, there are social and spiritual impoverishment in isolation and alienation contributing to social diseases; fourthly, lack of easy access to nature areas and open space, unhealthy air and an urban environment that thwarts our fundamental need for the most basic exercise, walking. The underpinnings of a healthier, more effective and efficient urban arrangement require citizens, planners and developers to strive for development that provides characteristics such as: Walkability, Connectivity, Mixed-Use and Diversity, Quality Architecture and Urban Design, Smart Transportation, Sustainability, and Quality of Life.

Essentially, New Urbanist principles benefit every sector of a city, from residents to businesses, developers to municipal governments. The benefits to each group are summarized below:

Residents who in Mansfield are avid park users, enjoy easy access and proximity to a high quality public realm of open space, parks, civic uses and retail with a local focus. A diverse mix of housing and pedestrian oriented development provides more walking, exercise and economic savings. Density also means utilities and roads are more efficient and tax dollars more effectively spent.

Businesses may expect increased sales resulting from pedestrian volume and increased discretionary spending available for residents; more profit results in live-work units, without a stressful and costly commute. There is also benefit in more community

involvement and knowing customers who are residents: businesses tend to be more successful and the experience more pleasurable for customers when personal relationships are forged between business owners and their clientele. Economies of scale in marketing are possible due to proximity and cooperation with other local businesses.

Developers benefit from more income potential from higher density mixed-use projects due to more leasable square footage, more sales per square foot and higher property values and selling prices. There is faster sell out due to greater appeal and to wider market share. Other benefits include lower utilities costs resulting from the compact nature of New Urbanist design, less need for parking facilities and faster approvals in communities which have adopted new urbanist and "smart growth" principles.

Source: http://www.newurbanism.org/newurbanism/principles.html

References:

1. Suburban Nation: The Rise of Sprawl and the Decline of the American Dream, by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck

Links:

1. Congress for the New Urbanism is an organization dedicated to providing the tools to put into practice the principles of New Urbanism and revitalizing communities.
   http://www.cnu.org/
2. New Urban News,
   http://www.newurbannews.com
3. Smithsonian,
   http://www.smithsonianmagazine.com/issues/2006/august/newurbanism.php
4. Smart Growth Online
   http://www.smartgrowth.org/

Cultural Landscape Preservation

The Cultural Landscape Foundation

A cultural landscape, to paraphrase the Cultural Landscape Foundation, is an artform as a place which natural and cultural resources associated with an historic event, activity, person, or group of people expresses regional identity. Their size in area may vary from a particular homestead with a small front yard to thousands of rural acres. Some of these sites include designed landscapes, expressing visual and spatial relationships as in estates, farmlands, public gardens and parks, cemeteries, scenic roadways as well as in industrial sites.

Preserved cultural landscapes provide a legacy that benefits current and future generations. These special places give insights into the history of an area's origins and development. Through their form, features and uses, our experience of such places

reveals our evolving relationship to nature. Cultural landscapes serve to provide scenic, economic, ecological, social, recreational and educational opportunities which foster greater understanding for individuals, communities, states and countries.

Protection of cultural landscapes ensures that such places are not harmed or destroyed by neglect or inappropriate development. The ongoing effort to preserve cultural landscapes promotes the value of this legacy in enriching the quality of life.

The Cultural Landscape Foundation is a not-for-profit organization that has as its mission to increase the public awareness of the importance and irreplaceable legacy inherent in cultural landscapes. Educational programs, technical assistance and public outreach are a few of the ways that the organization works to achieve a broader understanding and cultivating greater appreciation.

Certification of cultural landscapes does not obviate this organization's relevance to the goal of a community. Essentially, understanding the concepts presented by the Foundation assists in identifying the City of Mansfield's unique environmental context and cultural heritage. The identification of cultural landscapes provides a way of understanding and appreciating this community. Moreover, developing relationships with key people within the Foundation will assist in understanding the opportunities that exist in Mansfield and in strategizing ways to preserve such features. In these ways, it is entirely possible to develop a way of thinking and approach to preserving cultural landscapes independently from the Foundation, albeit with their help.

Source: The Cultural Landscape Foundation
http://www.tclf.org

Links:
1. Geography and Map Division, Library of Congress, Cultural Landscapes,
http://memory.loc.gov/ammem/gmdhtml/setlhome.html
2. National Park Service, U.S. Department of the Interior,
Protecting Cultural Landscapes, 36 Preservation Briefs,
http://www.nps.gov/history/hps/tps/briefs/brief36.htm

Appendix G

Development Review Guidelines

The following is a set of guidelines for parks, trails, and open space considerations during the review of proposed residential and non-residential developments in the City of Mansfield by MPFDC, PARD, the Parks Board, Planning and Zoning Commission, and Planning Department.

Background

Informed by the public participation process, the vision for the future of Mansfield is to protect and maintain the City's rural character with ample open space. The best manner to achieve this is by protecting the entire creek system including the 100 year floodplain with no creek or wetland reclamation as an option; a riparian buffer to provide additional protection to the creek environment; single loaded roads that make all parks and open space visually accessible and provide for long and wide vistas along the creeks.

Other considerations are to support a City wide network of trails that bring the Mansfield residents in close contact with Mansfield's unique natural areas, rural character and open space; appropriate park land dedication; creek road crossings that allow for trail underpasses; the visibility of parks and open space; pavilions that allow for air flow; and on-site detention ponds that are aesthetically pleasing and acceptable.

Guidelines

The following is a set of guidelines for future residential and non-residential developments in the City of Mansfield

1) **Protection of the 100 year floodplain of creeks and streams at built out conditions**
   The creek corridor is extremely important as a flood control measure, recreational opportunity, wildlife habitat, and establishing a sense of open space and rural character (see Parks Master Plan Appendix: Creeks and Streams).

2) **Preference for no reclamation of the 100 year floodplain of creeks and streams established at built out conditions**
   Such a measure prevents undesirable narrowing of the creek corridor, potential erosion of the creek banks and potential flood damage; and supports water quality and the ecological integrity of the floodplain.

3) **Protection of a riparian buffer along creeks and other water bodies** (see Parks Master Plan Appendix: Creeks and Streams)
   The health of a creek is directly linked to the quality of inflow. The vegetation in the riparian buffer serves as habitat and pollutant interceptor.

4) Single loaded roads

a. Fundamental to park and open space planning
The use of single loaded roads is a fundamentally important requirement for the successful use and enjoyment of all parks and protected open space including creek corridors.

b. Accessibility to everyone in the community
Single loaded roads allow for parks and open space to be accessible to everyone in the community, whether enjoyed by means of a vehicle, bicycle, or on foot.

c. Pleasant driving experience
People will often choose to drive along a road with pleasing views, even if the route is longer than a direct, less interesting road.

d. Sense of safety
Visibility along the single loaded road as well as from the surrounding structures, adds to the sense of safety of the park and open space users.

e. Property values
Single loaded roads adjacent to parks and open space have no effect on the value of the "prime location" of creek and park side properties. In addition, the park and open space accessible to the entire community through single loaded roads, results in a sustained property value increase for a distance further away from the park/open space compared to a community where such direct and open access is not provided.

f. Minimum requirement
A compromise to the requirement of single loaded roads along all parks, creeks, and open space is to demand it along a 75% minimum boundary of the adjacent park, creek and open space.

5) Visually transparent wrought iron fences along parks, trails and/or open space

Parks, trails, and open space bordered by solid fences create a sense of cloister-phobia as well as a sense of being unsafe. It is when eyes and ears are open to such areas that users feel safe and comfortable to relax and recreate. For this reason, it is necessary that visually transparent wrought iron fences be erected between all developments and parks, trails and/or open space.

6) Appropriate park land dedication

The aim with park land dedication is to provide park areas large enough where multiple amenities can be provided including a playground, pavilion, picnic facilities, one or two basketball goals, a multi-purpose practice field for activities like ball play and kite flying, and a trail that provides a walking/jogging loop and connections with the surrounding community. Together these facilities encourage social interaction and, therefore, community building. The best example is areas where children play ball while parents use a trail for exercise, or where children enjoy a playground while parents sit and socialize in the shade of an adjacent pavilion.

7) Minimization of Pocket parks

a. Park land needs to be contiguous to have value as park land. Small parcels of land should as a rule, not be accepted as park land. Developers will often call such areas "pocket parks" which refer to parks typically smaller than 2 acres. Although such pocket parks have a role in build-out areas where open space is at a premium, new developments typically do not benefit by such pocket parks.

b. Pocket parks are typically applicable when a landmark, gateway or landscape feature/s needs to be protected and/or celebrated. Even so, the need to include the context of such features often requires the dedication of more land than that on which the feature stands alone.

8) Easements

a. Easements versus dedicated parkland

Utility and drainage easements including a maintenance easement along creeks, should not account for dedicated parkland. The requirement by park ordinance should be that all utility easements as indicated on the Parks Master Plan, drainage and/or maintenance easements, or future appropriate easements that support the City wide trail system, be made available for the establishment of a trail whereby the City may or may not accept responsibility for the maintenance of the easement corridor.

b. Maintenance of easements

Once a trail is developed, the maintenance of easements is often best achieved by the adjacent HOA especially if they have use of the easements by means of the trails. The City may choose to compensate the HOA for taking charge of such maintenance.

9) Unique features

All proposed development sites must be evaluated for the presence of any unique features that may include: wetlands and their buffers; moderate and steep slopes; groundwater resources recharge areas; woodlands; representative stands of native vegetation including blackland prairie; productive farmland; significant wildlife habitat; historic, archaeological, and cultural features; cultural landscapes; scenic features; and viewsheds from public roads. Every effort possible should be made to incorporate such features as places of special interest in the parks and open space system. The City may or may not choose to account such land, partially, or all inclusive, as part of the park land dedication, which should be considered on an individual basis. Potential criteria for such decision include public access and connection to other parks or open space.

10) Multi-tier roof pavilions

The standard design of all pavilions should include openings in the roof that allows for hot air captured under the roof to escape. Multi-tier roofs make this possible and should be required as a standard throughout the City.

11) Creek road crossings with a trail underpass

The use of creek corridors as trail connections is enhanced when the trail can follow a creek under a road crossing. However, this is typically only possible where the topography allows for a trail with a head clearance of 10 feet minimum after construction of a trail. This should always be considered as a matter of principle before being disregarded as being impossible.

12) Physically and aesthetically accessible detention ponds

Where detention ponds are provided on development sites, it is vitally important that such facilities be incorporated as a visually attractive and physically accessible feature within the development. Whether it contains water at a constant level or not, it is suggested that no more than 60% of the side slopes are steeper than 6:1 (horizontal: vertical) and easily accessible for either play when dry or water side enjoyment when operated at a constant water level.

13) Visit all proposed developments

Important decisions about the use of the land are often made on paper, in an office distant from the site, and with no clear insight as to the true potential and value of the site and its features. It is recommended that all sites be visited by the relevant staff, P&Z, Parks Board and even Council members. In fact, Randall Arendt (Conservation Development) regards this as a crucial requirement for all land development projects.