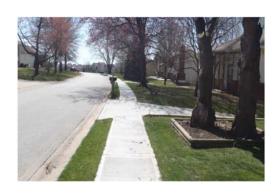
City of Raymore, MissouriPEDESTRIAN MASTER PLAN

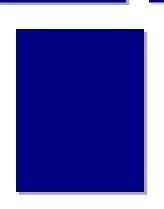
Raymore Together!...a community of active people, quality places, and economic opportunity





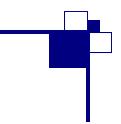








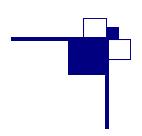




Raymore Together!

...a community of active people, quality places, and economic opportunity.

Acknowledgements



Planning and Zoning Commission

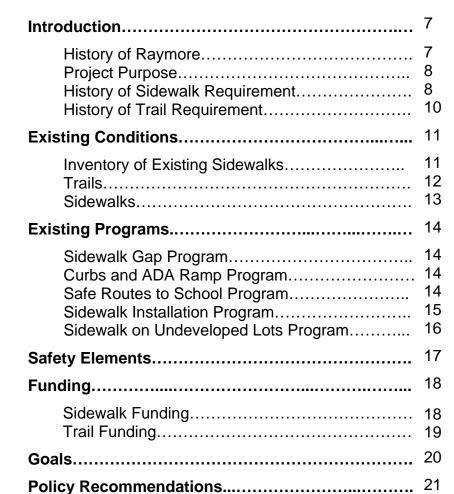
William Faulkner, Chairman Kelly Fizer, Vice-Chairman Charles Crain, Secretary Eric Bowie Leo Anderson John Berendzen Joseph Sarsfield Donald Meuschke Peter Kerckhoff

Mayor and City Council

Peter Kerckhoff	Mayor
Jeffrey Stevens	Ward 1
Kevin Kellogg	Ward 1
Derek Moorhead	Ward 2
Joseph Burke III	Ward 2
Jay Holman	Ward 3
Kevin Barber	Ward 3
Sonja Abdelgawad	Ward 4
Charlene Hubach	Ward 4

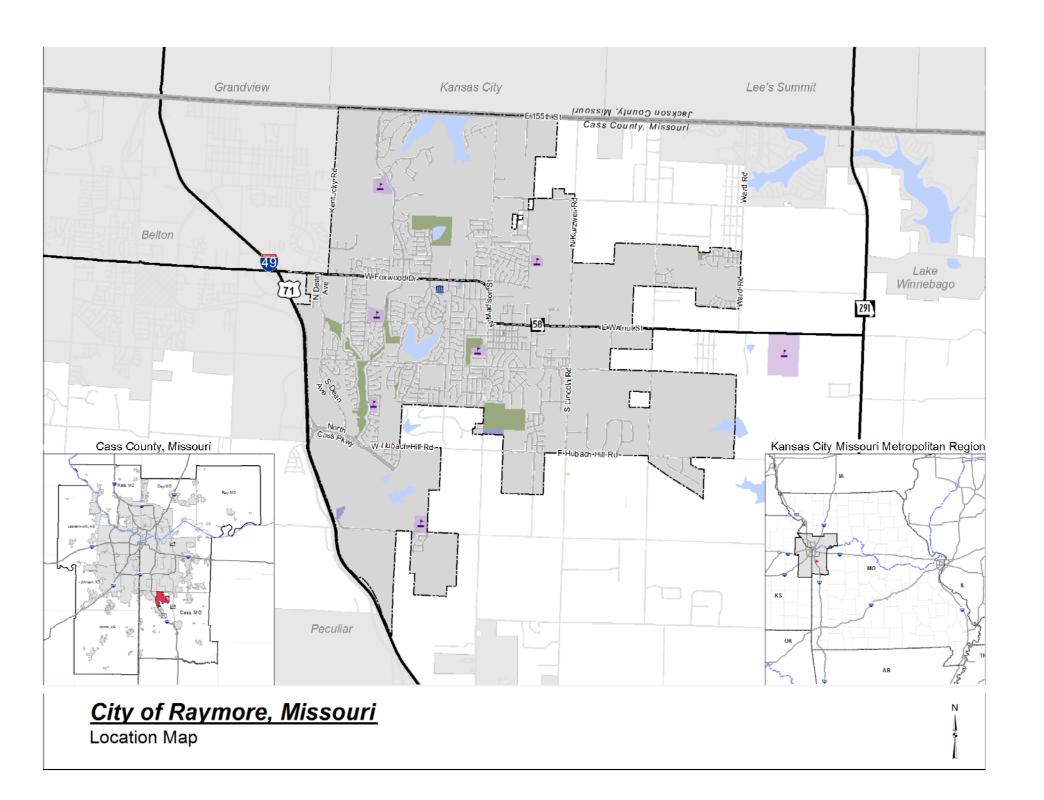
City Staff

Jim Feuerborn, City Manager James Cadoret, AICP, Community Development Director Mike Krass, PE, Public Works Director Nathan Musteen, Director, Parks and Recreation Heather Eisenbarth, GISP, GIS Coordinator



Recommendations.....





The Raymore Pedestrian Master Plan is intended to educate Raymore residents about the pedestrian system that exists throughout the community and the plans to continue to grow and expand the system. Community connectivity is one of the key components of the City's Growth Management Plan, with goal statements on expansion of the trail and sidewalk network, expansion of connections to the regional trail system, and creation of connections to major gathering spaces.

This plan is an important tool for the community to utilize as it continues to grow and prosper. It is vital that all new development that occurs in the community establish connections with the existing community. Trail, bikeway, and sidewalk connections will provide vital links between residential, business, educational, recreational and social activities throughout the community.

This plan also serves as the framework for future planning of pedestrian connections. The plan helps to identify where investments need to be made for Raymore to have a complete pedestrian network.

HISTORY OF RAYMORE

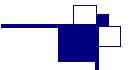
The City of Raymore, Missouri in located adjacent to and south of Kansas City, Missouri, approximately 20 miles from downtown Kansas City. The City is located along Interstate 49 and Missouri Highway 58 and is over 17.5 square miles in area. According to U.S. Census data the population of Raymore as of July 1, 2014 was 19,963.

Raymore is one of the fastest growing communities in the State of Missouri, having increased its population by 72.3% between 2000 and 2010. While the pace of growth has slowed over the past several years, Raymore continues to see an increase in households and population.

The Raymore community had as few as 587 residents in 1970. Raymore's population expanded from 3,154 in 1980 to 19,963 in 2014. Density in Raymore remains low, currently at 1,092 residents per square mile. With 46% of the land area in the City undeveloped, there are many opportunities for infill development to occur and for the population to greatly expand both in overall numbers and density level.

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Introduction



PROJECT PURPOSE

The purpose of the Pedestrian Master Plan is to identify and evaluate the pedestrian network that currently exists within the City and to establish a plan for continued maintenance and expansion of the system.

Raymore is fortunate to have 165 miles of sidewalk and over 20 miles of trails within its 17.5 square mile border. The pedestrian network continues to be expanded on an annual basis, with both private and public funding being utilized. New development is required to have sidewalk installed as part of the construction process while the City absorbs the cost for maintenance of sidewalks and for installation of sidewalk in older areas of the community where no sidewalk exists.

Monitoring and evaluating the existing pedestrian system is a key component of this plan. While City leaders are interested in the continued expansion of the system, provisions have been made to ensure maintenance of what already exists. This plan documents where all sidewalk and trail segments are located and incorporates the 2015 sidewalk and 2014 trail condition inventories that were completed. Monitoring the existing network is a key component of a successful pedestrian network.

HISTORY OF SIDEWALK REQUIREMENT

The requirement to install sidewalk first appeared in Raymore City Code in 1992. The requirement adopted in 1992 for commercial and industrial development was for sidewalk on all lots. The requirement for residential development was as follows:

- If gross density of subdivision was less than 2 units per acre, then no sidewalk required
- If gross density is between 2 and 3 units per acre, then sidewalk was required on 1 side of the street
- If gross density was greater than 3 units per acre, then sidewalk was required on both sides of the street.

In 2000 City Code was amended to require sidewalk on both sides of the street for all developments. An exception was granted for residential lots greater than 3 acres, and for new subdivisions when the average lot size was greater than 3 acres.



In 2005 the City started requiring that the ADA ramps required at all intersections be constructed by the developer at the same time all public infrastructure (streets; water lines; sanitary sewer lines) are installed. Then, when a contractor built on a corner lot the sidewalk installed with the new construction would simply connect with the pre-existing ADA ramp.

In 2007 the City funded a sidewalk gap program with the intent of eliminating gaps in the existing sidewalk network. There were numerous examples spread across the City wherein a small (± 100 feet) gap existed in the sidewalk system. The gap program was the first infusion of City funds into creating a more complete sidewalk network.

In 2009 the City initiated a sidewalk program to install sidewalk on streets that had no sidewalks. This program was designed to create a community that had sidewalk on at least one side of every street. Each year since 2009 the City has budgeted funds for this program. Over 2.2 million dollars have been spent on this initiative.

In 2014 the requirement to install sidewalk on undeveloped residential lots that met a certain threshold became effective. The code requirement reads as follows:

The owners of any undeveloped lot within the subdivision or subdivision phase shall be required to construct a sidewalk on that lot when:

- a. 66% or more of the lots on the same side of the street in the same block already have a sidewalk; and
- b. it has been 3 years from the date the first Certificate of Occupancy was issued in the subdivision or subdivision phase that contains the undeveloped lot.

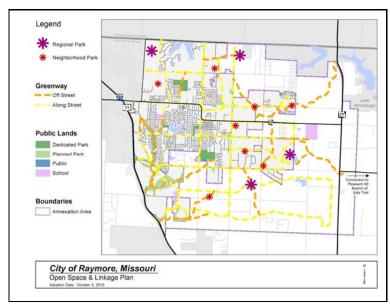
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Introduction

HISTORY OF TRAIL REQUIREMENT

In 2003 the Growth Management Plan (GMP) for the City first identified the requirement to construct trail in any new development that contained a segment of an identified trail according to the Open Space and Linkage Plan Map contained in the GMP. The requirement was codified in the Raymore City Code in 2009 to read as follows:

"Development planned for land on which a trail segment is identified on the Growth Management Plan Update Open Space Corridor Plan must provide such trail segment. Trail segments with a minimum width of 10 feet shall be constructed at the time of infrastructure improvement and must be constructed to meet or exceed the standards set forth by the MetroGreen Plan adopted by the Mid-America Regional Council. A public access easement 15 feet in width is required over the entire length of the trail segment. The property owners' association established for the development must maintain the trails along with all other common areas in their development."



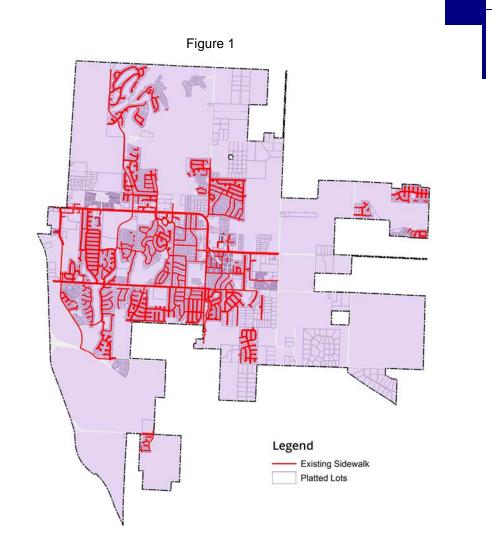
In 2014 the City adopted the Raymore Community-Wide

Trails Plan. The purpose of this plan was to address the active transportation needs of the community. The master plan took a close look at the existing trail system, evaluating several key areas:

- evaluation of the existing trails system
- reaffirmation of existing and proposed connectivity within the community
- identification of connections to neighboring communities
- identification of a connection to the Rock Island Trail State Park in Pleasant Hill

INVENTORY OF EXISTING SIDEWALKS

Through the City's Geographic Information System the City developed an application that allowed staff to inventory all existing sidewalk segments and track funding sources for each segment. Additionally the application allows the City to track segments required to be constructed by the property owner each year under the undeveloped lot sidewalk program as well as the City funded annual sidewalk installation program. Figure "1" is a map illustrating the overall sidewalk inventory for the City.



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Existing Conditions

TRAILS

In 2014 the Raymore Community-Wide Trails Plan included an evaluation of the existing trail system to assess the condition of the trails and identify areas needing immediate attention and areas where maintenance can be programmed. The plan was very thorough in documenting existing conditions and providing recommendations for action. Each trail segment in the City was reviewed.

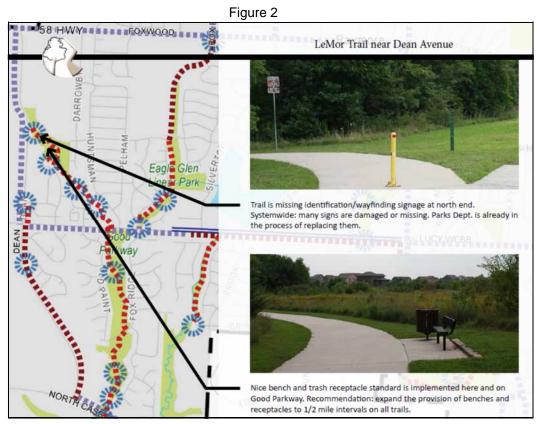


Figure "2" is an example from the plan that illustrates trail location and inventory points, providing detailed comments on improvements that can be made to the trail segment.

Example from the plan of a trail analysis

SIDEWALKS

In 2015 an assessment was completed by the City Public Works Department of all existing sidewalk segments in the City. This assessment included an analysis of the condition of the sidewalk and ADA facilities. GIS technology was utilized to map the location of any deficiencies to allow for the development of a maintenance plan.

There were 1,068 sidewalk condition events identified in the assessment. Each event location was given an identification number with data collected about the specific condition. A slight, moderate or severe classification was given to the event as well as inclusion of an action needed identifier, such as panel replacement or mud-jacking. The events have been mapped (Figure "3") to help illustrate how the events are spread throughout the City.



Example of Sidewalk Condition Assessment Map

Existing Programs

The City of Raymore has a number of existing programs that address pedestrian needs. Below is a summary of these current programs:

SIDEWALK GAP PROGRAM

The sidewalk gap program was first commenced in 2007 and was the initial focus of the City's involvement in developing a cohesive pedestrian network. A total of 17 gaps were identified by City staff and included in the program. The FY2007 budget allocated \$150,000 to eliminate the gaps. In recent years the gap program has been incorporated into the annual sidewalk program since most, if not all, of the minor gaps have been eliminated.



CURBS AND ADA RAMP PROGRAM

In 2008 City staff conducted a survey of the condition of concrete curb and gutter and ADA ramps throughout the City. In the 2009 Capital Budget City Council allocated \$200,000 to install ADA ramps throughout the City. This program allowed for the construction of ADA ramps at intersections throughout the City.

SAFE ROUTES TO SCHOOL PROGRAM

The City has worked closely with the Raymore-Peculiar School District to support the Safe Routes to School



Program. In 2009 and again in 2013 the City provided funding for two important projects that established new sidewalk segments near two elementary schools. These sidewalk segments provided direct links from residential neighborhoods to the school entrances. The City also provides police officers that assist in maintaining a safe pedestrian environment around the schools.

Figure 4 is a photograph taken at the Walk to School Day in 2013, which coincided with the ribbon cutting for the new sidewalk segment to Stonegate Elementary School in Raymore.

SIDEWALK INSTALLATION PROGRAM

In 2009 City Council adopted a resolution that established a multi-year sidewalk program for construction of sidewalk on streets that did not have sidewalk on either side of the street. The goal of the program was to provide approximately 5.4 miles of new sidewalk over a 5-year period. The resolution also identified an additional 2.25 miles of sidewalk to be constructed after the initial program expires.

Year one of the program was provided a \$500,000 budget. Four significant sidewalk segments were constructed on collector roads in the community. Over 2.6 miles of sidewalk were constructed the first year. Each additional year saw significant funding (over \$1.17 million expended between 2011 and 2014) for sidewalk installation.

The program continued in 2014 with an expenditure of \$109,208 and in 2015 with an expenditure of \$129,326. The 2016-2020 Capital Improvement Program identifies funding for FY 2016 through FY2018 at \$117,000 each year.

BEFORE



AFTER



15

Existing Programs

SIDEWALK ON UNDEVELOPED LOTS PROGRAM

In 2014 the City Council implemented enforcement of a requirement first approved in 2009 for sidewalk to be installed upon undeveloped lots in developing subdivisions when a certain threshold of development occurs on a street. This program was deemed important in Raymore due to the rapid growth in new residential subdivisions. With construction of the first new home in a subdivision phase there is need for those residents to have access to a sidewalk network. As the developments build out the need increases. In 2015 Raymore had new home construction occurring in 29 different subdivisions. With 800 undeveloped lots available for new home construction spread out over these 29 subdivisions the City is faced with many gaps in the network. The sidewalk on undeveloped lots program is a fair approach to creating a complete sidewalk network in a developing subdivision.



Each year City staff must evaluate whether the construction of new homes in developing subdivisions triggered the threshold requirement to be met. On January 1st of each year staff determines those undeveloped lots that meet the threshold requirement to have sidewalk installed. The property owner is notified of the requirement and provided a deadline date of August 1st. If the lot owner does not install the sidewalk by the deadline City Council holds a public hearing to determine if the City is to install the sidewalk and levy a special assessment on the property for the costs thereof. In September a public hearing is held for those lots that have not had sidewalk installed or a permit for a new home issued.

In 2014, the first year of the program, there were 89 lots that met the threshold. The City ended up installing sidewalk upon 45 lots. In 2015, 23 lots met the threshold and were provided notice to install sidewalk.

Safety Elements

Keeping pedestrians safe is of utmost importance to the City. Several measures have been taken to ensure pedestrians and cyclists are safe when utilizing the sidewalk and trail networks throughout the City. A few of the elements the City has utilized include:



Speed enforcement trailer to reduce vehicle speeds in neighborhoods



Use of signs and painted Pedestrian Crosswalks



Signage and maps to identify trail segments



Crosswalks with pedestrian refuge areas



Police Bicycle Patrols



Safety on the pedestrian network is also ensured through the use of law enforcement officers at certain school crossings and assisting the Raymore-Peculiar School District in the safe routes to school program.

Funding

Funding for the pedestrian network in Raymore comes from several sources. The City General Fund, Capital Fund, and General Obligation Bond money has all been utilized to develop the pedestrian network. Additional funding has been approved in the 2015-2016 City Budget for equipment (mud-jacking and concrete mixer equipment) that will be utilized to help maintain the pedestrian network.

SIDEWALK FUNDING

Funding for the creation of a pedestrian network throughout Raymore has been significant over the past 8 years. Starting in 2007 the City has made an annual commitment to the expenditure of City funds on various sidewalk projects, with the total to date exceeding \$2.2 million dollars.

The first year of the program brought funding to eliminate various "gaps" that existed in the sidewalk network. Gaps were identified as missing segments of sidewalk in areas that otherwise would have a complete network. Focus was placed on eliminating gaps near areas where pedestrians most often need safe routes, such as sidewalks connecting to schools and parks.

Second and subsequent year funding was on the construction of new sidewalk segments on roads that had no sidewalk. Funding for the program has varied each year, with increases in those years wherein sidewalk installation was made a high priority in the budget. Funds spent to date on the sidewalk program are identified in Chart 1.

Chart 1

Sidewalk Installation Program	
2007 Sidewalk Gap Program	\$113,923.00
2008 Sidewalk Program	\$65,724.00
2008 Design of Elm Street Sidewalk	\$20,640.00
2009 Sidewalk Program (Elm Street Sidewalk)	\$103,240.75
2010 Sidewalk Program	\$389,627.50
2011 Sidewalk Program	\$470,755.00
2012 Sidewalk Program	\$387,024.60
2013 Sidewalk Program	\$203,950.00
2013 Foxridge Drive Sidewalk	\$82,722.50
2014 Sidewalk Program	\$109,208.00
2014 Sidewalk on Undeveloped Lots Program	\$128,379.58
2015 Sidewalk Program	\$129,326.40
TOTAL	\$2,204,521.33

Funding

TRAIL FUNDING

A trail network was first introduced in the 2002 Parks and Recreation Master Plan. An open space and linkage plan map was created that identified important corridors wherein trail development should occur.

Funding proposed under the new Master Plan was started in 2003 with the construction of the Good Parkway Trail, located between Lucy Webb Road and Foxridge Drive.

In April of 2007 a Parks and Recreation Strategic Implementation Plan was adopted to allow the Park Board to focus its capital improvement recommendations for the next 10 years. The plan placed an emphasis on construction of trail segments throughout the community.

A second major accomplishment in April of 2007 was the approval by voters of a General Bond obligation that included funding for general trail construction. Five trail

Trail Installation Program

2003 Good Parkway Trail Installation \$116,000.00
2007 General Obligation Bond Program \$825,000.00
2014 Eagle Glen Trail Rehabilitation/General Trail Improvements \$366,000.00
2015 Hawk Ridge Park Trail \$260,000.00

Chart 2

segments were identified for funding through the bond issue, with the trail loop at the City's Recreation Park the biggest project.

TOTAL



In 2014 funding for trail rehabilitation and trail replacement was approved. Funding was allocated to replace the Eagle Glen trail and to rehabilitate various segments of trail that had become worn and damaged over time.

2017 Proposed Memorial Park Trail Reconstruc-

In 2015 funding was approved from the Park Sales Tax Fund to construct a new trail segment around Johnston Lake in Hawk Ridge Park with a connector to the existing parking lot for the park.

The FY2016-2020 Capital Improvements Program for the City includes funding for the reconstruction of the existing trail in Memorial Park. This is the oldest trail segment existing in the City and is past the point of normal maintenance. This project is proposed to be completed in 2017.

City of Raymore, Missouri

\$150,000.00

\$1,717,000.00

Goals

While the City of Raymore has a density of 1,092 residents per square mile, and encompasses over 17.5 square miles, the fact is that 61% of platted residential lots have a sidewalk segment upon the lot. The Raymore community has an extensive pedestrian system utilizing both public and private funds. This public/private partnership is helping the community realize the goal of having pedestrian access available to all residents in the community.

The 2013 Growth Management Plan included a Goal specific to pedestrian Connectivity:

Community Connectivity Goal #3: Continue expansion of the City trail and sidewalk network

The objective of the goal was to ensure all residents have pedestrian connectivity with the entire City through use of a trail or sidewalk. Three action steps were identified:

- 1. Support funding for the continued expansion of the trail system and sidewalk network throughout the community.
- 2. Provide connectivity to MetroGreen trail network and to the extension of the Katy Trail.
- 3. Publish trail maps and provide signage to identify trail locator's

Other action steps identified in the GMP to address pedestrian connectivity and safety are:

- Provide transportation links (roads; sidewalks; trails) to connect office park areas within the community
- Support programs that create a strong police presence in neighborhoods, such as bicycle patrol units
- Support civic involvement programs such as National Night Out, Neighborhood Watch programs, and the Citizens' Police Program
- Ensure neighborhood parks are interconnected in the neighborhood through sidewalks and/or trails

In FY2016 City Council members will engage the community in a strategic planning process. This process will engage the public in the creation of goals for the community and is likely to include a component to continue efforts in creating a walkable, pedestrian friendly City.

INTERNATIONAL CHARTER FOR WALKING

In 2015 the Mayor signed the International Charter for Walking. The Charter illustrates how Raymore can create a culture where people choose to walk. The Charter indicates that the quality and amount of walking as an everyday activity is an established and unique primary indicator of the quality of life. John Butcher, founder of Walk21, stated "Walking is the first thing an infant wants to do and the last thing an old person wants to give up." Creating an environment where residents of Raymore want to walk is the goal of this plan. The International Charter for Walking includes the following strategic principles:

- 1. Increased inclusive mobility
- 2. Well designed and managed spaces and places for people
- 3. Improved integration of networks
- 4. Supportive land-use and spatial planning
- 5. Reduced road danger
- 6. Less crime and fear of crime
- 7. More supportive authorities
- 8. A culture of walking

Raymore is committed to reducing the physical, social and institutional barriers that limit walking ability, and supporting the International Charter for Walking and the strategic principles is a clear indication of that commitment.

LIVABLE STREETS

The City Council is currently considering adoption of a Livable Streets Resolution. If adopted the action will indicate how streets should be designed, and existing streets redesigned, as opportunities arise. For Raymore a livable street design includes accommodation for pedestrians, cyclists and vehicles to safely co-exist in the right-of-way.

Recommendations

NEIGHBORHOOD CONNECTIONS

This plan recommends that every neighborhood (subdivision) within the City be connected to the rest of the community through a sidewalk or trail connection.

At least one sidewalk or trail connection needs to be made between all developments in the City. This connection ensures that residents have the ability to walk to any residential area, business, school, church, park or gathering space within the City. Trail connections would expand the connectivity for bicycle use.

Inner-connectivity of all neighborhoods in the City is faced with many challenges due to the low density development that has historically occurred in the City and the fact that 46% of the land area within the City remains undeveloped. Several areas located on the periphery of the City limits are currently only connected through the street network. The Open Space and Linkage Plan provides trail connections to these areas, but most of these trails have yet to be developed. A more immediate course of action for the City to take would be to construct sidepaths or an on-street trail network.

SIDEWALK ON ALL STREETS

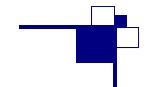
This plan recommends that a sidewalk be placed on at least one side of all streets in the City.

All new development in the City is required to install sidewalk along both sides of all public streets. This requirement includes installation of sidewalk across any common areas and requires connection to existing sidewalk segments.

Commercial and Industrial developments that contain private streets are required to have sidewalk along one side of the private street. Additionally, all commercial, office and public buildings are required to provide a sidewalk connection between the front door of the facility and the sidewalk in the public right-of-way. This requirement helps to further the ability of residents to gain pedestrian access to all areas.

This plan acknowledges there are certain large lot neighborhoods that have a rural character wherein residents have expressed a desire to not have sidewalks installed. The few residential areas in the City that have rural estate or rural residential zoning may be excluded by the City Council from having sidewalk installed under this plan.

Recommendations



MAINTENANCE

This plan recommends that a maintenance plan be established for the pedestrian network.

It is imperative that a robust maintenance plan be established as the City continues to fund the expansion of the pedestrian network throughout the City. The City is responsible for future maintenance of all sidewalk and trail segments constructed on city right-of-way or city easements. This maintenance responsibility needs to be upheld so the efforts made to date to create a pedestrian network continue to be supported in the future. The FY2016 City budget included funding for equipment to assist in the maintenance of the network. A mudjack machine and concrete mixer are to be purchased to allow City staff to complete basic maintenance and repair on the pedestrian network.

TRAIL EXPANSION

This plan recommends that the Off-Street and On-Street Trail and Greenway Network identified in the Open Space and Linkage Plan be Expanded and Developed.

The Open Space and Linkage Plan Map identifies where future parks and recreation facilities should be located to meet the level of service goals in the Parks and Recreation Strategic Implementation Plan. The Parks and Recreation Board should take into consideration the future park locations identified on the map when making recommendations regarding the fulfillment of the parkland dedication requirements.

The Open Space and Linkage Plan Map also identifies an interconnected system of greenways throughout the City. Greenways should provide connections for pedestrians and cyclists between recreation areas, public facilities, and neighborhoods. The identified greenways often follow planned transportation routes or stream corridors. Greenways should also provide connections between Raymore and adjacent communities and tie into the regional green infrastructure system.

As new developments are proposed in the City the Open Space and Linkage Plan should be consulted and any trail corridor identified on the map that crosses onto or though the development area should be required to be constructed as part of the development. New residential preliminary plats and new commercial or industrial site plans should be closely reviewed to ensure the plan is followed.

Recommendations

SAFETY

This plan recommends that the City continue efforts to minimize areas of pedestrian and motorist conflict.

Minimizing the opportunity for conflicts to exist between pedestrians and motorists is an important element of having a safe and accessible pedestrian system. Through proper planning and design the potential for unintentionally creating areas of potential conflict can be minimized. Through the use of wider sidewalks; well marked crosswalk areas; pedestrian refuge areas for crosswalks on wider streets; ADA compliant intersections; accessible pedestrian signals; and similar features the safety of pedestrians can be ensured.

In the planning and design of new roadways, and the re-design of existing roadways, the potential impact on the pedestrian system shall be considered. Safety features for pedestrians must be incorporated into the design of all development projects.

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Legend

Regional Park

* Neighborhood Park

Greenway

Off Street

- Along Street

Public Lands

Dedicated Park

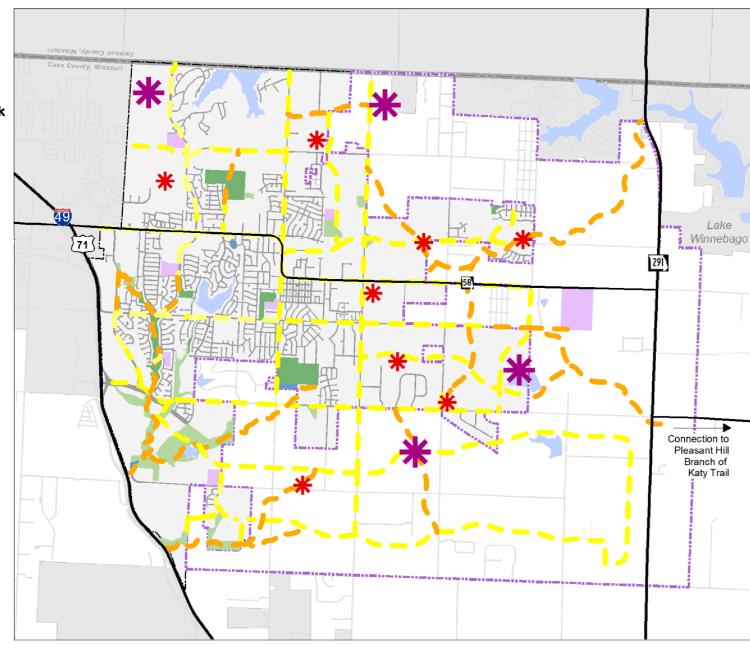
Planned Park

Public

School

Boundaries

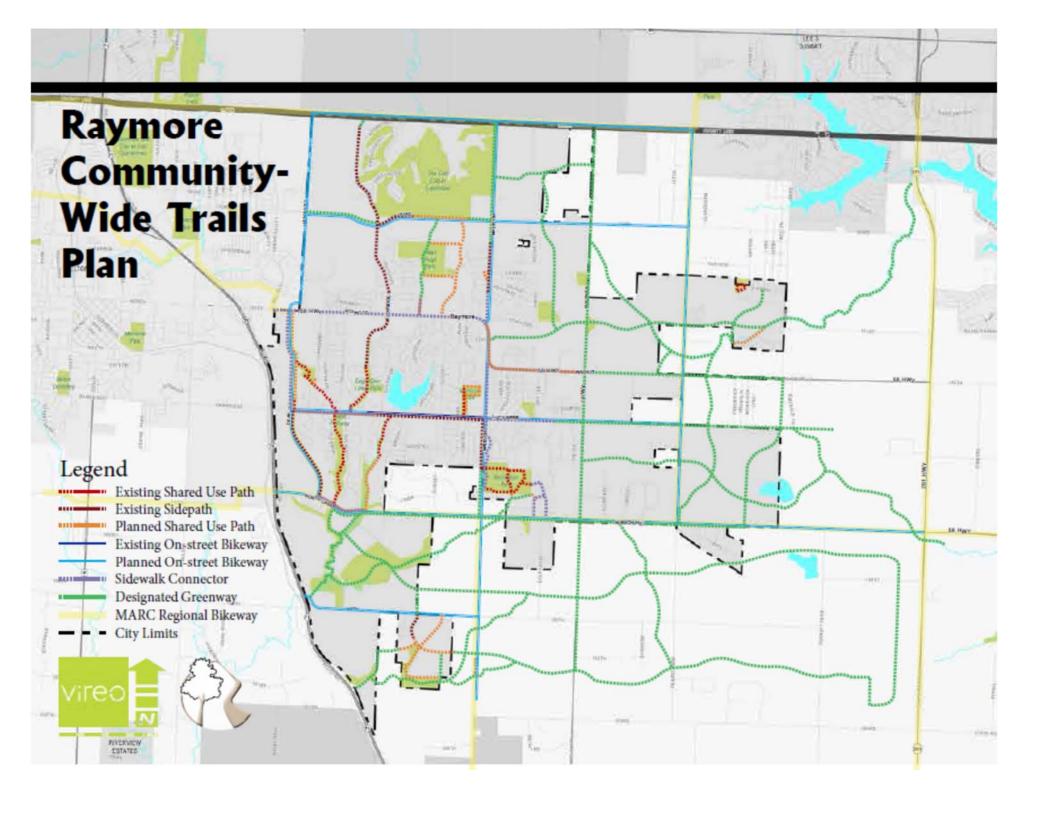
Annexation Area



City of Raymore, Missouri

Open Space & Linkage Plan

Adoption Date: October 5, 2010



Sidewalk Condition Assessment Map