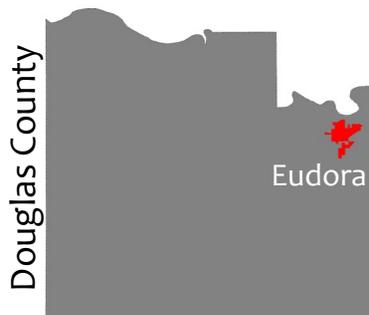


Eudora



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Background

Located 10 minutes East of Lawrence and 15 minutes West of the Kansas City metropolitan area, Eudora is home to 6,500 residents. Its unique location offers residents the opportunity to live close to the amenities of a university community as well as a large city while still retaining a small town atmosphere. Eudora's elementary, middle, and high school make it an attractive place to raise a family.

Existing Pedestrian Infrastructure - Eudora

In 2014, MPO staff walked all sidewalks locations within Eudora and recorded defects as they encountered them. Staff inventoried the sidewalks for the following defects:

- Vertical deflections <1”
- Vertical deflections >1”
- Horizontal gaps
- Tree roots
- Cross slope
- Brick resets
- Manholes
- Missing sidewalk
- Gaps
- No ADA ramp exists
- ADA ramp compliant
- ADA ramp non-compliant

A map of this inventory can be found in Figure 3.1, and photo examples of defects can be found in Appendix A.

Findings

Maintenance

Maintenance includes the repair of existing sidewalk defects as well as replacing missing panels within a continuous sidewalk. The cost to repair existing sidewalk defects throughout Eudora is estimated at \$175,830. Estimates do not include ancillary costs such as tree removal or utility relocation. Detailed sidewalk defect information can be found in Table 3.1.

Ramps

The inventory identified 144 ADA compliant ramps, 166 which were not ADA compliant, and 615 locations where no ramp exists. The average cost to construct an ADA compliant ramp is \$800. The estimated cost to install or repair ramps on existing sidewalks is \$624,800. This estimate does not include ramps to be added to

newly constructed sidewalk where no sidewalk currently exists. Complete ramp information can be found in Table 3.2.

Missing Sidewalk

The estimated cost for installing missing sidewalk on at least one side of every street in Eudora is \$2.3 million. The estimated cost for installing sidewalk on both sides of every street in Eudora is \$5.6 million. These estimates do not include the previously discussed costs of ramp construction or maintenance to existing sidewalks. A map of missing sidewalks is shown on the following page. Complete missing sidewalk costs can be found in Table 3.3.

Table 3.1: Eudora Sidewalk Defects (2014 Sidewalk Inventory)

Sidewalk Defect	Linear Feet
Replacement Required (multiple defects)	2,225
Vertical Deflection less than or equal to 1"	479
Vertical Deflection more than 1"	789
Horizontal Gap	30
Tree Roots	N/A
Cross Slope	35
Brick Reset*	2,249
Manhole	54
Total Linear Feet of Defects	5,861

Table 3.2: ADA Ramps on Eudora Sidewalk Network

Ramp Type	Count	Cost to Repair/Build
ADA Compliant	144	N/A
Not ADA Compliant	166	\$132,800
Does Not Exist	615	\$492,000
Total	925	\$624,800

*assumes an \$800 estimated cost to replace each ramp

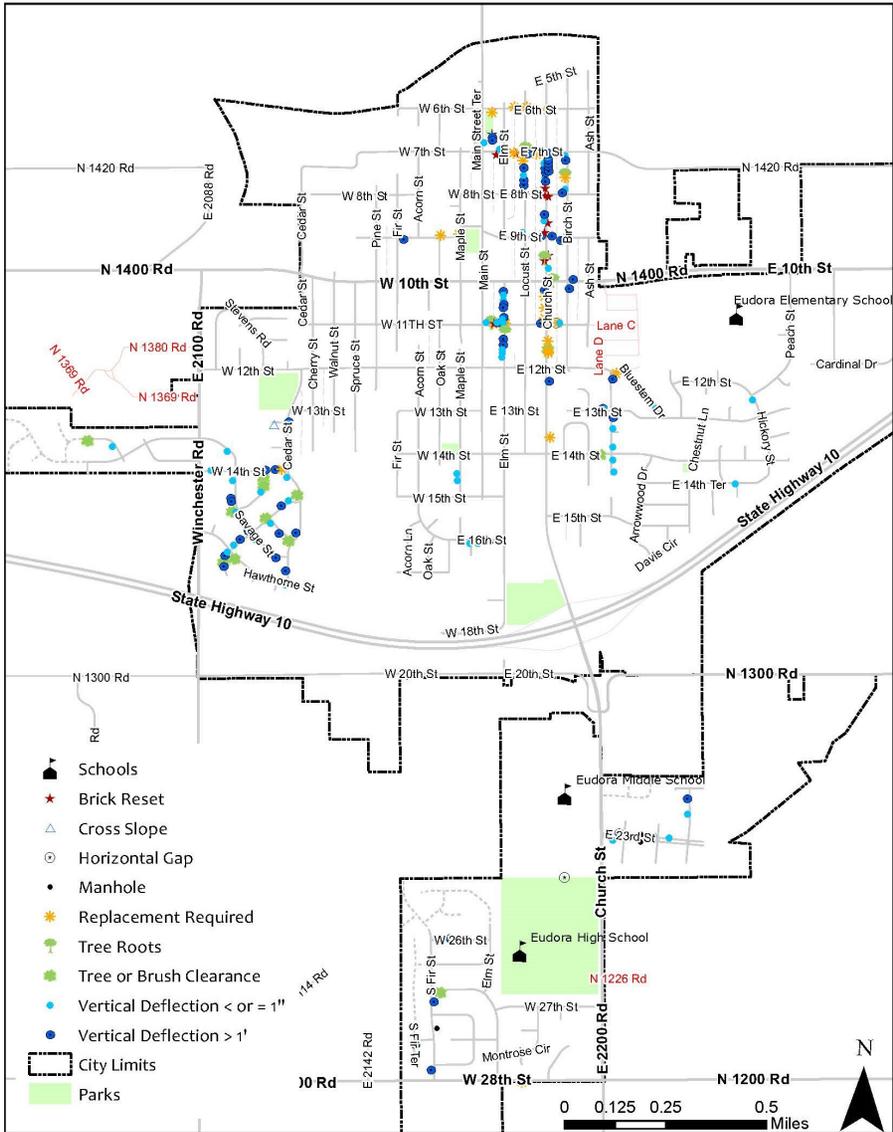
Table 3.3: Eudora Sidewalk Cost Summary

		Width (Sq Ft)	Cost*
Missing Sidewalk	Linear Feet of Missing Sidewalk:	185,145	
	Miles of Missing Sidewalk:	35.07	925,725
	Miles of Missing Sidewalk Needed so Sidewalk Exists on at Least One Side:	14.74	389,136
Sidewalk Defect	Linear Feet of Defects	5,861	29,305
			\$5,554,350
			\$2,334,816
			\$175,830

*Cost estimates for developing sidewalks does not include ancillary costs and assumes a 5 foot width at \$6 per square foot



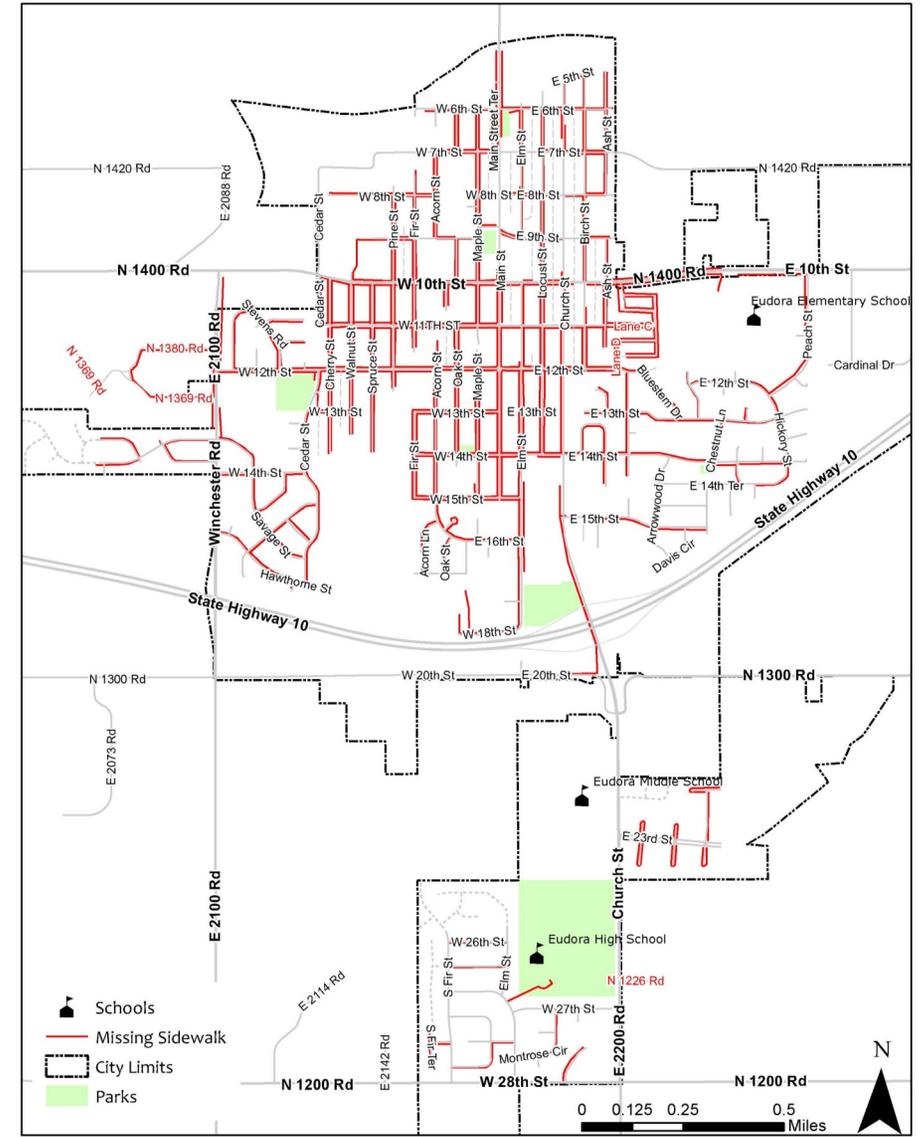
Figure 3.1: Eudora Sidewalk Defects (2014 Sidewalk Inventory)



Data compiled as a point in time analysis for the Regional Pedestrian Plan by the Lawrence-Douglas County MPO and the City of Lawrence. Plot date: 7/12/2016

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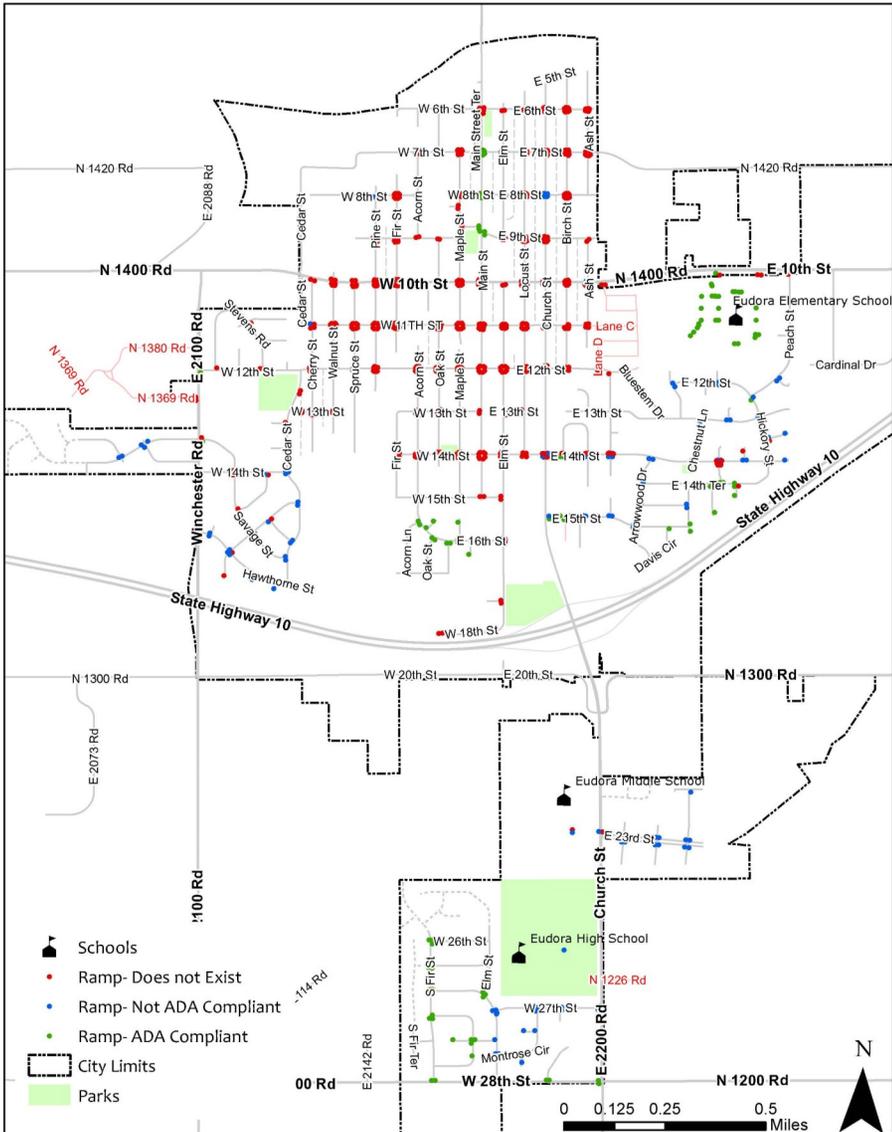
Figure 3.2: Eudora Missing Sidewalk Segments (2014 Sidewalk Inventory)



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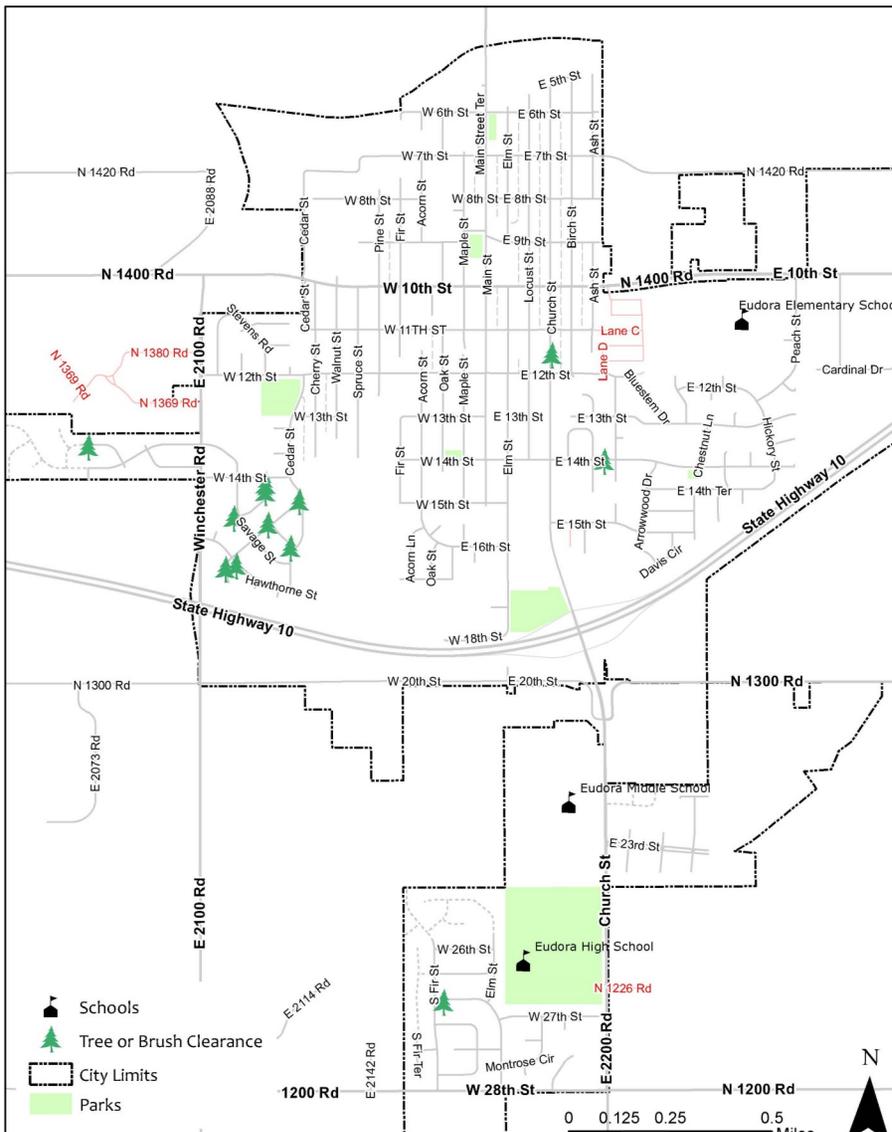
Figure 3.3: Eudora ADA Ramps (2014 Sidewalk Inventory)



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Figure 3.4: Eudora Tree or Brush Clearance (2014 Sidewalk Inventory)



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Funding for Pedestrian Infrastructure in Eudora

Sidewalk Maintenance

Eudora’s city code for sidewalk maintenance states “The total cost of all sidewalks or pedestrian way improvements shall be borne by the property benefitted by the improvement¹.”

This sidewalk maintenance policy requires regular inspection and notification to ensure compliance. The current condition of sidewalks as shown in Figures 3.1 and 3.2 suggests that the existing policy is not creating a compliant sidewalk network. If the City of Eudora determines that enforcement of this policy is not feasible, alternative programs or ordinances should be explored.

Table 3.5: Eudora Capital Improvements

Eudora Capital Improvements - Sidewalks and Trails									
Year	Project	Facility	Length (LF)	Total Project Cost	City Funds (property tax)	School Funds	State/Federal Funds	Private Funds	Funding Notes
2013	South Trail:From Eudora High School to 20th St.	SUP	2,500	\$ 83,400	\$ 25,000	\$ 25,000	\$ -	\$ 33,400	The city received a Sunflower Foundation grant and partnered with Eudora School District
2014	Eudora Elementary trail	SUP	2,620	\$ 97,200	\$ 38,600	\$ 38,600	\$ -	\$ 20,000	The city received a Sunflower Foundation grant and partnered with Eudora School District

¹ <http://eudoraks.citycode.net/index.html#!articleSidewalkConstruction>

² \$255,532 is the average sales tax generated in Eudora from 2008—2014

Alternative Sidewalk Maintenance Programs

Alternatives to the current policy could be to have the City of Eudora take over maintenance responsibilities or develop a cost-sharing model where property owners and the City each pay a certain amount to maintain or build sidewalks. To generate revenue for this policy change, the city could increase sales tax or property tax. It was determined that a monthly sidewalk utility fee would not be legal in Kansas. Table 3.4 demonstrates how much funding could be generated from different levels of taxes.

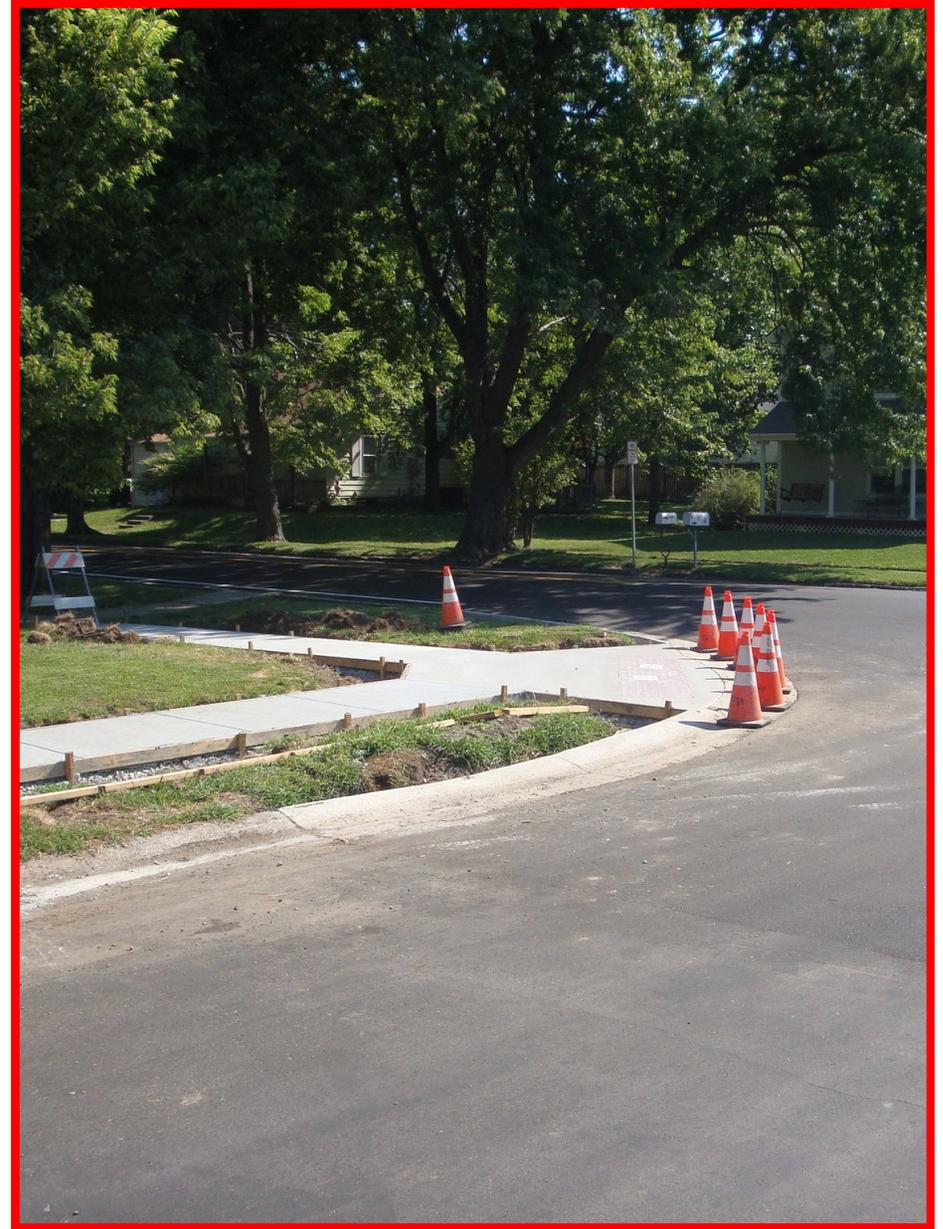
Table 3.4: Eudora Funding Generation by Tax Type

	Annual \$ Generated	Years Required to Generate \$1 Million
1 mill property tax	\$ 38,951	26
City sales tax (1%)	\$ 255,532	4

New Sidewalk Construction and Other Infrastructure Improvements

In addition to sidewalk maintenance and repair, a quality pedestrian system also relies on new improvements that enhance the pedestrian network. Currently, construction of new public pedestrian infrastructure has occurred by leveraging property tax revenue, school funds, and private grants. Table 3.5 lists public capital improvement projects in Eudora since 2013. City code states that “Public sidewalks shall be installed on one side of all local residential streets and on both sides of all other streets, unless such installation is specifically waived by the governing body¹.”

Improving the sidewalk infrastructure through these methods leads to sporadic improvements with little continuity. The Infrastructure Implementation Scenarios located at the end of this chapter identify a few ways to prioritize the construction of new pedestrian infrastructure.



¹ <http://eudoraks.citycode.net/index.html#!articleSidewalkConstruction>

Recommendations

Continue to Seek Funding for the Safe Routes to School (SRTS) Program

Primary Focus Areas Addressed: Safety, Health

The City of Eudora applied for but did not receive, SRTS Phase I funding in 2012. This funding would have been used for evaluating implementation options, engaging in public participation, and producing the final project report. However, the City should continue to pursue this funding which could significantly improve the pedestrian environment for kids attending one of the three schools in Eudora. This funding could be used for education, encouragement programs, and infrastructure.

Encourage Pedestrian Trips Through Participation in National Walk to School Day and Other Strategies

Primary Focus Areas Addressed: Health

Teachers can encourage students to walk to school, and encouragement on a broader scale could empower pedestrians of all ages. The City, in coordination with the school district, could participate in National Walk to School Day, a global event that involves communities from over 40 countries walking and biking to school on the same day. City-provided maps of walking routes, wayfinding signs, and programs driven by employer incentives are options for Eudora to consider.

Adopt Design Standards and Policies that Result in Pedestrian-Friendly Development

Primary Focus Areas Addressed: All

The Pedestrian Progress Toolbox on pages 14-19 contains site design guidelines, engineering standards, and policies that can lead to a safe and comfortable pedestrian environment. Eudora could benefit from adopting guidelines to ensure the pedestrian network is built thoughtfully. Early adoption of standards and policies on setbacks, block length, and sidewalk maintenance are a few ways Eudora can help to prevent the need to retrofit street and sidewalk connections at a later date, and often a higher cost. Many other standard and policy ideas can be found in the toolbox on pages 14-19.

Recommendations

Use Traffic Calming Devices to Improve Pedestrian Safety and Comfort at Locations with Real and Perceived Risk

Primary Focus Areas Addressed: Safety

Traffic calming devices should be installed to improve pedestrian safety and comfort at historical crash locations as well as locations of perceived risk that deter pedestrians from walking in the area, such as Church Street north and south of K-10. Pedestrians in crashes with motor vehicles traveling at a speed of 31 mph face a 50% risk of injury and nearly 25% risk of death. Traffic calming should be installed in response to high crash locations, but also proactively to improve pedestrian safety and comfort in locations that may currently discourage pedestrian activity.

Track and Measure Progress of Eudora’s Pedestrian Network, Amenities and Programming

Primary Focus Areas Addressed: All

It is important to understand the type, magnitude, and location of pedestrian improvements that are being implemented each year. The City should track miles of sidewalk construction and sidewalk gap infill, sidewalk maintenance, shared-use path construction, installation of other pedestrian amenities, and results of education, encouragement, and enforcement campaigns. Tracking cost, location, and program data for pedestrian improvements will demonstrate the progress Eudora is making on the pedestrian environment and where more work still needs to be done to further address the region’s focus areas.

Develop an ADA Transition Plan

Primary Focus Areas Addressed: All

Each public agency with more than 50 employees is required by law to have a transition plan which details how this agency will come into compliance with the Americans with Disabilities Act. The Act requires that public agencies with more than 50 employees provide access to all programs and services offered. The City of Eudora is nearing that threshold. To avoid future legal concerns and formally address a plan for mobility access, the City should develop an ADA Transition Plan.



Recommendations

Primary Focus Areas Addressed: Connectivity

Target resources to priority pedestrian corridors that provide the most people with access to the most parts of town, particularly to schools, grocery stores, and other landmark destinations. The Priority Network can be found in Figure 3.5. Cost estimates for installing sidewalk on at least one side of every street along the Priority Network can be found in Table 3.6. Funding should be prioritized to complete these routes first, creating continuous, quality pedestrian facilities.

Certain segments of identified SRTS routes may overlap or differ from the Priority Network. These two methods for prioritizing routes need not be mutually exclusive, as the City could pursue completion of both concurrently.

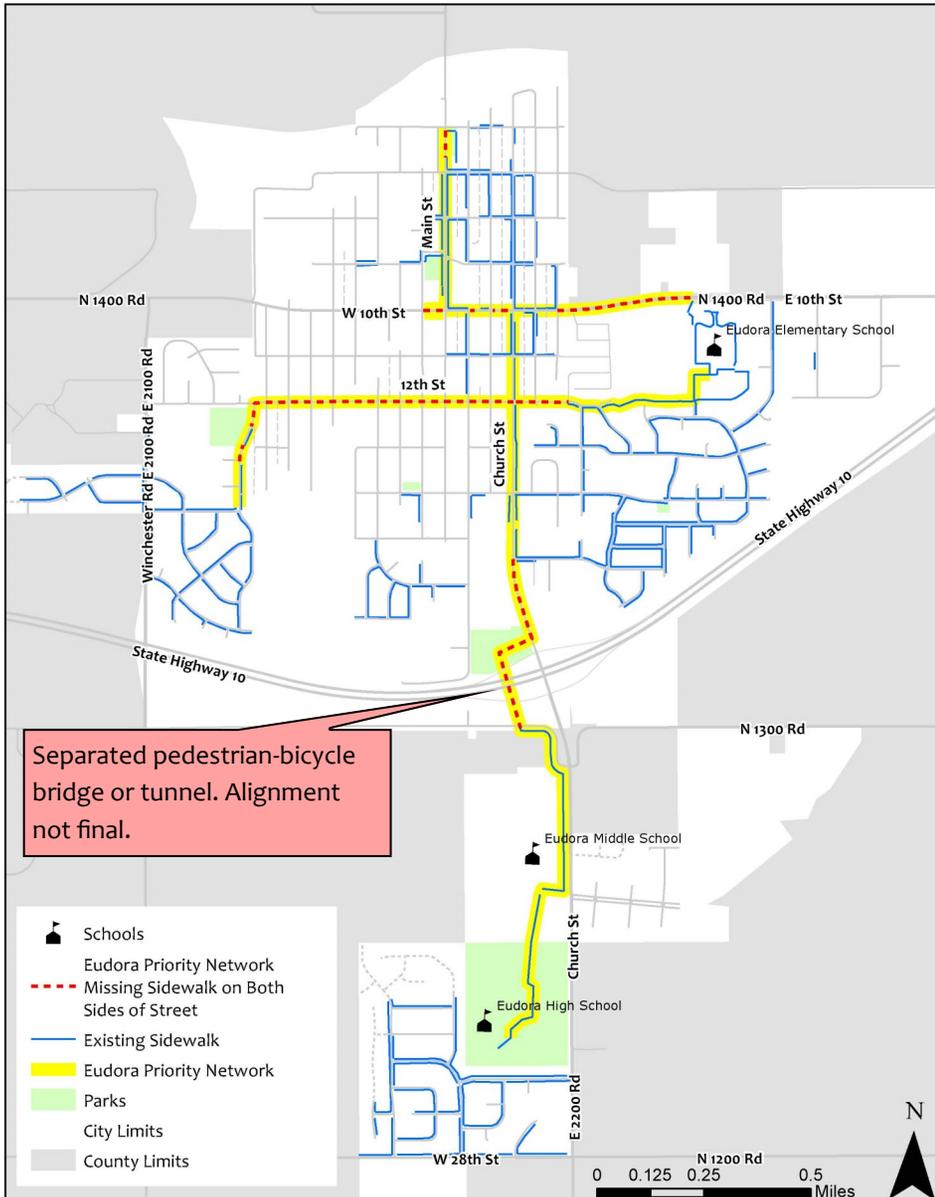
A separated pedestrian-bicycle facility to cross K-10 has been discussed by KDOT and City of Eudora officials as a potential solution to encourage travel by foot or bike to the middle and high school south of the highway. Alignment for the proposed facility in Figure 3.5 was chosen by consulting a similar alignment in the Eudora Parks and Recreation Master Plan that lists a future recreational trail at this location. At this time, no funding has been identified to pursue design or construction of this facility.

Table 3.6: Eudora Priority Routes Estimated Costs¹

	Sidewalk on One Side of Priority Network
Linear feet of missing sidewalk on priority network	8,800
Estimated cost at 5' sidewalks, \$6 per square foot	\$264,000

¹ Planning-level cost estimates based on 5' sidewalk width and \$6/sqft. Engineering-level estimates may reveal site-specific costs such as tree removal, utility relocation, etc.

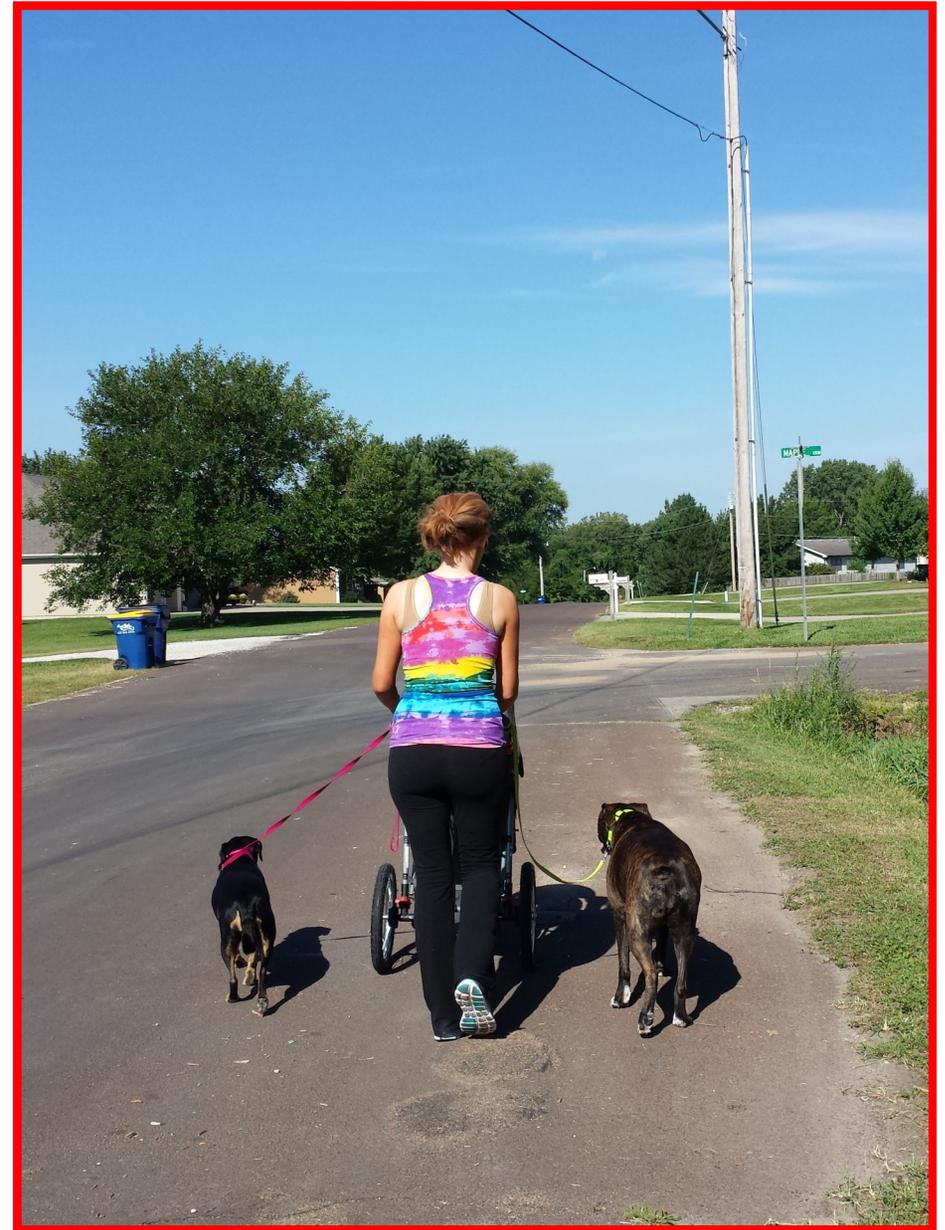
Figure 3.5: Eudora Priority Network



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Eudora Conclusion

Pedestrian improvements in the city of Eudora currently occur as the as roadways are repaired and constructed, and grants are sometimes identified to fund standalone projects. This leads to a fragmented network with no clear goal or system-wide vision.

The recommendations in this document aim to focus investment in pedestrian infrastructure so that the network is less fragmented. These recommendations are not mutually exclusive and can be implemented incrementally as funding becomes available. City officials should consider using tools found in the Pedestrian Progress Toolbox section on pages 14—19 to achieve one or more of these recommendations.

This Pedestrian Plan is an important document because it enables city staff to make consistent decisions to improve the pedestrian environment. It sets the stage for policy discussion regarding sidewalk requirements, helps protect streets with developed pedestrian infrastructure, and prioritizes streets with underdeveloped pedestrian infrastructure for upgrades. This Plan will be incorporated into the regional long-range transportation plan, T2040, during the update in 2017.

While funding is limited, yearly improvements help improve the system by bringing existing facilities into compliance with current standards, and providing programming, education, and policy changes that can lead to more people choosing to walk. The ultimate goal is to have a complete citywide system of quality pedestrian infrastructure paired with policies and programs that encourage more people to walk. Measured progress towards this will continue to support overall walkability and economic development opportunities throughout Eudora.

