

safe
connected
fun



bicycle & pedestrian plan

maize, ks

2019

Thank you to the hundreds of people who provided input during our community engagement activities. A special thank you to those who dedicated time and effort by participating in Maize in Motion Core Team.

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Purpose

Maize in Motion is a plan for how the City of Maize will enhance walking and bicycling long into the future. Maize in Motion identifies goals related to walking and bicycling. It also identifies strategies, actions, and capital projects to be implemented to achieve the goals.

Maize wants to make walking and bicycling a social norm. This will require physical improvements and changes in attitudes and habits. Parents need to feel comfortable allowing their children to walk and bicycle safely throughout the City. Residents need to have safe and convenient walking and bicycling routes. The routes need to connect people to where they want to go.

The primary focus of this plan is to develop safe and convenient connections to allow children to get to schools and parks and for all residents to enjoy the high quality of life in Maize.

The City should regularly review and update the plan as projects and actions are completed, as needs change, and as the City grows. This will ensure the plan represents the will of the community.



Process

The development of Maize in Motion was guided by a Core Team comprised of residents, stakeholders, and staff. Regular meetings throughout the process provided local context, ideas, and feedback.

Data was gathered to identify the elements of the community that impact walking and bicycling. Data on existing bicycle and walking infrastructure, the natural and built environment, Maize's residents, and local assets were collected and assessed.

A survey was used to obtain community input and get residents involved in the process. The survey results were used to provide local context and identify walking and bicycling characteristics along with defining community needs, demands, and preferences.

Interviews with key stakeholders were held to dig deep into local issues, preferences, context, and the variety of needs. An open house was held to present draft ideas and obtain feedback.

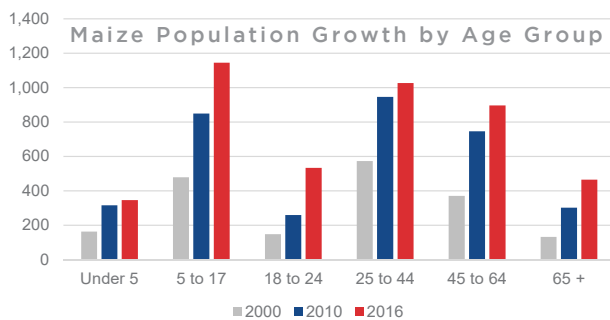
This data-driven and community focused process led to a plan that expresses Maize's needs and desires for bicycle and pedestrian enhancements.



Maize Residents

There are key characteristics of Maize's residents that impact the use of, and demand for bicycle and pedestrian facilities. Trends in the data provide a glimpse at likely future population characteristics, which will impact future walking and bicycling.

Growth - Maize is a growing community. From 2000 to 2016, Maize added over 2,500 new residents. As Maize continues to grow, the new residents will place increasing demand on bicycling and walking infrastructure.



Children - Much of the growth has been in young families with school-aged children. Young parents and school-age children now make up the majority of Maize's population. Over half of Maize's households have individuals under the age of 18. In general, children walk and bicycle more than adults.

Vehicle Access - The vast majority of occupied housing units have access to at least one vehicle, with over 80% having access to more than one vehicle. Most households do not have to rely on walking and bicycling as the only means of transportation. However, walking and bicycling can reduce the need for parents to drive their children to local destinations.

Work Location - Almost 90% of Maize residents work outside of Maize. This provides fewer opportunities for Maize residents to walk and bicycle to work due to the longer trip length. In general, the acceptable trip length for walking trips is about 1/2 mile and about 2 miles for bicycle trips.

Use Characteristics

Community engagement provided insight about local use of bicycle and pedestrian facilities in Maize. Approximately 300 people provided input via an on-line survey or in-person meetings.



About 90% of residents walk at least once a month for exercise and enjoyment.



Over 50% of residents bicycle at least once a month for exercise and enjoyment.



Walking regularly is more prevalent than bicycling for adults and children.



Walking and bicycling for exercise and enjoyment is more common than for transportation.



The most common transportation purpose for walking and bicycling is to travel to schools, parks, and community buildings.



Maize residents see a great need to make walking and bicycling improvements.



Natural Environment

Maize's flat terrain provides easy travel for bicycling and walking. The short winter and generally warm and sunny weather enhances the opportunities for walking and bicycling. However, high winds and severe thunderstorms can make walking and bicycling challenging.

Built Environment

A quality bicycle and pedestrian network connects the community; connecting people to places. The network allows people to walk and bike from their homes to schools, parks, businesses, places of worship, jobs, community services and events.

Walking and bicycling is heavily influenced by the number and variety of destinations within a comfortable walking and bicycling distance from homes and between destinations.

Primary walking and bicycling destinations in Maize are the schools, Maize City Park, City Hall/Recreation Commission, and the post office. There is a high concentration of primary destinations in the northwest portion of Maize. Another high concentration is the Maize South school complex, which lies just outside Maize.

Secondary destinations include the businesses, services, and places of worship. These are generally located along the major streets and at intersections. **MAP 1** shows the location of primary destinations and highlights clusters of primary and secondary destinations



There are two major barriers to walking and bicycling in Maize. The first is the disjointed nature of the existing developments. There are large gaps in development that increase the distance needed to walk or bike between them. The second barrier is the high volume and high speed streets. Crossing these streets to get to destinations creates real and perceived safety concerns.

Future Development

Maize in Motion is a long-term plan that takes into account future development. It is not only important to connect our existing community, we also need to think about how the future connections are made.

The Comprehensive Plan envisions the development of a City Center concept within the Academy Arts District. The City is developing a plan for the Academy Arts District, which supports the development of a walkable, active business district.

The Comprehensive Plan also envisions the development of activity nodes at primary street intersections. These neighborhood and community centers contain commercial, office, mixed-use, and residential land uses. These centers are located at the intersections of 53rd St and 119th St, 53rd St and Maize Rd, 45th St and 119th St, 45th St and Maize Rd, 45th St and Tyler Rd, 37th St and 119th St, and 37th St and Maize Rd.



Bicycle & Pedestrian Infrastructure

There are 13.4 miles of off-street bicycle and pedestrian facilities in Maize, with no on-street facilities. Of this total, 10.6 miles are sidewalks (6 feet wide or less) and 2.8 miles are shared use paths (8 feet wide or more). There are additional facilities on school property and other semi-public property within Maize city limits. **MAP 1** shows the location of the existing sidewalks and shared use paths.

The vast majority of these facilities are in good condition. There are a few point locations that are in poor condition, such as broken or upheaved panels. The exception is the area north of Academy Avenue along Park Street and King Street. Although there are good sections, this area has multiple sections of very poor pavement.

The majority of street crossings have curb ramps, many of which include truncated domes (small bumps) for Americans with Disabilities Act (ADA) compliance. Others have ramps but do not include the domes. ADA compliance was not determined due to very specific data being required, such as cross slope, running slope, landing area, and transition slopes.

Most minor street crossings do not have pavement markings. However, there are a few marked crosswalks along Academy Avenue. There are also marked and signalized crosswalks across arterial and major collector streets at the intersections. There is a mid-block signalized crosswalk on Maize Road between 45th Street and Academy Avenue. The limited pedestrian crossings of arterials and major collectors require walking and bicycling further, making it less convenient to walk or bicycle.



Maize has 13.4 miles of off-street pathways

There are very few amenities along Maize's bicycle and pedestrian routes. There are two benches, both of which are located along Maize Road between Academy Avenue and 53rd Street along the east side of the street.

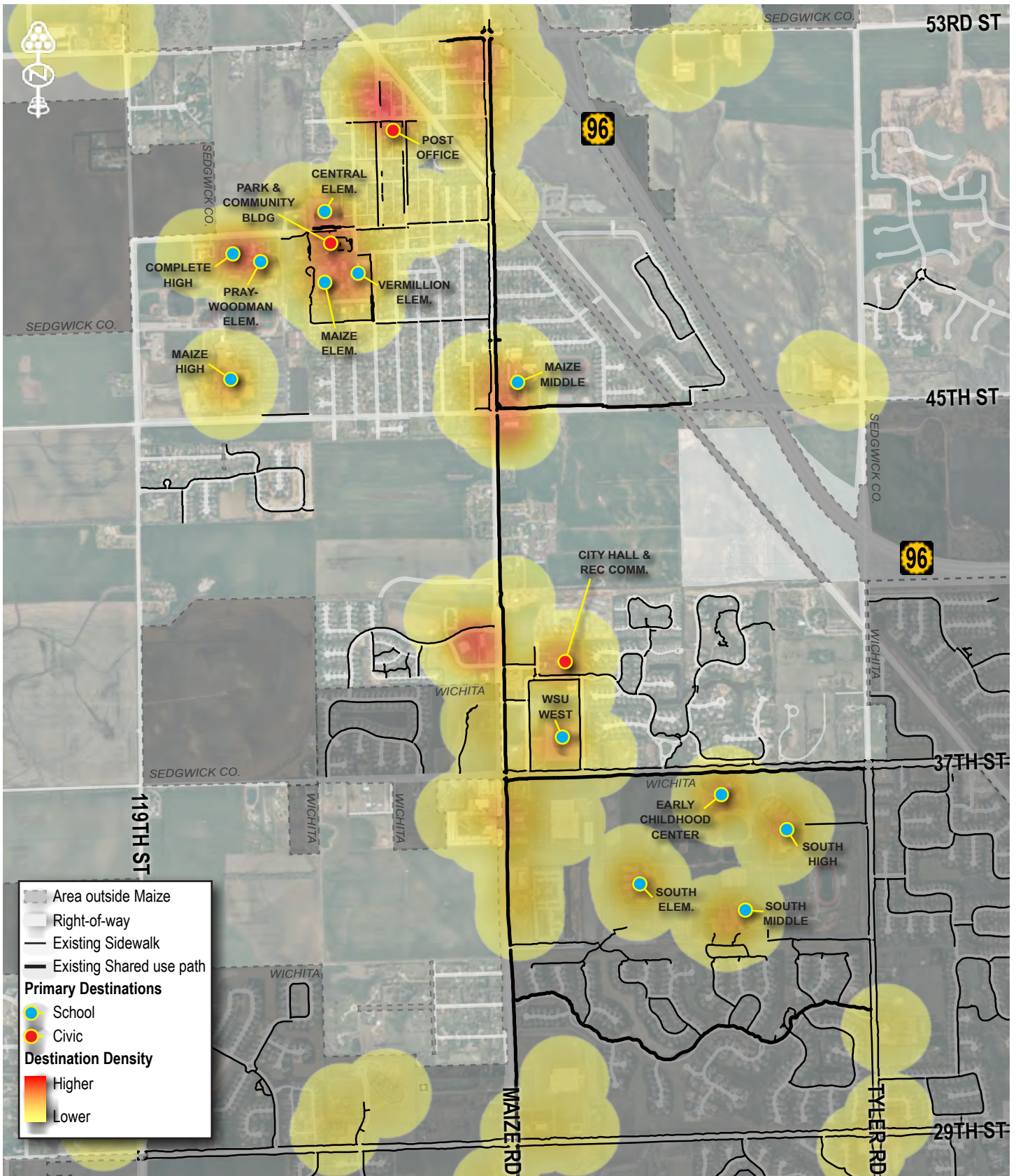
In addition to the off-street sidewalks and shared use paths, Maize's streets and street shoulders are used by bicyclists and pedestrians. Walking and bicycling on low volume and low speed streets is often deemed acceptable.

Regional Connections

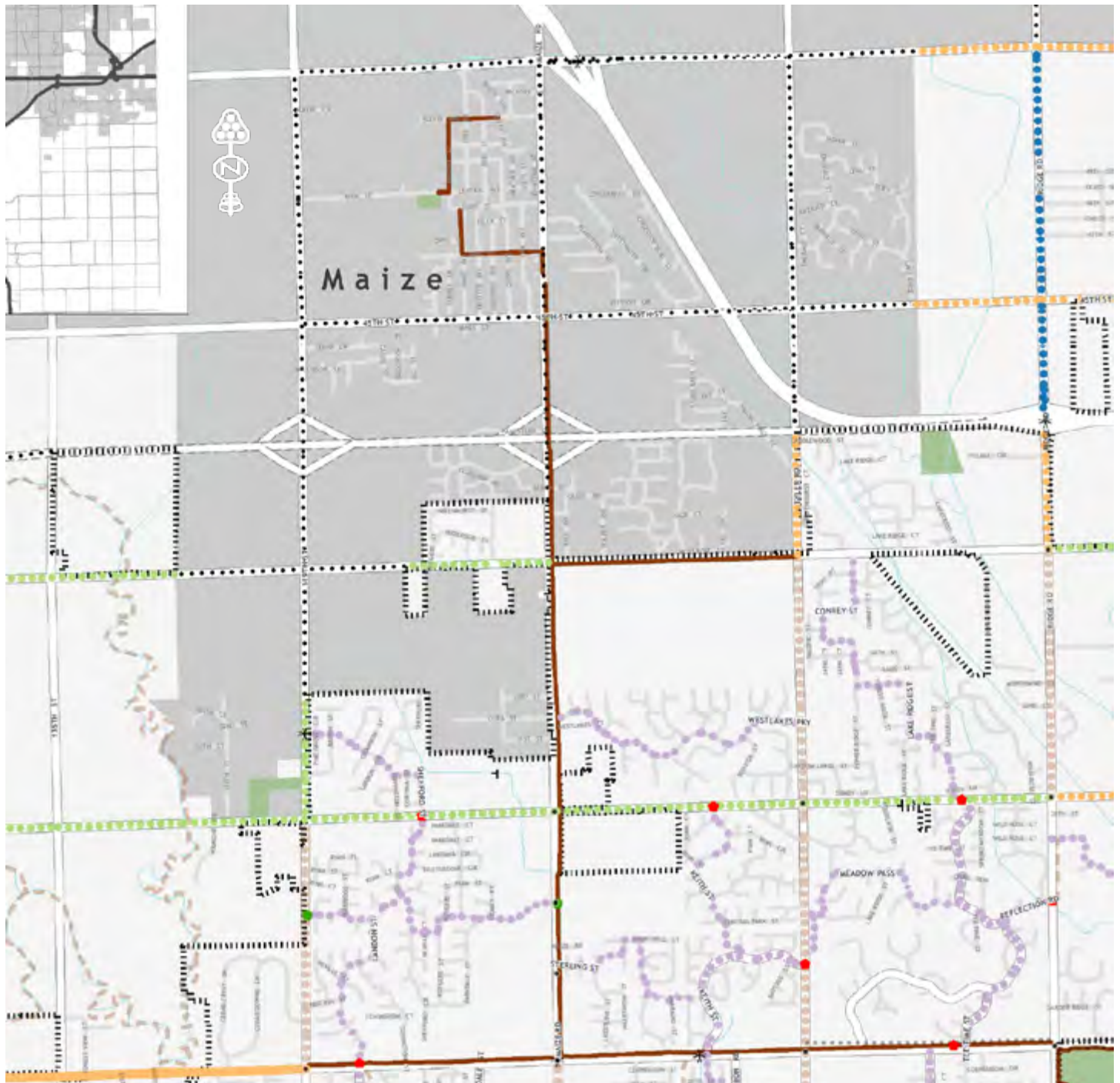
There are existing and planned bicycle facilities that connect Maize to the region. **MAP 2** shows the City of Wichita's planned connections near Maize. Maize will benefit from coordinating improvements to ensure regional connectivity.



Map 1: Existing Conditions



Map 2: Wichita Bicycle Master Plan



Proposed		Existing	
Bicycle Lane and Buffered Bicycle Lane	Planned with Future Development (Bicycle Lane, Side Path, and/or Paved Shoulder)	Bicycle Lane	Ped/Traffic Signal Exists
Shared Lane Marking	Planned Shared Use Path	Paved Shoulder	Wichita City Limits
Paved Shoulder	Planned Side Path	Shared Use Path	Wichita 2030 Urban Growth Area
Bicycle Boulevard	Crossing Improvement/Study Needed	Traffic Signal	Unincorporated County
Further Study Needed	Ped/Traffic Signal Needed		Wichita Transit Transfer Point

* This assumes that Main/Park Street is changed from one to two way.

Overview

Where is it difficult to walk or bike? What destinations are community members trying to reach by bike or on foot? Which area of the community should be improved first? The City, engaged the public and key stakeholders to uncover the answers to these and other questions during the Maize in Motion community engagement process.

The City used a combination of pop-up meetings, stakeholder interviews, a public meeting, and opinion surveys to gather feedback. They also promoted meetings and commenting opportunities on the City website, via social media, through email marketing, and with the help of a Core Team of community members.

Pop-Ups

Pop-up meetings were at held at MOXI Junction, the splash pad, and at National Night Out in City Park during summer 2018. At each one, participants reviewed a detailed map and identified important destinations for walking and/or bicycling. They also used markers, colored dots, and post-it notes to describe needs, issues, and opportunities to improve walking and bicycling around the community. The most common comments involved:

- Concerns about safety, especially for children traveling to school, City Park, the splash pad, and other locations.
- Concerns about the amount of traffic, number of driveways, and lack of signage along Maize Road
- Sidewalks and bike paths are needed along arterial streets.
- Concerns about crossing busy streets.
- Improving the area from 53rd Street on the north to 45th Street on the south and from 119th Street on the west to Maize Road on the east.
- Pedestrian improvements are needed around Field Stone Apartments.

Stakeholder Interviews

Following the pop-ups, the City conducted five stakeholder interviews with various interested residents and USD 266. They were presented community feedback, results from an analysis of the community, and a concept map of potential pedestrian and bicycle improvements. The map showed the location of existing sidewalks and bicycle pathways as well as future projects. It also included the location of key



destinations, such as commercial areas, schools, parks, community buildings, and more. Responses from interviewees centered on the positive aspects of the concept map, project priorities, and additional improvement ideas. They supported the map concept. Specific thoughts on projects included:

- Short-term projects that received great support included 45th Street from Maize Road to 119th Street, Academy Avenue from Maize Road to 119th Street, and a pedestrian crossing of Maize Road at Academy Avenue.
- Medium-term projects that received great support included connections to the Eagles Nest and Hampton Lakes developments.
- The long-term project that received great support was the 119th Street corridor.

Other project ideas involved helping children reach schools safely, installing sidewalks on residential streets in both established and developing neighborhoods, and providing bicycle routes around the City and connecting to Wichita.

Public Meeting

In coordination with the Academy Arts District Master Plan, the City held the Celebrate Maize public open house on September 26, 2018 to discuss both Maize in Motion and the arts district plan. During it, attendees shared their thoughts on the Maize in Motion project concept map and commented on the goals and strategies that could help make it a reality. The feedback gathered during the meeting was very similar to that shared by interviewees during the stakeholder interviews.

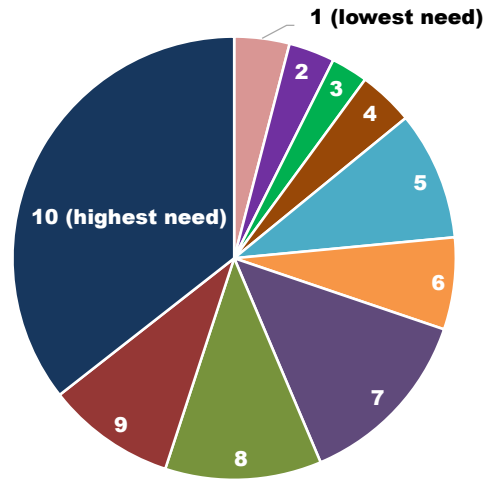
Opinion Surveys

In coordination with the pop-ups, stakeholder interviews, and public meeting, two surveys were utilized to gather public feedback and input. The surveys were available online and copies were available during the meetings, through social media, and with email marketing to the project contact list.

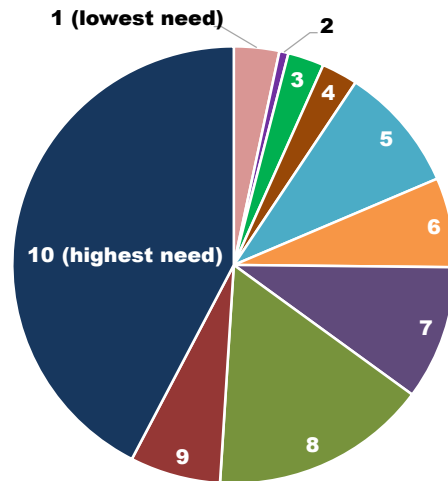
The first survey was available from July 26 through August 19, 2018. A total of 206 people responded to it. The questions inquired about frequency of walking and bicycling, degree of need for pedestrian and bicycle improvements, best places to walk and bicycle, and important accomplishments for walking and bicycling in Maize. General findings are summarized below:

- Respondents walk more than bicycle in Maize.
- 58% bicycle at least once a month and 41% bicycle at least once a week.
- 83% of respondent’s children bicycle at least once a month and 68% bicycle at least once a week.
- 90% walk at least once a month and 79% walk at least once a week.
- 86% of respondent’s children walk at least once a month and 77% walk at least once a week.
- Exercise and enjoyment is the primary purpose for bicycling and walking for adults and children.
- 41% of respondent’s children bicycle to schools, parks, or community buildings at least once a month.
- 47% of respondent’s children walk to schools, parks, or community buildings at least once a month.
- About one third of respondents with children stated that their children walk to school, park, or other community buildings at least once per week.
- The worst place to walk and bicycle is along arterial streets (especially 45th Street), crossing busy streets, near schools due to heavy traffic, and in poorly illuminated areas.
- Most respondents believe that there is a moderate to high need to make bicycle and walking improvements in Maize.
- Respondents want:
 - ~ More off-street bicycle paths.
 - ~ Sidewalk and bicycle connections to schools, parks, community buildings, and community events.
 - ~ Improved crossings of busy streets.
 - ~ Sidewalk connections between neighborhoods.
 - ~ Pathway and crosswalk lighting.
- Respondents want a safer, more connected bicycling and walking network.

On a scale of 1 (lowest) to 10 (highest), how great is the need for **bicycle** improvements in Maize?



On a scale of 1 (lowest) to 10 (highest), how great is the need for **walking** improvements in Maize?



A second opinion survey was available from September 17 through October 12, 2018. Questions revolved around goals three primary goals:

- Connectivity
- Safety and accessibility
- Quality and education.

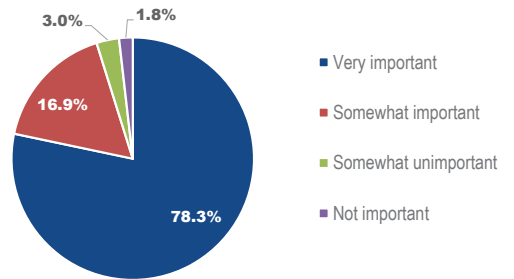
The survey also asked about improvement locations and funding. A total of 168 people responded to it. Although all three goals were important to the community, safety and accessibility received the most support with 97.6% stating that it was somewhat to very important.

The survey also asked for input on the proposed future network and priority improvements. Below is a summary of the common themes provided by respondents:

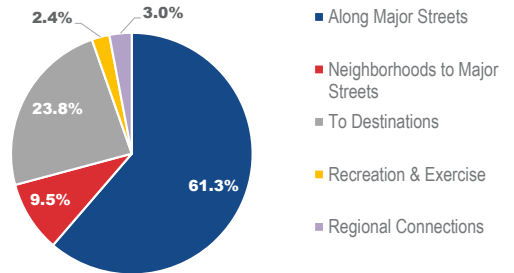
- Support for developing bicycling and pedestrian facilities along arterial and major collector streets including Maize Road, 119th Street, Tyler Road, 53rd Street, 45th Street, 37th Street, and 29th Street.
- Developing a bicycle and pedestrian network that focuses on safety for school-aged children.
- Providing unique and quality pathways that also include benches, lighting, parklets, waste receptacles, dog waste stations, and other amenities.



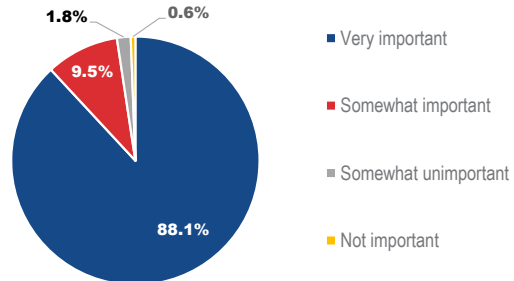
How important is it to expand and enhance Maize's bicycle and pedestrian network, providing connections within the City and to the regional network?



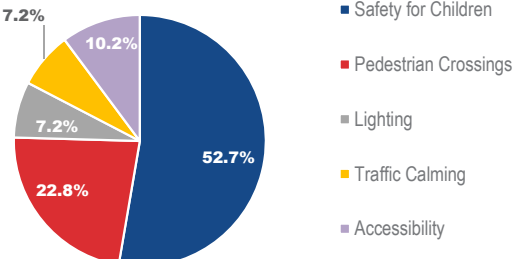
If the City's bicycle and pedestrian network were enhanced, which of the following strategies would be most important to achieve?



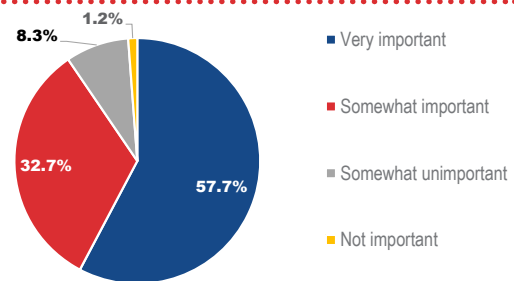
How important is it to enhance safety and accessibility of the bicycle and pedestrian network?



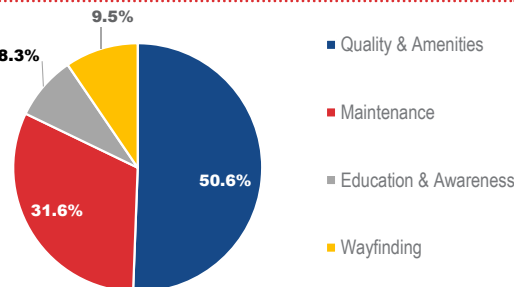
If the City were to enhance safety and accessibility of the bicycle and pedestrian network, which of the following strategies would be the most important to achieve?



How important is it to enhance the quality and promote educated use of the bicycle and pedestrian network?



If the quality of the City's bicycle and pedestrian network were promoted, along with educated use of the system, which of the following strategies would be the most important to achieve?



Guiding Concepts

The Maize Comprehensive Plan identifies the community's long-term vision, goals, principles, and policies. Many of the concepts expressed are related to bicycling and walking. These concepts include:

- High quality of life.
- Family-friendly community.
- Expanded bicycle and pedestrian network.
 - ~ City-wide connections.
 - ~ Connecting to new developments and growth areas.
 - ~ Connecting parks.
 - ~ Connecting neighborhoods to schools.
 - ~ Connecting to destinations.
 - ~ Connecting people to places, events, and activities.
 - ~ Connecting for future transit service.
- Providing first-class recreational opportunities.
- Safe, accessible, and inviting bicycle and pedestrian network.
- Quality infrastructure that enhances the character of the community and conveys Maize's uniqueness.
- Academy Arts District is the premier pedestrian-oriented corridor.
- Gateways and wayfinding for destinations and amenities.



Goals & Strategies

Goals are broad statements that define the desired future. Strategies describe how Maize will achieve the goal. The Maize in Motion goals and strategies are:

1. Expand and enhance Maize's bicycle and pedestrian network to provide efficient and effective connections within the City and to the regional network.
 - a. Develop bicycling and pedestrian facilities along arterial and major collector streets including Maize Road, 119th Street, Tyler Road, 53rd Street, 45th Street, 37th Street, and 29th Street.
 - b. Develop bicycle and pedestrian connections from neighborhoods to arterial and major collector streets.
 - c. Develop bicycle and pedestrian connections to schools, parks, post office, event spaces, shopping, entertainment, restaurants, and other community destinations.
 - d. Develop high-quality pedestrian facilities and related amenities within the Academy Arts District.
 - e. Provide quality recreational and exercise options through the development of connected bicycle and pedestrian facilities.
 - f. Develop bicycle and pedestrian facilities that enhance Maize's integration into the regional network.
2. Provide and enhance a safe and accessible bicycle and pedestrian network.
 - a. Develop a bicycle and pedestrian network that focuses on safety for school-aged children.
 - b. Provide safe and convenient pedestrian crossings of arterial and major collector streets, railroads, and other barriers.
 - c. Ensure adequate lighting of the bicycle and pedestrian network including street crossings.
 - d. Reduce the negative impacts of vehicular traffic, including school bus traffic, on bicycling and walking.
 - e. Provide bicycle and pedestrian facilities that are accessible for all users including those with disabilities.
3. Promote the use of the bicycle and pedestrian network.
 - a. Provide unique and quality pathways, amenities, and support facilities.
 - b. Maintain high quality, clean, and aesthetically pleasing bicycle and pedestrian facilities.
 - c. Support programs that increase awareness and participation in bicycling and walking.
 - d. Provide bicycle and pedestrian wayfinding and branding to ease navigation and promote bicycling and walking.

Not every street needs separate facilities for bicyclists and pedestrians. However, each street should safely and effectively accommodate bicyclists and pedestrians to the degree needed.

When determining how to accommodate drivers, bicyclists, and pedestrians, consider the safety of all users. Consider the likely users of the street. Certain segments of the population will desire different facilities. Children may not be comfortable walking and bicycling in the street (parents may not feel that it is safe either). Consider the experience of the drivers. Consider those with vision impairments or physical disabilities. Also consider the pavement condition to ensure that it will work for the users.

Shared Streets

A shared street is where motor vehicles, bicyclists, and pedestrians all share the same space; there are no sidewalks, shared use paths, or dedicated on-street bicycle facilities. An example of this is Jones Street.

When to consider a shared street

- Very low pedestrian and bicycle volumes
- Vehicular speeds are typically 25mph or less
- Vehicular volumes are typically 300 cars per day or less
- Primarily residential uses along the street
- Residential cul-de-sacs or dead ends
- Pavement is smooth and in good condition

Sidewalks & Shared Use Paths

Sidewalks are a good way to accommodate pedestrians. Sidewalks are preferred to be 6 feet wide to comfortably accommodate two people walking side-by-side. At a minimum, sidewalks should be 5 feet wide and meet all Americans with Disabilities Act (ADA) requirements.

Although not ideal, sidewalks also can accommodate bicyclists. Children often ride on sidewalks rather than in the street. The issue is that sidewalks are not wide enough for bicyclists to comfortably pass pedestrians or other bicyclists. Typical cross sections for arterial streets are provided later in this section to illustrate the desired pedestrian and bicycle accommodations for arterial streets.

Shared use paths are wide enough to accommodate pedestrians and bicyclists. Shared use paths are preferred to be at least 10 feet wide. In constrained circumstances, 8 feet wide is acceptable. Shared use paths must also meet all ADA requirements.

Sidewalks and shared use paths should be buffered from an adjacent street. The buffer creates a more comfortable environments for walking and bicycling. The buffer should be at least 5 feet wide. When space is constrained and buffers cannot be provided, consider vertical dividers to separate the pathway from the street. Dividers should be more than a standard curb. They can include bollards, large stones, trees, railings, or anything else that will make the pedestrian or bicyclist feel safer and more comfortable.



When to consider a sidewalk on one side of the street

- Low to moderate pedestrian volumes
- Vehicle speeds are typically higher than 25mph
- Vehicular volumes are typically higher than 300 cars per day
- Block lengths are typically shorter than 600 feet long
- Pedestrians can safely cross the street to get to the sidewalk on the opposite side of the street
- There is development on only one side of the street
- Local streets
- Primarily residential uses along the street

When to consider a sidewalk on each side of the street

- Moderate to high pedestrian volumes
- Vehicle speeds are typically higher than 25mph
- Vehicular volumes are typically higher than 500 cars per day
- Block lengths are over 600 feet long
- There are long distances between safe street crossings
- Pedestrians cannot safely cross the street to get to the sidewalk on the opposite side of the street
- There is development on both sides of the street
- Collector and arterial streets
- Primarily commercial uses or mixed use developments along the street

When to consider a shared use path rather than a sidewalk

- Moderate to high pedestrian and/or bicycle volumes
- High volume of children bicycling
- Bicycling in the street is not preferred
- Collector and arterial streets



Buffered On-Street Bicycle Lanes

If the street is not a shared street, Maize prefers shared use paths for bicyclists rather than on-street bicycle lanes. If on-street bicycle lanes are to be implemented, physical buffers should be provided between the bicycle lane and vehicular travel lanes. Bicycle lanes should be 4 to 5 feet in width. If adjacent to a curb, the bicycle lane should extend at least 3 feet from the longitudinal joint. If bicycle lanes are too wide, vehicles are more likely to encroach on the bicycle lane. The buffer between the bicycle and adjacent travel lane should be at least 2 feet wide and include vertical dividers.

When to consider an on-street bicycle lane

- Moderate to high bicycle volumes
- Excess space between the curbs (or edges of pavement) for vehicles and on-street parking
- Insufficient space between the curb and right-of-way line to install a shared use path
- Moving the curb is not desirable to create space for a shared use path
- Driveways create unsafe conditions for a shared use path

Enhanced Crosswalks

Enhanced crosswalks include features beyond the typical pavement markings. Typical elements of enhanced crosswalks include traffic signals with pedestrian push buttons, pedestrian countdown timers, pedestrian hybrid beacons, and refuge islands. An engineer should assess the appropriate features to include at each enhanced crosswalk.

One of the major barriers to bicycling and walking in Maize are the busy arterial and collector streets. Along the arterial streets, there are often long distances between intersections where pedestrians can safely cross the street. Each signalized intersection should include crosswalks and pedestrian signals. In general, there should be one to two pedestrian crossings between the mile-line street intersections. Prime locations for these crossings are typically signalized intersections.

Median refuge islands can greatly enhance pedestrian safety when crossing streets due to pedestrians only needing to cross one direction of travel at a time. Refuge islands should be considered for all pedestrian crossings, especially for mid-block crossings and arterial street crossings.



Wayfinding

A bicycle and pedestrian wayfinding system guides people to destinations and helps promote the use of the facilities.

Naming and branding pedestrian and bicycle routes can enhance the network. The majority of the existing and future routes follow major streets. People will likely associate the bicycle and pedestrian route with the street that it follows. Consideration should be given to using the street naming convention for the bicycle and pedestrian routes.

Directing people to destinations requires the careful selection of destinations. Generally, wayfinding signs do not direct to individual businesses. They typically direct to civic destinations as well as named districts. Criteria for selecting destinations includes the following: existing and future destinations:

- Public schools
- Public parks
- City / community service buildings
- Named business districts or other activity centers

When determining the destination text to use on the sign, it is important to use a clear and concise naming convention. Using general names such as Park rather than Maize City Park can make the sign more readable. Consideration should be given to including distance and/or travel time to destinations and major streets from each sign.

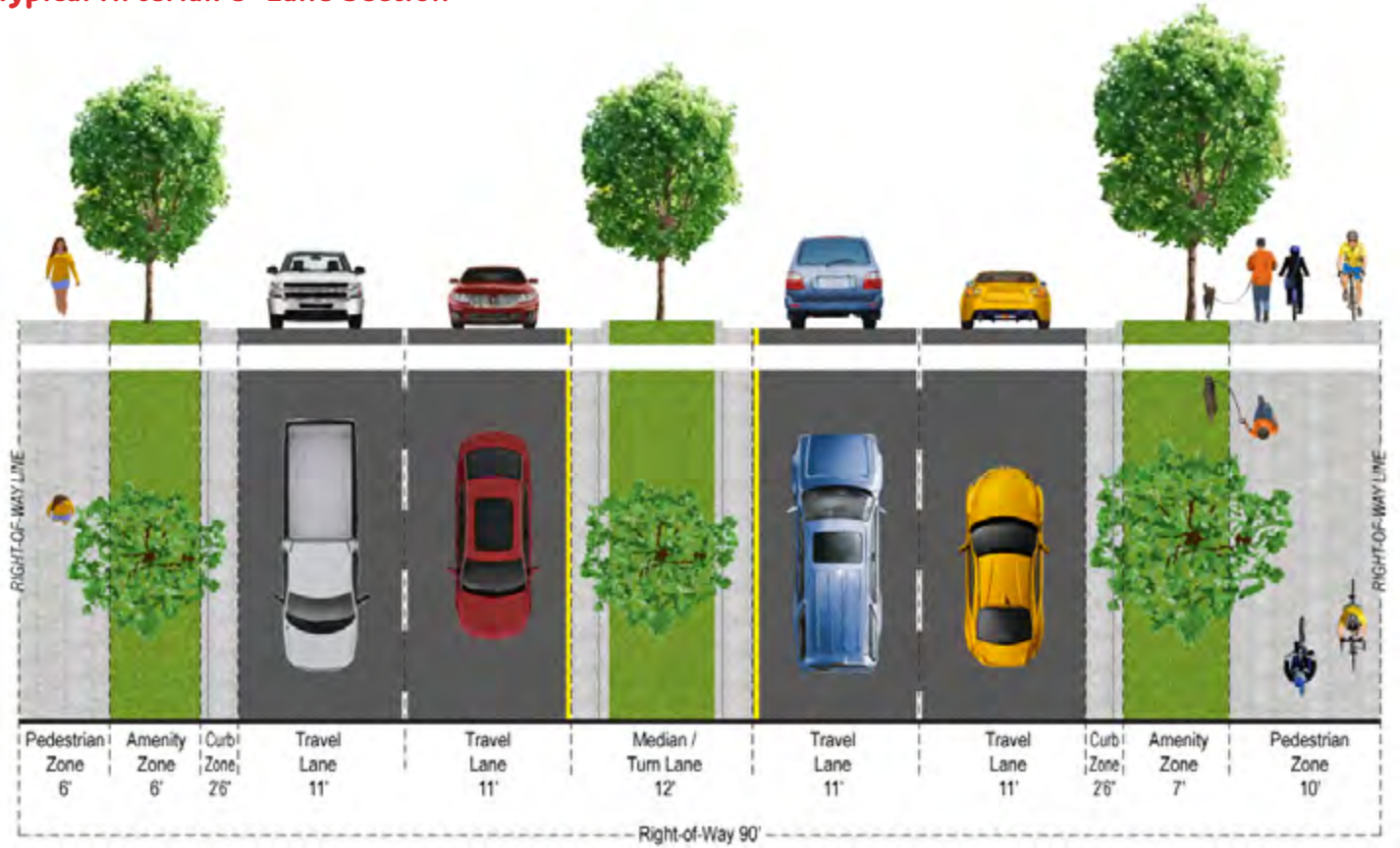
Wayfinding signs should be located at intersections of routes and at decision points along a route. They should be placed where they will be clearly visible by the intended user.

Other Considerations

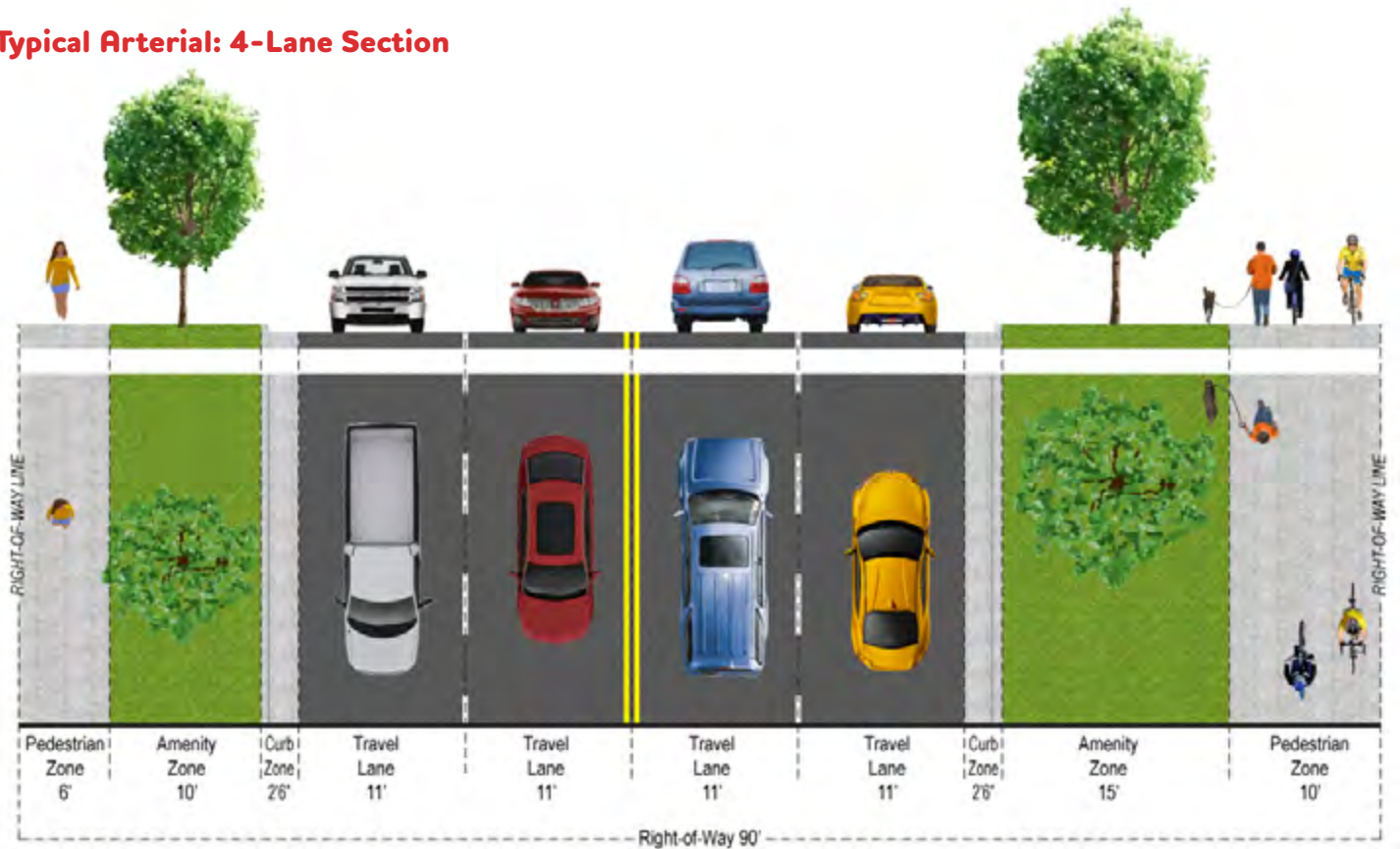
Maize desires to be unique. Consideration should be given to opportunities for unique designs, treatments, and amenities. Some examples include glow-in-the-dark pavement treatment, colored pavement, educational elements, fitness equipment, gathering/seating areas, and parklets.

Design Guidance

Typical Arterial: 5-Lane Section



Typical Arterial: 4-Lane Section



Priority City Action Steps

The priority actions for the City focus on constructing needed connections, making safety improvements, and developing guidance for the implementation of walking and bicycling enhancements. The priority action steps are as follows:

- Program local funds for, and construct, short-term capital projects identified in Maize in Motion.
- Seek outside funding sources to supplement local funds for short-term capital projects.
- Include pedestrian support facilities along major pedestrian routes such as seating, dog waste stations, trash receptacles, lighting, shade, exercise equipment/stations, educational components, and leisure areas.
- Create promotional campaigns and/or public events as projects are completed to celebrate the project completion to promote use of the facility.
- Update the subdivision regulations related to bicycle and pedestrian accommodations to be consistent with Maize in Motion.
- Follow the guidance of Maize in Motion and the subdivision regulations for the provision of bicycle and pedestrian accommodations.
- Coordinate with USD 266, the Maize Recreation Commission, Maize Park and Tree Board, local businesses, and other organizations to fund the construction and maintenance of bicycle and pedestrian pathways, amenities, and support infrastructure.
- Coordinate with USD 266 to identify strategies and projects to mitigate traffic safety issues caused by busing, drop-offs, and pick ups.
- Develop and implement an Americans with Disabilities Act (ADA) pedestrian accessibility program that includes installing accessible curb ramps in locations that do not meet current requirements.
- Develop an arterial street access management policy that focuses on minimizing negative impacts on bicyclists and pedestrians at business driveways.
- Develop a pathway maintenance program that identifies responsible parties for maintenance, issue reporting procedures, enforcement, and funding mechanisms.
- Assign City staff responsible for managing the implementation of Maize in Motion.
- Participate in the Wichita Area Metropolitan Planning Organization's bicycle and pedestrian count program.

Other City Action Steps

Once more facilities are available, other City actions can be implemented to further enhance walking and bicycling. These also include action steps that would be necessitated by future development or when the need arises. The other action steps are as follows:

- Program local funding for, and construct, mid- and long-term capital projects identified in Maize in Motion.
- Seek outside funding sources to supplement local funds for mid- and long-term capital projects.
- Require the provision of pedestrian and bicycle connections between adjacent neighborhoods and from neighborhoods to the bicycle and pedestrian network during the land development process.
- When appropriate and feasible, incorporate Maize in Motion projects with other City projects, such as street and intersection improvement projects.
- As development and redevelopment occurs, require the construction of bicycle and pedestrian projects, or portions thereof, consistent with the Maize in Motion Plan, or require fee in lieu of construction.
- Provide safe and secure bicycle parking within public right-of-way in areas that have a high density of destinations for bicyclists. Consider requiring bicycle parking provisions for major destinations in the subdivision regulations.
- Include bicycle support facilities along major bicycle routes such as bicycle fix-it stations, rest areas, and potable water.
- Reduce motor vehicle travel speeds and incorporate traffic calming measures on streets along bicycle and pedestrian routes, especially those near schools.
- Coordinate with the City of Wichita and Sedgwick County to develop regional connections and integrate Maize's bicycle and pedestrian network.
- Develop a city-wide parks master plan to enhance recreational opportunities with connections to, and circulation through parks. This should include assessing opportunities to include parklets along pathways to increase the number of parks and increase the use of the pathway network.
- Support mixed use developments and small scale commercial within walking distance of residential areas to increase walkability.
- Coordinate with the Park and Tree Board to identify opportunities to enhance pathway user experience such as tree plantings.
- Coordinate with USD 266 on future school siting to identify pedestrian and bicycle connections and options to mitigate safety issues.
- Develop and implement a bicycle and pedestrian wayfinding plan.

- Incorporate branding into the design of bicycling and walking facilities and support infrastructure.
- Promote bicycling and walking to community events and include such into marketing materials.
- Develop materials that promote Maize as a walking- and bicycling-friendly City. Distribute City promotional materials to tourism, real estate, and other organizations that attract businesses, residents, and visitors.
- Develop and regularly update a Maize walking and bicycling map and make it available in print and on-line.
- Develop a mobile application for walking and bicycling in Maize.
- Develop safety programs to educate youth on safe walking and bicycling habits.
- Work with USD 266 to create, enhance, and promote walking school bus programs, walk/bike to school day, and other programs to instill safe habits and promote walking and bicycling to school.
- Coordinate with the Maize Recreation Commission to develop programs that utilize the pathways such as events and exercise programs.
- Encourage employers to provide incentives and accommodations to employees who walk or bicycle to work.
- Encourage creation of, and participation in bicycling and walking clubs.
- Organize regular community events intended to increase walking and bicycling.
- Support walking, running, and bicycling races and charity events.
- Coordinate with event organizers to develop traffic circulation plans.

Non-City Action Steps

Schools

The City encourages USD 266 and individual schools to coordinate with the City to develop bicycle and pedestrian connections to school property as well

as drop-off and pick-up circulation including busing, and future school siting. Maize encourages USD 266 to consider funding or joint-funding projects that enhance walking and bicycling connections and safety.

Recreation Commission

The City encourages the Maize Recreation Commission to develop programs and activities that utilize the pathway network. This could include walking and bicycling clubs, exercise or activity programs, and social activities. Maize encourages the Recreation Commission to consider funding or joint-funding projects that provide recreational opportunities for Maize residents.

Developers

The City encourages property developers to support the development of the bicycle and pedestrian network. There is a local desire to enhance quality of life, increase walkability, and provide bicycle and pedestrian connections throughout the community. Developers are encouraged (and may be required) to construct and/or fund the Maize in Motion projects related to the development of their property.

Businesses

The City encourages local businesses to consider partnering with the City to develop projects and/or sponsor the maintenance of pathway routes. Businesses are encouraged to minimize negative impacts of vehicular business traffic on pedestrians and bicyclists.

Citizens

Citizens are encouraged to support the expansion of, and enhancements to, the bicycle and pedestrian network. They are encouraged to take advantage of the opportunities provided by the City to walk and bicycle. The City encourages residents to celebrate the quality of life enhancements provided through this plan and make it a social norm to walk and bicycle throughout Maize.



1/2 of pedestrians killed in traffic crashes occur between 6pm and midnight



Network Improvement Plan



The Network Improvement Plan (NIP) is intended to be used by the City to program bicycling and walking infrastructure improvements. The complete future bicycle and pedestrian network is illustrated in **MAP 3**.

Projects have been grouped into three categories based upon priority; short-, mid-, and long-term. Short-term projects are immediate needs and have been identified as the highest priority through community engagement. Mid-term projects are currently needed or needed with development that is currently underway. They are community priorities but are not as high of a priority as the short-term projects.

The long-term network identifies future project needs based upon likely development and regional connections. The long-term network has not been broken into specific projects. The long-term projects should be broken out from the long-term network and implemented as developments occur to connect them to the City's bicycle and pedestrian network.

Planning level construction cost estimates are provided for each project. These estimates are very general in nature and do not include design, major grading, drainage improvements, or other elements that cannot be accounted for without careful examination of existing site conditions or developing design concepts.

All pathways are assumed to be constructed of concrete. All street approaches and curbed driveways were assumed to include curb ramps. Additional truncated domes are assumed at driveway approaches with moderate to high traffic volumes.

Short-Term Projects

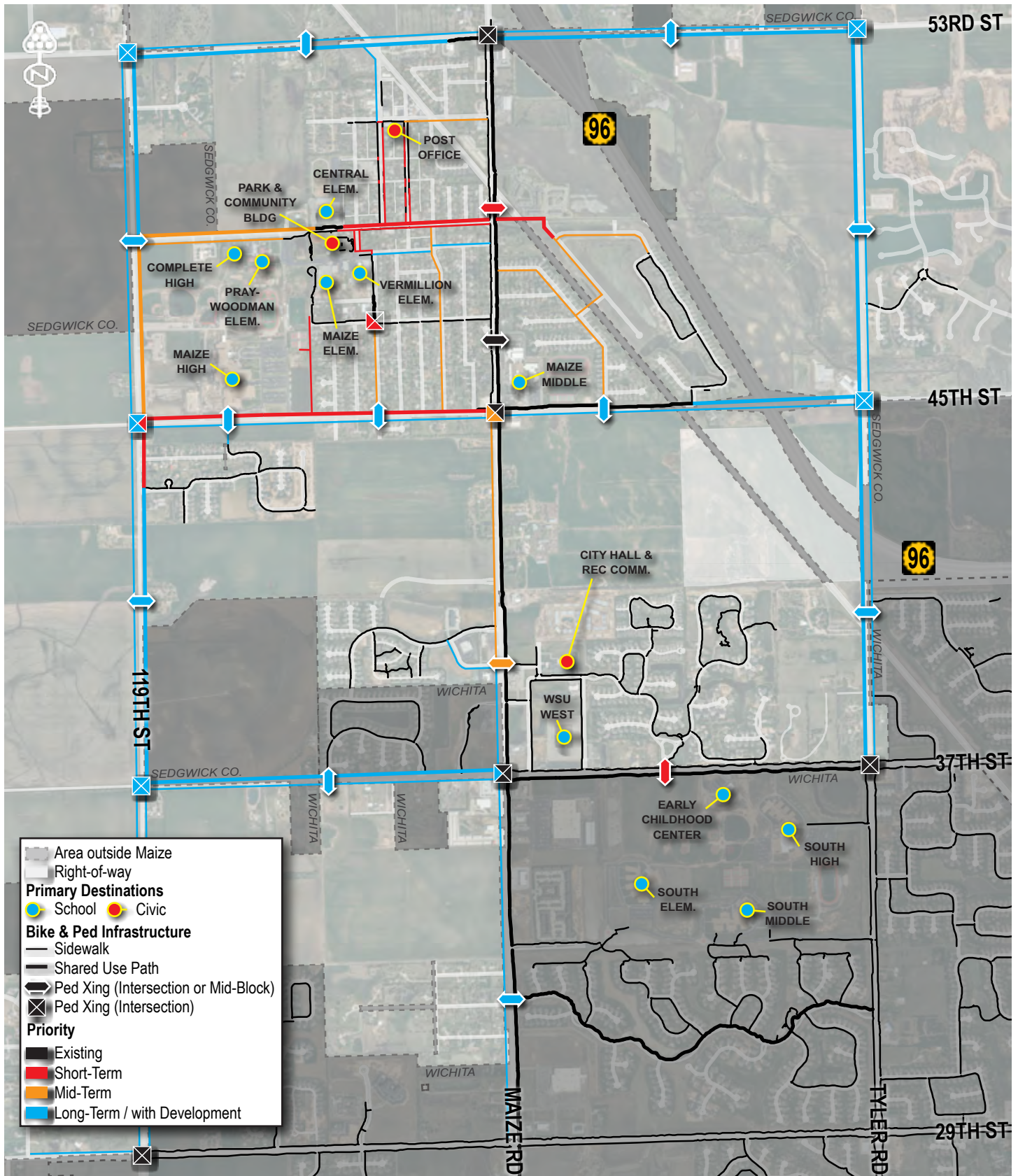
ID#	Name	Description	Cost Estimate
1A	45th St to Maize High	Shared use path along north side of 45th St from Maize Rd to Maize High	\$173,000
1B	Maize High to Wilkinson St	Shared use path along north side of 45th St from Maize High to 119th St & along east side of 119th St from 45th St to Wilkinson St	\$140,000
1C	Irma St to 45th St	Shared use path from west end of Irma St to 45th St and connecting to Maize High	\$74,000
1D	East Academy Ave	Shared use path along north side & sidewalk along south side of Academy Ave from Maize Rd to City Park	\$154,000
1E	Khedive St & Jones St	Sidewalk along both sides of Khedive St from Academy Ave to Jones St & along the north side of Jones St from Khedive St to James Ave	\$29,000
1F	Maize Rd Crossing near Academy Ave	Enhanced pedestrian crossing of Maize Rd near Academy Ave	\$75,000 to \$100,000
1G	Drainageway Path	Shared use path along drainageway from Maize Rd to Sweetwater Rd	\$66,000
1H	Park Ave & King St	Sidewalk along both sides of Park Ave & King St from Academy Ave to Albert St	\$83,000
1I	37th St Crossing near Watercress Ln	Enhanced pedestrian crossing of 37th St near Watercress Ln	\$60,000 to \$100,000
1J	Irma St & James Ave Intersection	Enhanced pedestrian crossings at the intersection of Irma St & James Ave	\$500 +

Mid-Term Projects

ID#	Name	Description	Cost Estimate
2A	Maize Rd to Ranch Rd	Sidewalk along the west side of Maize Rd from 45th St to Ranch Rd	\$112,000
2B	West Academy Ave & 119th St to 45th St	Shared use path along north side & sidewalk along south side of Academy Ave from City Park to 119th St & shared use path along east side of 119th St from Academy Ave to 45th St	\$334,000
2C	James Ave	Sidewalk along the west side of James Ave from Irma St to 45th St	\$41,000
2D	Queen Ave	Sidewalk along the west side of Queen Ave from Academy Ave to 45th St	\$87,000
2E	Albert St	Sidewalk along the south side of Albert St from King St to Maize Rd	\$43,000
2F	Plantation Rd	Sidewalk along the south/west side of Plantation Rd from Maize Rd to 45th St	\$95,000
2G	Longbranch Dr, Sweetwater Rd, & High Plains Cir	Sidewalk along the south side of Longbranch Dr, east side of Sweetwater Rd, and north side of High Plains Cir from Horseshoe Bend St to Plantation Rd	\$95,000

The projects within each priority category are not in priority order.

Map 3: Future Bicycle & Pedestrian Network



Funding bicycle and pedestrian enhancements will require local support. Although it would be nice to receive outside funding through grants or federal programs, local municipalities are typically required to fund a portion of the project. These grants and funding programs allow the City get more bang for their buck. They should not be relied upon as the sole funding strategy.

The City can allocate funds for capital projects or programs through the City's budget. Maize currently funds sidewalk installations through the City's existing sidewalk program. The current annual allocation is \$100,000 for maintenance and capital sidewalk projects. At this funding rate, it would take about 9 years to fund the short-term projects and an additional 8 years to fund the mid-term projects. The City should consider allocating more funds to this or a similar program to increase the rate of bicycle and pedestrian network expansion.

All project costs estimates were provided in 2019 dollars. For programming purposes, it is important to consider the impact of inflation. The standard inflation rate used is 4% per year. Below is the formula for calculating inflation using 4% per year.

$$FC = CC \times (1 + IR)^{(FY-EY)}$$

FC = Future Cost, CC = 2019 Cost, IR = Inflation Rate, FY = Future Year, and EY = Estimate Year (2019)

Example: 2019 project cost estimate is \$100,000 and program year is 2024.

$$FC = \$100,000 \times (1 + 0.04)^{(2024-2019)}$$

$$FC = \$100,000 \times 1.04^5$$

$$FC = \$116,985.86$$

The City should enforce the subdivision regulations and require the provision of sidewalks and shared use paths as properties develop.

The City should look at innovative ways of funding the capital project, maintenance, and programs. The City should seek out partnerships with businesses and organizations. There could be opportunities for local businesses or organizations to sponsor specific projects or programs.

WAMPO Funding

The Wichita Area Metropolitan Planning Organization (WAMPO) administers federal transportation funds for the Wichita area, which includes Maize. There are multiple federal funding programs that could fund the construction of bicycle and pedestrian improvements in Maize. WAMPO is sub-allocated approximately \$12 million per year to fund projects. The Transportation Policy Body ultimately decides which projects receive funding.

The first step in securing funds is to get specific projects included in WAMPO's long-range transportation plan. WAMPO is currently developing their next long-range plan. Maize should consider submitting projects for inclusion into WAMPO's long-range plan. This is a competitive process where all jurisdictions within the WAMPO region submit projects to receive funds. Getting a project into the long-range plan does not guarantee the project will receive federal funding assistance.

Once in the long-range plan, Maize can then submit the project for inclusion in WAMPO's Transportation Improvement Program (TIP). The TIP is similar to a capital improvement program. It is a 4-year program that identifies specific projects to receive funds, the year for which the project is programmed, and the federal funding source and amount for the project. This is another competitive process to secure funding for a project. When WAMPO initiates a call for projects, Maize should consider submitting projects that are in the long-range plan for inclusion in the TIP.

The federal funds administered through WAMPO typically require a minimum 20% local match. However, WAMPO typically prefers a larger local match.

Typical eligible project-related activities are limited to construction and construction engineering. Design, right-of-way acquisition, and utility relocation are typically not eligible for WAMPO funding.

Highway Safety Improvement Program

Administered through KDOT, the HSIP is intended for safety improvements on public roads that are consistent with the Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature. The minimum local match requirement is 10%. This is a very competitive statewide program. Contact the KDOT Bureau of Transportation Safety and Technology to request funding.

Transportation Engineering Assistance Program

Administered through KDOT, the TEAP is available to cities for safety-related activities such as assessing traffic operational issues and traffic engineering problems. Applications can be found at <https://www.ksdot.org/bureaus/burlocalproj/default.asp>

Maize desires unique amenities for the pathway network and to increase bicycling and walking. Maize also has identified a lack of parkland within the City. Parklets are one way to address all of these issues. Parklets can provide additional recreation and leisure space without the need to purchase land for parks.

A parklet is an extension of the pathway that provides additional space for amenities. In essence, they are small parks along pathways. They provide opportunities for activities, gathering space, leisure, and recreation. They can be designed in a variety of ways and either integrated into the pathway or next to it.

When placed near schools, they are often used by children. Utilizing the creativity of school children by having them help design a parklet or specific elements is a great way to create ownership and pride for the parklet and reduce vandalism.

Parklets often include many different elements based upon the desired activities, amenities, and the amount of space available. Design elements can include:

- Seating and tables
- Table games
- Shade structures
- Trees & landscaping
- Trash receptacles
- Seatwalls
- Bicycle parking
- Art
- Picnic areas
- Lighting

The following images show a parklet example. The location of this example is on the north side of 45th Street at the east end of the Maize High School property. The example shown would range between \$100,000 and \$225,000 depending on materials and components. However, they can be designed to be much less expensive. A nice small rest area can be around \$10,000.





Parklet Example





Description - This project includes a 10-foot wide shared use path along the north side of 45th Street North from Maize Road to the primary Maize High School entrance driveway.

The path should be located as close to property line as possible to maximize the buffer between the shared use path and the street. This may also allow the shared use path to remain if and when 45th Street is reconstructed.

Cost - The planning level cost estimate for the 45th St to Maize High project is \$173,000.

Other elements for consideration include:

- Painted crosswalks: \$5,600 (assumes 7 crosswalks on the local streets at a cost of \$800 each)
- Lighting: \$112,000 (assumes 28 light structures spaced 120 feet apart, at a cost of \$4,000 each)
- Benches: \$4,500 (assumes 3 standard benches at a cost of \$1,500 each)
- Trash receptacles: \$3,600 (assumes 3 receptacles at a cost of \$1,200 each)
- Bicycle parking: \$1,000 (assumes 2 bicycle racks with 3 stalls each at a cost of \$500 each)
- Dog waste stations: \$750 (assumes 3 stations at a cost of \$250 each)
- Trees: \$10,000 (assumes 20 additional tree plantings at \$500 each)
- Parklet: See "Parklet Example" section

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

Children often walk and bicycle along this route to get to school, with 7 schools in close proximity to the project. However, there are no off-street bicycle or pedestrian facilities. The road is very narrow with a speed limit of 40mph. Lighting is minimal and there are open ditches that often force children to walk in the street. There are also 6 other schools within 1/2 mile of the route.

With 45th Street being a primary route for getting to Maize High School, many inexperienced drivers use the route. At the same times of day that buses and motorists are using 45th Street to get to and from the school, children are walking and bicycling along the same route. Not only does the school attract trips from around 1,500 students, it is also a large employer that would allow teachers and other employees to walk or bicycle to work.

The project will funnel pedestrians and bicyclists from the residential areas north of 45th Street to the schools, including Maize Middle School located on the northeast corner of Maize Road and 45th Street.

There is a proposed development south of 45th Street that would add housing units. The proposed access to 45th Street is at James Avenue. This development and access would increase pedestrian, bicycle, and vehicular demands on 45th Street.

This route is an extension of Maize’s existing bicycle and pedestrian network. This route will connect the existing pedestrian and bicycle routes converging at the Maize Road and 45th Street intersection to Maize High School.

Maize has planned routes on James Avenue and Queen Avenue and the east side of Maize High School to connect the 45th Street shared use path to the north to the other schools, City Park, and the Academy Arts District.



Description - This project includes a 10-foot wide shared use path along the north side of 45th Street North from the primary Maize High School entrance driveway to 119th Street West and along the east side of 119th Street from 45th Street North to Wilkinson Street. A crosswalk will be installed on the east leg of the intersection of 45th Street and 119th Street.

Cost - The planning level cost estimate for the Maize High to Wilkinson St project is \$140,000.

Other elements for consideration include:

- Lighting: \$60,000 (assumes 15 light structures spaced 120 feet apart, at a cost of \$4,000 each)
- Benches: \$3,000 (assumes 2 standard benches at a cost of \$1,500 each)
- Trash receptacles: \$2,400 (assumes 2 receptacles at a cost of \$1,200 each)
- Dog waste stations: \$250 (assumes 1 station at a cost of \$250 each)
- Trees: \$10,000 (assumes 20 additional tree plantings at \$500 each)

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

119th Street is a 2-lane street with open ditches. The posted speed limit is 55mph and transitions to 45mph south of 45th Street. 45th Street is a 2-lane street with open ditches and a speed limit of 40mph.

There are currently no off-street bicycle or pedestrian facilities within the project area. There is a good sidewalk network within the Eagles Nest subdivision but they are isolated from the rest of Maize.

Children living in Eagles Nest live a very short distance from Maize High School and the 5 schools just north of Maize High. Children often walk in the ditch along the street to get to school.

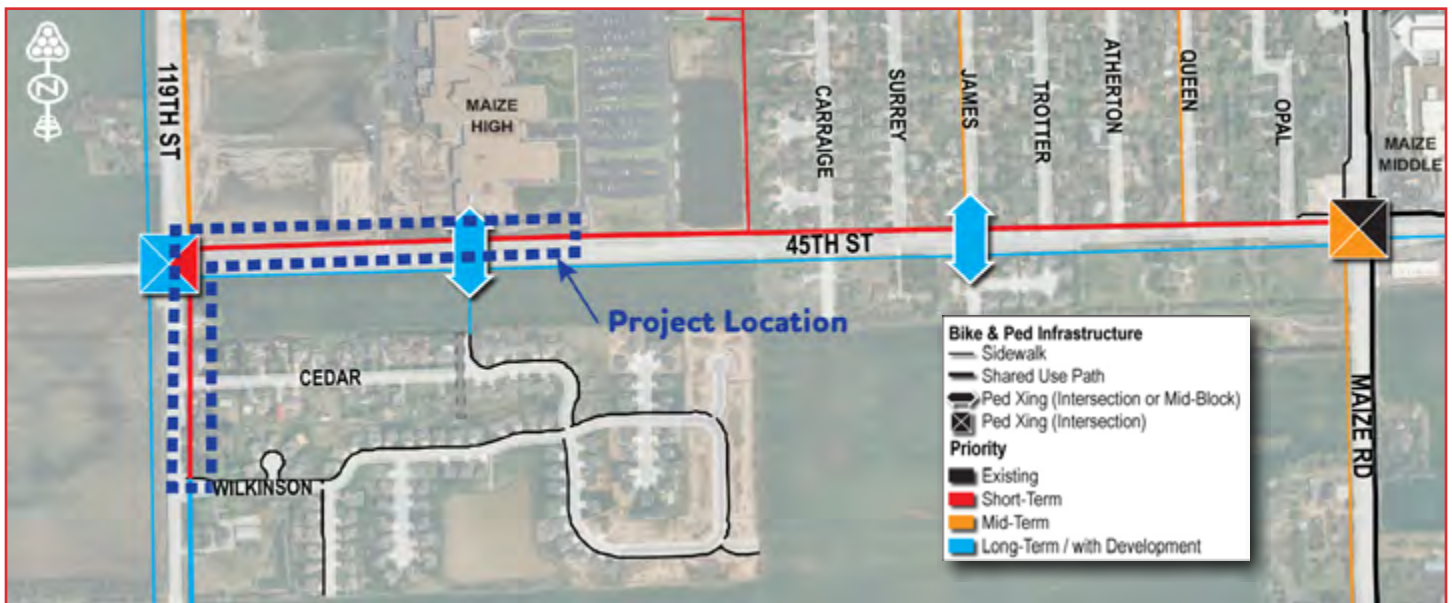
With 45th Street and 119th Street being primary routes for getting to Maize High School, many inexperienced drivers use the routes. At the same times of day that buses and motorists are using 45th Street and 119th Street to get to and from the school, children are walking and bicycling along the same route. Not only does Maize High School attract trips from around 1,500 students, it is also a large employer that would allow teachers and other employees to walk or bicycle to work.

The USD 266 transportation facility is located on 119th Street just north of 45th Street. This facility is where all district buses start and end their routes.

USD 266 owns land on the northwest corner of 45th Street and 119th Street. This is a potential new school site for the district. This has the potential to significantly increase traffic in the project area. The project will provide needed pathways to get to existing schools, as well as the future school site.

This route is an extension of Maize’s existing bicycle and pedestrian network, connecting sidewalks in Eagles Nest to Maize High School and other destinations further north.

Maize has planned routes along 45th Street and 119th Street. The Maize High to Wilkinson St project will provide a vital link for future bicycle and pedestrian connections.



Description - This project includes a 10-foot wide shared use path along the east side of the Maize High School property from Irma Street to 45th Street and connects to the existing pathway on the school property.

This project should be constructed with or after planned Project 1A: 45th St to Maize High.

Cost - The planning level cost estimate for the Irma St to 45th St project is \$74,000.

Other elements for consideration include:

- Painted crosswalks: \$800 (assumes crosswalks on north of Irma St at a cost of \$800 each)
- Lighting: \$92,000 (assumes 23 light structures spaced 60 feet apart, at a cost of \$4,000 each)
- Benches: \$4,500 (assumes 3 standard benches at a cost of \$1,500 each)
- Trash receptacles: \$3,600 (assumes 3 receptacles at a cost of \$1,200 each)
- Bicycle parking: \$1,000 (assumes 2 bicycle racks with 3 stalls each at a cost of \$500 each)

Justification - Through the engagement process, the community identified this project as a top priority to enhance school access for bicyclists and pedestrians.

Children often walk and bicycle along this route to get to school from Irma Street. However, there are no bicycle or pedestrian facilities.

This route is an extension of Maize’s existing bicycle and pedestrian network. This route will connect the existing sidewalk on Irma Street to Maize High School and to the proposed path along 45th Street. It will connect the proposed 45th Street path to the elementary, middle, and high schools, City Park, and Academy Avenue.

There is a proposed development south of 45th Street that would add housing units. The proposed access is at James Avenue. This development and access would increase pedestrian, bicycle demands along 45th Street and to destinations such as the schools and City Park.



Description - This project includes a 10-foot wide shared use path along the north side Academy Avenue and a 5-foot wide sidewalk on the south side from Maize Road to Maize City Park. The existing sidewalk on the south side will not be replaced. The existing 5-foot wide sidewalk on the north side will be replaced with a 10-foot wide path.

The exact project description may need to be revised based upon specific recommendations of the Academy Arts District Plan. The plan identifies right-of-way constraints. Due to the constraints, that plan identifies a 4- to 5-foot wide sidewalk and the potential need to use an on-street bicycle path for a portion of the project length.

Cost - The planning level cost estimate for the East Academy Ave project is \$154,000.

Other elements for consideration are located in the Academy Arts District Plan.

Justification - Through the engagement process, the community identified the Academy Avenue corridor as a premiere walking and bicycling street.

The Academy Avenue corridor includes the City's primary park with splash pad, playground, community building, and skate park. It also includes 3 schools directly on Academy Avenue with 3 more in very close proximity. It also includes the USD 266 Educational Support Center. There are also many small businesses north of Academy Avenue as well as the post office.

The street is about 28 feet wide east of Queen Avenue and about 40 feet wide west of Queen Avenue. The street is posted at 30mph and lighting is minimal.

This route currently has sidewalk along the entire length. However, the sidewalk jogs to the opposite side of the street at King Street and again at Khedive Street. This design requires undesirable street crossings of Academy Avenue.

Academy Avenue has heavy bus and vehicle school traffic at the same time of day as children walking and bicycling to school. Children and other pedestrians often walk in the street or in the adjacent grass due to the discontinuous sidewalk on each side of the street.

Maize has planned routes that feed to and from the East Academy Avenue project location on Khedive Street, Park Avenue, King Street, and Queen Avenue. Maize also has planned connections extending west from the project to 119th Street.



Description - This project includes 6-foot wide sidewalk along both sides of Khedive Street from Academy Avenue to Jones Street and a 6-foot wide sidewalk along the north side of Jones Street from Khedive Street to James Avenue.

Cost - The planning level cost estimate for the Khedive St & Jones St project is \$29,000.

Other elements for consideration include:

- Painted crosswalks: \$1,600 (assumes 2 crosswalks on the local streets at a cost of \$800 each)
- Lighting: \$28,000 (assumes 7 light structures spaced about 60 feet apart, at a cost of \$4,000 each)

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

Khedive Street and Jones Street are both two-lane local streets with open ditches. There are no off-street bicycle or pedestrian facilities.

This project is directly east of City Park and north of two elementary schools. The school parking lot empties into the intersection of Khedive Street and James Street. This introduces many vehicle and bus interactions with pedestrians and bicyclists.

This route is an extension of Maize’s existing bicycle and pedestrian network. This route will connect the existing facilities on James Avenue to those on Academy Avenue. This project will get children from Academy Avenue to the two middle schools.

Maize has planned routes on Jones Street extending east from this project to Maize Road.



Description - This project includes an enhanced pedestrian crossing of Maize Road near Academy Avenue.

One option could include a raised center median and a pedestrian hybrid beacon located north of Academy Avenue. The planning level cost estimate for this option is \$75,000.

Another option is to have the intersection of Maize Road and Academy Avenue be a fully-signalized intersection with pedestrian push buttons. The planning level cost estimate for this option is \$100,000.

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians. It is a primary way to mitigate the barrier to pedestrian and bicycle travel caused by high volume streets.

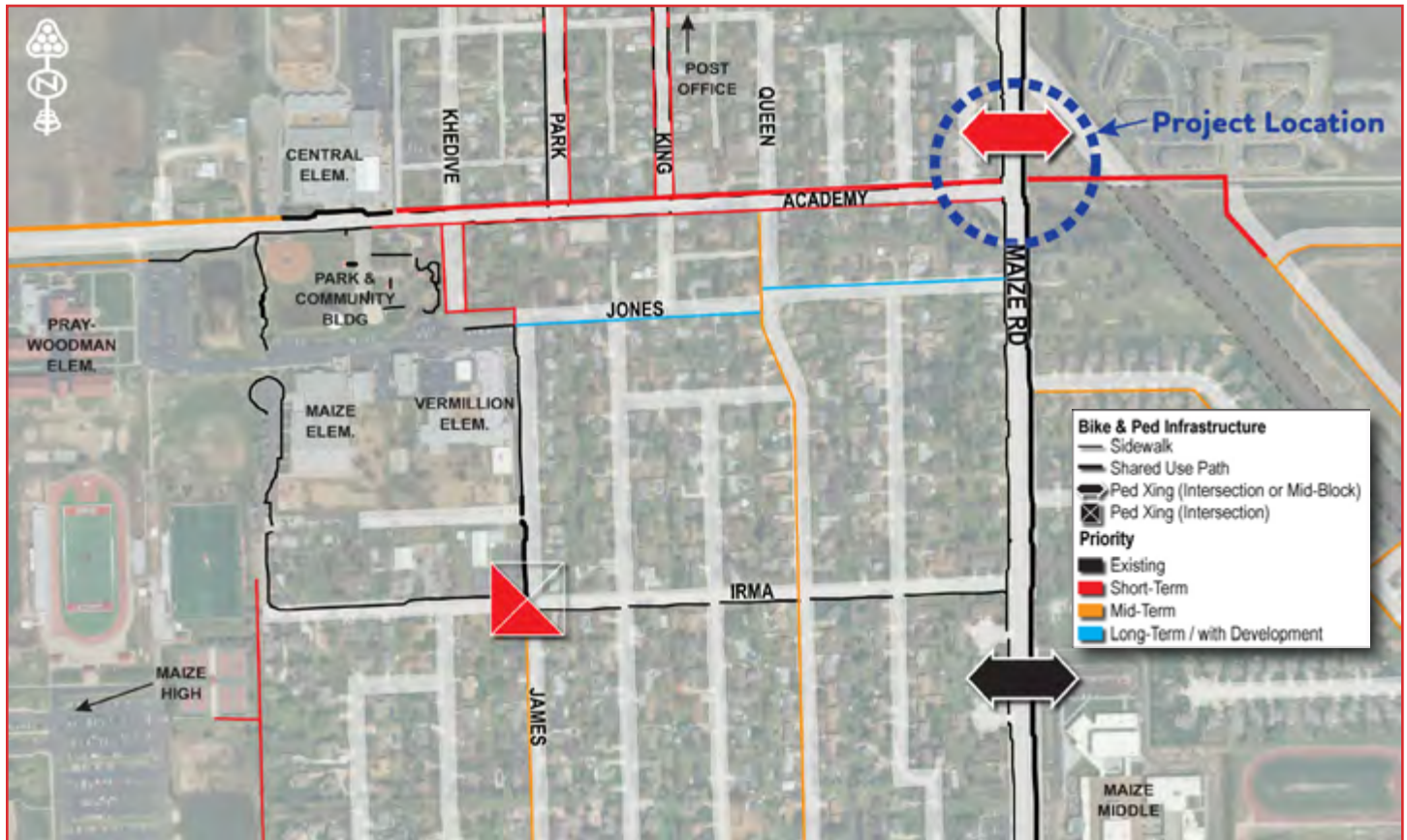
Maize Road is a 5-lane arterial with a speed limit of 40mph. Based on 2015 counts, Maize Road carries around 7,000 vehicles per day north of Academy Avenue. North of 45th Street, Maize Road carries around 9,000 vehicles per day.

There is an existing shared use path along the east side of Maize Road and a sidewalk along the west side. Academy Avenue has a sidewalk on the north side of the street.

East of the project location is Fieldstone Apartments. The apartments are home to many school-aged children. In order to walk to the 6 schools and City Park west of Maize Road, they must cross Maize Road. The nearest crossing is 1/3 of a mile south at the existing pedestrian crossing. With a crossing near Academy Avenue, walking and bicycling trip distances would be reduced by 0.4 to 0.6 miles, making trip lengths less than a half of a mile. It would also reduce distances to get to the businesses along the west side of Maize Road.

Maize has planned development east of the project in the Hunters Glen subdivision. This will likely increase the demand for pedestrian and bicycle crossings of Maize Road. Along with the crossing project, the planned Project 1G: Drainageway Path will allow these residents to access the west side of Maize Road.

This crossing is not only an extension of the existing bicycle and pedestrian network, it will enhance the usability of the network.



Description - This project includes a 10-foot wide shared use path extending from the shared use path along the east side of Maize Road east to the planned Sweetwater Road. This path will traverse along the City-owned drainageway property near Academy Avenue.

The project includes a railroad crossing of the Kansas and Oklahoma Railroad. Coordination will need to occur with the railroad. Specific safety considerations will need to be made during the design of this project.

There may be an opportunity to create a park on the City-owned property. This concept is included in the Academy Arts District Plan.

This project should be constructed with or after planned Project 1F: Maize Rd Crossing near Academy Ave.

Cost - The planning level cost estimate for the Drainageway Path project is \$66,000. This project could be significantly more expensive due to potential grading, permitting, and railroad requirements.

The option to include a park should be considered. The cost for the park will vary greatly. If a park is not developed, a parklet or park-like amenities should be considered.

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

The project will connect the Hunters Glen subdivision and Fieldstone Apartments to the Maize Road shared use path. Hunters Glen is platted and about 50% of the lots have homes. Fieldstone Apartments could be connected to this pathway to increase its viability.

There are currently no off-street bicycle or pedestrian facilities within the project area. There is a good sidewalk network within the Hunters Glen subdivision with more planned with its continued development. However, there is not a good connection to the north and west. A connection on the northeast portion of this subdivision would significantly reduce the distance required to travel to the schools and City Park west of Maize Road.



Description - This project includes 5-foot wide sidewalk along both sides of Park Avenue and King Street from Academy Avenue to Albert Street.

Concepts for pathway projects, development, and redevelopment in this area are included within the Academy Arts District Plan.

Cost - The planning level cost estimate for the Park Ave & King St project is \$83,000. It is assumed that approximately 1/2 mile of sidewalk and 18 curb ramps will be installed.

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

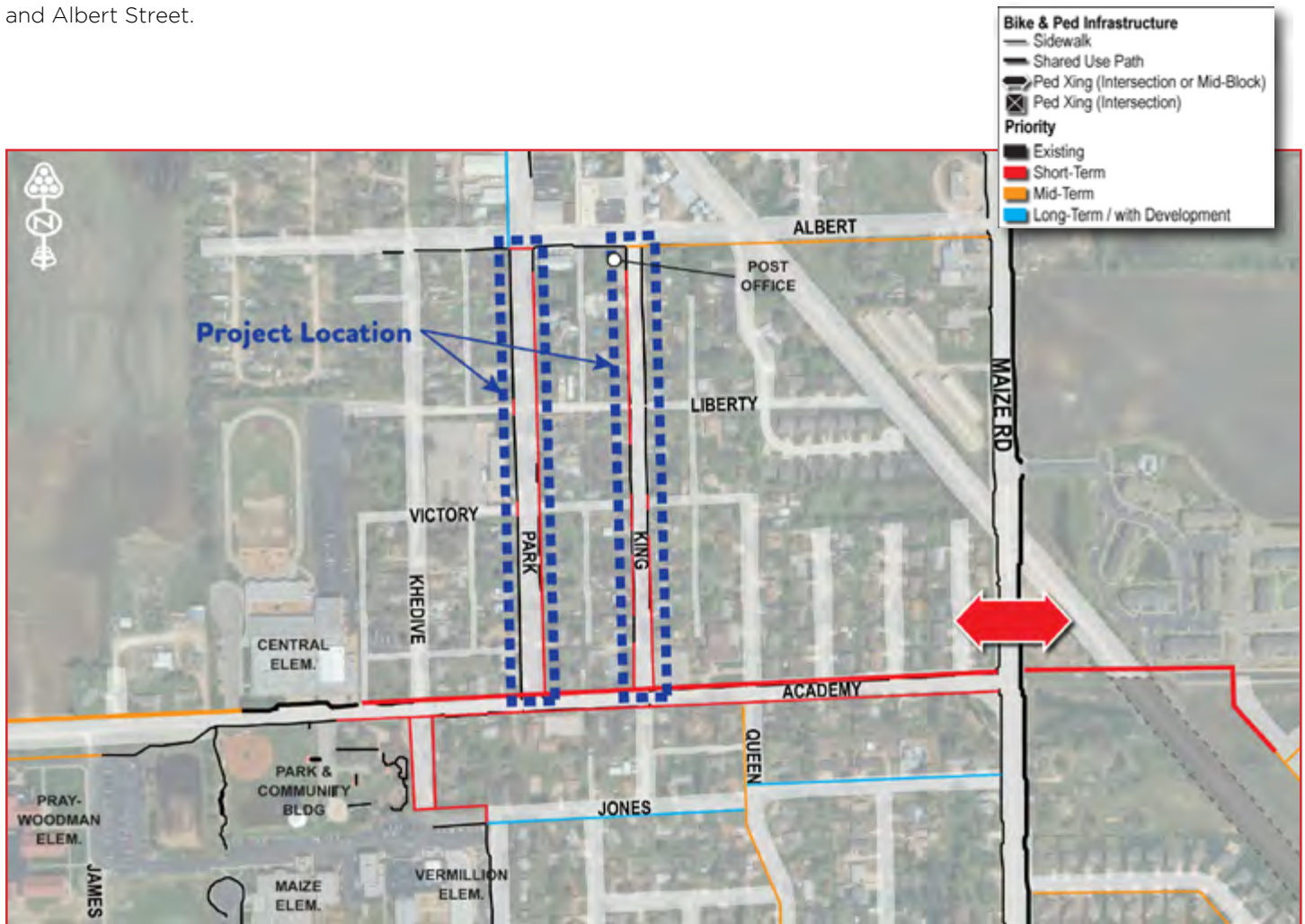
Park Avenue and King Street have some of the oldest development in Maize. The area is primarily residential with small businesses primarily in the northern portion of the project and further north. The post office is located at the intersection of King Street and Albert Street.

The existing sidewalk network includes sidewalks on both side of both streets for much of the project extents. However, there are missing segments, missing curb ramps, and sidewalk in extremely poor condition. The City has replaced some of the sidewalk and installed a few curb ramps.

This project area is in close proximity to many schools and City Park. A complete sidewalk network will offer the opportunity to walk safety to these destinations. This project will also complete connections to the post office, one of the primary walking and bicycling destinations identified by the community.

This route is an extension of Maize’s existing bicycle and pedestrian network, connecting sidewalks to Academy Avenue.

Maize has a planned route along Albert Street connecting to Maize Road. Park Avenue and King Street improvements will allow the future connectivity along Albert Street and connections to Academy Avenue.



Description - This project includes an enhanced pedestrian crossing of 37th Street near Watercress Lane. Although this project will provide great benefits to Maize residents, it is within the City of Wichita. Maize will need to **coordinate improvements** with Wichita. Improvements should also be coordinated with USD 266 as they have schools located just south of the project.

One option would making a path through the existing median and adding a pedestrian hybrid beacon east of Watercress Lane. The planning level cost estimate for this option is \$60,000.

Another option is to have the intersection of 37th Street and Watercress Lane be a fully-signalized intersection with pedestrian push buttons. The planning level cost estimate for this option is \$100,000. If this option is selected, consideration should be giving to relocating primary access to the Maize South school complex to this location.

Justification - Through the engagement process, the community has identified this project as a top priority to enhance safety and access for bicyclists and pedestrians. It is a primary way to mitigate the barrier to pedestrian and bicycle travel caused by high-volume streets.

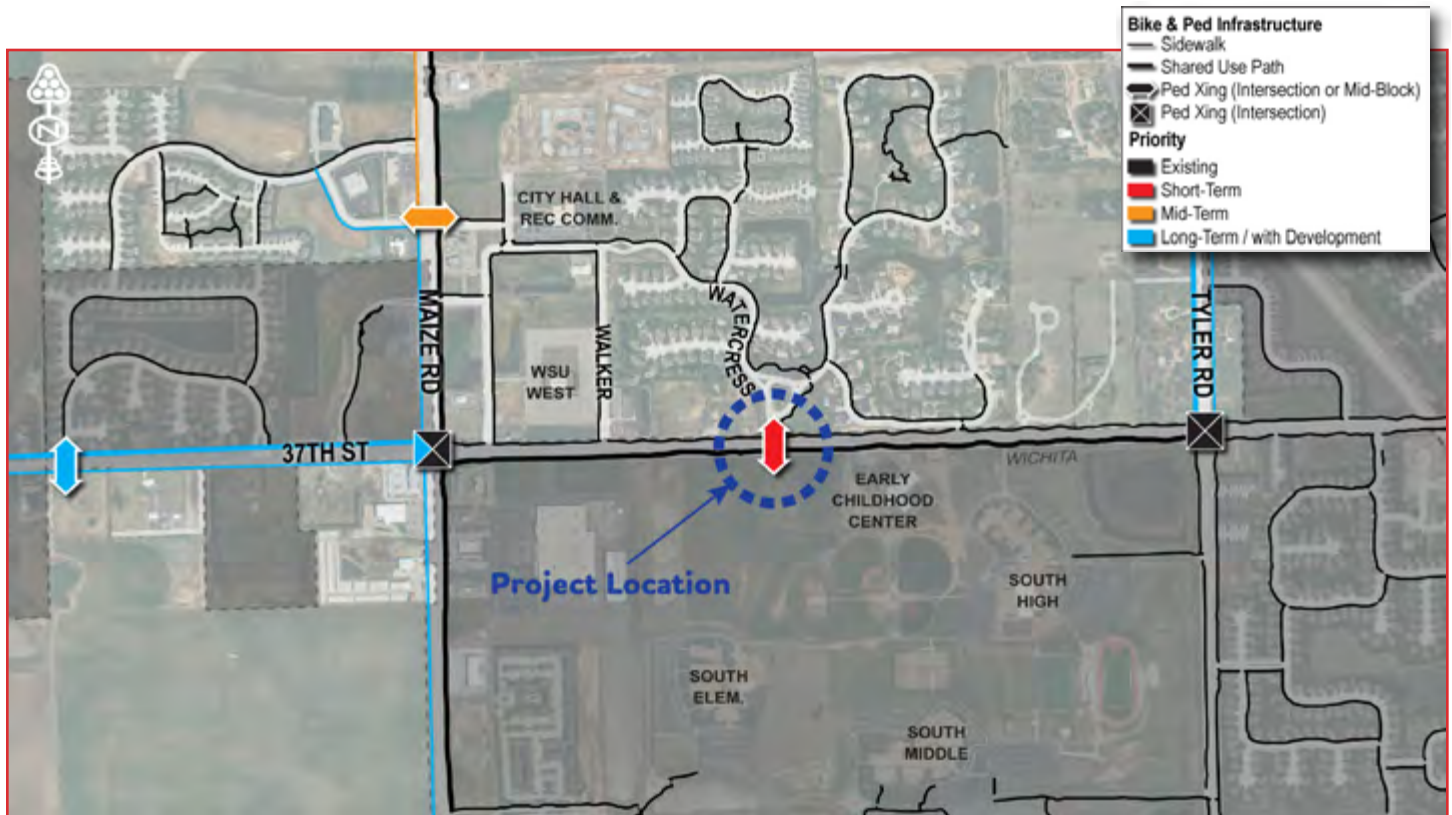
37th Street is a 5-lane arterial street. It has a center turn lane west of Watercress Lane and a raised center median to the east. Based on 2015 counts, 37th Street carries around 8,000 vehicles per day.

There is an existing 6-foot wide sidewalk along the south side of 37th Street and a 5-foot wide sidewalk along the north side. Watercress Lane to the north has existing sidewalk on the east side of the street.

South of 37th Street is the Maize South school complex that includes a high school, middle school, elementary school, and an early childhood center. There are also plans to build another school. There are no pathway connections into the school complex from the north. USD 266 should consider installing pathway connections into the complex from 37th Street in coordination with this project.

North of 37th Street is the Watercress subdivision with many residences. This neighborhood has a good sidewalk network. In order to walk to the 4 schools south of 37th Street, pedestrians must cross 37th Street. There are no pedestrian crossings of 37th Street between Tyler Road and Maize Road (1 mile apart). The nearest crossing is over 0.4 miles west at Maize Road. With a crossing near Watercress Lane, walking and bicycling trip distances would be reduced by just under 1 mile.

This crossing is not only an extension of the existing bicycle and pedestrian network, it will enhance the usability of the network.



Description - This project includes pedestrian crossing upgrades on the south and west legs of the intersection of Irma Street and James Avenue.

There are multiple options to improve the pedestrian crossings. Simply adding striped crosswalks would cost about \$1,600. Adding centerline mounted signs would cost around \$500. The costs for other enhancements will vary greatly and could include installing:

- Curb extensions
- A raised intersection
- Raised crosswalks
- Raised center medians
- Flashing warning lights/signs

Justification - Through the engagement process, the community identified this project as a top priority to enhance safety and access for bicyclists and pedestrians.

Irma Street is a 40-foot wide local street with curb and gutter. James Street is a local street. James Street is 40 feet wide with curb and gutter north of the intersection. It is 24 feet wide with open ditches south of the intersection.

There is currently sidewalk along the south side of Irma Street east of the intersection, a pedestrian ramp on the southwest corner, and a shared use path on the west side of James Street north of the intersection. The area east and south of the intersection is primarily residential.

The intersection is located just southeast of two elementary schools. Irma Street carries a lot of buses

and parents drop their students off along the street. This creates a lot of pedestrian and vehicle conflicts.

This route is an extension of Maize’s existing bicycle and pedestrian network, enhancing the connectivity through the intersection.

Maize has a planned routes along James Street south of the intersection, connecting to planned improvements to 45th Street. The intersection project will enhance safety and provide for future bicycle and pedestrian connections.



2A: Maize Rd to Ranch Rd

This project includes sidewalk along the west side of Maize Road from 45th Street to Ranch Road. This project is estimated to cost \$112,000.

The Hampton Lakes development includes residences, a hotel, and businesses. There is a sidewalk network within the development. However, the network leads to Maize Road with no pathways along the west side of the street and no crossing of Maize Road to the adjacent shared use path. This project would connect the Hampton Lakes development to the City's pathway network.

There is a drainageway along the west side of Maize Road. This could significantly impact the cost of constructing this project.

2B: West Academy Ave & 119th St to 45th St

This project includes shared use path along the north side of Academy Avenue from Central Elementary to 119th Street and along the east side of 119th Street from Academy Avenue to 45th Street. This project is estimated to cost \$344,000.

There are no off-street pathways along the project length. There are many schools along Academy Avenue and in close proximity to the corridor along with the USD 266 Educational Support Center, generating heavy school and bus traffic along corridor.

This project extends the improvements from Project 1D: East Academy Ave from City Park to 119th Street, completing the corridor.

2C: James Ave

This project includes sidewalk along the west side of James Avenue from Irma Street to 45th Street. This project is estimated to cost \$41,000.

This project will provide a link between the planned shared use path along 45th Street to the elementary schools. This project, along with Project 1E: Khedive St & Jones St connects 45th Street to Academy Avenue, providing access to City Park and multiple other schools.

2D: Queen Ave

This project includes sidewalk along the west side of Queen Avenue from Academy Avenue to 45th Street. This project is estimated to cost \$87,000.

This project connects Academy Avenue to the planned 45th Street pathway. Queen Avenue is the only continuous street connecting 45th Street to Academy Avenue.

2E: Albert St

This project includes sidewalk along the south side of Albert Street from King Street to Maize Road. This project is estimated to cost \$43,000.

This project completes a connection from Academy Avenue to Maize Road with Project 1H: Park Ave & King St. It connects the schools and other development along Academy Avenue, the post office, and the existing pathway along the north Maize Road business corridor.

2F: Plantation Rd

This project includes sidewalk along the east/south side of Plantation Road from 45th Street to Maize Road. This project is estimated to cost \$95,000.

Plantation Road is a collector street through a residential area that connects 45th Street and Maize Road. This residential area is adjacent to Maize Middle School. This project would facilitate walking and bicycling from this residential development to the school and connect to the existing pathways along 45th Street and Maize Road.

There is a planned connection to the northeast to the Hunters Glen subdivision, which will increase vehicular traffic. This project, along with Project 2G: Longbranch Dr, Sweetwater Rd, & High Plains Cir, will connect Hunters Glen to the Maize Road pathway and create connectivity between the neighborhoods.

2G: Longbranch Dr, Sweetwater Rd, & High Plains Cir

This project includes sidewalk along the west/south side of Longbranch Drive, the west side of Sweetwater Road, and the north side of High Plains Circle. This project is estimated to cost \$95,000. Much of the project is anticipated to be constructed as part of the Hunter Glen subdivision development.

This project provides sidewalk within the Hunters Glen subdivision and connects this development to the planned project on Plantation Road. This connection improves access to the Maize Road pathways. The project includes a railroad crossing of the Kansas and Oklahoma Railroad.