Hesston, Kansas

Bicycle and Pedestrian Master Plan

Produced by: PedNet
Produced for: Hesston, Kansas
In Cooperation with: Healthy Harvey Coalition
February 2020

Table Of Contents

Chapter 1: Why Plan for Non-Motorized Transportation?

Why Plan for Non-Motorized Transportation?

The goal of this Hesston, Kansas Bicycle and Pedestrian Master Plan is to improve quality of life for all residents. While most people will recognize the need for and benefits of this type of policy, others may feel skepticism toward spending money on bicycle and pedestrian infrastructure, believing the money should be spent on other community needs. These concerns are reasonable and will be addressed in this section.

Spending money on bicycle and pedestrian facilities is a wise investment by the City of Hesston and the Kansas Department of Transportation (KDOT) because:

- It is the right thing to do;
- It will improve the health of Hesston citizens and reduce healthcare costs; and
- It can reduce the strain on local automobile infrastructure, diminishing transportation costs and congestion.

Healthy Harvey has funded the development of the Hesston Bicycle and Pedestrian Master Plan through a grant from Blue Cross and Blue Shield of Kansas. Healthy Harvey's motto is "working together to improve the health, safety and success of all people in Harvey County."

Creating opportunities for people to be more active will help Healthy Harvey reach its goal of improving health. However, more than that, on a fundamental level, building and maintaining bicycle and pedestrian facilities is simply the right thing to do.

Today, in many American communities, traveling by any means other than an automobile is difficult and dangerous. This is due in part to transportation policies throughout the past 60 - 70 years, which have focused on moving automobiles, rather than moving people. Bicyclists and pedestrians were marginalized, while moving vehicles from one place to the next as fast as possible took precedence. Through this Bicycle and Pedestrian Master Plan, we hope to bring the focus back to moving people.

One hundred years ago, it would have been unprecedented for a government or private developer to build a street without meeting the needs of pedestrians. Today, this practice is commonplace. Unfortunately, this leaves many Kansans who cannot or do not drive to negotiate the busy streets, while their transportation needs remain unmet.

Chapter 1: Why Plan For Non-Motorized Transportation?

Though it may be hard to imagine, a substantial portion of the population uses another means of transportation besides an automobile. Whether they are too young, cannot afford to drive, have a physical or mental disability that prevents them from driving, or have lost their ability to drive due to complications of aging, there are many Kansans who do not drive.

All new housing neighborhoods in Hesston lack sidewalk, a total departure from 1905-1965 development.

Sadly, these residents are left with few options. They must rely upon others (who are not always available) for transportation, or navigate busy, dangerous streets. Pedestrians and wheelchair users can be seen on the streets wedged between fast moving automobiles and the curb. Or, their presence is made clear by trampled grass alongside major roads.

Beyond the fundamental question of mobility, many people who currently drive would prefer to drive less. Some people are motivated out of a concern for their health, the environment, the need to save money, or because they think it is fun. Whether they want to replace all of their trips or only a portion with walking and bicycling, they are more likely to do so when it is convenient and safe.

As previously mentioned, building a bicycle and pedestrian network is simply the right thing to do. Our federal, state, and local governments are in the business of providing a transportation network for their citizens. This includes everyone: automobile drivers, pedestrians, wheelchair users, and bicyclists. All forms of transportation need to be considered when building infrastructure.

Improved Health and Reduced Healthcare Costs

The United States is facing a public health crisis caused by a population that is increasingly sedentary. Some of that sedentary behavior can be linked to the overuse of the private automobile, and it begins with children being driven to school.

In 1969, almost 50% of American children walked or rode a bicycle to school, but by 2009, that number had dropped to just 13 percent (Safe Routes to School National Partnership, 2011). Even worse, 50% percent of children who live between ¼ and ½ of a mile (a 10-minute walk or less) are driven to school.

Many adult residents are also making trips in their automobiles that could be made by foot or bicycle. For example, of trips that are less than one mile, 60% are taken by private automobile (League of American Bicyclists, 2010). The automobile is a

wonderful device that allows us to travel to destinations our great-grandparents may have never thought possible. But its overuse, especially for short distances, is leading to severe health consequences.

Obesity truly has become an epidemic in the United States. As of 2015, Kansas has the twelfth highest adult obesity rate in the nation, with 34.4% of the adult population obese (State of Obesity, 2016). In 2015, 33% of Harvey County adults were obese, an increase over 2013 and 2014 (County Health Rankings, 2019).

In 2015, 33 percent of Harvey County adults were obese (Community Commons, 2019).

Obesity increases the risk for many chronic illnesses, such as diabetes, heart disease, and certain types of cancers (Centers for Disease Control, 2012). All of these obesity effects raise the already staggering cost of healthcare in the State of Kansas. In fact, in 2010, total healthcare costs to treat obesity related disease in Kansas were $1.327 billion (Kansas Department of Health and Environment, 2012). If the obesity trends continue unabated, the costs could increase by as much as 50% in the next decade (Finkelstein et al, 2011). These figures do not even include other costs, such as the loss of productivity at work by unhealthy employees. The health complications of obesity are tremendous, and the amount of preventable human suffering is heartbreaking, but there is something we can do about it.

Our sedentary lifestyle and reliance on the automobile have no doubt contributed to these healthcare costs. The Hesston Bicycle and Pedestrian Master Plan will design streets to make physically active transportation safe, enjoyable, affordable, and convenient, helping to address the obesity epidemic.

For every $1.00 spent on a walking and bicycling trail, the community saves over $3.00 in healthcare costs. – American Heart Association

We are rewarded with a substantial return on investment when we build facilities that encourage and support bicycling and walking. For example, the American Heart Association found that for every $1.00 spent on a walking and bicycling trail, the community saves over $3.00 in healthcare costs (APA, 2015). Figures like these are powerful. Nonetheless, it sometimes can be hard for policymakers, like City Council members, to incorporate them into the development of city budgets. While everyone wants people to be healthy, those healthcare costs are borne by the individual, their insurance company, their employer, or the federal or state government--not usually the government entity paying to build the trails.

A morbidly obese employee can cost employers over $8,000 compared to a non-obese person, who would cost just over $4,000 (American Journal of Health Promotion, 2014). This price tag could cost a city new employment opportunities.

However, more employers are realizing the benefits and importance of a healthy community for their business. If the average citizen in Hesston is less healthy than the average citizen elsewhere, then employers will face increased healthcare costs and decreased productivity if they build in Hesston. In fact, a morbidly obese employee can cost employers over $8,000 in medical claims, sick days, short-term disability, and workers' compensation compared to a non-obese person, who would cost just over $4,000 (Van Nuys et al, 2014). This price tag could cost a city new employment opportunities. Given these obesity statistics and the fact that 24 percent of Harvey County adults are physically inactive, increasing the health of the people in Hesston is everyone's responsibility and should be on everyone's list of concerns (County Health Rankings, 2019).

To fully appreciate the effect an increase in bicycling and pedestrian infrastructure can have on the health of Hesston residents, let us imagine a resident who uses the new bicycle and pedestrian facilities to change their life.

Imagine a Hesston resident who lives in the Windover subdivision and works at Hesston High School. For years, this employee has driven to work every day and never considered using their bicycle for transportation. One day, they use a new trail in town, and it rekindles the love of bicycling that they remember from their childhood. Then, on their drive to work, they begin to notice new bicycle lanes and sharrows along the street. Soon, the idea hits them that they could enjoy their new favorite recreational activity on the way to work, and they begin bicycling the 1.3 miles (2.6 miles round-trip) to work most days of the week.

This individual typically drives to work in approximately 5 minutes, but after beginning to bicycle it, the trip length increases to 10 minutes. Therefore, their new vehicle choice has added 10 minutes to their daily, round-trip commute, but they have gained 20 minutes a day of cardiovascular exercise. Thirty minutes of daily exercise will reduce their risk of heart disease, stroke, diabetes, certain types of cancer, and other ailments. In addition, it is helping them maintain a healthy weight by burning calories on their commute to and from work.

Reduced Transportation Costs

Simply put, any time a Hesston resident decides to walk or ride a bicycle instead of drive, it saves Hesston and its taxpayers money. Every time a driver in Kansas purchases a gallon of gasoline, he or she pays two types of tax: a state tax (24 cents per gallon) and a federal tax (18.4 cents per gallon). In addition to these fuel taxes, drivers also pay license and registration fees and personal property taxes on their automobiles. While these taxes have built and repaired thousands of miles of roads and bridges over the years, they do not provide enough revenue to maintain or enhance the entire road network.

Driving a car is a heavily subsidized activity. For every dollar in user fees that someone pays, society pays another dollar to operate the road system.

Driving a car is a heavily subsidized activity. For every dollar in user fees that someone pays, society pays another dollar to operate the road system. That is because, even though the fees might seem expensive to the motorist, the cost to move and store automobiles is enormous. A nonpartisan initiative of the Pew Charitable Trust called "Subsidyscope" examined the extent to which driving an automobile is subsidized. It analyzed all user fees and all of the non-user fees that also fund roads, such as sales taxes, income taxes, and property taxes. It found user fees fund only 51 percent of road and highway costs.

Hesston has made progress in making their existing sidewalk network Americans with Disabilities Act compliant.

Some trips are more expensive to a community than others. Trips during peak demand times (like school pick-up and drop-off) are more expensive than others that have more varied time demands on the road network. Constructing roads to meet the peak traffic demand is the principle force behind road expansion and other congestion mitigation efforts.

Allowing people to replace automobile trips with bicycle and walking trips will reduce the strain on the road network, and will result in substantial long-term savings to the taxpayers of Hesston.

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Chapter 2: Methodology and the Hesston Community

History of Hesston, Kansas

Transportation History

Like any Kansas town, transportation is at the heart of Hesston's inception. In some places, it's a river, in others a cattle trail. In the case of Hesston, the railroad spawned the creation of the town, with the Meridian Highway further increasing its importance.

The Missouri Pacific railroad came through the area, and two brothers with the surname of "Hess" donated land for the depot, and hence "Hesston" was born.

In 1911 a group of Kansans met in Salina to promote the idea of an automobile route from north to south. Groups formed in other states and the "International Meridian Road Association" was born in 2012 with Texas, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota, and Canada represented. The trail was developed, following the 97th Meridian West, connecting Hesston with motorists from the rest of the heartland. The path was crude, rough, and useless during wet weather. In 1926, the federal government created U.S. Highway 81 over the Meridian trail and conditions improved dramatically. The roadway was adequately engineered and paved.

The incorporation of Hesston began with the railroad, still vitally important due to a vibrant manufacturing industry.

Major Historic Economic Developments

Besides transportation, two other historic landmarks have insulated Hesston from the economic realities of most communities of its size.

In 1909 the Mennonite Church founded Hesston College. Presently, this college has 420 students, with 13% of students from outside of the United States and 36% of students from outside of Kansas.

In 1947, Lyle Yost founded Hesston Manufacturing. Now owned by AGCO, the Hesston facility has had significant investments made and figures firmly into AGCO's worldwide presence.

The Hesston Community

The U.S. Census of 2010 found that Hesston has a population of 3,709 (U.S. Census, 2010). The median age in Hesston is 36 years with 49% male and 51% female. Roughly 24.6% of the population is 18 years old and under, 55.8% is 18-64 years old, and almost 19.7% is 65 years and over (U.S. Census, 2010).

USD 460 has three school buildings. All are located in the heart of the city, making it easy for many children to walk or bicycle to school.

The racial composition of Hesston was 94.56% White, 1.48% African American, 0.6% Alaska Native or American Indian, and Hispanic or Latino of any race accounted for 2.88% of the total population (U.S. Census, 2010).

Of the 1,227 households in Hesston, 35% have children under the age of 18 (U.S. Census, 2010). The average household size was 2.52 (U.S. Census, 2010).

According to the U.S. Census Bureau (2010), 5.5% of people in Hesston live below the Federal Poverty Level.

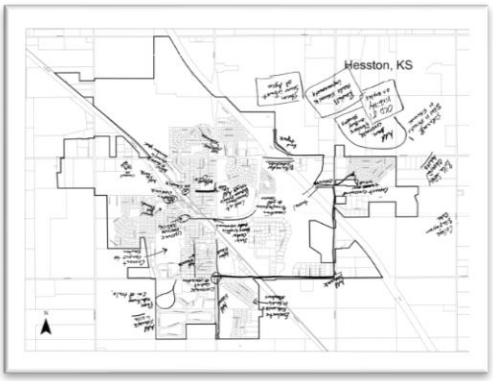
Education

Schools are significant attractors for pedestrian and bicycle traffic. Hesston, Kansas is home to the Unified School District (USD) 460. In USD 460, there are three schools: Hesston High (grades 9-12), Hesston Middle (grades 5-8) and Hesston Elementary (PK-4).

According to the National Center for Education Statistics (2019), USD 460 serves a total of 802 students with only 4.3% of families having income below the federal poverty level.

Methodology

The citizens of Hesston, Kansas primarily guided the development of the Hesston Bicycle and Pedestrian Master Plan. Healthy Harvey directly oversaw the plan's development and offered suggestions and feedback during the process. In addition, the public's suggestions were collected via a public meeting and a website that was online throughout the project.



One of the maps from the July 22nd, 2019 public meeting. The public added their notes directly to the maps.

Advisory Committee

The project was managed by the Walk and Roll Committee. The members were:

- Dana Shifflett (Walk & Roll Harvey Chair)
- Aaron Swank (Healthy Harvey Coalition Co-chair)
- Curtis Stubbs
- Bob Becker
- Duane Miller
- Carol Sue Stayrook Hobbs
- Denise Duerksen
- Edith Buller-Breer
- Rebekah Morse
- Jeffrey Brault
- Edward Bonham
- Mallorie Coffman (Healthy Harvey Coalition Co-chair)

Lorrie Kessler, the Chronic Disease Risk Reduction & Healthy Harvey Coalition Coordinator for the Harvey County Health Department was the main point of contact between the Committee and PedNet staff.

Robert Johnson from PedNet presenting at the July 22nd, 2019 public meeting.

The General Public

The general public's input was collected via a public meeting held on July 22, 2019. Public input for these types of planning documents is critical as it provides feedback that may not have otherwise been identified.

At the meeting, PedNet, Healthy Harvey, and City of Hesston staff spoke to the public to provide background to the project and highlight the benefits of this type of planning for their community. Further, Healthy Harvey assisted the PedNet team in facilitating tabletop discussions during which the public could offer their project ideas by drawing directly on a map. The public provided input on areas of concern and areas where they would prefer to see improvements made in their community.

In addition to the public input meeting, a project website was created where comments were collected and analyzed during the project period.

City of Hesston staff were supportive during the process. For example, PedNet had the GIS data the same day it was requested.

Sidewalk data was collected on every property parcel inside of the city limits.

Data Collection

Information was collected from a variety of sources. The tax parcel data, digital aerial photography, state and local roadways, streams, railroads, lakes and ponds, and municipal boundaries were provided by the City of Hesston. The City of Hesston provided information on transportation budget and projects and various travel data.

Field reconnaissance and surveys were used to map the following information:

- Location and condition of existing sidewalks
- Location of schools, parks, and other attractors for bicycle and pedestrian traffic
- Location of areas with non-residential land uses
- Location of public lands, streams, railways, and floodplain areas for potential trail sites
- Location of future sidewalks and trail projects

Road width and sidewalk condition and location rounded out the data gathered for completion of the plan.

Topography, Creeks, and Floodplains

Digital resources from City of Hesston were used to map the streams, floodplains, and topography in the area. A digital elevation model (DEM) provided the base data for the examination of the elevations and slopes. The map on the next page highlights this information.

Streets and Highways

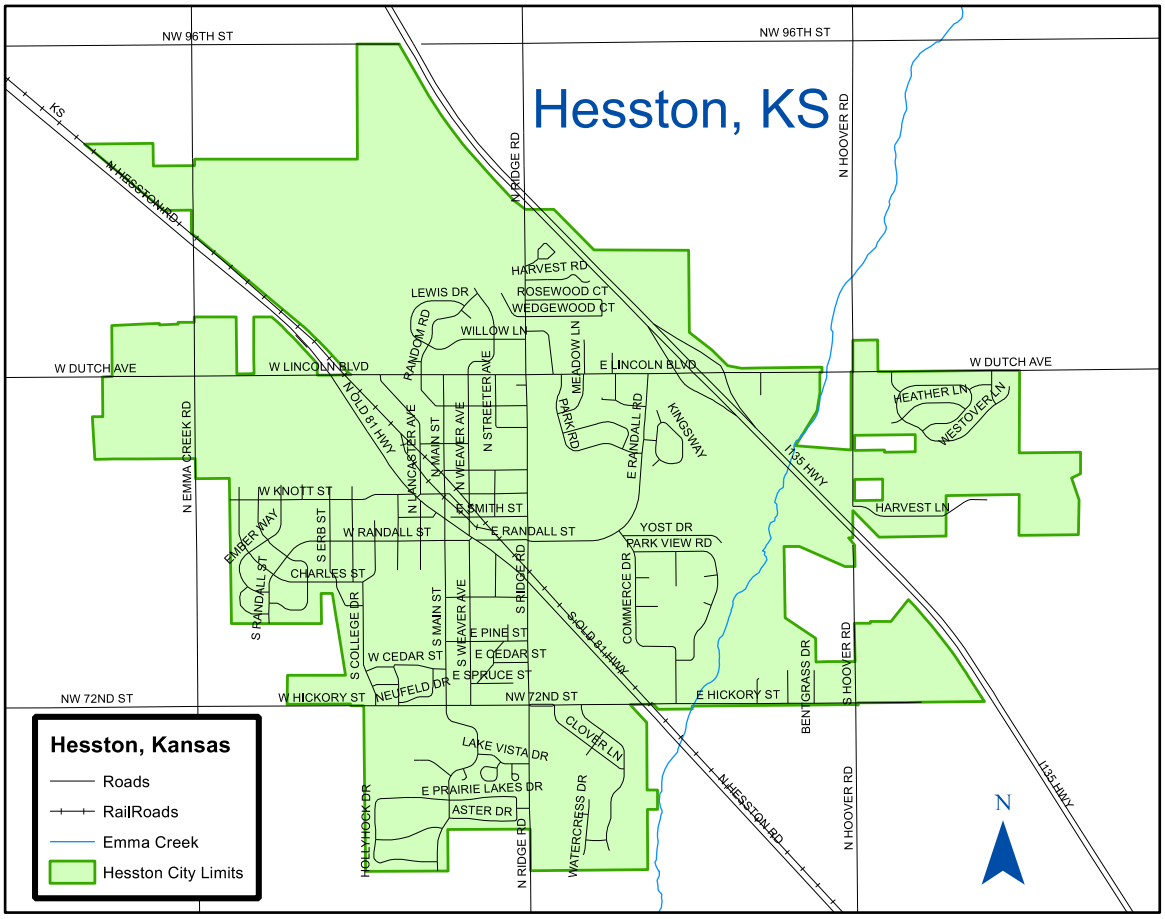
State and local roadways and municipal boundaries were provided by the City of Hesston. Hesston is accessible by Old U.S. Hwy 81 and its national replacement, U.S. I-135, from the north and south. Looking closer at the city streets, Hesston predominately uses a grid system, except for newer subdivision development which is cul-de-sac.

Parks and Government Owned Land

Parks and recreation facilities, community centers, libraries, and city, state, and federal offices are also locations that attract bicycle and pedestrian activity. Vacant government land may be a

site for future trails because it is undeveloped, and its potential development is likely to be unopposed. According to the Parks Department there are nine different park properties.

Locating and mapping these community resources was completed using digital tax parcels, field investigation, and data provided by Hesston.



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Chapter 3: Priority List

Classification and Definition of Infrastructure

The language within this plan aligns with the most commonly used national definitions and classifications.

Sidewalk: a paved path for pedestrians that parallels a roadway, and usually exists in the roadway's right-of-way. The sidewalk's width does not influence its designation.

Sidepath: a type of non-motorized transportation facility that, like a sidewalk, typically parallels a roadway and exists in the roadway's right-of-way.

Trail: a path that is open to the public for use by non-motorized transportation users. Trails generally exist outside of the roadway right-of-way. Trail width does not influence its definition.

Bicycle Lane: a roadway section designated exclusively for bicyclists' use via striping and marking. Bicycle lanes normally exist on the outer edges of a roadway.

Sharrow: a painted symbol placed in existing traffic lanes to alert motorists that bicyclists may be using the full lane. A sharrow by itself does not indicate a bicycle boulevard.

Photo of a sharrow

Bicycle Boulevard: a low speed, typically residential street that gives priority to bicyclists by allowing through bicycle traffic and local automobile traffic only. Many have a physical barrier, which directs motorists off the roadway, while allowing bicyclists' access.

Note about Sidepaths: There are some safety considerations with providing bicyclists' facilities along an existing roadway's right-of-way. The "Guide for the Development of Bicycle Facilities, 4th Edition" by the American Association of State Highway Transportation Officials (AASHTO) lists 14 ways that pathways of this type may increase the risk of bicycle/automobile crashes.

In summary, sidepaths are generally more appropriate along long stretches of roadways with infrequent driveways and intersections, such as a rural highway. In most cases, they are not appropriate for city streets. Sidewalk widening only increases the potential danger to bicyclists by allowing them to achieve increased bicycling speeds. For those reasons, the PedNet team tends to discourage the use of wide sidewalks as substitutes for trails.

There are ways to create safer infrastructure for bicyclists that exist in the roadway right-of-way. For example, “protected bicycle lanes” are being built across the United States. These are bicycle lanes that are protected from adjacent traffic by bollards, concrete barriers, floating parking, or other means. However, these protected bicycle lanes require extensive planning and specialized signals at every intersection in order to work properly.

Prioritized List is Not Proscriptive

The Hesston Bicycle and Pedestrian Master Plan, and the projects described herein, are intended as a starting point for discussion, and are not a proscriptive guide for community improvements. Hopefully, the information provided will serve as a resource to support future investment decisions by the City of Hesston concerning sidewalks, trails, and on-street facilities.

The planning focuses on the long-term development of an integrated system of sidewalks, trails, and on-street facilities.

The planning focuses on the long-term development of an integrated system of sidewalks, trails, and on-street facilities. While this priority list was created in good faith and included to focus the results of this plan, Hesston residents should be consulted as to which projects would most benefit the community.

Factors that Influenced Selection

First, the projects were ranked based upon these criteria:

- Potential to increase the mobility of bicyclists and pedestrians
- Potential to increase physical activity
- Potential to reduce automobile trips in Hesston
- Quality of the project (for example, would a trail project only be possible if it included several “at grade” crossings thereby reducing its comfort and safety?)

Then, the highest ranked projects were weighed against two “costs”:

- The cost to complete the project
- The ease of completion (for example, would the land acquisition process be difficult because the project crosses several private land holdings?)

Sidewalk Priority Projects

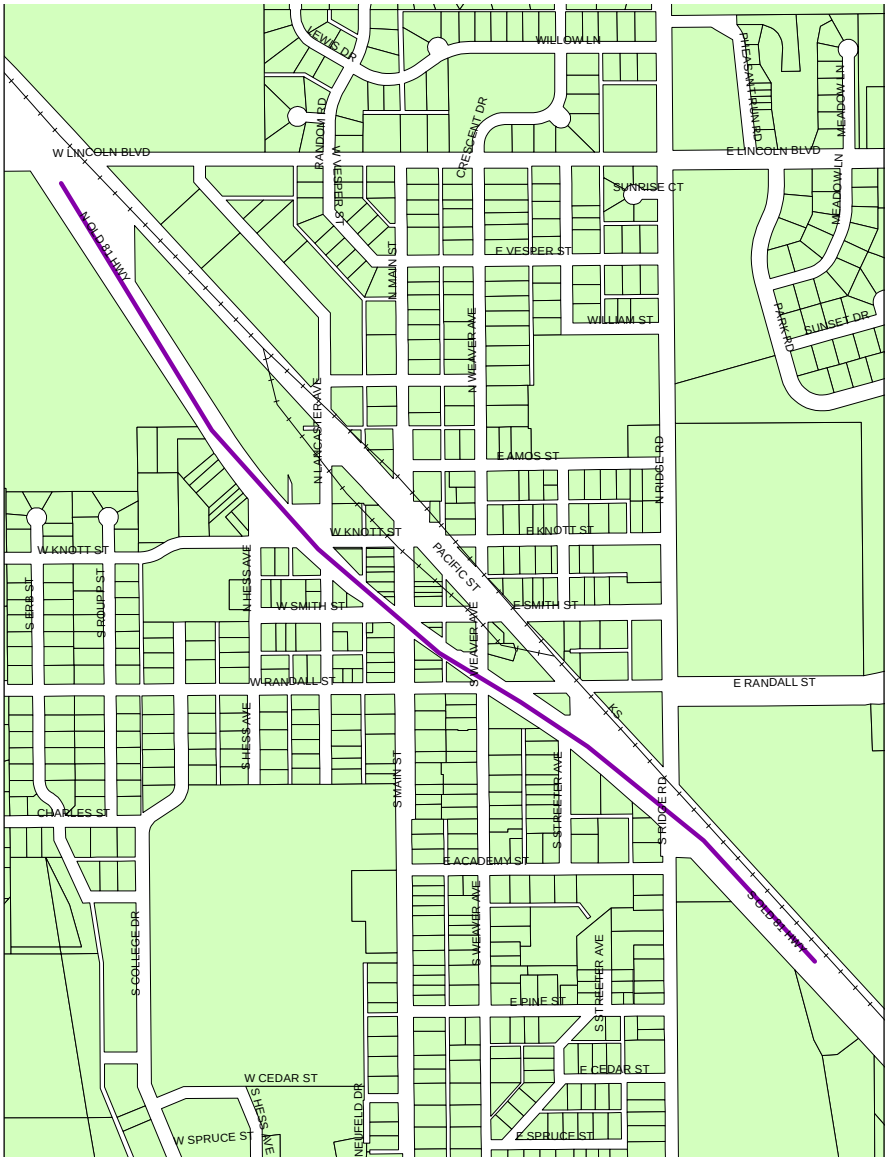
The development of the sidewalk plan focused on the following objectives:

- Improving conditions for people who are currently walking
- Improving accessibility to sidewalk facilities for pedestrians with disabilities
- Providing connections to places that attract pedestrians
- Increasing levels of walking
- Reducing the number of crashes involving pedestrians

PedNet and the steering committee identified eight individual sidewalk projects. The table below shows the costs for each project and the following pages provide maps and descriptions of the sidewalk projects.

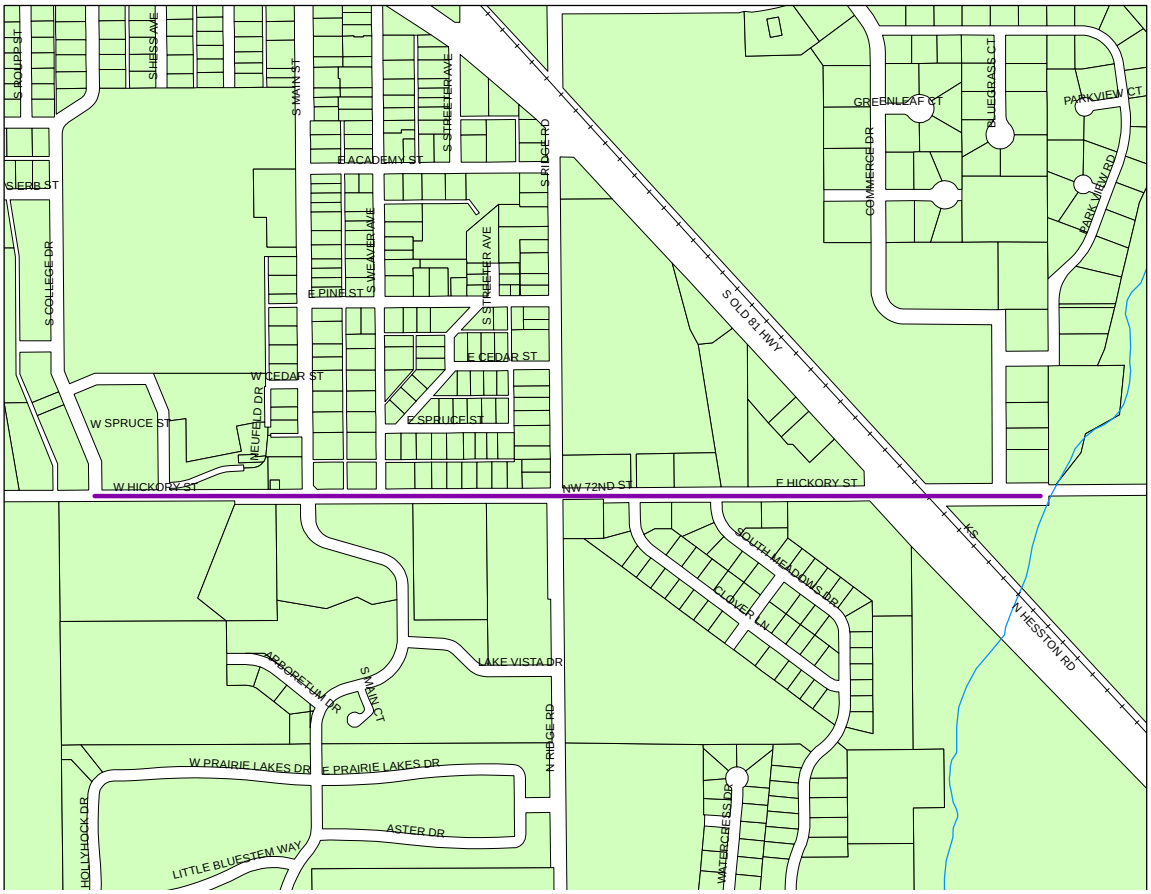
Sidewalk Priority Project Costs

Location	Cost
North Old Highway 81	$248,961
Hickory Road	$184,760
West Knott Street	$42,606
Lancaster Avenue	$171,456
Lincoln Boulevard	$121,420
East Pine Street	$65,743
Ridge Road	$121,420
Vesper Street	$16,814
Total	**$973,178**



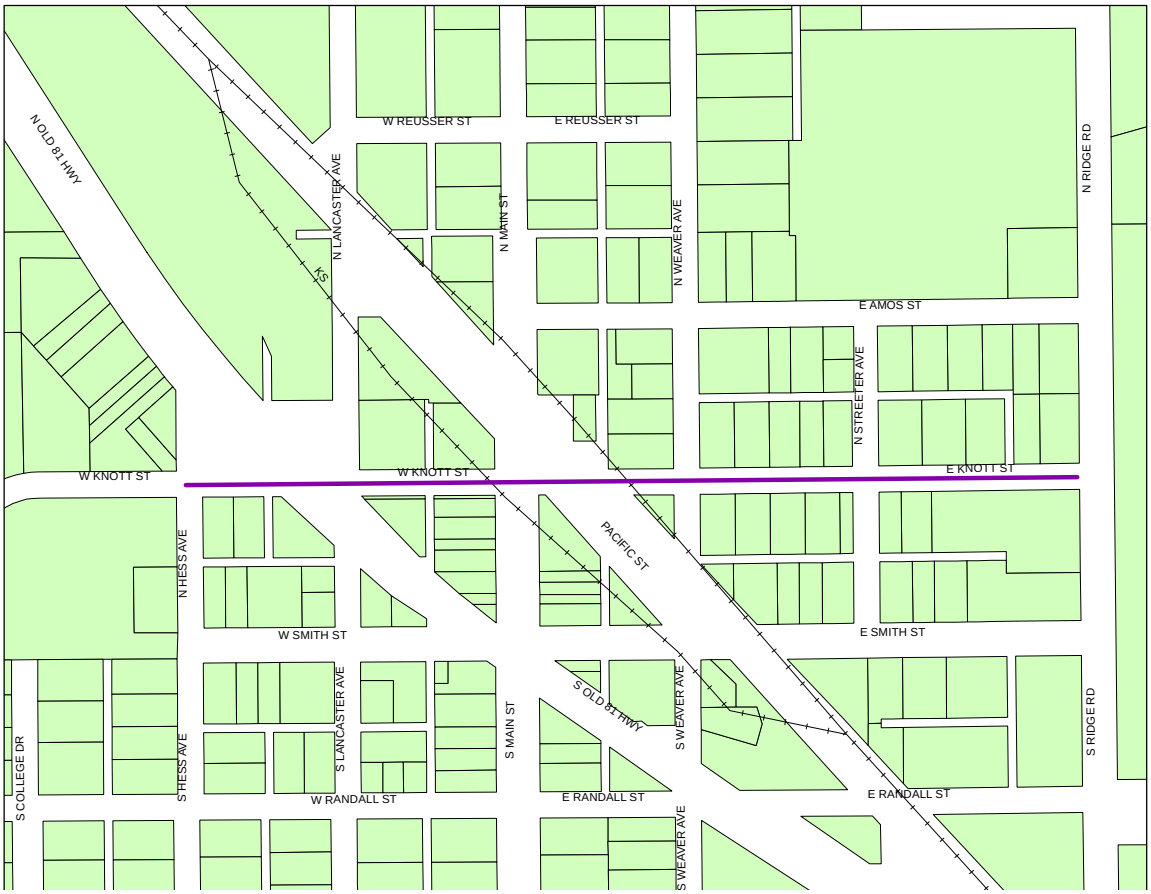
North Old Highway 81

Having functional sidewalks on both sides of Old Highway 81 is key for two reasons. The highway functions as a significant barrier for pedestrians due in part to its odd angle throughout the city. The odd angle makes each crossing much longer than would be necessary if it were at a 90-degree angle. Since the crossing of the roadway is difficult, it is critical that pedestrians can easily walk to the next functioning crossing. Second, the road also has many destinations along its length.



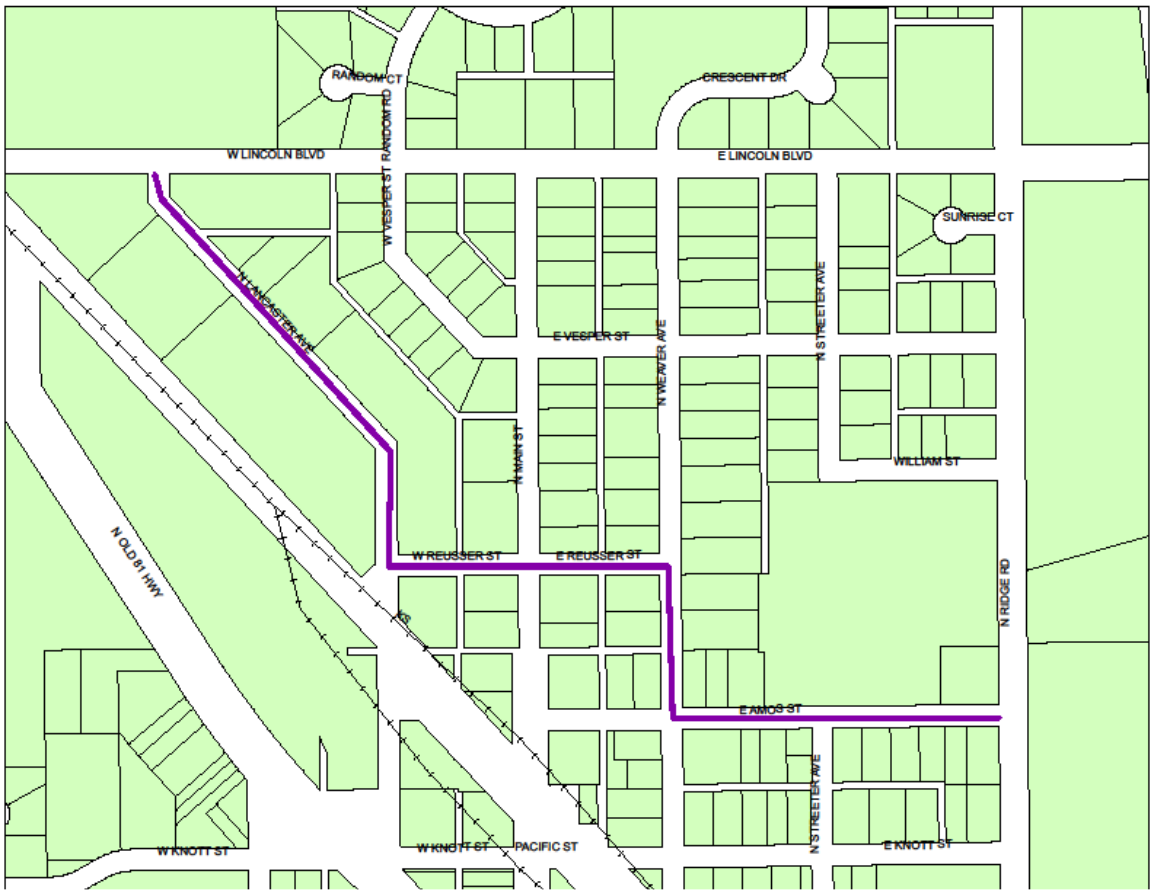
Hickory Road

This sidewalk is a classic example of a "missing link" in the existing sidewalk network. It connects Emma Creek Park with the rest of the existing sidewalk network, and therefore the community as a whole.



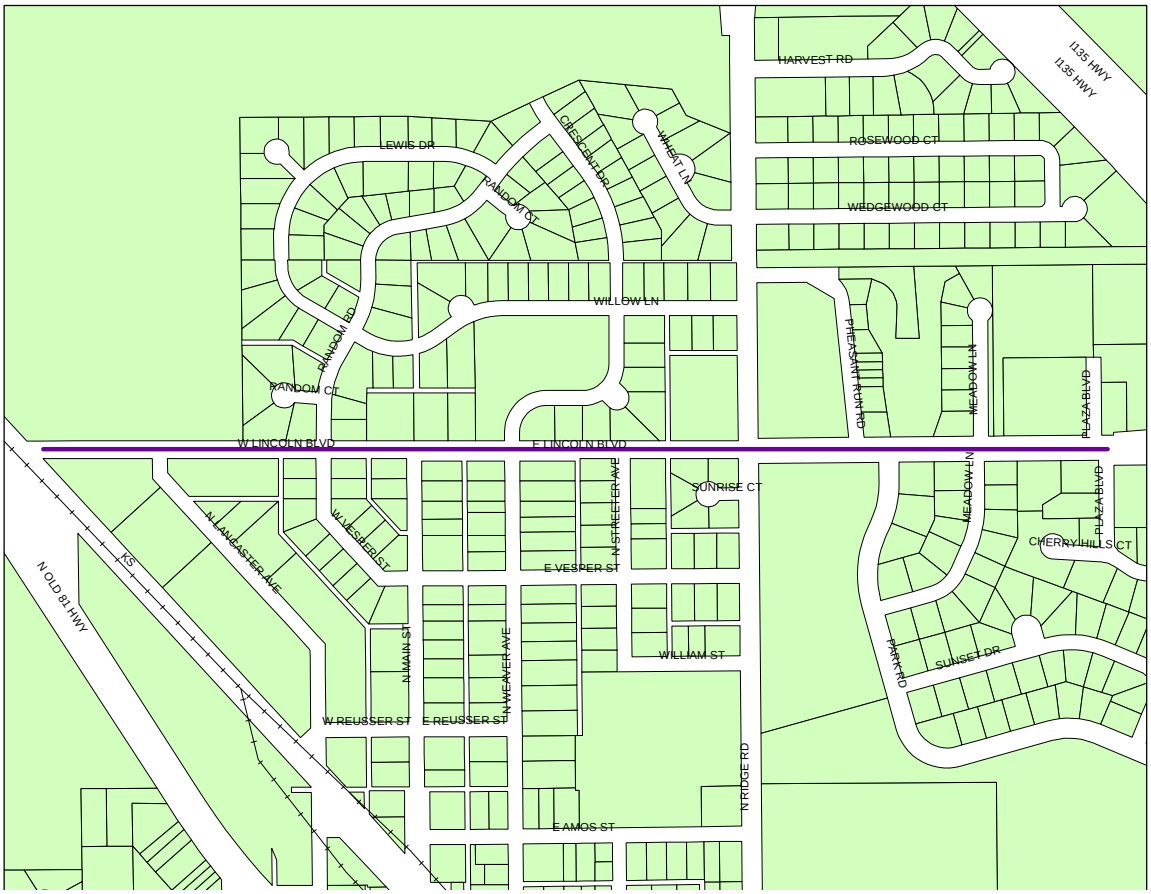
West Knott Street

This section of Knott Street was identified in public comment as necessary to improve the safety of children walking to school. It directly connects a neighborhood to a park and the entire public school system.



Lancaster Avenue

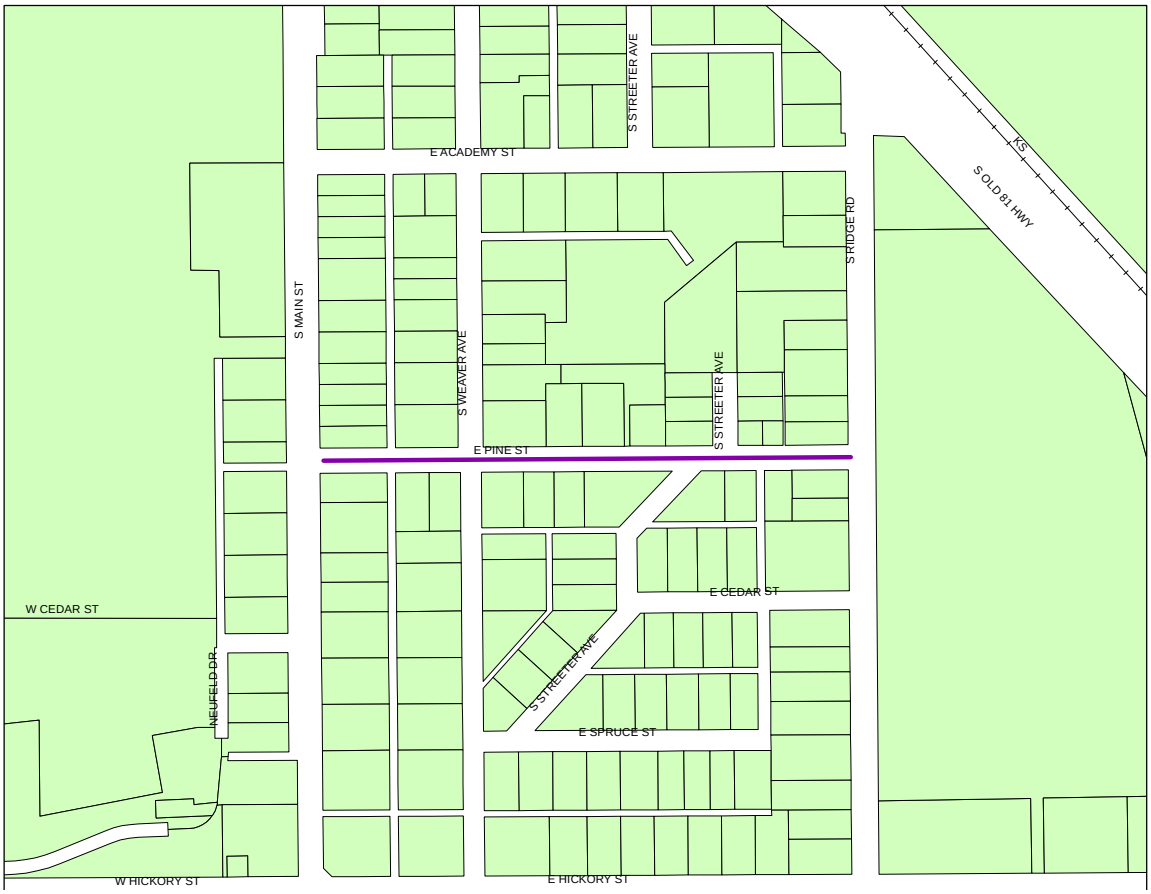
This section connects the surrounding neighborhoods with the police department, Hesston Public Library, and the entire school district.



Lincoln Boulevard

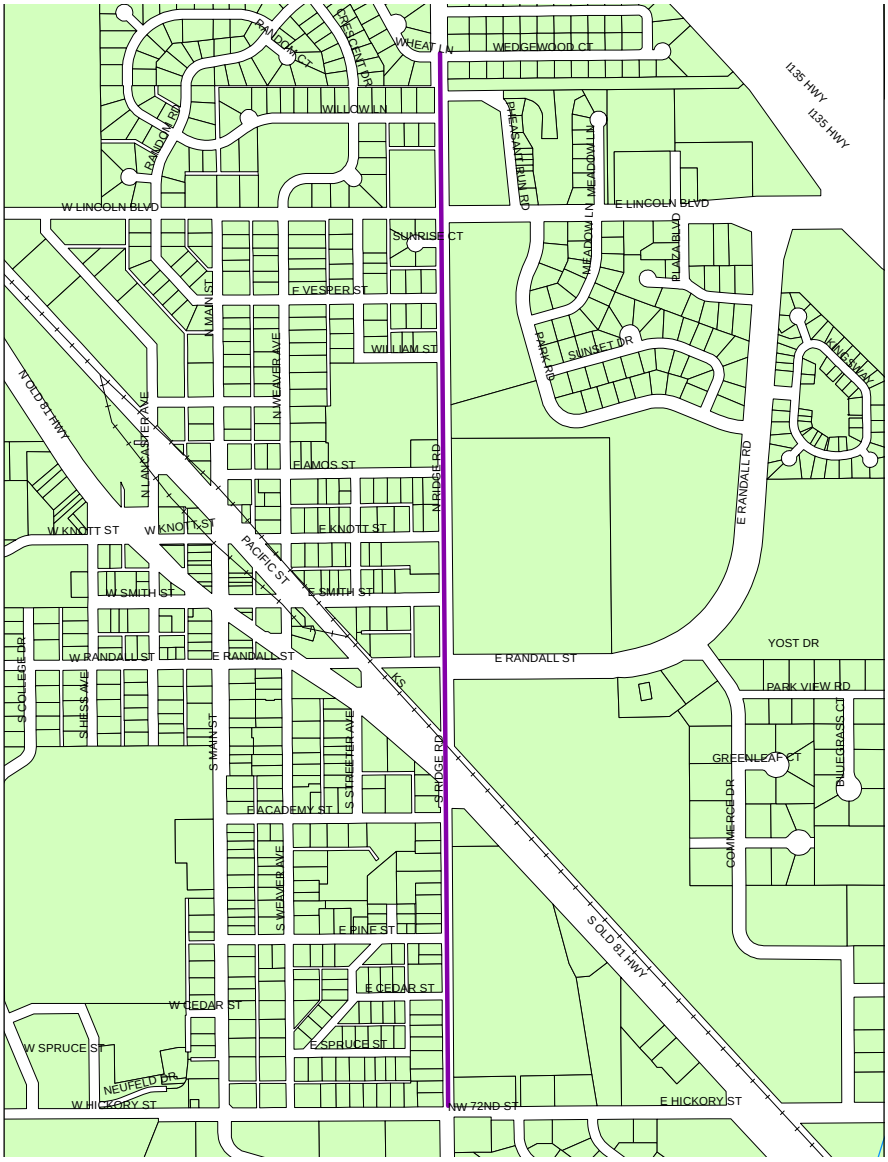
Lincoln Boulevard is the gateway to Hesston off of Interstate I-135. It includes numerous businesses, including AGCO. Currently, the sidewalk is inconsistent throughout the length of Lincoln. There are sections without a sidewalk, sections with a sidewalk on one side of the street, and sections with a sidewalk on both sides.

It's critically important on a heavily trafficked arterial, like Lincoln, to have a sidewalk on both sides of the street because crossings are infrequent and difficult.



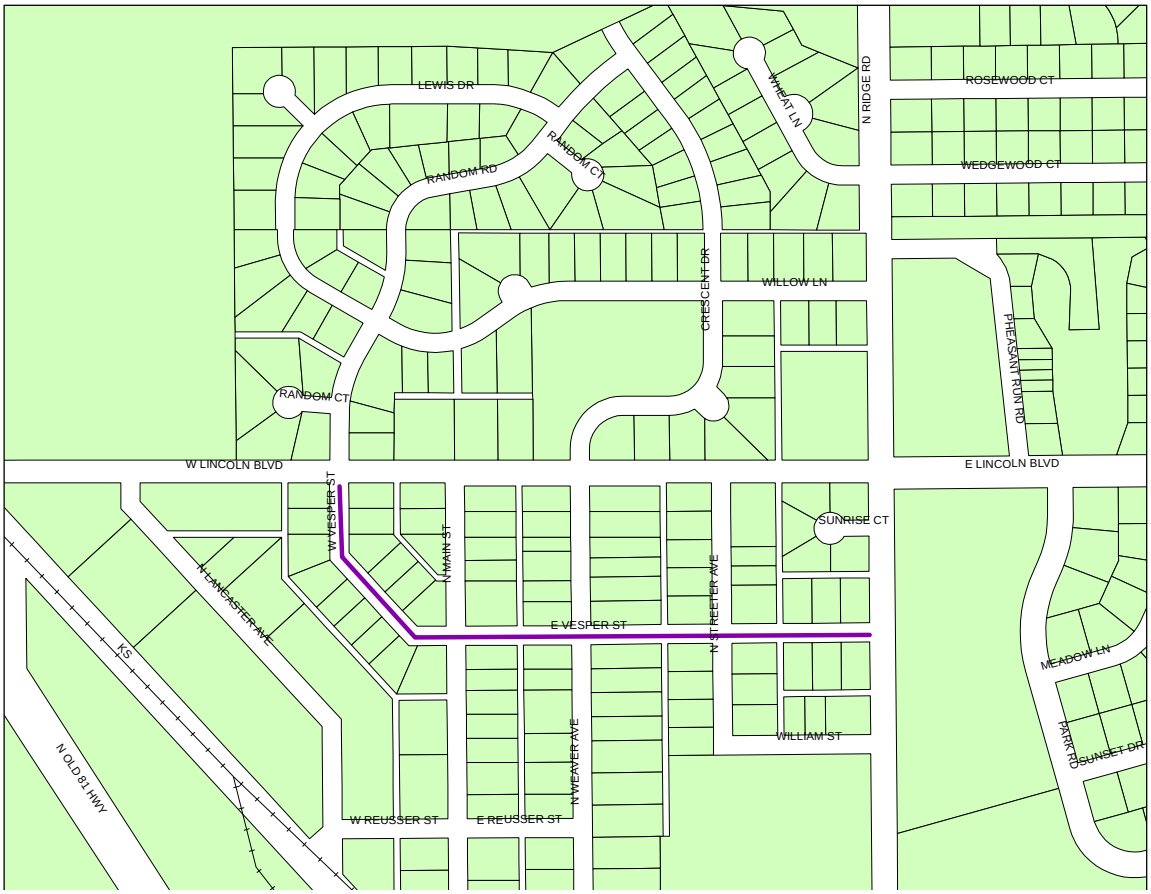
East Pine Street

Pine Street is critical because of its connection to Hesston College. The East/West connections to Hesston College are infrequent, which increases the importance of safe pedestrian pathways on each one. East Academy Street to the north is .13 miles away from East Pine, and East Hickory is .20 miles to the south.



Ridge Road

Ridge Road has sidewalk along only one side throughout most of its length. Having only one sidewalk is problematic because a pedestrian approaching Ridge Road is forced to cross midblock as they are unable to walk to the next official crossing.



Vesper Street

This sidewalk is all about getting children to school. This sidewalk would connect an entire swath of Hesston to the school district without having to traverse the much heavier trafficked Lincoln Boulevard.

Trail Priority Project

Recreational trail use is popular nationwide, representing one of the highest-ranked recreational demands in the United States. Trails serve a wide variety of purposes. They range from functional transportation connectors, which enable citizens to travel safely from one location to another, to the passive and intimate pathways that provide opportunities to enjoy nature in a quiet and personal way.

The development of this trail plan focused on the following objectives:

- Increasing opportunities for people to partake in physical activity
- Increasing the use of "non-motorized" transportation
- Increasing the quality of life of Hesston citizens
- Making Hesston a more "livable" city
- Increasing the safety of bicyclists, pedestrians, and wheelchair users

Trails serve a wide variety of purposes. They range from functional transportation connectors, which enable citizens to travel safely from one location to another, to the passive and intimate pathways that provide opportunities to enjoy nature in a quiet and personal way.

Trail Priority Project: The Hesston Trail

The trail will originate at the eastern trailhead, located in the Windover housing development.

The trail route will proceed to Hoover Road at the southwest corner of Windover and follow Hoover south along the east side of the road. The trail will cross a tributary of Emma Creek and cross Hoover near the entrance to Crosswind Conference Center. An existing 14x10 reinforced concrete box (RCB) will have to be modified to accommodate the trail where Hoover crossed the tributary.

After crossing Hoover, the trail will proceed west along the south side of the tributary to Emma Creek and the I-135 bridges over Emma Creek. The trail will cross Interstate 135 beneath the Emma Creek bridge and enter the municipal golf course on the west side of I-135.

The trail route will continue in a south-southwesterly direction along the east side of Emma Creek and enter the municipal golf course north of the #10 fairway. An existing golf cart bridge crosses the creek immediately east of the #10 tee box. The trail will cross Emma Creek upstream 300-feet north of this bridge. A new bridge will need to be built to facilitate this crossing.

After crossing the creek, the trail will proceed along the base of the pond dam located north of the #10 tee box and wrap around the back (west side) of the tee box, intersecting an existing cart path. The cart

path will then become the route of the trail for approximately 800-feet and proceed south-southwest.

The trail will connect to an existing pedestrian path where it passes the south end of the maintenance facility. At this point, the trail will turn and head west along the current path located on the south side of Golf Course Drive. The existing path will have to be widened along the south side to meet American Association of State Highway and Transportation Officials (AASHTO) standards for a shared-use path.

The trail will cross Golf Course Drive at the intersection with Commerce Drive and continue a short distance north to Randall Avenue. The trail will then cross Commerce Drive at the intersection with Randall Avenue and head west along the south side of Randall.

The trail will continue along the south side of Randall Avenue to the vicinity of the northeast corner of the Excel Industries property. An existing sidewalk enters the USD 460 property near this location on the opposite (north) side of Randall. The trail will terminate at this position as it connects with the school district property.

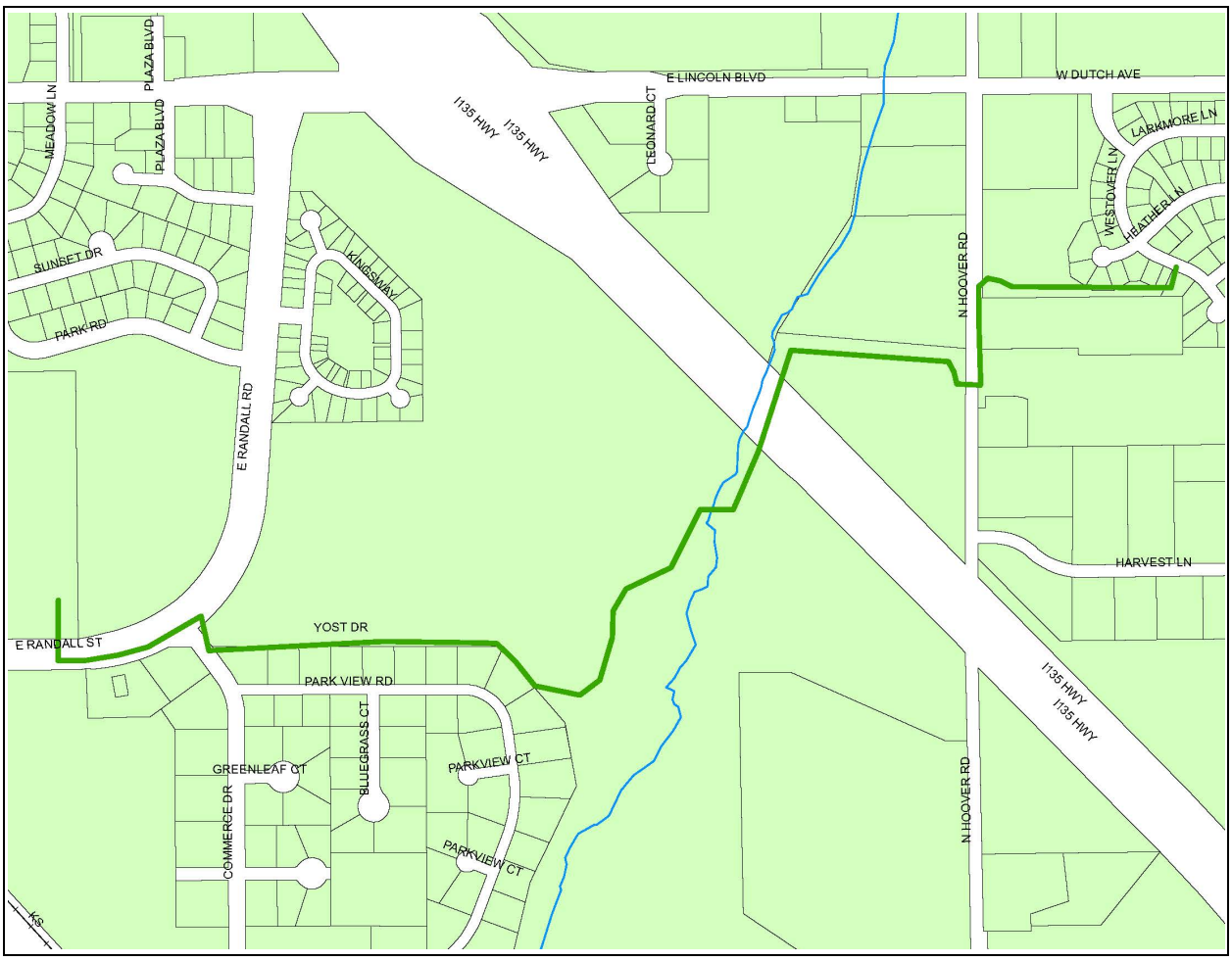
Cost of the Hesston Trail

Approximately 20 years ago a committee designed this trail and submitted a grant allocation to the Kansas Department of Transportation (KDOT). The original budget, with line item costs, is included in the appendix. The PedNet team has taken their costs and adjusted them roughly 22% for inflation. The updated, cost for this trail is $850,000.

Hesston/North Newton Trail

As part of a separate report, MKEC Engineering evaluated the feasibility of constructing a bicycle/pedestrian facility on Hesston Road and NW 36th Street between Hesston and North Newton. While this trail is not a formal part of this bicycle and pedestrian plan, the committee wanted it noted on the record that they support the project. More information can be found in the feasibility study conducted by MKEC Engineering.

Map of Hesston Trail



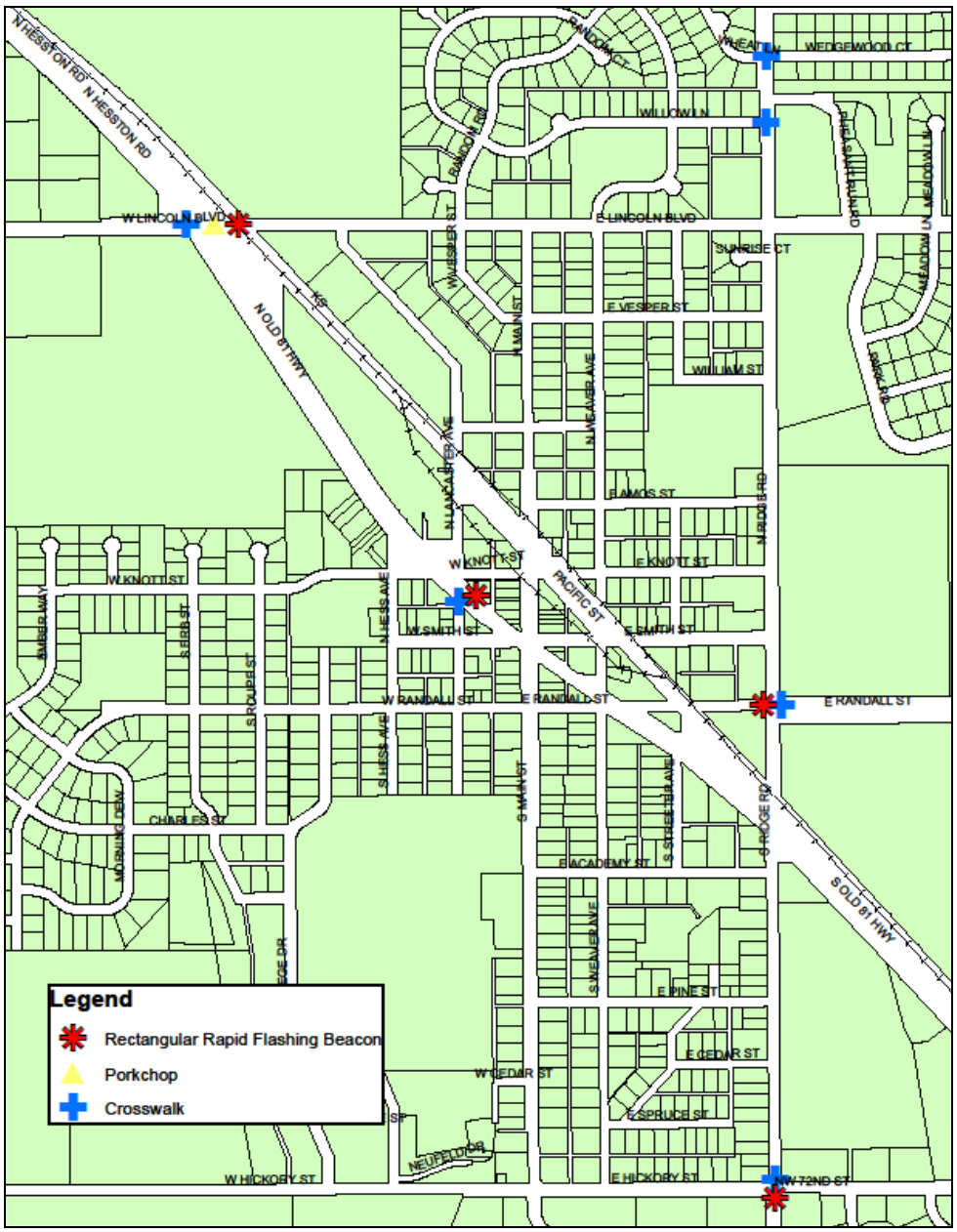
On-Street Facility Priority Projects

Crosswalk Improvements

For crosswalk improvements, we focused on improving intersections that citizens identified as problematic or as feeling unsafe. The table below shows the costs for each project and the following page provides a map of the projects.

Where	What	Cost
Ridge & Randall	Crosswalk	$1,000
Ridge & Randall	Rectangular Rapid Flash Beacon	$15,000
Ridge & Wedgewood	Crosswalk	$1,000
Ridge & Willow	Crosswalk	$1,000
Ridge & Hickory	Rectangular Rapid Flash Beacon	$15,000
Ridge & Hickory	Crosswalk	$1,000
Lancaster & Old 81	Rectangular Rapid Flash Beacon	$15,000
Lancaster & Old 81	Crosswalk	$1,000
Lincoln & Hesston	1 porkchop island	$20,000
Lincoln & Hesston	Crosswalk	$1,000
Lincoln & Hesston	Rectangular Rapid Flash Beacon	$15,000
	Total	**$86,000**

Map of Crosswalk Improvements



Road Diets

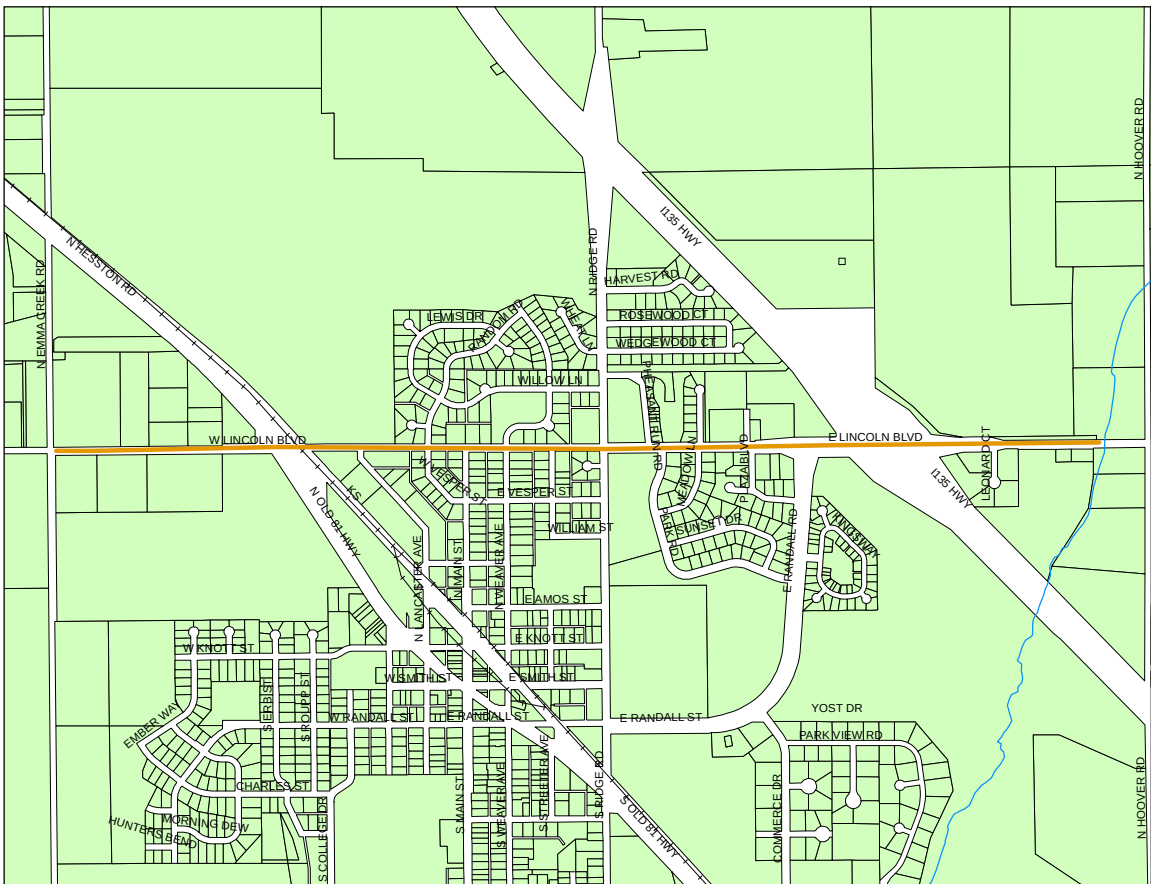
Road diets represent the most significant opportunity for change in Hesston. The road diet works by removing two of the lanes of traffic and replacing them with bicycle lanes and a two-way continuous left-turn lane. The traffic capacity is maintained, and collisions reduced by removing left-turning movements from the travel lanes.

The addition of a two-way continuous left-turn lane means that through traffic is uninterrupted by left-turning vehicles decelerating or stopping in the travel lane. Maintaining the traffic capacity of the roadway is ensured by eliminating turn delays, allowing through vehicles to maintain speed providing a more continuous flow of traffic. This safety improvement also reduces the instances of rear-end collisions.

A road diet not only facilitates bicycle traffic but also increases the automobile capacity and reduces traffic crashes on roadways.

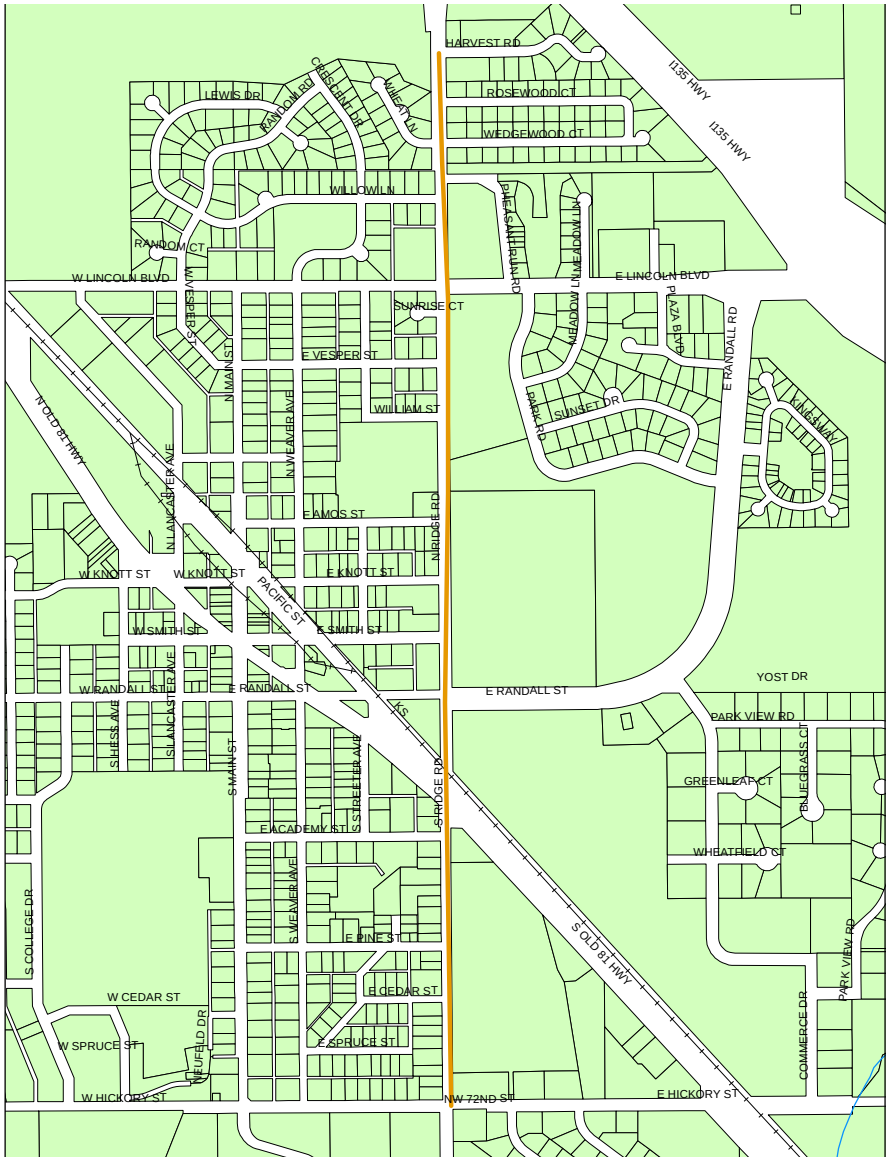
Hesston is fortunate that its two major thoroughfares are perfect for road diets.

Road Diet	Length (Miles)	Costs
Lincoln Road Diet	1	$25,000
Ridge Road Diet	1.35	$32,500
	Total	**$57,500**



Lincoln Boulevard Road Diet

Lincoln Boulevard is the gateway to Hesston off of Interstate I-135. It includes numerous businesses, including AGCO.



Ridge Rd Road Diet

This north-south thoroughfare would benefit from installing a road diet as it includes multiple parks and schools and connects the community.

Total Priority Projects Costs

Improvement	Cost
Sidewalk Projects	$973,178
Crosswalk Improvements	$86,000
Road Diets	$57,500
Trail	$850,000
Total	**$1,966,678**

A map of all priority projects is in the appendix.

Chapter 4: Plan Implementation

Plan Implementation: Design, Policy & Funding

This chapter will cover proper project design, thoughtful policy initiatives, and creative funding mechanisms, all of which are key to implementing this plan.

Best Practices: Sidewalks

While sidewalks may seem simple, the details make all the difference between a good facility and an expensive mistake. It is important that Hesston staff and contractors be well versed in sidewalk design and construction. Across the United States, new sidewalks are being built to comply with the Americans with Disabilities Act (ADA). However, even a minor engineering miscalculation, such as a failure to maintain the proper slope at a driveway, can result in them being too hazardous for wheelchair users.

Sidewalk Width

Five feet should be the minimum width for any sidewalk regardless of location and roadway classification. A 5’ sidewalk provides adequate space for a pedestrian and personal mobility device or two pedestrians to pass. In areas that attract pedestrian traffic and/or where people may congregate, the width of the sidewalk will need to be greater than 5’ to accommodate the situation and circumstances.

The suggested minimum widths for sidewalks are:

- Local Streets: minimum 5’ in width
- Collector Streets: minimum of 5’ in width
- Secondary Arterials: minimum of 5’ in width
- Primary Thoroughfares: minimum of 6 to 8’ in width
- Downtown: minimum of 8’ to 12’ in width

For the non-buffer design sidewalks, increased sidewalk width is needed to provide distance from the street edge or curb to accommodate passing pedestrians and any commercial activity that will share part of the sidewalk. This applies principally to the downtown areas of Hesston.

Sidewalk Zones

Curb Zone

Buffer/Furniture Zone

Pedestrian Zone

Frontage Zone

Sidewalk Zones

A sidewalk has four main design features that are often referred to as "zones." These features are (1) the curb zone, (2) the buffer/furniture zone, (3) the pedestrian zone, and (4) the frontage zone. The curb and furniture zone will be discussed in this section.

One of the curb zone's main purposes is to facilitate the proper water drainage of the street. However, the curb also works to protect pedestrians from motorists who are not maintaining control of their vehicle. For this reason, the curb along sidewalks should be of the "non-mountable," rather than "mountable" variety.

The second zone in sidewalk design is the buffer/furniture zone. This zone has two purposes. It serves as a buffer between the roadway and the sidewalk, and is a place where items can be stored so as to not block the sidewalk.

Furniture zones reduce pedestrians' proximity to passing traffic, increasing their safety and comfort, especially on rainy days when water collected on the street presents a splash hazard. In residential areas, the buffer zone is often grass covered and maintained as part of a lawn. Another option, if the width is sufficient, is to plant trees. However, the trees need to have a suitable growth habit so they do not conflict with overhead utility lines. The buffer aspect of the furniture zone is extremely important to both the safety and comfort of children and people with physical disabilities.

The furniture zone also gives the government and property owners a place to store items that must be near the road. In many areas without a furniture zone, the sidewalk is often blocked several times per week due to those items. This essentially makes the sidewalk useless for its intended purpose. For homeowners, this may include refuse carts, lawn waste, or other items waiting to be picked up. For the government, these items may include utility poles, parking meters, benches, or mailboxes.

Furniture zones, the areas located between the roadway edge and the sidewalk, offer a number of practical advantages and benefits for pedestrians. The minimum widths should be:

- Local Streets: minimum 3 to 5' in width
- Collector Streets: minimum of 3 to 5' in width
- Secondary Arterials: minimum of 4 to 6' in width
- Primary Thoroughfares: minimum of 6 to 8' in width

Continuity

Sidewalks should be continuous along an entire block, from street intersection to street intersection. Sidewalks with missing sections may promote mid-block street crossings or other unsafe pedestrian movements, and are not ADA-compliant.

The Americans with Disabilities Act

Throughout our public forum, Hesston residents commented on the need for improved sidewalks and accessability in various parts of the community.

The Americans with Disabilities Act (ADA) was passed by Congress and signed by President George H.W. Bush on July 26, 1990. The law affects sidewalk that has been built since its passage or sidewalk that has undergone a major repair.

Typically, when one conducts interviews with residents, regardless of their home community, concerns are expressed that there might be crashes due to individuals with disabilities frequent use of their mobility devices on the roadways, rather than on available sidewalks. Citizens will voice frustrations, suggesting that they think these individuals are simply choosing to place themselves in harm's way by using the roadway rather than the sidewalk.

However, sidewalk evaluations completed in most communities reveal that where wheelchair users are using the public streets, it tends to be because the sidewalks are not ADA-compliant. Wheelchairs on the sidewalk system can make few complete trips when compliant sidewalks are periodic and inconsistent. Thus, wheelchair users will remain in the roadway, rather than having to exit the sidewalk each time they encounter a break in the sidewalk or a vertical curb they cannot maneuver.

Right-of-Way Acquisition

Many landowners do not fully understand the concept of the public right-of-way, and may assume that their lawn extends all the way to the curb of the roadway. Even though it is well within the rights of the city to build a sidewalk, it is critical to ensure that yard disruption is minimized, and perhaps even improved with tree plantings or other landscaping, to reduce public complaints and/or opposition to future projects. Most sidewalks can be built without having to purchase right-of-way.

Benefits of Buffer/Furniture Zone

Space for Trash Cans and Other Items

Room for Children to Veer without Falling into Roadway

More Comfort and Safety

Ultimately, after a series of public hearings, a government entity will determine the location of new sidewalks along existing streets. It is vitally important that decision makers consider sidewalks a piece of transportation infrastructure rather than a single amenity for a single neighborhood.

Best Practices: Trails

Trails are a great first step to developing an active community. Initially, they serve as recreation and fitness corridors where citizens start to feel comfortable walking and biking again. As a trail system develops and spreads throughout the city, it will serve the transportation needs of those who live near the trail and work or shop at another point along the trail system. Over time, those transportation trail users become comfortable commuting on the streets. This leads to a portion of the population using both trails and streets to commute, and living a healthier lifestyle.

Trail Materials

As the popularity of trails grows, many cities are faced with a variety of decisions regarding trail design. Municipalities must balance the initial cost of development and the long-term maintenance cost with the goal of providing the best service in the most cost-effective manner possible. The ideal trail system provides a safe place for recreation and a functional option for those who use active transportation. This requires good judgment and sound design to achieve.

Gravel trails are the least expensive to build initially, and many users prefer the natural look and perceived softness to the trail user's joints. The actual savings of going with gravel over a hard surface is usually minimal due to the majority of a trail's cost going to the land acquisition, grading, and bridge development. Gravel is a definite improvement over a natural (dirt) surface for year-round use. Additionally, gravel trails can be a good option where a trail does not have many elevation changes and where a trail is elevated out of a flood area. For this reason, many rail-to-trail conversions use the existing gravel base of the railroad line, add some fine gravel (3/8" minus) on top, and open the trail for use with very minimal expense.

However, snowfall can make gravel trails unusable for extended periods of time due to difficulty in clearing the snow, and rainfall can leave a user with mud on their clothing. Gravel trails also require year-round maintenance, since every time it rains, gravel will wash away and have to be replaced. Over time, this can be expensive.

Trail Material

Gravel Example

Asphalt Example

Concrete Example

Trail Amenities

Bicycle Racks

Parking

Benches

Restrooms

Asphalt trails present different challenges. In parts of the country where there is well-drained rocky or sandy soil, asphalt can be an attractive surface for trails, because it has the best initial smooth surface. Nonetheless, because of seasonal cracking and ongoing maintenance requirements, it is not a good option, as the initially smooth surface lasts only a couple of years before the trails become riddled with cracks. If a hard surface trail is chosen, it should be concrete, as asphalt trails are only slightly less expensive than concrete.

Concrete trails tend to last the longest with the least amount of maintenance. They are slightly more expensive initially, but the savings in maintenance, labor, and materials compared to a gravel trail can be recovered in five to ten years. Concrete trails are necessary wherever a trail may flood, or where a trail experiences slopes exceeding five percent. Therefore, any trail built in a floodplain should be a concrete trail. For these reasons, concrete trails are generally preferred.

Concrete and Gravel Cost

Construction estimates and bids can fluctuate greatly depending on topography, existing site conditions, site accessibility, and drainage issues. For the purpose of this comparison, we have assumed that this is new trail construction in a bottomland setting. Bridge costs, design, engineering, surveying, acquisition, signage, and amenities (e.g., restrooms, drinking fountains, and parking lots) are virtually the same regardless of material type, and thus are computed in the same way for this comparison. Because surface flow is more complex with gravel trails, extra pipe and ditching is required to minimize storm water damage. Excavation time and soil removal is greater for gravel trails, because depth is greater and more soil must be hauled away.

Tree Removal

Trees, especially in trail corridors, are a tremendous asset and typically, trail users demand that trees be planted and preserved along trails. Therefore, it is important to incorporate extensive tree planting to compensate for lost trees wherever tree removal is necessary.

Trail Amenities

At the outset, development of a trail system should focus on getting miles of trail built. As the trails become popular, there will be demand for additional facilities, such as drinking fountains, restrooms, and parking lots, so that recreational users can drive to a trailhead. In

order for users to learn where they are on a trail and where they can go, signage is essential. As the trail system develops, benches and fitness equipment can be added to further enhance the trail experience.

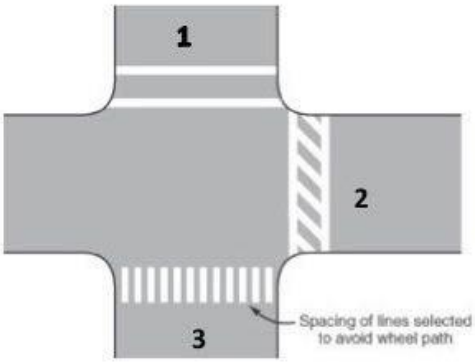
Trail Policies

One of the issues Hesston citizens will have to discuss is what level of easement and land acquisition, if any, the city wants to pursue to develop trails and other bicycle and pedestrian improvements.

Trails are a linear facility much like roads and utility (sewer, electric, and water) lines. Typical trail development first occurs along abandoned railroad corridors and along streams where there is no development and little opposition to trails. As the trail system grows, and trail system connections are less obvious, the communities will need to determine what level of land acquisition is acceptable.

With any proposed plan, there will be a mix of excitement and reservation from citizens. Right-of-way acquisition and utility relocation may be necessary for various types of pedestrian improvements. Parking along streets may be lost or lessened as part of proposed road improvements. There will be situations where tree removal is inevitable in order to build a trail. Therefore, it is critical to address these issues as part of initial design discussions, so there are no surprises during construction that may upset Hesston residents.

There are numerous examples that show trail development is positive for communities and increases residential property value. Nevertheless, it is common for citizens to be concerned about change to their cities, especially if a proposed trail is near their property. However, trail users are generally people who care about the environment and are good stewards of their natural resources. They tend to pick up trash instead of leaving it. Negative activities that might otherwise occur in an isolated area, like an abandoned railroad corridor, tend to be discouraged by positive use of the area.



The image above showcases three types of crosswalks. Credit: Federal Highway Administration

Best Practices: On-Street Facilities

Crosswalks

Marked crosswalks are vital for pedestrian mobility and safety. They signal to pedestrians that the location is safe to cross and that they have the right-of-way in that area.

Example, Poorly Painted Mid-Block Crosswalk

From the Pedestrian Point-Of-View, the Crosswalk Looks Visible

From the Drivers' Point-Of-View, the Crosswalk Cannot be Seen From an Appropriate Distance

On-Street Parking Blocks Motorists' and Pedestrians' Sight Lines

Photo credits: Michael Ronkin and Charlie Zegeer

Drivers are instructed by Kansas law to "yield when a pedestrian is in a crosswalk" to allow that pedestrian to cross. However, motorists typically only stop if the crosswalk has been installed properly.

While there are a variety of crosswalk markings, three are discussed in this section (see diagram on the previous page):

1. Two transverse lines
2. Zebra stripe
3. Continental stripe

"Two transverse lines" are the least visible of the three crosswalk types, and should only be used in locations where traffic would otherwise be stopped. It is recommended that either the "zebra" or the "continental" stripe design be used, especially for mid-block crossings.

Some crosswalks are located in positions known as "mid-block." Mid-block means that there is not an intersection nearby and that traffic will only stop at the crosswalk if a pedestrian is crossing. These are the type of crosswalks where particular attention to best practices needs to be paid.

In the photos to the left, you can see that painting two transverse lines looks sufficient from the pedestrian's point of view before s/he enters the street. However, the next photograph illustrates how difficult it is to see the crosswalk from the distance at which a driver would have to make a decision about whether or not to stop or yield to a pedestrian.

Hesston should use either the "zebra" or "continental" style of crosswalk and discontinue the use of the "two transverse lines" in mid-block locations.

On-Street Parking and Mid-Block Crosswalks

Significant attention should be paid to mid-block crosswalks that occur in places where on-street parking is allowed. This is because the parked vehicles can block the pedestrian from the motorist's sight lines and can block the pedestrian's view of the street.

The final photograph to the left demonstrates how dangerous this combination of on-street parking and poorly visible crosswalks can be for all road users. A child or person using a wheelchair, traversing from right-to-left, would be completely blocked by the parked vehicle until directly in the path of oncoming traffic.

There are two solutions to this situation:

1. Restricting on-street parking near mid-block crossings
2. Creating "bulb-out" extensions for crosswalks

If the demand for on-street parking is minimal, it is encouraged to restrict parking adjacent to mid-block crosswalks, and to consider restrictions to on-street parking near these crossings.

A "bulb-out" is an extension of the curb into the street to narrow the crossing distance for pedestrians and slow traffic via lane narrowing. The photo to the right shows an example of a bulb out.

Bulb-out Crosswalk Design. Credit: Federal Highway Administration

This allows the pedestrian to advance past parked vehicles to see oncoming traffic prior to crossing the street.

On-Street Parking and Bicycle Lanes

Typically, whether or not parking is allowed in bike lanes is left up to the city ordiance to decide as there is no official Kansas State law. However, section 9 of the Kansas Driving Handbook, "Sharing the Road," covers how drivers should interact with bicyclists. Within the "Bicyclists" portion of this section, the Handbook states, "As a driver… Do not stop, park, or drive on a designated bicycle path or lane unless you are entering or leaving an alley or driveway, performing official duties, directed by a police officer, or an emergency situation exists." Thus, within Hesston, parking is not encouraged anywhere that a bicycle lane exists except in the aforementioned circumstances.

When a motorist is driving in their traffic lane, they have the expectation that a parked automobile will not obstruct the lane. Bicyclists also deserve the ability to ride with the expectation that their travel lanes will be free of parked vehicles.

Nonetheless, it often becomes contentious when a community's citizens propose that their local governance remove existing parking or strongly enforce parking restrictions. Those who are against removal of existing parking may cite that the parking is necessary, because local homes may lack driveways and must rely on the availability of on-street parking. Occasionally, due to the controversial nature of the debate, a local government may lack the political will necessary to legislate parking removal or prohibition on a particular street.

For example, the City Council of Columbia, Missouri decided that they would never be able to install a bicycle lane system if the city

was forced to ban parking in order to install this system. Consequently, they voted against the adoption of Section 300.330 of Missouri's Model Vehicle Code, which states, "A designated bicycle lane shall not be obstructed by a parked or standing motor vehicle or other stationary object." Therefore, parking remains legal in bicycle lanes in Columbia.

There are positives and negatives to either approach, but the issue is one about which city leaders should be aware, because it will need to be addressed.

Funding for Bicycle and Pedestrian Projects

Hesston Bicycle and Pedestrian Master Plan

The Hesston Bicycle and Pedestrian Master Plan has identified the following priority projects:

- $973,178 in Sidewalk Projects
- $86,000 in Crosswalk Improvements
- $57,500 in Road Diets
- $1,521,321 in the Hesston Trail

Answers to funding include:

- Adopt a Bicycle and Pedestrian Master Plan (priority list in Chapter 3);
- Seek external sources of funding;
- Reexamine the allotment of available revenue; and
- Identify potential new internal sources of funding.

It is important to have consensus on the projects, priorities, and potential funding in order to move forward with a coordinated program of projects that advance bicycle and pedestrian improvements. One step toward this effort would be for Hesston to consider the adoption of the priority projects listed in Chapter 3 as the "Hesston Bicycle and Pedestrian Master Plan."

Adoption of the priority projects listed in Chapter 3, as the "Hesston Bicycle and Pedestrian Master Plan" would formalize the plan as a goal of the City of Hesston and authorize staff to identify funding to complete those projects.

This action would formalize the plan as a goal of the City of Hesston and authorize staff to identify funding to complete those projects, but would not direct any funds towards the plan.

This will help staff identify potential future trail corridors and connections to protect them. For instance, if a new subdivision is being planned near a future trail, then government officials can ask the developer for an easement to allow for that subdivision to be

connected to the future trail, whenever funding is secured to build it.

There exist a variety of potential funding sources to which Hesston has access. Yet, some sources are inconsistent or the allocation is outside of their control. For example, due to Kansas' present budget woes it is difficult to draw a conclusion as to how reliable those funds will be. Therefore, local sources of funding need to be considered.

In some communities, elected leaders state that they will not allow any local tax dollars to be used on active transportation. They do this to "tamp down" opposition and defend their position of financial responsibility. Instead, they indicate that grants will be used, which reassures residents that things can be built without anyone in the local community having to pay for them. There are two negative repercussions to this: (1) local citizens should pay at least a portion of the facilities (it is only fair), and (2) all federal grants (the main source of available non-motorized grants) require a 20% local match. Therefore, even if it becomes a matter of policy to rely on grants, at least some local funds will need to be spent on active transportation. The real question is where that money should come from.

New Internal Sources of Funding

With the improvements and construction of sidewalks, bike lanes, and trails, Hesston residents will continue to see the quality of their lives improve. As people begin to commute and recreate by bicycle along a new trail, or walk around their neighborhood on a new sidewalk, they may begin to wonder why other areas in the community do not look the same.

This Bicycle and Pedestrian Transportation Plan's maps are designed to positively influence public opinion when it comes to new bicycle and pedestrian projects, an impact that will be compounded by community members' experiences actually using the new multimodal infrastructure. At some point, Hesston citizens may be ready to vote to tax themselves to make more significant progress on the community's bicycle and pedestrian network.

Federal Funding

Almost all outside funding for bicycle and pedestrian facilities flows from the federal government. In fact, even grants that pass through state agencies like the Kansas Department of Transportation originate from the Federal Highway Administration by way of legislation, which dictates how federal transportation funding is spent.

There are two state agencies that administer federal funding that can be used for bicycle and pedestrian facilities: (1) the Kansas Department of Transportation (KDOT) and (2) the Kansas Department of Wildlife, Parks and Tourism (KDWPT). The Kansas Department of Transportation has programs funded through the Federal Highway Administration by way of the latest federal transportation legislation.

In December of 2015, Congress passed the "Fixing America's Surface Transportation Act" or FAST Act. It was signed into law by President Obama on December 4, 2015 and passed as a five-year bill. Here is a breakdown of information about the FAST Act:

- The Transportation Alternatives (TA) Program has been replaced with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives and included a small increase in funding for active transportation (i.e. walking, biking, etc.) infrastructure and programming (Federal Highway Administration, 2016).
- From 2016 to 2017 funding for TA Set-Aside was $835 million. From 2018 to 2020, this will increase to $850 million (Federal Highway Administration, 2016).
- A number of factors such as, population, road miles, etc. determine how much money each state receives. Kansas was expected to receive about $11 million in 2017 and is expected to receive about $7 million in 2018 for TA Set-Aside (Kansas Dept. of Transportation, 2017).
- In areas over 200,000 people, the Metropolitan Planning Organizations (MPOs) are in charge of choosing the projects and in areas under 200,000 the state department of transportation is in charge (Safe Routes to School, 2015).
- TA Set-Aside still requires a 20% state or local match, just as the TAP program did (Safe Routes to School, 2015).
- This new funding will allow large MPOs to divert up to half of their funds to transportation projects other than active transportation. While it isn't expected to be an issue, advocates, especially in larger cities, should work with their MPOs to ensure the funds are used for active transportation (SRTS National Partnership, 2015).

- States are now encouraged to adopt Complete Streets standards for the planning, development and operation of federally funded transportation projects (SRTS National Partnership, 2015).
- The TA Set-Aside program allows state and local nonprofit organizations that work on transportation safety to compete for funding (SRTS National Partnership, 2015). However, the Kansas Department of Transportation (KDOT) has decided that nonprofits are not eligible to apply for projects or funding.

The Kansas Department of Wildlife, Parks and Tourism administers two programs: (1) the Land and Water Conservation Fund (LWCF) and (2) The Recreational Trails Program (RTP). The program provides 50 percent reimbursement to select outdoor recreation projects. The Land and Water Conservation Fund grant applications are typically due in April every year (Kansas Parks, Wildlife, and Tourism, 2018). The Land and Water Conservation Fund Act was conceived in 1965 with a 50-year term that expired on October 1st, 2015. However, in December of 2015, the program was renewed for three years. The Recreational Trails Program provides 80 percent matching funds on a reimbursement basis. Grants are typically due on August 1st of every year (Kansas Parks, Wildlife, and Tourism, 2018).

Non-Government Funding

While there are philanthropic organizations that fund projects to increase bicycling and walking, most of these organizations prefer to fund policy changes rather than small capital improvement projects. If given the choice between funding a particular sidewalk project or funding an initiative that would result in a policy change ensuring that bicyclists and pedestrians begin to get their fair share of transportation sales taxes in a community, most funders would prefer the second option, because they consider the policy change to be a permanent fix to the problem. After all, building a single sidewalk and then continuing with "business as usual" does not result in impactful change.

If Hesston hopes to compete for these philanthropic dollars, the city will need to look at the funding pursuit differently than it would the pursuit of a government grant. Groups like the Robert Wood Johnson Foundation are primarily interested in advocacy and policy change, whereas government grants usually cannot fund advocacy or policy changes. Grants with advocacy agendas are best pursued by a non-profit organization acting as the fiscal agent on behalf of the county or city as a potential partner.

While the funders' "end goal" is often a new policy rather than the sidewalk itself, capital improvements, i.e. sidewalk and trail projects, can sometimes be part of the project.

Public-Private Partnerships

As federal sources of transportation dollars shrink, public-private partnerships are becoming more important. Perhaps Unified School District 460 can contribute to a "Sidewalk Fund" to be used as matching dollars on future federal sidewalk grants. Even $5,000 or $10,000 per year can go a long way towards securing potentially hundreds of thousands of dollars for new sidewalks. Potential public-private partnerships might also include large local employers contributing to a matching fund.

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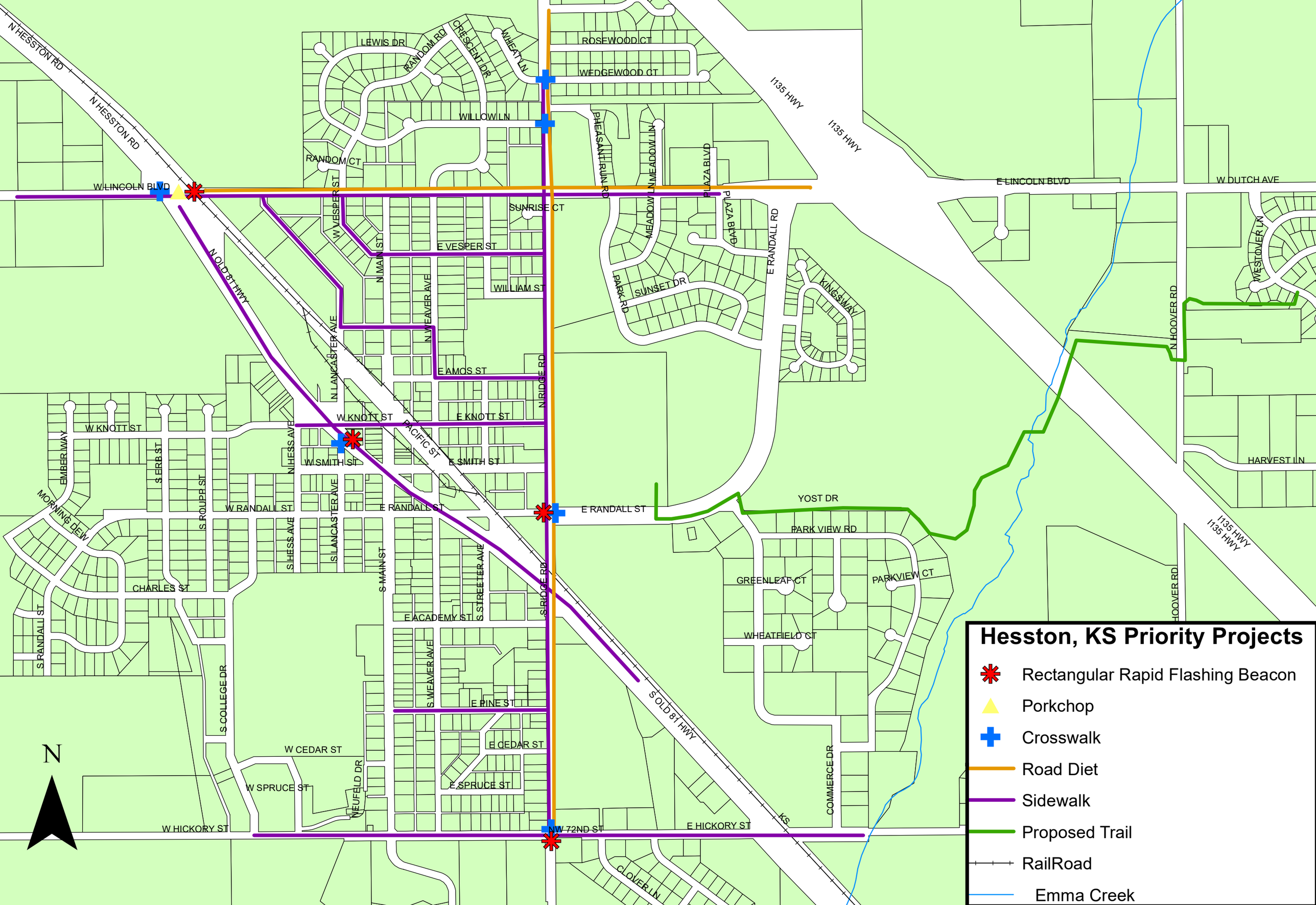
Appendix


N HESSTON RD
N HESSTON RD
LEWIS DR
RANDOM RD
CRESCENT DR
WHEAT LN
ROSEWOOD CT
WEDGEWOOD CT
I135 HWY
I135 HWY
WILLOW LN
PHEASANT RUN RD
MEADOW LN
PLAZA BLVD
PLAZA BLVD
RANDOM CT
W LINCOLN BLVD
E LINCOLN BLVD
W DUTCH AVE
W VESPER ST
SUNRISE CT
N MAIN ST
E VESPER ST
E RANDALL RD
N OLD 81 HWY
WILLIAM ST
PARK RD
SUNSET DR
KINGSWAY
WESTOVER LN
N WEAVER AVE
N LANCASTER AVE
N HOOVER RD
E AMOS ST
N RIDGE RD
W KNOTT ST
E KNOTT ST
PACIFIC ST
W KNOTT ST
EMBER WAY
N HESS AVE
W SMITH ST
E SMITH ST
HARVEST LN
S ERB ST
S ROUPP ST
W RANDALL ST
E RANDALL ST
E RANDALL ST
YOST DR
PARK VIEW RD
MORNING DEW
S LANCASTER AVE
S HESS AVE
S MAIN ST
S RIDGE RD
I135 HWY
I135 HWY
GREENLEAF CT
PARKVIEW CT
CHARLES ST
S STREETER AVE
HOOVER RD
S RANDALL ST
E ACADEMY ST
S WEAVER AVE
WHEATFIELD CT
S COLLEGE DR
S OLD 81 HWY
E PINE ST
W CEDAR ST
E CEDAR ST
COMMERCE DR
NEUFELD DR
W SPRUCE ST
E SPRUCE ST
W HICKORY ST
NW 72ND ST
E HICKORY ST
KS
CLOVER LN
N
Hesston, KS Priority Projects
Rectangular Rapid Flashing Beacon
Porkchop
Crosswalk
Road Diet
Sidewalk
Proposed Trail
RailRoad
Emma Creek

PROPOSED LINEAR TRAIL - PHASE ONE

HESSTON, KANSAS

BUDGET ESTIMATE

(Based on Trail Segment from Windover to USD 460)

Prepared by: Schwab-Eaton, P.A.
Date: November 01, 2004

DESCRIPTION	QUANT.	UNIT	UNIT COST	AMOUNT
Removals/Site Preparation	1	L.Sum	$20,000	$20,000
Excavation & Grading	3500	Cu.Yds.	$5.00	$17,500
Off-Site Borrow	500	Cu.Yds.	$7.00	$3,500
Conc. Path (10'w. x 4"th)	4900	Lin. Ft.	$35	$171,500
Conc. Path (5'w. x 4"th)	2300	Lin. Ft.	$20	$46,000
42" CMP Culvert	40	Lin. Ft.	$50	$2,000
36" CMP Culvert	35	Lin. Ft.	$40	$1,400
30" CMP Culvert	100	Lin. Ft.	$35	$3,500
Riprap	100	Cu.Yds.	$50	$5,000
Prefab. Bridge (12' w. x 32' l.)	1	L.Sum	$35,000	$35,000
Brdige Abutments	55	Cu.Yds.	$600	$33,000
RCB Extension (14'x10'x20' l)	1	L.Sum	$30,000	$30,000
RCB Wings w/ Soil Saver	1	L.Sum	$15,000	$15,000
Site Furniture	8	Each	$1,200	$9,600
Signage	1	L.Sum	$2,000	$2,000
Crossing Signal	1	L.Sum	$35,000	$35,000
Pavement Markings	1000	Sq.Ft.	$3.50	$3,500
Landscaping	1	L.Sum	$10,000	$10,000
Seeding	4	Acre	$3,000	$12,000
Erosion Control	1	L.Sum	$5,000	$5,000
SUBTOTAL:				**$460,500**
Mobilization (5%):				*$23,000*
Contingencies (10%):				*$46,100*
CONSTRUCTION TOTAL:				**$529,600**
Esmts. & ROW				*$10,000*
Utility Adjustment				*$0*
Construction Engineering (10%):				*$53,000*
2004 TOTAL PROJECT COST:				**$592,600**
Inflation Factor				*1.113*
INFLATED TOTAL PROJECT COST:				**$659,600**
% Federal Aid Requested:	***80%***			***$527,700***
% Local Match:	***20%***			***$131,900***
Design & Survey Fees:				*$40,000*
TOTAL LOCAL EXPENSE:				**$171,900**

Hesston, KS

N

Hesston, Kansas

City of Hesston
Railroad
Emma Creek

Sidewalk Score

Parcels
No Sidewalk
Sidewalk Needs Total Replacement, Non-Functional
Sidewalk Needs Replacement, Usability Questionable
Repairs Needed, But Usable
Imperfections, But Repairs Not Necessary
Appears To Be In Perfect Condition