

Trails Master Plan

JULY 2012







"Trails not only connect us with each other, they connect us with ourselves."

- David Burwell, 2001



Trails Master Plan

July 2012

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Trails Master Plan

INTRODUCTION

This master plan proposes a diverse network of trail connections within the City of Wylie. The current *Parks, Recreation, and Open Space Master Plan*, prepared for the city in 2010, identifies the need for developing hike & bike trails as the highest priority for outdoor facilities in the city. Although the park system already includes a certain number of park-related trails, the overall network is fragmented; therefore, a safe, accessible network of trail connections between neighborhoods, parks, and key city destinations needs to be strategically developed.

As a commitment to meeting these needs, Wylie city leaders hired the design team of landscape architects and planners from Dunaway Associates, Bowman-Melton Associates, and Land Design Partners. This collaborative team began working with the Parks & Recreation Department to further study the feasibility of a citywide trails network. The primary emphasis of this study has been to target four main areas of focus identified by city leaders as being central to citywide trail development. They include:

- Trails along Greenways & Utility Corridors
- Trails along Lake Frontage
- Trails along Roadways & Parkways
- Trail Gateways & Intersections

The Trail Master Plan is intended to become a tool that city officials can use to plan and coordinate future improvements for trails and associated infrastructure by various city departments. As this plan is implemented, citizens of Wylie will be afforded more mobility choices in connecting to city destinations, as well as increased opportunities for outdoor exercise and recreation.



ACKNOWLEDGEMENTS

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Throughout the master planning process, the design team worked closely with city staff and members of the Advisory Committee to examine the feasibility of trail development in each of the specified focus areas. In general, development of this trail network plan was achieved using a three-phase approach.

Phase 1 – ANALYSIS

- Data Gathering & Base Map Preparation
- Site Review / Existing Conditions
- Opportunities & Constraints

Phase 2 – PLANNING

• Conceptual Trails Network Plan

Phase 3 – RECOMMENDATIONS

- Preliminary Trails Master Plan
- Final Trails Master Plan

City Staff, the Parks & Recreation Board, and Wylie citizens were also engaged in key meetings to review progress and offer input to the planning process.

PHASE 1 - ANALYSIS

Data Gathering & Base Mapping

As an initial step, members of the consultant team met with an Advisory Committee that was appointed by the Parks & Recreation Board. The purpose of this meeting was to establish the goals and objectives that would guide the team throughout the master plan process. Among the goals and objectives, the Advisory Committee expressed the overall desire to create a safe, well-connected trail network for both pedestrians & bicyclists to use in connecting various destinations throughout the city (municipal complex, retail, neighborhoods, parks, schools, historic downtown, etc.). It was also highlighted that a key component to this network of connections should be to incorporate the Parks, Recreation, and Open Space Plan concept of "Embrace the Lakes".

The design team then began gathering digital data from the city as well as a number of public sources to create a base from which to proceed with mapping. Data gathered included aerial photographs, land uses, thoroughfares, utilities, easements, floodplains, county trail plans, city limits, property parcels / ETJs (Extra-Territorial Jurisdictions), and existing trails, among others. During this process, the consultant team identified the need to develop the city's first known GIS (Geographic Information System) base map. Each layer of data was digitally compiled using GIS software to create a database for use, not only in this master plan, but also in future planning efforts. Other sources of information related to trail development were also reviewed, including the city's current Parks, Recreation & Open Space Master Plan, the existing Thoroughfare Plan, and drafts of the current Comprehensive Master Plan in progress.

Site Review / Existing Conditions

A critical step in the analysis phase included the consultant team and Advisory Committee conducting a city-wide site tour to visually evaluate and document current conditions of the existing trail system, and to review key zones which may require particular attention in the planning process. This review was an important step in familiarizing the consultant team first-hand with each of the four focus areas throughout the city, and in capturing high level input from city staff and the Advisory Committee. The team documented the tour using digital photography, and recorded general observations regarding key aspects of the existing trail system. An additional site trip was conducted by the consultant team to further determine the feasibility of significant crossings and trail routings.



Municipal Complex Preserve



Municipal Complex

During the site visits, the team made special note of the Municipal Complex area. This property has already begun to serve as the "civic heart" of Wylie and will likely continue to do so as development continues in and around the property. As described in the Parks, Recreation and Open Space Master Plan, city leaders have expressed favor for the "Low Impact Scenario" of planned development at the Municipal Complex. This scenario endeavors to preserve the natural character of the site and to create passive recreational areas including an amphitheater, protected meadow / habitats, and a trail system throughout the property. With utility corridors and adjacent neighborhood parcels left open to the east, a wide abandoned road corridor leading to the south, roadside sidewalk connections to the north, and parkland connections to the west, the opportunity for connecting this civic resource to a citywide network of trails has great potential.

While the Municipal Complex serves as Wylie's "civic heart", Founders Park and Community Park serve as the "activity centers" of the city. These parks primarily focus on athletics, but have incorporated a trail system to support park activities. The team toured recent renovations at Founders Park, which includes some trail development internal to the park and the potential to complement future trail network connections. In addition, the team noted that these parks are fairly centrally located within the city limits and hold a greater capacity for parking than smaller neighborhood parks. These "activity centers" have potential to become trailhead type access points within the larger trail network. Other community parks of note which were evaluated by the design team included Valentine Park and Olde City Park. These parks, although much smaller than the nearby athletic parks, will be important considerations in linking Wylie parks through a citywide trail network.

Connecting future trail users to key retail and tourist destinations is also important. The team toured the city's major retail development zones following Kirby Rd. (FM 544), including the newer Woodbridge Crossing development, through to the historic downtown and along Hwy. 78, a primary retail / industrial spine. In general, segments of roadside sidewalks are in place in front of newer retail developments but there is a need for wider, shared-use trails to serve the same development areas. The design team also toured major thoroughfares in the city that are currently undergoing expansion, as well as those currently slated for design upgrade / construction (Stone, Brown, McMillen Rd., etc.). Current and future thoroughfare routes offer opportunities for potential trail integration along the city roadway system.



Retail Destinations



Lavon Lake

Unlike any other city in the DFW region, the City of Wylie is situated between two major lakes. City leaders have expressed a unified desire to become a city that will "Embrace the Lakes", and plan for expanded shoreline access for citizens and visitors alike. With this in mind, the Advisory Committee took great care during the site tour to give the design team a thorough overview of current issues and opportunities at the lake edge properties. Currently, the parks along Lavon Lake (Avalon Park, East Fork Park, and Collin Park & Marina) are under the jurisdiction of the USACE (United States Army Corps of Engineers). As such, the parks are gated and may only be accessed through paying a use fee. In like manner, the shoreline along Lake Ray Hubbard is largely

populated by private parcels, making both visual and physical access to the lake limited. The two lakes are loosely connected by Skyview Drive, a narrow, asphalt roadway that runs along the southern shore of Lavon and southward near the western shore of Lake Ray Hubbard. Public-use trail development at the lakes essentially consists of a well-used equestrian trail system with some parking and a small restroom facility located at the Trinity Trailhead on Lavon Lake. With restricted parking provided, access to the existing trails essentially aimed at one user group (equestrians), and limited visual connections to the lakes, it seems clear that the lake parks are generally underutilized by citizens of Wylie and its visitors.



View across private property to Lake Ray Hubbard

During the site tour, committee members also emphasized a desire for connections to the Muddy Creek and Rush Creek riparian corridors. The team toured a number of localized park trails that are in close vicinity to the Muddy Creek corridor, which runs north/south through the west side of Wylie (including Creekside Park, Sage Creek Park, Riverway Park, Woodbridge



Muddy Creek Preserve

Golf Club, and Muddy Creek Preserve). The team also toured accessible portions of the Rush Creek corridor which runs north/south through Wylie's east side. Although existing trail connections along the Rush Creek Corridor are substantially less developed, the Advisory Committee showed the design team potential connection possibilities through Oncor Lavon Park and private developments such as Bozman Farms where partnerships may occur. Both of these major riparian corridors are rich greenbelt resources, and hold the potential to offer future trail users a diverse variety of recreational activities such as bird watching, interpretive areas, nature trails, and picnicking, among others.

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Opportunities & Constraints

After the site review with the Advisory Committee, the team summarized the observations on a series of exhibits including: a) locations of existing parks and trails in the Wylie system, as well some key trail connections that exist in private developments / neighborhoods, and b) general opportunities and constraints identified for trail corridor development in each of the four focus areas.

Focus Area: Greenways & Utility Corridors

Greenways and utility corridors throughout Wylie present the most extensive opportunity for expanding the overall community trail network in Wylie (see page 10). The riparian corridors and floodplains along Muddy Creek and Rush Creek have potential to link the city trail system from north to south across the entire community. These greenbelts are unique natural resources, and hold the potential to offer trail users a variety of recreational activities such as bird watching, interpretive areas, nature trails, and picnicking. In addition, several overhead electric corridors, underground utility corridors, and easements provide important open passageways for potential development of trail connections.

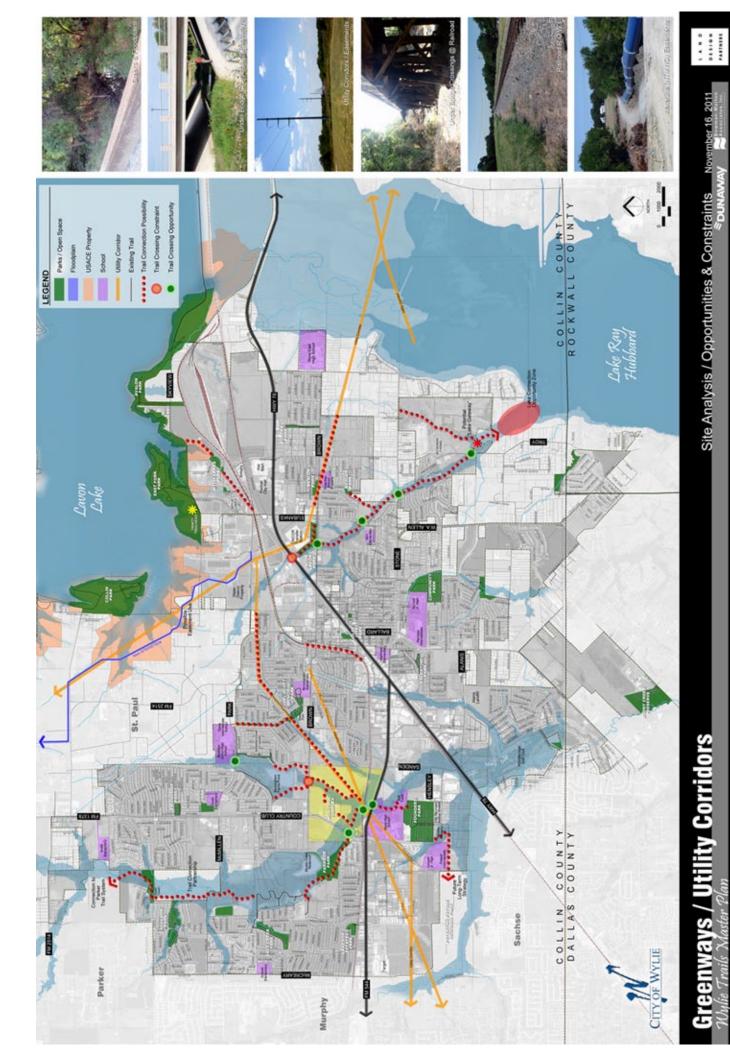


NTMWD Pipeline Under Construction

With the understanding that these greenway corridors and utility zones provide potential connections throughout the city, safe trail crossings must also be considered. Both at-grade and under-bridge crossings at roadways and railroads were closely examined by the consultant team. Where height clearances of 8' or greater appear to be possible, an under-bridge crossing opportunity was noted. Where height clearances were not available, at-grade crossings were noted.



Muddy Creek Greenway



Focus Area: Lake Frontage / Access

Approximately 94% of citizens surveyed in the 2010 Parks, Recreation, and Open Space Master Plan cited better access to Lavon Lake and Lake Ray Hubbard as being a top priority for future park development in Wylie. In an effort to increase access to the lakes and support the "Embrace the Lakes" concept, the design team identified a number of opportunities to connect trail users to (and between) the lakes. This could happen by strategically using a combination of park land partnerships, utility corridors, and trail development along future roadway improvements as identified in the city's current Thoroughfare Plan (see page 12).

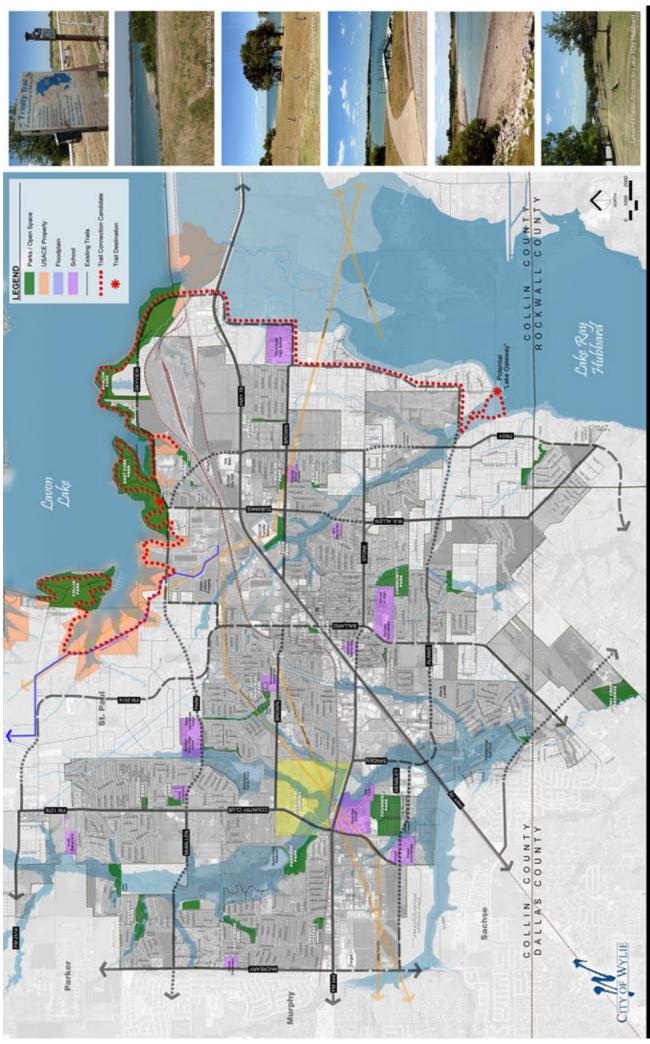
At Lavon Lake, the three major lakefront parks are currently under ownership of the USACE with fee access to private areas only. In recent years, the Corps has been receptive to partnering for passive or low impact recreational development along USACE controlled shorelines. With no other lakefront park lands currently available to the city of Wylie, taking the opportunity to approach the Corps for partnership in developing trails and/or other recreational improvements for public use will be vital to shoreline trail access at Lavon Lake.

A number of possible utility corridors / connections are also in place, which could provide other opportunities for lakeside trail connection. Existing overhead electric corridors (ONCOR) and underground water line easements (NTMWD) may provide open pathways linking the western and southern shores of Lavon Lake. Seeking partnerships with these utility agencies should be encouraged as part of the city's implementation of this master plan.

Like Lavon Lake, shoreline access to Lake Ray Hubbard has also been historically restricted and difficult to access. A string of private parcels occupy the majority of Wylie's lake shore and interrupt a continuous public corridor from Lavon Lake to Lake Ray Hubbard. However, the city's Thoroughfare Plan identifies long-term development plans for Skyview near Lavon, running along Ray Hubbard's western shore to Alanis. Roadside rights-of-way may become important corridors for inter-lake trail connections, provided they are wide enough for shared-use trails and depending on scheduling of long term improvements. In addition, providing a low-impact, lakeside destination along the shore could be a key initiative in opening the shores of Lake Ray Hubbard to the citizens of Wylie. Given the character of much of the shoreline in this area, there is a unique opportunity for an environmental learning facility to showcase diverse wildlife habitat as well as provide other passive recreational opportunities.



East Fork Park



1 A N D 01110N PARTNIES

Focus Area: Roadways & Parkways

City leaders have estimated the growth of Wylie's population at approximately 177% over the past decade. As Wylie continues to grow, roadways will become busier and safe access for pedestrians and non-motorized vehicles will be increasingly important. A notable goal of this study is to provide safe, walkable/bikeable connections to city destinations that are today mostly accessible by motorized vehicles. An important opportunity in developing this master plan has been to integrate potential trail corridors with the city's current thoroughfare improvements plan and design standards (see page 14).

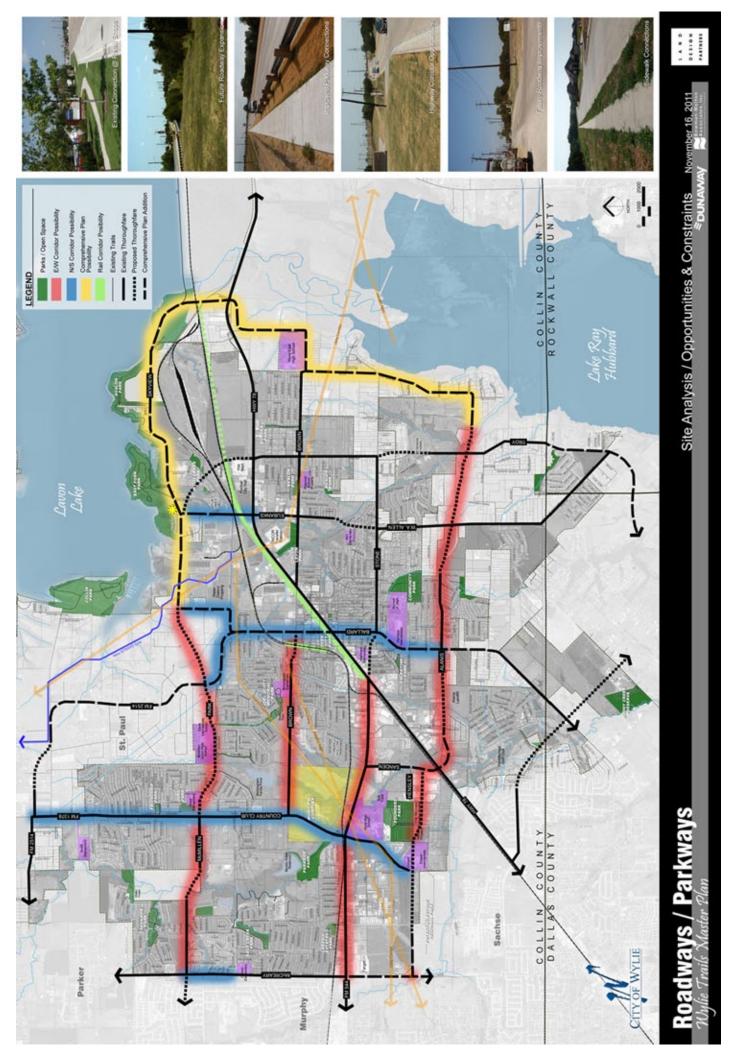


Old Railroad Corridor Along Highway 78

Although many of the city's major roadway expansions were already under design or construction at the time of this study (e.g., McMillen, Brown, etc.), key roadways in the Thoroughfare Plan were evaluated for opportunities to develop shared-use trails within existing or planned thoroughfare rights-of-way. The team evaluated potential north/south and east/west connectors, as well as long term connectors (Skyview) and available railway corridors. During the evaluation process, the city engineer provided valuable feedback regarding current right-of-way widths, current sidewalk design standards, and potential for future right-of-way expansion.



Woodbridge Crossing Retail Area



Focus Area: Trail Gateways & Intersections

Although foundational to the vision for a citywide trail network, providing connections between city destinations and neighborhoods is only one facet of a successful trail system. Equally vital is the creation of a system of trailheads, access points, and intersection treatments that work together within a family of design elements throughout the city's trail network and roadway system.

Several trailhead / gateway / intersection locations were evaluated by the team as potential trail access points. Primary opportunities, focused more on visitors to the city and connections between major city destinations, were identified along the retail & industrial spines of FM 544 and Hwy 78. Secondary opportunities, focused more on



Trinity Trailhead

residential trail users and connections to neighborhoods, were also identified (See page 16).

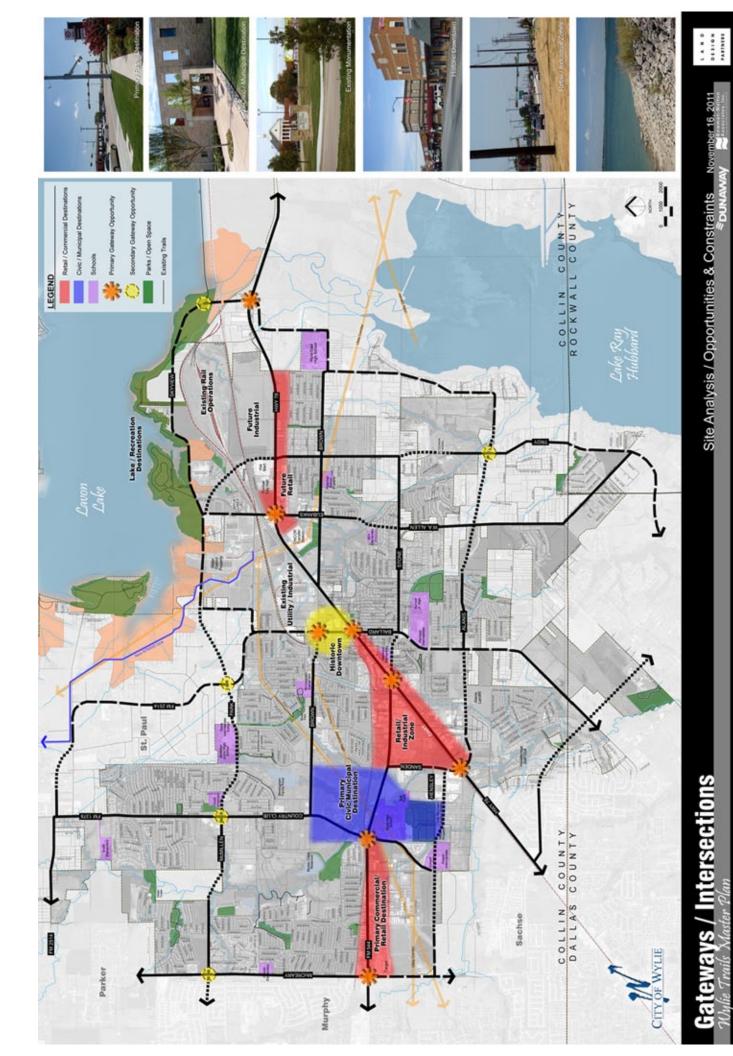
While outside the scope of this study, it will be an important step for city leaders to brand a unified city identity program, and develop design guidelines for a range of city gateways, intersections, and trailhead treatments that are unique to the character of Wylie.

To conclude the analysis phase, the design team held an interactive work session with the Advisory Committee to review the information gathered during base mapping and the site tour, as well as to discuss trail corridor opportunities & constraints as shown on the analysis exhibits. Feedback received during this work session provided the basis for the next step in the master plan process, an overall concept network plan.



Hwy. 78 @ Ballard Intersection

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Phase 2 - CONCEPTUAL TRAILS NETWORK PLANNING

The design team incorporated trail corridor opportunities from each of the four focus areas into (1) one Conceptual Trails Network Plan graphic capturing a range of corridor opportunities throughout Wylie. Where potential trail connection routes are interrupted by property boundaries not currently under city ownership (private, ETJ, etc.), partnership corridor routes were noted in order to provide developers, HOAs, private owners, and others an opportunity to partner with the city. Such partnering will expand connectivity throughout the network by granting public access easements, donating or selling land, or privately developing trails for public use.



Advisory Committee Meeting

The Advisory Committee stayed involved throughout the planning process and reviewed the overall concept network to provide comments to the consultant team. Once revised, the consultant team held a Park Board Briefing and Community Meeting with citizens to receive input and comment regarding the proposed network plan. Details of this concept plan and planning recommendations are discussed in the next section of this master plan document.

Phase 3 – PRELIMINARY MASTER PLAN FINAL TRAILS MASTER PLAN

To document the planning process and begin to outline recommendations regarding trail planning in each of the four focus areas, the design team prepared a Preliminary Trails Master Plan Report. This report was reviewed by the Advisory Committee, Park Board, and City Council for revisions to be incorporated prior to final review and plan adoption.

Once final revisions were made, the consultant team engaged the Advisory Committee, Park Board, and City Council to review the final master plan recommendations and this master plan as a base guide for future trail segment implementation.



Community Meeting



The planning recommendations in this section are the result of incorporating evaluations made by the Advisory Committee, city staff, Park Board, City Council, and Wylie citizens. The following section provides a description of the goals and recommendations proposed to develop trails in each of this study's Four Focus Areas.

While each of the focus areas present a different set of challenges and opportunities, each can be evaluated by the following questions:

GOAL: What are we trying to accomplish in this focus area?

LOCATION: Where are the opportunities for trail development in this focus area?

STRATEGY: How can we accomplish our goals in these locations?

PARTNERSHIPS: What other parties might be involved in implementing these strategies?

These Four Focus Areas provide a framework for development of a city-wide trail network. Various segments can be strategically implemented annually and in close coordination with other city infrastructure projects. Recommendations regarding trail locations, preferred widths, surface materials, etc. are summarized in the following pages. A graphic summary of these recommendations can be found in the Appendix.

Focus Area: Greenways and Utility Corridors GOAL:

Utilize greenbelts, drainageways, and utility corridors for trail system connections

LOCATION:

- Creeks (Muddy, Rush, etc.)
- Floodplain Zones
- Utility Corridors (overhead electric, underground easements, etc.)

STRATEGY:

Identify utility corridors where partnerships may be possible

- Newly constructed water district pipeline
- Overhead electric easements
- Railroad corridors with open R.O.W.
- Other utility easements

PARTNERSHIPS:

Encourage private landowners, utility companies, counties, and neighboring cities to partner in developing expanded connectivity in the trail network



Major Greenbelt Trail

As valuable natural resources, the greenway corridors through Wylie consist primarily of floodplain and riparian corridors along Muddy Creek and Rush Creek. Coupled with this are several overhead and underground utility easements that provide a number of opportunities for trail network connection throughout the city.

The creek corridor and floodplain associated with Muddy Creek offers potential for a major north/south trail connection through the western portion of Wylie. From Parker Road south to McMillen, a series of parkland trails and partnerships can link the northern edge of the city with the larger trail network. From McMillen southward, new trail segments can connect with existing trails and provide trail users a link with an important cluster of civic destinations -- the Municipal Complex, Wylie High School, and Founders Park. Within the Municipal Complex itself, a network of shared-use trails, nature trails, and civic destinations have potential to become a signature destination for Wylie citizens and visitors alike. Beyond Founders Park to the south, partnering with neighboring Sachse and private owners can connect this community park destination with one of the



Scenic Greenway Overlook

longest continuous trail segments in the Wylie system, the Woodbridge Golf Club trails. And, the remote Muddy Creek Preserve in the southern edge of the city limits can be connected through partnerships with private owners in the city's ETJ.

In the eastern portion of the city, Rush Creek is another creek corridor that offers the potential for developing north/south trail connections. From Oncor-Lavon Park southward across Stone Rd., and through the Bozman Farms development, partnerships with land developers have potential to link a number of Wylie residents to parkland destinations (Avalon Park, Bozman Farms Park), schools (Akin Elementary, future school sites), and even Lake Ray Hubbard as future lakeside destinations are planned and developed.

In the central portion of the city, a series of parkland, partnership, and roadside sidewalk connections can complete an important north/south corridor from the active school/park hub at Community Park southward. Following drainage easements through the newer Twin Lakes / Southbrook Park and connecting to an underground sewer easement along Pleasant Valley Road, there is potential to connect trail users to the Muddy Creek Preserve system. Drainageway connection opportunities may also be pursued through partnerships and parkland development from W.A. Allen Blvd. through Pheasant Creek Park, across Troy Rd. to Lake Ray Hubbard.



Greenway Trail

While creek corridors in Wylie are a rich natural resource, various utility corridors can also play a role in trail network connection throughout the city. Overhead electric easements and unused railroad corridors can provide vital east/west connections. The Municipal Complex can be connected to existing trails at Joel Scott Memorial Park and beyond to the NTMWD (North Texas Municipal Water District) property edge. In the same manner, Avalon Park can be connected through a partnership to the north edge of Lake Ray Hubbard. Additionally, open railroad corridors may present potential for network connections from the city's historic downtown to the Wylie Lakes Park area.



Trail development in these greenway corridors and utility corridors will comprise a large portion of the future trail network in Wylie. Each proposed segment will have to be evaluated closely to determine site specific trail routing as well as the feasibility of partnering with adjacent land owners for trail development. As future site design progresses, trail corridors in this focus area should be developed within a corridor of 25' (minimum) in width, clear of vegetation or vertical obstructions to allow for greater visibility, and to maintain a wide enough corridor for ease of maintenance and emergency access.

Trail in Overhead Electric Easement

New trail developments should be designed using materials that respond to the character of the environment through which they are located. Greenway or drainageway trails will likely see heavy use by a variety of users, and should be constructed of a durable material at an appropriate width. Concrete trails at 10'-12' minimum, and 12'-14' preferred width are recommended. Utility easements used for trail development will serve for shared-use, and should also be constructed of concrete, at a 12'-14' width, and with a thicker profile where motor vehicle traffic is anticipated. Where trails traverse through preserves or ecologically sensitive areas, natural trail materials such as decomposed granite or other permeable materials should be used. Trail widths in the 6'-8' range will likely be most appropriate for most of these areas.

It is important to note that these unique trails can serve as a very important connection to Wylie's beautiful natural resources. Along with typical trail activities like walking or jogging, a range of passive recreational activities can be incorporated into these trail developments. Facilities that offer picnicking, wildlife viewing, interpretive learning, and discovery of natural features (overlooks) will add significant enjoyment to the city's greenway corridors.



Nature Trails

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Focus Area: Lake Frontage / Access

GOAL:

Identify routes of walkable / bikeable access to Lavon Lake & Lake Ray Hubbard

LOCATION:

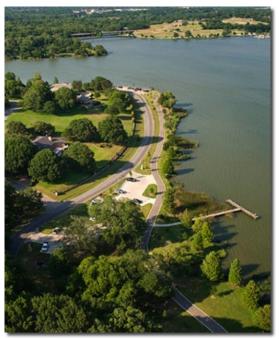
- Lake Frontage Properties
- United States Army Corps of Engineers (USACE) Property
- Extra-Territorial Jurisdiction (ETJ) & Floodplain Properties

STRATEGY:

- Connect citywide trail network to both lakes
- Connect lakes to each other
- Consider development of new lakeside destinations

PARTNERSHIPS:

- Pursue recreational use partnerships with the USACE
- Provide opportunity for private landowners to partner in developing expanded connectivity in the trail network



Regional Lakeside Trail

The City of Wylie has a unique setting in DFW by its proximity to two major recreational lakes. However, with little to no ownership or access to shoreline park land, the city has been limited in its ability to provide citizens and visitors access to the lakes. Evaluating the feasibility of access to Lavon Lake and Lake Ray Hubbard via trails has been an important focus area of this study.



Regional Lakeside Trail

By partnering with the Army Corps of Engineers (USACE) and other utility agencies, a number of trail network opportunities can connect users to Lavon Lake. Through these partnerships, trail users could have access around the entire southwestern shoreline of Lavon Lake from Collin Park along the USACE-controlled shoreline to the new North Texas Municipal Water District (NTMWD) pipeline easement. Similar partnerships could provide opportunity to extend a trail connection from the NTMWD pipeline eastward through East Fork Park and Avalon Park to Skyview Drive near the spillway. Across Hwy 78 and continuing south along existing floodplain at the city's ETJ, the trail network can connect Wylie East High School and a potential future environmental learning center with its vast wetlands and natural systems at the north end of Lake Ray Hubbard.

Strategic recreational use partnerships will be vital in establishing trail connections along and between the two lakes. As these partnerships progress and site specific design is explored, a few guidelines should be kept in mind. Similar to trail corridors in the greenways focus area, these trail corridors should be developed within a corridor of 25' width (minimum), clear of vegetation or vertical obstruction to allow for greater visibility, and to maintain a wide enough corridor for ease of maintenance and emergency access. Also similar to greenway corridors, lake access trails will likely see heavy use by a variety of users and should be constructed of a durable material at an appropriate width. Concrete trails at 12'-14' minimum



Environmental Learning

width are recommended. Where soft / natural trails are desirable in this focus area, materials such as decomposed granite or other permeable materials in the 6'-8' width range should be used.

Historically, soft / natural trails at Lavon Lake have primarily been used by equestrians through the Trinity Trailhead. Equestrian trail access should continue to be allowed in this area and should be designed as separate paths from the primary pedestrian / bicycle trail. Separating specialized trail users in this manner will provide Wylie's equestrians a trail experience tailored to their preferred use, and will reduce conflicts between trail users such as pedestrians, bicyclists, skaters, strollers, etc.



Shoreline Trail

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Focus Area: Roadways & Parkways

GOAL:

Identify routes of walkable / bikeable access to and from key city destinations (retail, civic, schools, tourism, etc.)

LOCATION:

- Existing Thoroughfares
- Planned Roadways as described in the city's current Thoroughfare Plan

STRATEGY:

- Utilize existing sidewalks / R.O.W.s as minor connectors between trail segments
- Identify opportunities for R.O.W. expansion to allow for shared-use trails

PARTNERSHIPS:

- Partner with other city departments (engineering, planning, etc.)
- Partner with governing transportation agencies (TxDOT, NCTCOG, Collin County, etc.)
- Partner with private land owners for use of roadside property



Parkway Trail

As a growing city that is part of an expanding metropolitan region, Wylie has had to respond to increased population and vehicle congestion by continuing to develop roadways that will carry active traffic volumes. While designed to carry such volumes, the current road system is not designed to accommodate bicycles and allow for other non-motorized transportation types. City leaders recognize that integrating trails along roadways and parkways in Wylie is a significant step in a successful trail network, and have prioritized its evaluation as a focus area in this study.

Current roadway design standards in Wylie outline a minimum 5' wide concrete sidewalk to be constructed along all new roadway improvements. Although they provide important connections along city roadways, a sidewalk is of insufficient width to be classified as a trail (10' width minimum), and is generally inappropriate for shared-use. However, these connectors should not be dismissed. In addition to sidewalks already in place, major roadway projects under design or construction at the time of this study include McMillen, Brown and Stone. Although they generally meet the 5' minimum width requirement, the existing sidewalks and the new sidewalks built with these roadway improvements will serve as important minor connectors between wider, shared-use trail segments (creek corridors, lake trails, etc.).



Trail in Vegetated Parkway

While it is beyond the scope of this study to evaluate the entire sidewalk network within the city, a few key sidewalk connections that should be noted as part of the trail network are: a) north/south along McCreary between McMillen and FM 544; b) north/south along Country Club from Hensley to Parker Road; c) neighborhood sidewalk connections from McMillen to Creekside Estates Park, d) along Westgate Way from FM 544 to Joel Scott Memorial Park; e) along FM 544/ Stone at Ballard, and f) north/south along Ballard from Alanis to the historic downtown area. These existing routes provide residents useable access to the larger trail network. When feasible and R.O.W. is available, these routes should be considered for widening to accommodate shared-use by trail users.

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To fill the gaps where existing sidewalks are unavailable, trail placement should be considered. Notable connections can be: a) east/west along Parker Road from the city limit to Country Club; b) east/west along McMillen from McCreary to Country Club; c) along Park Road from Davis Intermediate School to Skyview Drive and East Fork Park; d) along Brown from the municipal complex to the historic downtown and eastward to Wylie East High School; e) along FM 544 / Kirby to the municipal complex and Wylie High School; and, f) along Alanis from Hensley to Ballard and eastward across W.A. Allen to Lake Ray Hubbard.



At - Grade Crossing

In future trail design where sufficient R.O.W. is available, trails along roadways and parkways should be designed at 10' width (minimum), with a minimum of 3'-5' between the back of curb and inside edge of trail. Where the R.O.W. is narrower in width, 8' wide trails should be constructed with a minimum of 2' between the back of curb and inside edge of pavement. Surfaces along roadways should be durable, and the use of concrete is recommended.

To develop this part of the trail network, cooperation and partnership will be required between city officials and other roadway governing agencies (TxDOT, NCTCOG, etc.), as well as between city departments (i.e., engineering, planning, parks, etc.). Where feasible, city engineering should pursue acquiring additional R.O.W. and approach private land owners for potential partnering along roadside property edges where R.O.W. is not available.

As part of developing trails along roadways will come the issue of providing safe crossings where trails intersect with roadways or railroads. In the condition that height clearances of 8' to 10' can be achieved, underbridge crossings should be constructed. Security



Under-bridge Crossing

lighting, overhead clearance height signage, speed limit signage, and guardrails are typical safety measures that should be incorporated when designing these crossings. Where these height clearances are not achievable, safe at-grade crossings should be incorporated. A large number of design approaches exist to demark at-grade trail crossings and give them distinction for both motor vehicles and trail users. Some combination of decorative paving, accent lighting, decorative bollards, and landscape enhancements would be appropriate to be considered here. In general, key guidelines to follow when considering site specific at-grade crossing design include: a) crossing the roadways at a perpendicular angle, b) aligning accessible ramps with the trail route rather than at a 45-degree angle to traffic, and c) promoting visibility of trail users to drivers and vice versa by creating a simple, yet distinct visual difference between the trail route and regular vehicular route.

Trails Master Plan

Focus Area: Trail Gateways & Intersections GOAL:

Establish locations for trailhead treatments and intersection / crossing treatments

LOCATION:

- Significant trail crossing locations & trail system entry points
- Vehicular intersections for future city identity program

STRATEGY:

Identify key trail intersections for signature treatments and wayfinding

PARTNERSHIPS:

Partner with land developers, neighboring cities, and private land owners where necessary

Part of any successful trail network is a distinct family of architectural elements and wayfinding devices at strategic points along the trail to serve as cues and amenities for the trail user. As key parts of the overall system, trail gateways and intersections are a vital piece of the Wylie Trail Network.



Trail Gateway Monument

Three major trail gateway / intersection points are identified in this plan. The intersection of several trails, sidewalk routes, and prominent civic destinations at FM 544 / Kirby and Country Club provide an important gateway opportunity for the trail system. In the same manner, the intersection of trails, schools, neighborhoods, and a destination park with ample parking at the Community Park could provide a gateway and major trailhead in the Wylie system. Last, a series of trails coming together just north of Eubanks & Hwy 78 could serve to be a signature trailhead and gateway to the lake trails.

As supporting elements, a number of minor trail gateway / trail intersection points are represented as well. These include the following: a) McMillen at Muddy Creek where trail users from the neighborhoods might access the Muddy Creek greenway segments; b) McMillen at Country Club - a decision-making intersection in wayfinding to adjacent trail segments; c) Park at Birmingham Farms and Park at Westgate - strategic trailhead connectors between two schools and residential neighborhoods; d) Country Club at Brown - a major intersection leading to the municipal complex; e) Hwy 78 at Woodbridge Golf Club - a connector between two major portions of the Wylie greenbelt as well as potentially to the neighboring Sachse trail system; f) Woodbridge Golf Club at Sachse Rd. - a key north/south connector along the Muddy Creek greenbelt; g) Brown at Ballard and Hwy 78 at Ballard - bookends to the city's historic downtown; h)



Gateway to Trail System

Skyview at Forrest Ross, Skyview at East Fork Park, and Skyview at Avalon Park – all gateways to Lavon Lake; and i) just north of Troy at Alanis along Rush Creek – a potential future gateway to Lake Ray Hubbard.

Major trail gateways and intersections primarily provide easy access for users to various segments of the trail system. Additional features may sometimes include motorized vehicle parking, bicycle racks, shade / pavilions, seating, drinking fountains, restrooms, fitness stations, emergency call boxes, lighting, interpretive signage, landscape enhancements, decorative paving, and public art amenities. As a minimum, it is recommended that an informational kiosk with trail map and wayfinding information be provided. Also recommended are seating, shade, and other rest amenities as appropriate to the specific trail gateway site.

Minor trail gateways and intersections are often comprised of a combination of rest amenities and wayfinding elements. As recommended for major trail gateways, minor gateways should feature a wayfinding signage / kiosk that is part of an architectural family of elements consistent throughout the trail network. In addition to this, a typical minor trail gateway should include seating, shade, and paving enhancements.

The city should also consider major branding opportunities for arriving motorists. Noted within this plan are both major and minor city identity opportunities that are primarily intended to identify preliminary locations for gateway / city identity opportunities. Primary opportunities are located along the Hwy 78 spine at key points throughout the city. These include:



- Hwy 78 at Ballard the city's historic core
- Hwy 78 at Wylie East Dr. the city's eastern gateway

Secondary opportunities are located throughout the city. These include:

- McCreary & McMillen and McCreary & FM 544/Kirby the city's western gateways
- Parker at FM 1378 / Country Club and Park at FM 2514 the city's northern gateways from St. Paul
- Hwy 78 at FM 544 / Kirby the city crossroads
- Alanis at Ballard the city's southern gateway from Hwy 190
- Brown at Wylie East Dr. a signature intersection and potential gateway to environmental learning / lake destination
- Hwy 78 at Eubanks and Alanis at Troy the city's gateways to Lavon Lake and Lake Ray Hubbard.



Trailhead with Parking & Shelter



Informational Kiosk at Trailhead



Enhanced Paving Treatments

Although beyond the scope of this study, it is recommended that city leaders pursue a unified city identity program, and incorporate consistent architectural treatments, wayfinding signage, and/or public art to these gateways.

Other Recommendations

Trail User Safety, Security & Signage

A highly active trail system will offer enjoyment for all age groups. As trail development continues throughout Wylie, the trails will host an abundance of walkers, joggers, bicyclists, and skaters. With this in mind, safety of these users becomes a critical component of any trail system.

While trails which are used frequently can help provide a measure of safety, they can also present potential for inter-user conflicts. Posting trail etiquette signage at trailheads and strategic locations along the trail system can help curtail some of these conflicts before they occur. It will be important for the city to develop a list of trail rules that address issues particular to the Wylie trails system. Some of these might include:

- Be courteous to other trail users at all times;
- Keep to the right, except when passing;
- Always pass on the left, and give clear audible warning when passing slower traffic;
- Avoid congregating on the trail or walking more than two abreast;
- Bicyclists should keep speed under 15 mph at all times, and should slow down in congested conditions, reduced visibility, or other hazardous conditions; and
- Pet owners should keep dogs on a leash at all times and remove pet waste from the trail.

In addition to trail etiquette and courtesy, is the topic of trail user security. To maximize speed for emergency responders to access victims of medical emergency, crime, or other conflict on trails, a growing number of metropolitan cities are adopting emergency locator systems along major trails. It is recommended that the city of Wylie incorporate such a system when implementing this trail network plan. At minimum, sign posts with a location identifier should be placed within view of each other, or no more than about every 1/8 to 1/4 mile to ensure markers are never out of sight of trail users. Each sign should be GPS located and integrated into the city's 911 system. Other security devices that may be implemented where appropriate include trail lighting, emergency call boxes, or surveillance cameras.

Just as user security is a critical component to any trail system, other items such as wayfinding, warning and regulatory signs are also important components. Wayfinding signage should be incorporated at trailheads and key intersections throughout the trail system to provide users information and length of route segment. Warning signs should be used only where special regulations apply, at specific times only, or where hazards are not self-evident. The use of warning signs should be kept to a minimum so as to not lose their effectiveness.

Trail Rest Stops

Rest stops placed at determined intervals throughout the trail network will be an important piece of a successful trail system in Wylie.

On high traffic trails, such as those planned in the Municipal Complex or in the lake parks, rest stops should be placed at intervals of 1/3 mile to ½ mile. On trails with potentially lower volumes of use and more remote sections, such as those planned along Muddy and Rush Creeks, rest stops may be placed at intervals of 3/4 mile to 1 mile.

These stopping points may be comprised of a variety of amenities for the trail user. Each point may include seating only (for example, 1 to 2 benches or a picnic table). They may also include a drinking fountain, trash receptacle, and/or interpretive and wayfinding signage, as appropriate to the character of each point.

Like the trail gateways and intersections described in this plan, amenities included in each rest stop should be designed to appear as part of a family of architectural elements that are consistent throughout the trail system.

Integrated Planning Efforts

As part of an integrated planning effort, the city should incorporate these trail network recommendations into the city's new comprehensive plan currently under development. By incorporating trail guidelines in the development of overlay districts being defined by this plan, city leaders can ensure that trail development throughout Wylie becomes an integrated priority as part of future city development (e.g., South Ballard, Redevelopment / A.C.T.I.O.N. plans, Lake Development, etc.). As previously discussed, engineering design standards, should be evaluated to incorporate wider roadside trail connection standards than are currently in place (10' width or greater preferred). Inclusion of these design widths early in the planning process can help city engineers ensure that new capital improvement projects are able to allow for space that promotes a trail-user friendly environment along city roadways.

To continue support of a growing inter-city network of trail connections, Wylie city officials should meet with the neighboring cities of St. Paul, Parker, Murphy and Sachse to discuss and plan for implementation of partner connections between city trail systems. And, to participate in region-wide trail planning efforts, the City of Wylie should submit their trail network plans to Collin County officials to be recognized by the Collin County Trail Plan. Once on file with the county, other cities in the region can become familiar with Wylie's proposed trail routing and determine if partnerships for future connections can feasibly be pursued. The plan should also be submitted to the North Central Texas Council of Governments (NCTCOG) to be recognized in the Regional Veloweb / Mobility 2035 planning effort. Recognition by these regional agencies may increase the city's ability to secure supplemental funding sources for implementation.

Estimating Cost of Implementation & Funding Sources

The current estimated construction cost for a hard surface trail is calculated at approximately \$5-\$6 per square foot (trail only), or around \$316,000 to \$380,000 per mile for a 12' wide trail. Depending on the level of recreational elements and amenities added (rest areas, trailheads, etc.), cost of construction for a complete trail project can reach amounts around \$1 million per mile of hard surface trail. The cost for constructing a soft surface trail can vary, but for this plan, current costs are estimated at around \$4 per square foot (trail only), or around \$170,000 per mile for an 8' wide trail.

When budgeting for trail improvements, other infrastructure expenditures must be thought through in addition to baseline trail construction costs. At-grade or under-bridge thoroughfare crossings, creek bridge crossings, and varying levels of trail amenities must also be considered. As these costs can vary widely, they have not been estimated as part of this plan.

Once a budget number is reached, it is important to consider what funding sources might be available to help the city supplement the cost of trail network expansion. When seeking funding for trails, other cities have had success using a grants coordinator to guide them throughout the application process. The following list identifies potential funding sources for the City of Wylie to strategically pursue.

County

- Collin County Parks and Open Space Program
- Dallas County Trail and Preserve Program

North Central Texas Council of Governments (NCTCOG)

- Transportation Enhancement Program
- Sustainable Development Calls for Projects
- Regional Tollway Revenue Funding Initiative

State of Texas

- Texas Parks and Wildlife Department (TPWD)
 - Recreational Trail Grants
 - Boating Access Grants
- Texas Department of Transportation (TxDOT)
 - Safe Routes to School Program
- State Energy Conservation Office
 - Energy Efficiency and Conservation Block Grant

Federally Funded Programs that include Bicycle and Pedestrian Opportunities

- U.S. Department of Housing and Urban Development
 - Community Development Block Grant
- U.S. Army Corps of Engineers (USACE)
- U.S. Department of Interior (USDOI)
 - National Parks Service's Rivers, Trails and Conservation Assistance

Federal Transportation Funding Sources

- Highway Bridge Replacement and Rehabilitation Program
- Highway Safety Improvement Program
- National Highway System
- Surface Transportation Program
- Federal Transit Administration Programs
- Interstate Maintenance
- Transportation and Community and System Preservation

Other Sources of Funding for Trail Development

- Land Trusts
- Communities Foundation of Texas
- Meadows Foundation
- Recreational Equipment, Inc.
- Foundation Directory On-Line
- Private Donations Partnerships with Volunteer Groups

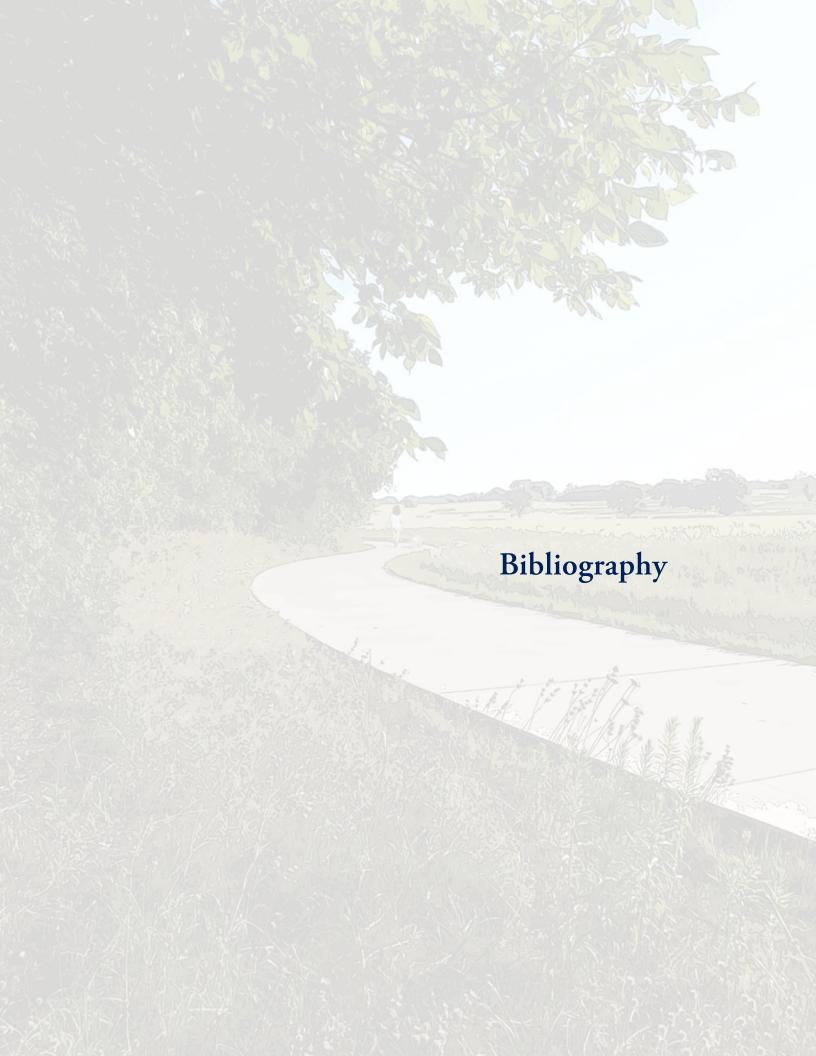
Conclusion

By undertaking this plan, the City of Wylie has taken an important step in creating a city-wide network of trail connections, which has potential to become one of the great assets of its recreation and transportation system.

Having garnered enthusiasm from city leaders and citizens, Wylie is well postured to begin implementing one or more of the proposed trail segments. A coordinated effort with other city departments will ensure funds are directed to the common vision for Wylie.

While this plan provides guidance for locating trails in each of the city's primary focus areas, site-specific alignments should be viewed as flexible and adjustable as needed to work with the objectives of residents, business owners, and developers. by taking steps to implement this trail plan, Wylie city leaders can work towards providing safe, healthy transportation choices and recreational opportunities for its citizens and visitors alike.

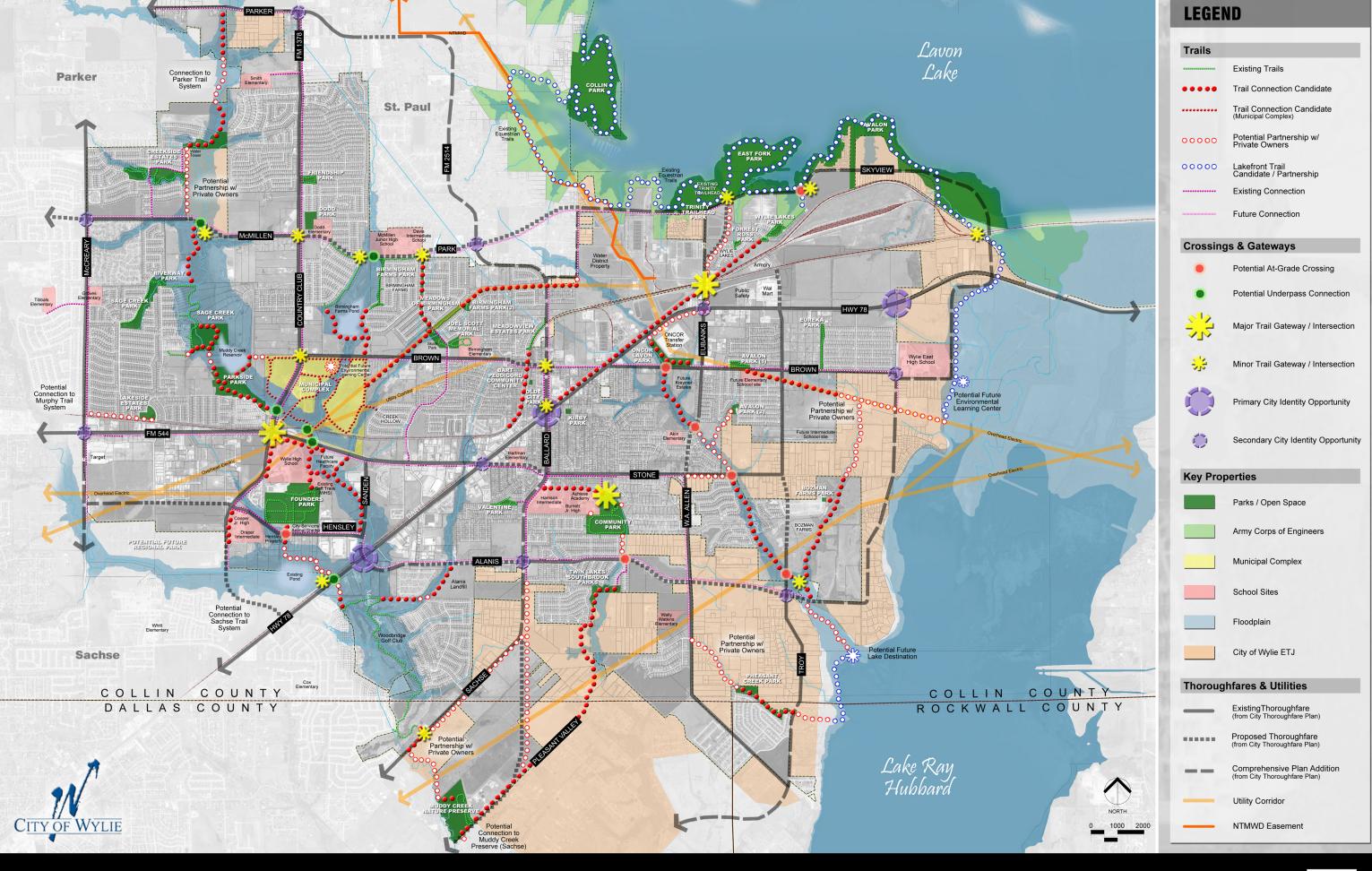




BIBLIOGRAPHY

- 1. Comprehensive Master Plan DRAFT, City of Wylie Planning Department, 2012.
- 2. The 2010 Parks, Recreation & Open Space Master Plan, Wylie: Halff Associates, 2010.
- 3. Manuals for the Design of Storm Drainage Systems, Water and Sanitary Sewer Lines, and Thoroughfare Standards, City of Wylie, 2005.
- 4. Trail Quotes: From Advocacy to Wilderness, 2001, Jim Schmidt, editor, South Carolina Department of Parks, Recreation and Tourism, Columbia, SC.
- 5. Dallas Trail Network Plan, City of Dallas Park & Recreation Department, 2008.





RECOMMENDATIONS

Б	RECOMMEND.						
Focus Area	Goal	Locations & Estimated Lo	engths of Proposed Trails	Width	Surface	Cost Range	
Greenways & Utility Corridors (Total Estimated 32.25 miles)	Utilize greenbelts, drainageways, & utility corridors as trail system connections Open walkable / bikeable access	 Municipal Complex Property (est. 3.5 miles) Central floodplain (south from Community Park) (est. 1 mile) Rush Creek floodplain & riparian corridor (est. 3.5 miles) Drainageway connection from Park to Joel Scott Memorial Park (est5 mile) Drainageway from W.A. Allen through Pheasant Creek Park to Lake Ray Hubbard (est. 1.5 miles) Overhead electric from Municipal Complex to NTMWD property (est. 1.5 miles) NTMWD easement at Lavon Lake (est. 1.5 miles) Sewer easement at Pleasant Valley (est. 1.5 miles) Overhead electric easement from Avalon Park to Lake Ray Hubbard (est. 1.5 miles) Rail corridor connection from McCreary to Lakeside Estates Park (est5 mile) Rail corridor along Highway 78 (est. 2 miles) Bozman Farms from OHE to Rush Creek (est. 2 miles) Avalon Park (2) to Rush Creek (est5 mile) Avalon Park (2) to Rush Creek (est5 mile) Community Park to Ballard (est5 mile) Brown through Birmingham Farms (est75 miles) Muddy Creek from Parker to McMillen (est. 2 miles) Muddy Creek from McMillen to Municipal Complex (est. 2.5 mile) Muddy Creek from FM 544 (Kirby) to Hensley (est. 1 mile) Muddy Creek from FM 544 (Kirby) to Founder's Park (est5 mile) Muddy Creek from Founders Park to Woodbridge Golf Club (est. 1 mile) Alanis Landfill to Woodbridge Golf Club (est5 mile) Woodbridge Golf Club to Muddy Creek Preserve (est. 1 mile) 		 Greenways , 10'-12' minimum / 12' – 14' preferred Utility Corridors, 12'-14' preferred Nature Trails, 6'-8' Range 	Concrete Crushed Stone Concrete	• \$ 5 / sq. ft. • \$ 4 / sq. ft.	
Lake Frontage / Access (Total Estimated 12.5 miles)	Open walkable / bikeable access to Lavon Lake & Lake Ray Hubbard	 Shoreline along Collin Park to NTMWD easement (est. 2 NTMWD Easement at Lavon Lake (est. 1.5 miles) USACE shoreline near NTMWD station (est. 1 mile) Shoreline along East Fork Park (est. 2 miles) Skyview Dr. from East Fork Park to Avalon Park (est5 m Shoreline along Avalon Park (est. 2 miles) Skyview Dr. from Avalon Park to Hwy. 78 (est. 1 mile) Along floodplain / ETJ limits from Hwy 78 to overhead elect Along Ray Hubbard Shorline @ Rush Creek (est5 mile) 	 Shoreline Trail, 12' – 14' preferred Nature Trails, 6'-8' Range 	Concrete Crushed Stone	• \$ 5 / sq. ft. • \$ 4 / sq. ft		
Roadways & Parkways (Total Estimated 21 miles)	Provide safe, walkable / bikeable connections to & from key city destinations	 Along McCreary from McMillen to Hensley (est. 1 mile) Along Westgate from Joel Scott Memorial Park to Kirby (1) Along Ballard from the electric easement, to historic down Along W.A. Allen from Stone to the Pheasant Creek green Along Parker Rd. from city limits to Country Club Rd. (e. Along McMillen to Dodd Elementary (est. 1.5 miles) Along Park from Davis Intermediate School to Forrest Ro Along Brown from municipal complex to Wylie East High Along FM 544 from McCreary to Rush Creek (est. 3 miles) Along Hensley from Country Club to Sanden (est5 miles) Along Skyview from Wylie E.H.S. to OHE (est25 miles) Along Ballard from Alanis to Pleasant Valley (est. 1.5 miles) Along Paul Wilson from electric easement to Park (est5 miles) Along Country Club from FM 544 to city limits (est. 1 m. Along Brown to Hwy 78 at Oncor Lavon Park (est5 miles) Along Hwy 78 at Oncor Transfer Station (est5 miles) 	8'-10'minimum where R.O.W. available 8' in narrow width R.O.W.s	• Concrete	• \$ 5 / sq. ft.		
Trailheads & Intersections	Establish locations for trailhead treatments to serve as wayfinding & signature elements throughout the trail system	Major Trailheads / Intersections: FM 544 @ Country Club Community Park @ Thomas Eubanks @ rail corridor near Centennial Minor Trailheads / Intersections: McMillen @ Muddy Creek Country Club @ McMillen McMillen @ McMillen Jr. High School Park @ Davis Intermediate School Skyview @ Forrest Ross Skyview @ Wylie Lakes Park Skyview @ Avalon Park Country Club @ Brown Ballard @ Brown Olde City Park Hwy 78 @ Woodbridge Golf Club Woodbridge Golf Club @ Ballard Rush Creek near Troy @ Alanis	Future City Identity Opportunities: Major • Hwy 78 @ Alanis • Hwy 78 @ Ballard • Hwy 78 @ Wylie East Dr. Minor • McCreary @ McMillen • McCreary @ FM 544 • Parker @ FM 1378 / Country Club • Park @ FM 2514 • Hwy 78 @ FM 544 • Ballard @ Alanis • Hwy 78 @ Eubanks • Troy @ Alanis • Brown @ Wylie East Dr.	Varies	Concrete Enhanced Concrete Unit Pavers	• \$ 5 / sq. ft. • \$ 8 - \$ 10 / sq. ft. • \$ 8 / sq. ft.	







