

## Chapter 9 – Efficient Transportation and Mobility:2040

Efficient transportation involves three things for Earlham: a range of transportation choices, appropriate and proactive systems management, and appropriate capacity of the system to support incremental and planned growth. All three thoughts are explored in a strategy for the next twenty years. Earlham can save money by not prematurely developing streets and by having thoughtful standards for street design. Something like a complete street policy can also encourage non-auto trips, reducing wear on the system.

This chapter discusses:

- Summary of current conditions from Chapter 3.
- Summary of public input about future efficient transportation and mobility needs and vision.
- Potential need for new streets – future street plan.
- Potential for transportation alternatives – future trail plan.
- Design standards and considerations for efficient transportation and mobility.
- Efficient transportation and mobility goals, policies, and action items.

### Summary of Current Conditions

The following matrix itemizes the positive and negative characteristics identified in the background research concerning the topic of this chapter.

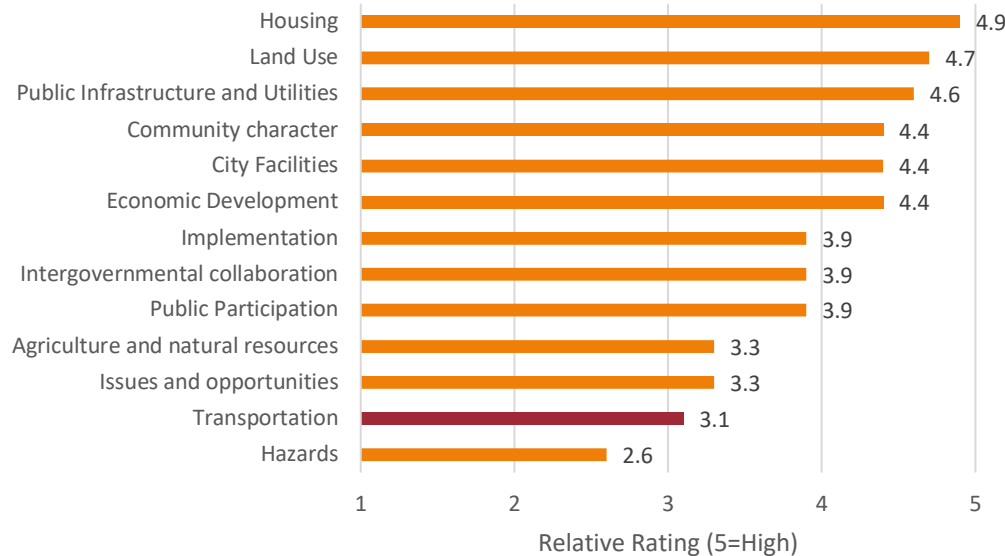
**Figure 9.1: Current Conditions Matrix for the Efficient Transportation and Mobility**

Thriving Earlham	Struggling Earlham
<ul style="list-style-type: none"><li>• Earlham has a high-quality street system, especially when compared to other towns in rural Iowa. Most are good or excellent for their type of street.</li><li>• Compared to many rural communities, Earlham is better covered by sidewalks on at least one side of the street and sidewalks are in better overall condition.</li></ul>	<ul style="list-style-type: none"><li>• More significant street upgrades to more prominent streets (NE 6th and Birch Avenue) are not yet completed. These would need to be completed to support continued growth north and east of Earlham.</li><li>• Earlham lacks an established trail system. A few minor trails are in city park areas, but none of them would be considered part of the transportation network. There are no trails connecting various City amenities.</li></ul>

### Summary of Public Input About Efficient Transportation and Mobility Needs and Vision

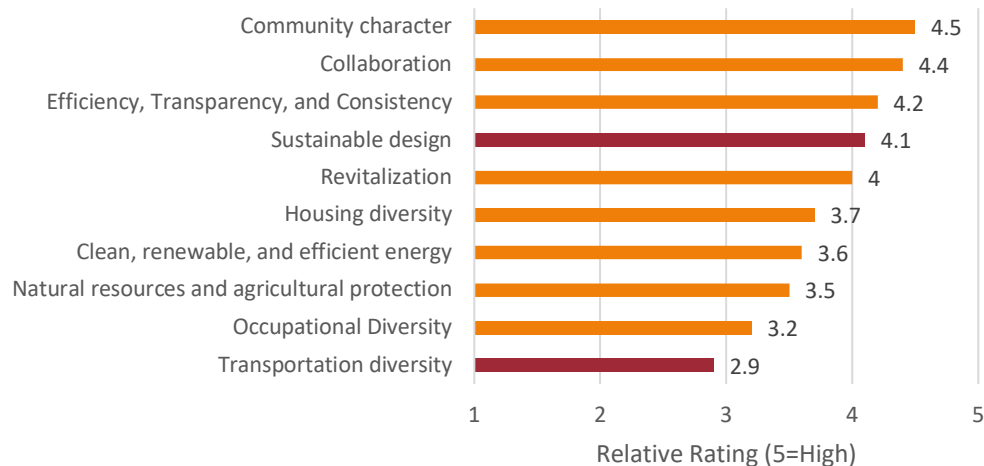
Earlham has decent to good roads and a quality network. Sidewalks are improving and serve all neighborhoods. Trails are lacking. The public supports these views, and therefore, transportation is not a top concern of the public, except for those that strongly desire a trail system.

**Figure 9.2: Relative Importance of Iowa Smart Planning 13 Planning Elements According to the Steering Committee**



Transportation is among the lowest priority of the 13 Iowa Smart Planning Elements. This will be reflected in the brevity of the future transportation and mobility strategy.

**Figure 9.3: Relative Importance of Iowa Smart Planning 10 Planning Principles According to the Steering Committee**



Transportation diversity is the lowest ranked priority among the 10 Smart Planning Principles. Sustainable design, another Principle that is highly related to transportation, is mid-high ranked. Other planning principles, such as collaboration, community character, revitalization, natural resources and agricultural protection, and efficiency/transparency/consistency are key to the implementation of goals, actions, and policies related to this topic.

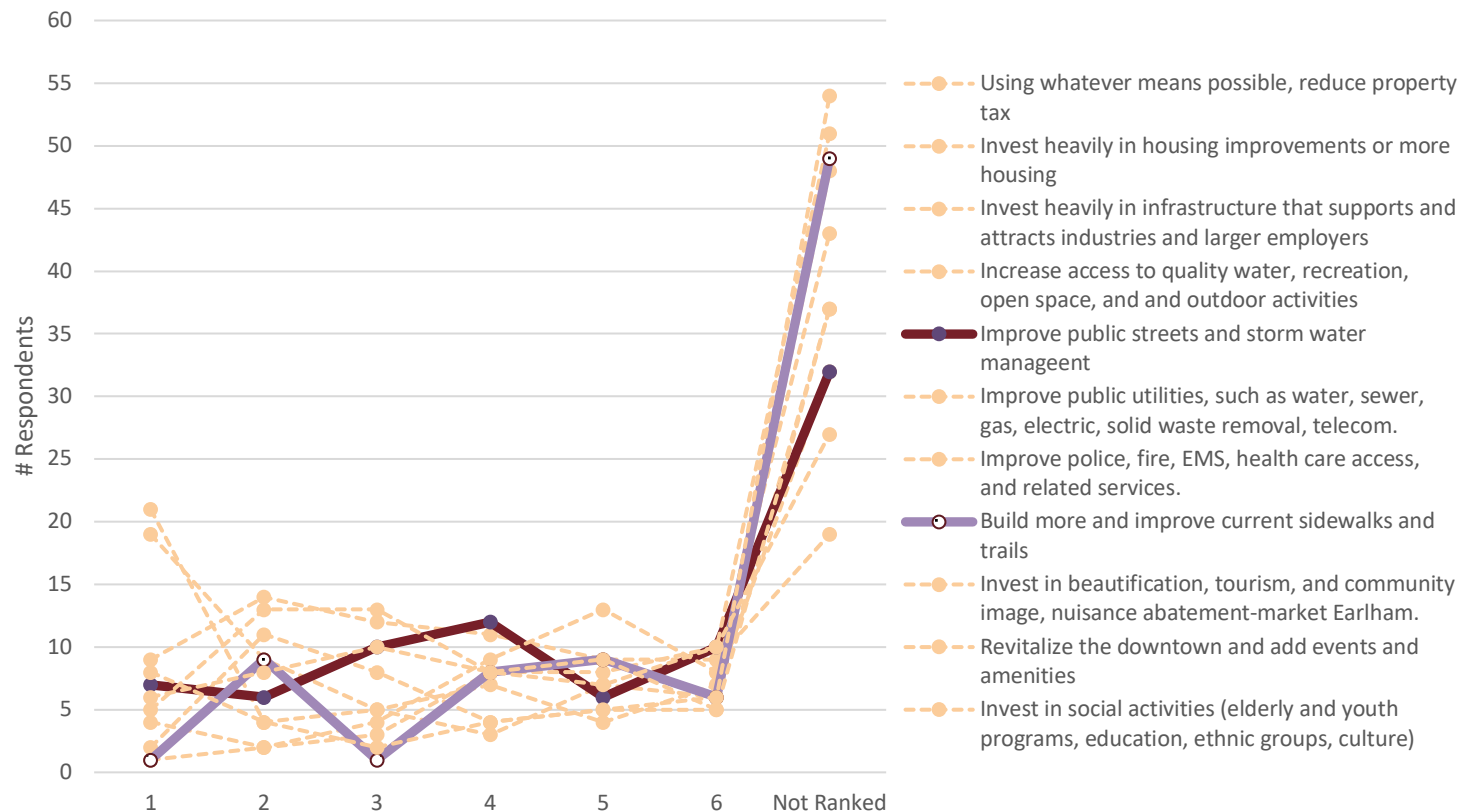
**Figure 9.4: Steering Committee Four Questions Exercise Comments Related to Transportation and Mobility**

Biggest Opportunities	Biggest Challenges	One Big Dream	One Big Fear
<ul style="list-style-type: none"> <li>Proximity to Des Moines metro.</li> <li>Bike trails connecting to larger trails.</li> <li>Grow residential and retail zoning.</li> <li>Engage Chestnut St. with businesses to drive street traffic.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and address needs for a healthy (socially, physically, spiritually, financially) community.</li> <li>Appropriate zoning.</li> </ul>	<ul style="list-style-type: none"> <li>Bypass highway around town.</li> <li>Having streets of gold.</li> </ul>	<ul style="list-style-type: none"> <li>Not being able to grow.</li> <li>My biggest fear is that uncoordinated/unplanned sprawl would result in a loss of community and pit neighborhoods and businesses against one another.</li> </ul>

Eighty-four people responded to the community survey question asking about current street, sidewalk, and trail needs in Earlham. The question asked to rate a series of statements on a scale of strongly agree to strongly disagree. Most people agree that streets are in good condition overall, that trails are almost non-existent, having paved streets with curb and gutter are essential, they feel safe using streets and sidewalks, and they would be interested in more taxpayer funds being used for trails. The respondents disagree with the idea that sidewalks and trails do not matter.

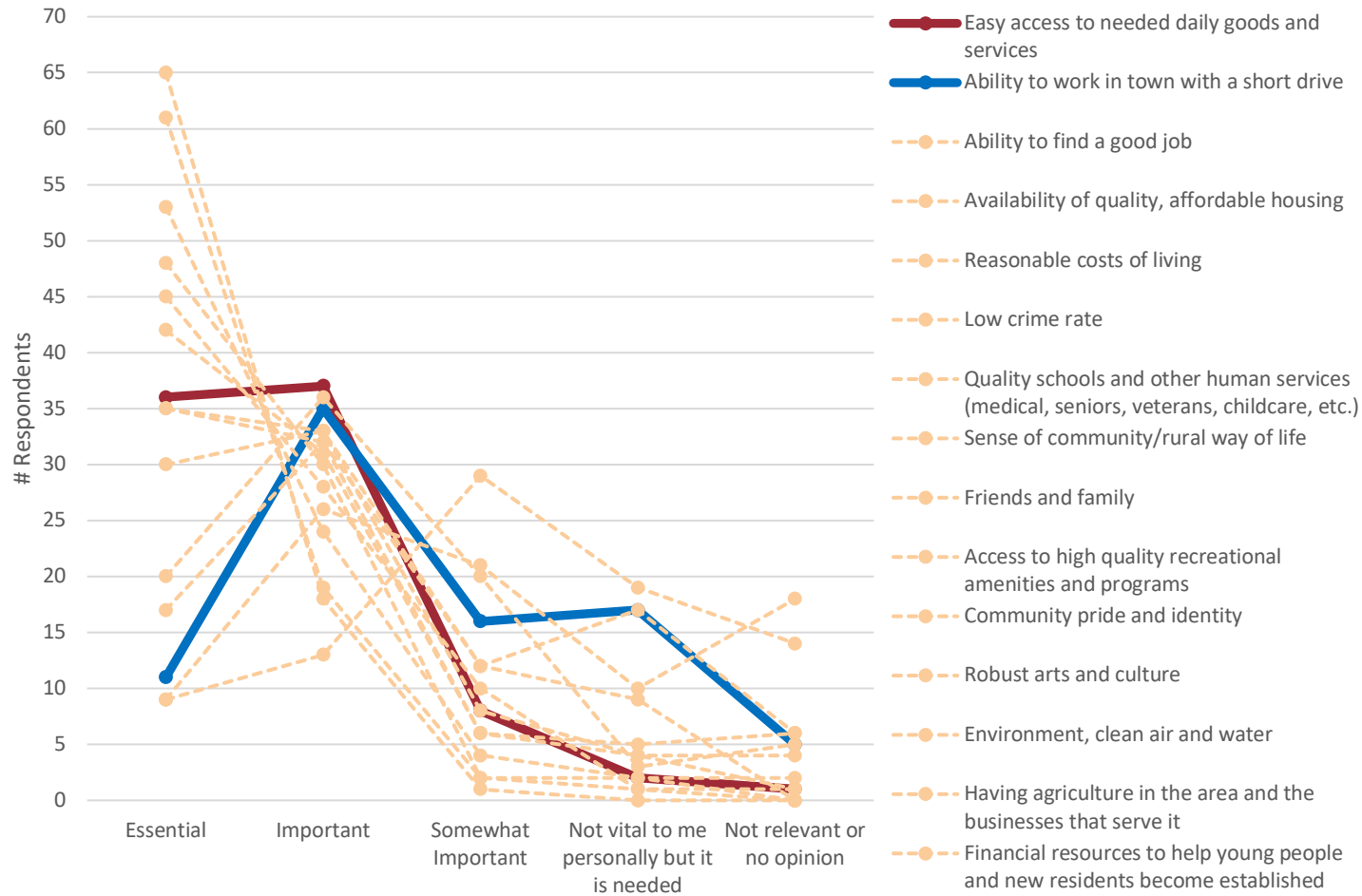
The community survey also asked about *future* transportation and mobility, as shown in the following graphics.

**Figure 9.5: Community Survey Results: “What Actions Can the City Take to Improve the Quality of Life in Earlham?”**



The survey respondents rated transportation actions modestly. Sidewalk and trail improvements are seen as one of the least important issues overall, while street and storm water improvements were seen as more important but not above several other community issues and needs.

**Figure 9.6: Community Survey Results: ““In Your Opinion, How Important Are the Following Factors for WHY You Would Want to Live in or Near Earlham?”**



Two items in this question are highly related to the topics of this chapter. Easy access to goods and services is perhaps more relevant to the economy but is also relevant to transportation. This item is more important than many amenities listed. Ability to work in the town in which they live is considered less important. This reflects the fact that many people may be retired, and others choose to live in Earlham and work in Des Moines.

**Figure 9.7: Survey Respondent Thoughts About Earlham Related to Transportation and Mobility (Number of Responses)**

Favorite Thing	Least Favorite Thing	Most Important Places
<ul style="list-style-type: none"> <li>• Close to Des Moines/amenities (9)</li> <li>• Sense of safety (8)</li> <li>• Location</li> <li>• Proximity to Interstate</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of trail system (7)</li> <li>• Behind in development/lack of future planning (7)</li> <li>• Infrastructure, street, sidewalk, storm water drainage conditions, slow internet/cell service, lack of water pressure (6)</li> <li>• People not stopping at stop signs</li> <li>• Lack of streetlights</li> <li>• Trains stopping on the tracks</li> <li>• Railroad track crossing on Walnut, Chestnut, and Sycamore are in horrible conditions</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>

Favorite Thing	Least Favorite Thing	Most Important Places
	<ul style="list-style-type: none"> <li>• “City Maintenance Manager’s lack of energy nor though leadership in partnering for enhancements, rather the manager is flat footed and band-aids issues with outdated methods.”</li> <li>• Lack of trails</li> <li>• No sidewalk on Walnut St. From 1st street going south.</li> </ul>	

What Should Stay the Same?	What Should Change?	What Would Make Earlham a Better Place to Live
<ul style="list-style-type: none"> <li>• Stay separate from Interstate (3)</li> <li>• No stoplights</li> </ul>	<ul style="list-style-type: none"> <li>• Revitalize downtown commercial district, green spaces in downtown (9)</li> <li>• More trails/new walking/bike paths (4)</li> <li>• More events, attractions, street dances, downtown activities (3)</li> <li>• Improve/grow infrastructure (3)</li> <li>• Better street water drainage (2)</li> <li>• Repair/ rebuild sidewalks. (2)</li> <li>• Address truck routes for future growth; The truck traffic through town (2)</li> <li>• Flashing yellow stop lights instead of stop signs</li> <li>• Increase streetlights.</li> <li>• 360th street NE of town should be connected to Earlham on the East side by a paved road. Followed up by bicycle trails, making Gendler Park a place to visit.</li> </ul>	<ul style="list-style-type: none"> <li>• Trails/a trail from town to Gendler Park, developments of trails around the ponds (11)</li> <li>• Improve existing sidewalks (3)</li> <li>• Better roads (2)</li> <li>• Better storm sewers</li> <li>• Traipsing system, activities</li> </ul>

As the matrix in Figure 9.7 shows, transportation is a concern, not so much in terms of existing streets but in terms of the future development of the city, the desire for trails, and the relationship and connection of Earlham to Des Moines, both positive and negative. Figure 9.8 repeats the four-question exercise used with the steering committee (Figure 9.4) but with a bigger audience of about 75 people who attended the community forum in October 2023.

**Figure 9.8: Community Forum Four Questions Exercise Comments Related to Transportation and Mobility**

Biggest Opportunities	Biggest Challenges	One Big Dream	One Big Fear
<ul style="list-style-type: none"> <li>• Recreation building/trails</li> <li>• Self-sustaining</li> </ul>	<ul style="list-style-type: none"> <li>• Many of the challenges relate indirectly to transportation, as it has a role in allowing for growth and development. The public desires managed and limited growth.</li> </ul>	<ul style="list-style-type: none"> <li>• Trails nearby</li> <li>• Trails, aquatic center, and recreation center</li> <li>• Connection to existing trail system</li> <li>• Bike trails</li> </ul>	<ul style="list-style-type: none"> <li>• Rapid growth that the city cannot cope with for school and infrastructure</li> <li>• Like the “challenges” response, many fear too rapid growth. Transportation spending can impact the growth rate.</li> </ul>

The “opinion casting” exercise used scale bars as another way to gain understanding on where people are on a range of thought concerning a few issues. The following are some of the key findings for about 20 people who participated that relate to transportation and mobility.

- 90% feel very safe walking and biking in Earlham.
- The group believes moderately (70%/30%) that entryways and corridors are okay like they are.
- The group is slightly (55%/45%) in favor of focusing public dollars on quality-of-life items versus infrastructure.

Figure 9.9: Type Preference Exercise Results: Streetscapes

Place ONE dot in each column to indicate your preference among the choices for each category. If you want to suggest a different amenity or feature, please write in and place dot on a “write your own” square.

### Streetscapes



This exercise helps us understand the relative importance of different types of investments in each category. The “streetscape” category was judged by 23 people, 12 of which said they most support proactive maintenance and focus on upkeep of existing transportation infrastructure. Street trees received four votes. Other issues received two or fewer.

Since each person was asked to select the top choice in each category (column in graphic), it is possible there is unidentified support for other options.

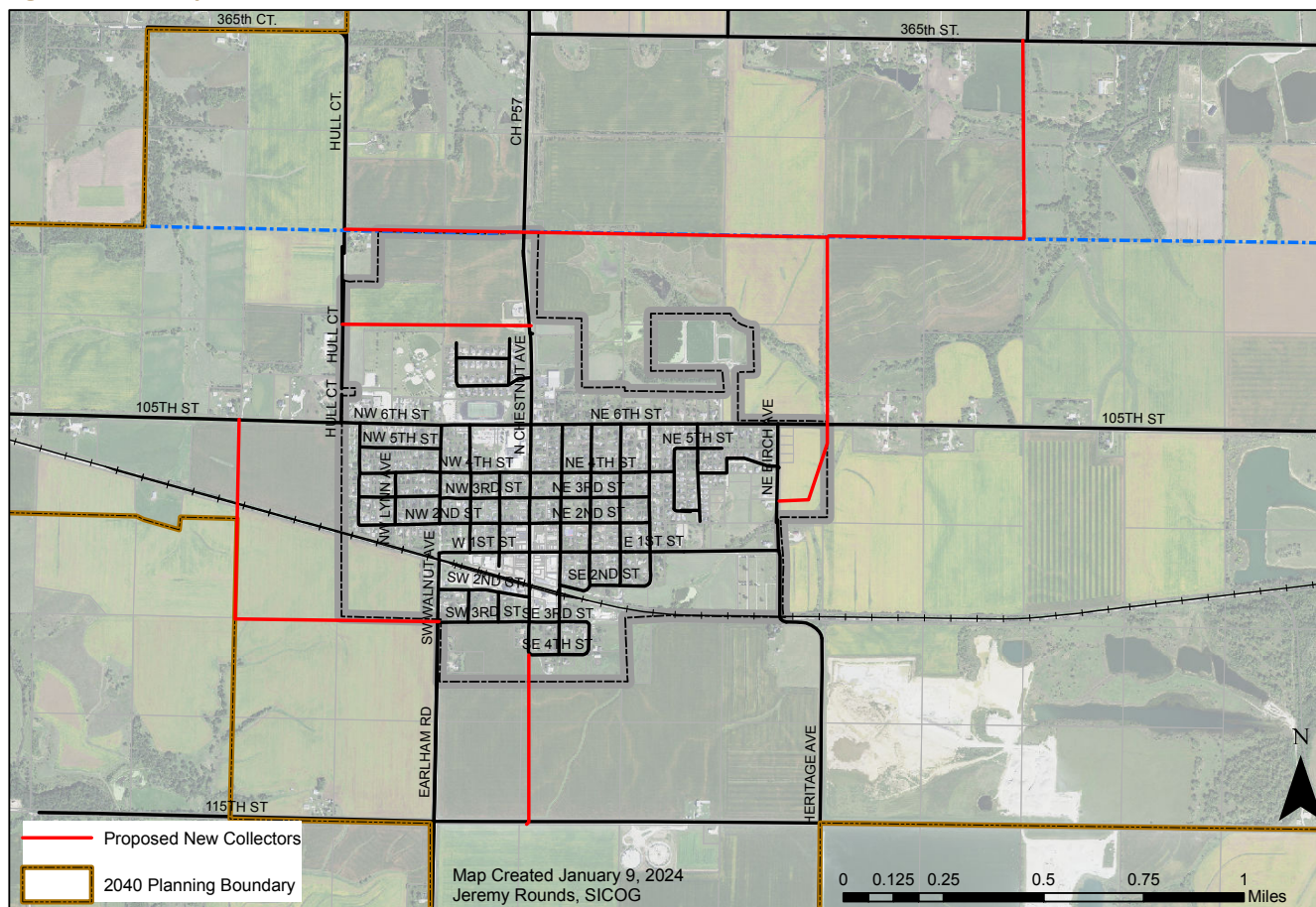
### Potential Need for New Streets – Future Street Plan

One of the best ways to encourage and direct growth is to build streets and mobility infrastructure. To ensure growth is not too fast, new street building should be minimal. However, thoughtful planning of street location and capacity can direct development to where it is desired in hopes that this reduces the demand for growth where it is not desired. Because of this, this plan includes a proposed layout of future collector level streets that can support local streets for development related to the future land use plan in Chapter 12.

As Earlham grows to 1,800 residents, traffic will increase. However, there is no evidence that traffic will become a major concern. The greatest concern may be around the school, which has high traffic at the beginning and end of the school day. However, the traffic should never get high enough that major infrastructure changes would be needed, such as traffic signals, additional lanes, or bypasses. New collector streets should be designed to ensure that not too much traffic funnels to the existing street network. Figure 9.10 (next page) shows potential new street routes that will help facilitate growth to 1,800 within the city and where the city may logically grow.



**Figure 9.10: Proposed Future Collector Street Plan**



An interesting facet of the CIP is that it calls for about 10 miles of new future minor and major collector streets in all directions within town and within a mile of the city limits. These roads, if built, could accommodate more than a doubling of the size of Earlam.

The proposed street plan is not as aggressive as the plan in the 2012 TIP and is geared to moderate growth desired by residents. The total length of new collector streets is about 4.5 miles by 2040. This may support about two to three miles of local streets within developments. The actual roads to be developed depends on how much growth and annexation is desired in the future. The roads shown here are located in areas where development is most likely and desired though the public engagement process.

In areas where new development is targeted in the city, especially NE 6<sup>th</sup> Street and NE Birch Street, streets should improve to a higher-grade surfacing (gravel to blacktop or blacktop to concrete, etc.) over time or incrementally. For new roads outside of the

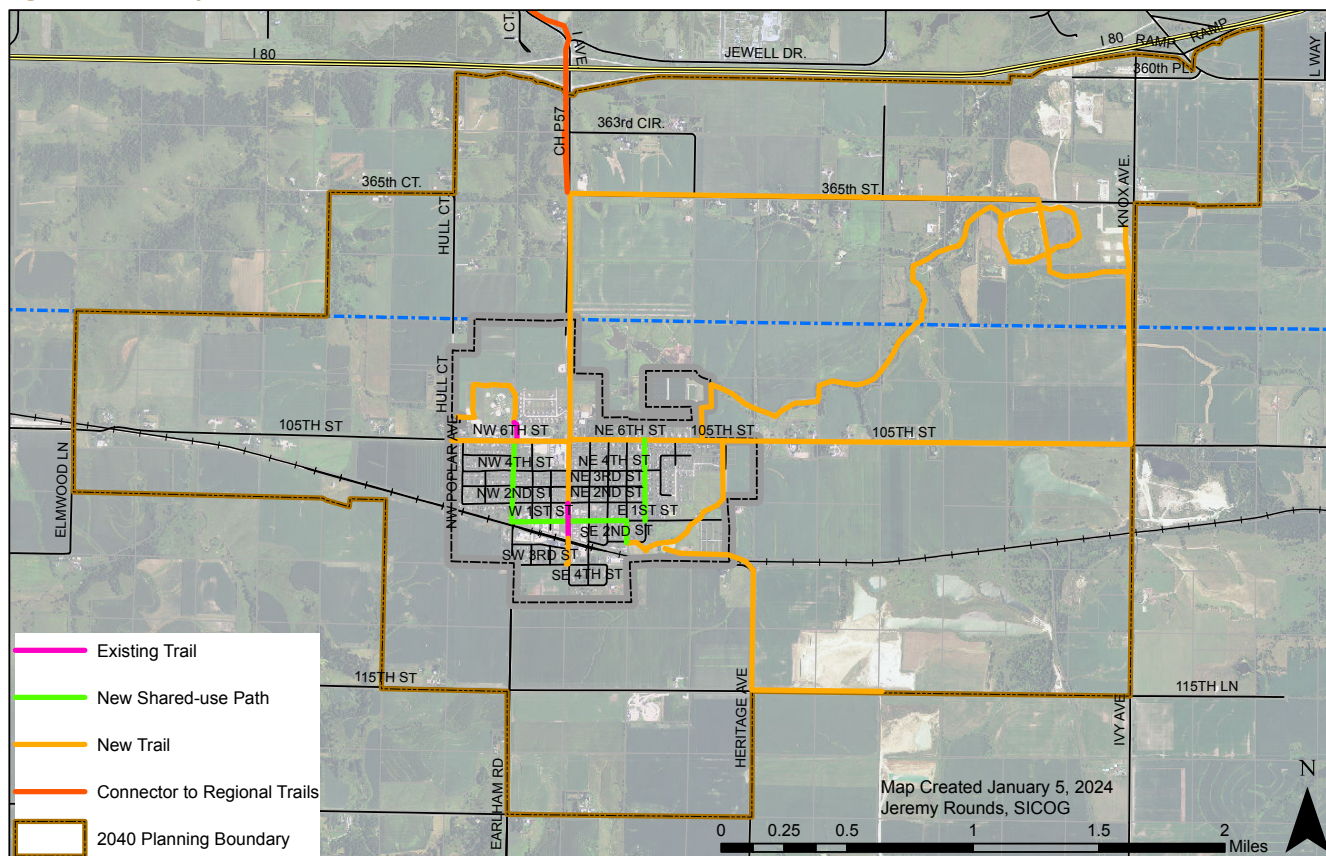
city boundary, Earlam should maintain conversations with Madison and Dallas Counties to review possible development plans in the planning area.

### Potential Need for Transportation Alternatives – Future Trails Plan

People completing the community survey agree most that trails are almost non-existent or not located where desired, having paved streets with curb and gutter are essential, sidewalks are in poor condition, I feel safe using streets and crossings, and I would be interested in my taxpayer dollars being invested in a trail network. People disagreed most with trails really don't matter to me, sidewalks really don't matter to me, and sidewalks are almost non-existent. Trails are one of the most mentioned amenities desired by residents. Earlam is also strategically placed relative to the regional trail network, including the Raccoon Valley Trail system.

The proposed long-term trail plan should include a combination of existing and new shared use paths, new local trails, and a trail to the regional network. Figure 9.11 shows this proposal.

**Figure 9.11: Proposed Earlham Trails Plan**



For this plan, a trail is a separate hard-surface path of at least 8’ width dedicated to pedestrian and bicycle use, either owned by a public body or on private property with a perpetual easement granted to a public body. A shared-use path is a dedicated section of an existing street (or possible future street) that is used for cycling and other non-motorized activities. Many agree that a trail with signage and perhaps even lighting would help connect Gendler Park to the city proper. This map shows some potential options that can make this connection and also leverage possible development in that area.

An actual trails plan should involve a trails committee, a consulting engineer, and more public engagement. Many grants are available for trails, but they are competitive. Likely, any large trail project will require phasing over several years. Granting agencies prefer trail projects that have a clear connection, such as a town to an existing trail system, another town, or other destination.

**Design Standards and Considerations for Efficient Transportation and Mobility**

The street should be designed to accommodate future growth of the area and its long-term needs, long after all lots are developed. It is important that the City of Earlham have a plan for street and path development that ensures sustainability over time of the town as a whole and the neighborhood impacted.

*Incremental Development*

Many cities leave it entirely for the site developers to build the streets and then require no mechanism to ensure the streets to be maintained by the city have a means to do so. When this happens, some developments, especially those with too many large lots, cause the municipality to lose money. It is therefore important to incrementally build streets and then begin with a lower level of service, increasing over time as the tax base from the development area can support it.

*Complete Streets*

Many jurisdictions are now implementing “complete street” policies. These are policies that require, under certain conditions, that all new, significantly repaired or resurfaced, and expanded streets shall also include a pedestrian element that allows pedestrians and bicyclists to safely use the street corridor. Earlham should include this into the street design but allow it to be incremental through a long-term funding mechanism.



According to Wellmark Healthy Hometown, a complete streets policy ensures that, from the start, projects are planned and designed to meet the needs of every community member, regardless of their age, ability, or how they travel. Doing so allows a community to save money, accommodate more people, and create an environment where every resident can travel safely and conveniently. The ten elements of a Complete Streets Policy are:

1. Vision and intent.
2. Diverse users – pedestrians, bicyclists, transit passengers, and operators of all forms of motor vehicles.
3. Commitment in all projects and phases, including design, planning, maintenance, and operations, for the entire right of way.
4. Clear, accountable expectations with a clear procedure that requires high-level approval of exceptions.
5. Jurisdiction centrally maintained to create a comprehensive, integrated, connected network for all modes.
6. Design adoptable by all agencies.
7. Land use and context sensitivity with the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.
8. Performance measures.
9. Project selection criteria.
10. Implementation steps.

There are many resources for the creation and implementation of this policy. Numerous cities in Iowa of all sizes have adopted this approach to certain areas of their city.

#### *Limited Use of Cul-de-Sacs and Preference for Grid Streets*

Cul-de-sacs are inefficient and should be limited to areas where the topography and existing conditions make through streets impossible or economically infeasible. Grid street patterns with walkable block lengths is encouraged. Residents should have two egress points into and out of the development neighborhood. Streets should also not create a sense of segregation or exclusivity to a development. Cul-de-sacs perpetuate the exclusivity that is inconsistent with the welcoming character desired by residents and exhibited in existing neighborhoods.

*Architecture and Design* magazine identifies the following characteristics of a walkable city:

- Coherence – clear and organized sidewalk, street, and land use system consistent with the scale and function of the urban context. (Sidewalk and street should link points of interest and activity, provide clean lines of sight, and include simple, instructive signage).
- Continuity – pattern of design and usage that unifies the pedestrian system (complimentary streetscaping along perpendicular and parallel streets).
- Equilibrium – a balance of transportation modes that accommodate and encourage pedestrian usage.

#### *Green Stormwater Management and Vegetation*

As the intensity of storms increases, it becomes more important that street corridors include modern stormwater management infrastructure. This should reduce the incidence of flooding onto surrounding areas, street deterioration, and excessive maintenance. The use of “green” infrastructure, appropriate street trees, planned landscaping and vegetative areas, and design with topography will enhance water quality conditions. Chapter 10 outlines green systems in greater detail and how they can be used with “gray” traditional stormwater to meet community needs as Earlham grows and storms become more intense.

#### *Access Roads*

Too many parking entrances and access roads can create unnecessary points of risk for drivers and other roadway users. As much as possible, these should be limited on any street that is a minor arterial or higher.

### *Pedestrian Crossings*

Over time all intersections should have ADA curb cuts with continental style crossings. Continental style paintings on street crossings are more visible throughout the year and require less maintenance. Crossings should also include signage and appropriate stop and yield signs to encourage safety. Sign policy should be based on desired travel paths to limit excessive driving on lower-classed streets (below collector level).

### **Efficient Transportation and Mobility Goals, Policies, and Action Items**

Several goals, actions, and policies have been created to help local leaders and partners create efficient transportation and mobility.

Goals are statement of overall vision and intent and which aim to be broad. They serve as categories for action items and policy statements.

Action items are specific steps and activities the City of Earlham, its people, and partners should take.

Policies are ongoing principles by which the City of Earlham, its people, and partners should adhere when approving new developments or planning future investments.

These goals, policies, and action items were created to further promote the guiding principles of the Earlham Comprehensive Plan.



### **Efficient Transportation and Mobility Vision**

*Earlham will have an efficient transportation system that enhances our quality of life, is sustainable, encourages various modes, allows for managed growth, and fits into the neighborhoods and environment in which it operates.*

## **Goal 1**

Continue to proactively manage existing transportation systems and incrementally improve them.

## **Action 1A**

Continue current transportation safety enforcement effort by adding mobile speed signs with flashing lights and radar.

## **Action 1B**

Continue plans for existing street and sidewalk improvements outlined in the CIP and the street conditions map in Chapter 3.

## Action 1C

Implement more curb and gutter projects in infill areas. Add “green” stormwater infrastructure where space can accommodate it and where best practices make sense.

## Action 1D

Engage the public to learn where new streetlights or better lighting is needed; implement best practices.

## Action 1E

Review current stop sign configurations and determine where changes are needed throughout town.

## Action 1F

Engage Iowa Interstate Railroad to improve crossings.

## Policy 1A

Continue to budget annual and long-term street and sidewalk improvements.

## Policy 1B

Study and consider a truck route policy.

## Policy 1C

Incrementally upgrade existing streets over time using foresight and specific criteria, such as development potential, current traffic, and environmental impact; include those factors in a formal city policy document.

## Policy 1D

Limit access roads (such as none closer than 200 feet apart) on main streets so that the traffic flow is safer.

## Goal 2

Offer a range of transportation choices throughout Earlham and the surrounding areas.

### Action 2A

Using the future trails map from this chapter, engage a design consultant to create a multi-phase trail plan.

### Action 2B

Using various funding sources, build three to five miles of trails, including to Gendler Park, by 2040.

### Action 2C

Install ADA crosswalks and continental crossings at intersections, especially in and near downtown, the school, and recreational areas; add signage and flashing yellow lights where warranted.

### Action 2D

Once the existing CIP sidewalk plan is complete, identify gaps in the systems and investigate opportunities to replace and enhance sidewalks that are not compliant with established standards.

### Action 2E

Using various funding sources, build a half-mile to one mile of new sidewalks and infill areas where gaps exist.

### Policy 2A

Consider and adopt a “complete street” policy.

### Policy 2B

Create a policy for planning of “green” and “gray” infrastructure.

### Policy 2C

Require at all street improvements and new streets that new intersections include continental crossings and ADA infrastructure.

## Policy 2D

Consider a policy and funding for appropriate street trees and foliage on certain streets.

## Policy 2E

Consider a policy for the installation and development of EV charging stations: possible locations, designs of the site, and infrastructure needs.

## Goal 3

Support the capacity of Earham to grow to 1,800 people and to support the managed growth of surrounding areas.

## Action 3A

Pave and add curb and gutter to NE 6<sup>th</sup> Avenue and Birch Street.

## Action 3B

Continually upgrade Chestnut Street to prepare it for greater traffic and make it more suitable for pedestrians (crossings). Improve or enhance walkways and lighting.

## Action 3C

Collaborate with Dallas County, study feasibility and impact, and consider paving 365<sup>th</sup> Street from the County P57 to Gendler Park.

## Action 3D

Follow recommendations for future collector streets outlined in this chapter.

## Policy 3A

To manage growth, new street building should be minimal and not merely responsive to private developer requests, unless those requests are consistent with the plan and the road is built at the pace of development.

## Policy 3B

Continue to or increase collaboration with Madison and Dallas Counties in relation to their rural secondary road planning and subdivision development plans.



## Policy 3C

Ensure that not too much traffic is forced onto existing roads as new roads are built or extended.

## Policy 3D

Limit cul-de-sac development unless the development meets certain criteria, such as topography that does not support a grid system.

## Policy 3E

Research and create a viable downtown parking strategy that also makes downtown as walkable as possible and meets competing needs – owner, customer, resident.

Chapter 13 is the implementation chapter. It includes a matrix that provides strategies to carry out each goal, action, and policy outlined in this chapter. The matrix also outlines the suggested timeframe for each, the guiding principles impacted, and potential partners that should be involved. It also provides tools and resources to help with the implementation process.