

Chapter 10 – Effective and Efficient Public Facilities and Infrastructure:2040

This chapter outlines a vision and strategy for the miscellaneous facilities and infrastructure elements under the care of or that concern the City of Earlham. These include non-recreational public buildings, water, sewer, and storm water. Covered to a lesser extent are non-City properties and amenities. During the planning process, it was decided that the City was not in need of a detailed plan for these facilities, because they were covered by other planning mechanisms. This chapter mostly, therefore, focuses on the relationship between these facilities and future growth and land use patterns. In other words, the plan focuses on the aspects of these facilities and infrastructure as they pertain to the growth and evolution of the city and how they relate to planning goals for other topics, such as housing and commercial development.

This chapter discusses:

- Summary of current conditions from Chapter 3.
- Summary of public input about future effective and efficient public facilities and infrastructure needs and vision.
- Potential need for new facilities.
- Potential need for new infrastructure.
- Design standards and considerations for effective and efficient public facilities and infrastructure.
- Effective and efficient public facilities and infrastructure goals, polices, 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.

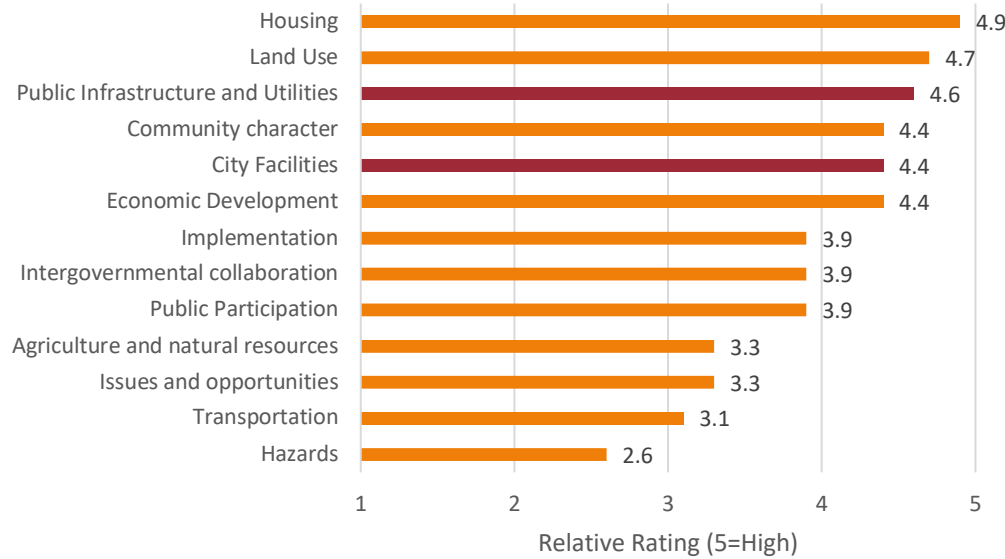
Figure 10.1: Current Conditions Matrix for Effective and Efficient Public Facilities and Infrastructure

Thriving Earlham	Struggling Earlham
<ul style="list-style-type: none"> • Earlham has a high-quality library, city hall, fire station, and community center. They meet current needs and are staffed with quality employees/volunteers. • Overall, the central infrastructure, such as water, gas, electric, and sewer plants and supply sources, are more than adequate to meet needs through 2040. There are sections of some of these systems that are not able to meet future needs, which are now being addressed by the City and private suppliers, although these shortages are much less notable in Earlham than in many rural communities. • Infrastructure in the area surrounding Earlham meets current growth trends and is consistent with what is offered in the city. 	<ul style="list-style-type: none"> • The fire station is not large enough to meet growing future needs. • Staffing needs overall are slightly short of LOS recommendations. • The water/public works building is aging and not designed for long-term needs as the town grows. • Water, storm water, and sanitary sewer needs/improvements identified in the 2012 CIP are largely not completed. • Storm water infrastructure is limited.

Summary of Public Input About Effective and Efficient Public Facility and Infrastructure Needs and Vision

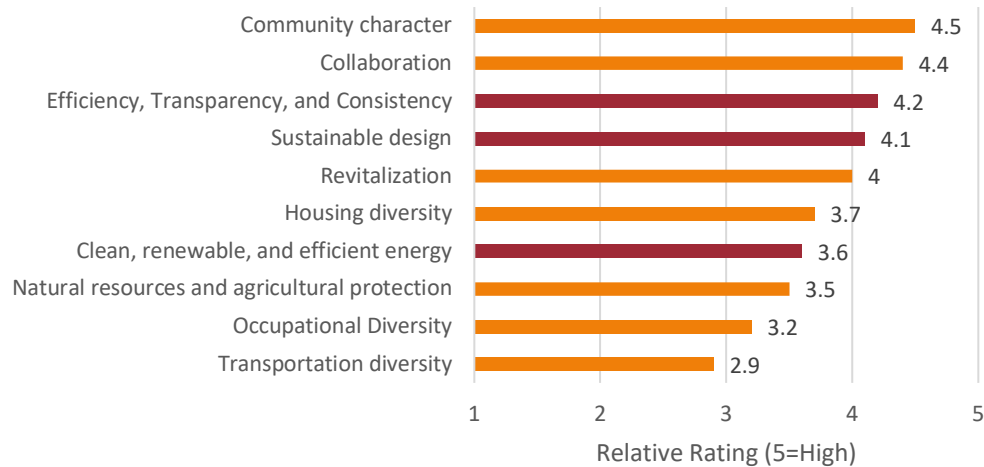
Public infrastructure and facilities are important to the City of Earlham. For example, City staff work at public buildings and rely on quality workspaces to perform public duties. City equipment and vehicles are also essential. Public infrastructure is vital to the success of not just the City but also residents, businesses, and other public bodies. These items are important to the public as well, although not as high of a concern as housing and a few other topics.

Figure 10.2: Relative Importance of Iowa Smart Planning 13 Planning Elements According to the Steering Committee



Public infrastructure and utilities are among the highest priorities of the 13 Iowa Smart Planning Elements. City facilities are also important to most of the steering committee members.

Figure 10.3: Relative Importance of Iowa Smart Planning 10 Planning Principles According to the Steering Committee



The main related 10 Smart Planning Principles to the topics of this chapter are shown in red. Efficiency, transparency, and consistency, sustainable design, and clean, renewable, and efficient energy are mid to mid-high priorities for the steering committee. Other planning principles, such as collaboration, community character, revitalization, and occupational diversity are key to the implementation of goals, actions, and policies related to this topic.

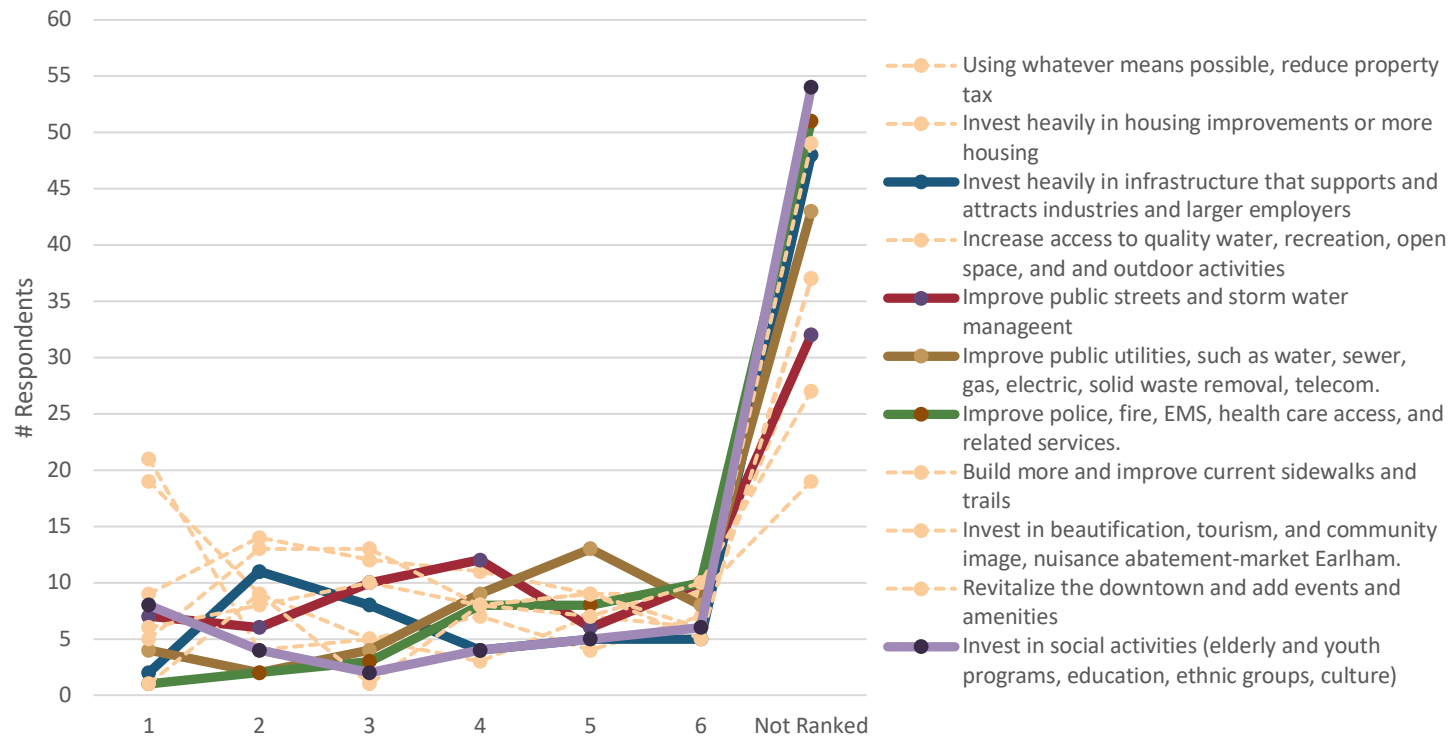
Figure 10.4: Steering Committee Four Questions Exercise Comments Related to Facilities and Infrastructure

Biggest Opportunities	Biggest Challenges	One Big Dream	One Big Fear
<ul style="list-style-type: none"> • Good education system. • PK-12th standalone school district. • Schools. • Great school and almost every business you need. 	<ul style="list-style-type: none"> • Identify and address needs for a healthy (socially, physically, spiritually, financially) community. 	<ul style="list-style-type: none"> • My biggest dream is for Earlham to maintain its small-town charm while accommodating just enough growth to keep the school district and community thriving on its own. • Slow, steady growth that we are able to keep up with – infrastructure. • Retained independent school district. • I want Earlham to be a destination town for families to take roots and raise their family. They do so because the schools are strong, the town is safe, the community is supportive and self-sustaining. 	<ul style="list-style-type: none"> • My biggest fear is that uncoordinated/unplanned sprawl would result in a loss of community and pit neighborhoods and businesses against one another. • Not being able to keep up with our growth.

Eighty-four people responded to the community survey question asking about current public services and amenities. Satisfaction was highest for fire, EMS, and law enforcement. It was also high for the library and for school and childcare options. Other things, such as access to and service at city hall, received moderate ratings. The same people rated water, sewer, lighting/electricity, and natural gas as highly dependable. Storm water management was rated moderately. Telecom/phone/broadband was rated as somewhat undependable and low quality. Many people had no opinion on many of these facilities and infrastructures.

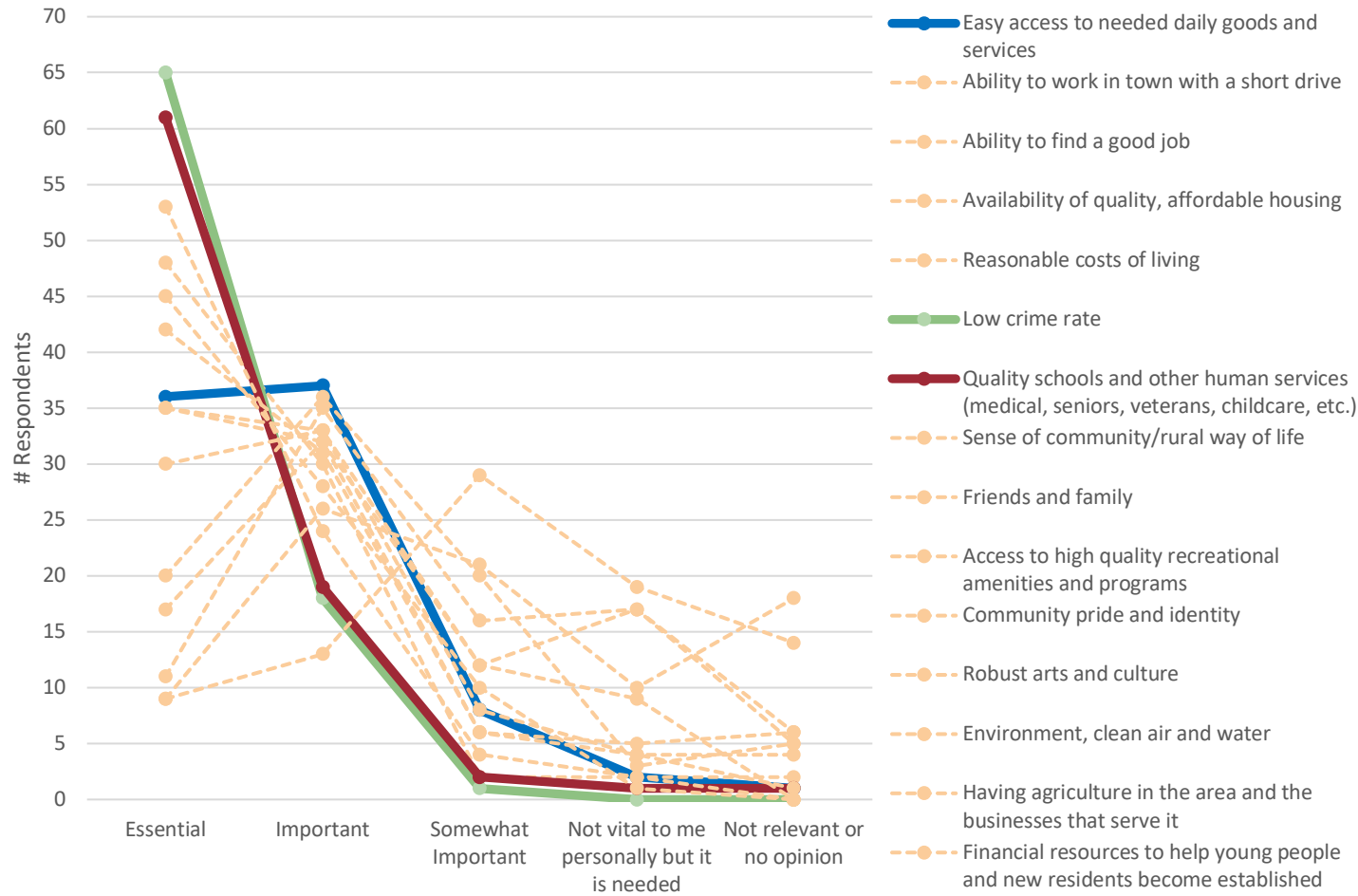
The community survey also asked about *future* infrastructure and facilities, as shown in the following graphics.

Figure 10.5: Community Survey Results: “What Actions Can the City Take to Improve the Quality of Life in Earlham?”



The survey respondents rated public infrastructure to support new industrial development higher than average, with many giving it a #2 ranking. Social activities and investments in streets and storm water infrastructure is also rated somewhat high. Improving public utilities (water, sewer, etc.) and services (fire, EMS, etc.) were not rated high, most likely because people already have a high opinion of these amenities.

Figure 10.6: Community Survey Results: “In Your Opinion, How Important Are the Following Factors for WHY You Would Want to Live in or Near Earlham?”



Three items in this question are highly related to the topics of this chapter. Quality schools and low crime rate are two of the most “essential” of the items presented. Easy access to goods and services is perhaps more relevant to the economy and transportation but is also relevant to public infrastructure and services (availability of water service, etc.). This item is also more important than many amenities listed.

Figure 10.7: Survey Respondent Thoughts About Earlham Related to Public Facilities/Services and Infrastructure (Number of Responses)

Favorite Thing	Least Favorite Thing	Most Important Places
<ul style="list-style-type: none"> • School (14) • Services/amenities (9) • Sense of safety (8) • Self-sufficient community (2) • Low crime rate • “I love the small-town feel, I feel that can still be achieved even with expansion and growth. Engage the community, get individual and groups involved. Pull individuals into sub committees to help.” 	<ul style="list-style-type: none"> • Infrastructure, street, sidewalk, storm water drainage conditions, slow internet/cell service, lack of water pressure (6) • No transport ambulance (3) • Unfriendly police, unequal/selective or lack of law enforcement (3) • Daycare options/childcare (2) • Reputation for cliques, difficult to feel one belongs in the city (2) • Reports of loose dogs • Stray cats 	<ul style="list-style-type: none"> • School (51) • The library (13) • Pharmacy (7) • Dentist (7) • Dr. Office/clinic (6) • The post office (6) • Community Center (3) • Churches (3) • Police/fire (3)

Favorite Thing	Least Favorite Thing	Most Important Places
<ul style="list-style-type: none"> • “Earlham is a safe place to raise a family. Part of that has been a result of its slow growth. As a community I feel our focus on future growth should take into consideration that sometimes bigger does not mean better. It’s ok to stay small, make improvements for our existing community. Being mindful of what growth would mean for the safety of Earlham should be the biggest priority. Making sure that our police, fire department and infrastructure can handle the growth before it is here.” • Incredible volunteer forces • Forward thinking leadership 	<ul style="list-style-type: none"> • “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.” • The city council • The cell towers • School size is too small • School academics are not adequate 	<ul style="list-style-type: none"> • Daycare • Cemetery

What Should Stay the Same?	What Should Change?	What Would Make Earlham a Better Place to Live
<ul style="list-style-type: none"> • Sense of community/involvement/pride (20) • School support (5) • School does not consolidate (4) • Low crime/safety (4) • Cleanliness, neat, and welcoming, good place to live (2) • Awareness of police 	<ul style="list-style-type: none"> • More opportunities- activity spaces for youth and families (5) • Update the School/growth (4) • Local/city leadership; more open-mindedness to new ideas (3) • Better street water drainage (2) • Cell and internet options (2) • Water that doesn’t turn pink if it’s not dried up right away bathroom tub/showers. • New public spaces • Funding for fire and rescue • Limit tax abatement & housing developments before the city’s core structures/utilities can handle. 	<ul style="list-style-type: none"> • Improved academic outcomes and competitive athletics and programs (7) • Better cell/internet coverage (2) • Improved school building (2) • More childcare options for pre-elementary age kids (2) • Having performing arts rent out the school's auditorium for shows. • “People who grew up here being a bit more welcoming to us newbies (and I have been here for 23 years!) Overall, a great place to live though.” • Welcoming spaces • More willingness to accept those who are different from us (non-traditional families) • Better storm sewers • “I feel like there is now almost too much as far as police & fire trucks. While I appreciate these items, I feel 3 cops is a lot when many other towns do not even have one. The fire staff seems to get a lot of new vehicles & keep the older ones.”

As the matrix in Figure 10.7 shows, some community facilities and utilities issues are notable to residents. Many commented on the quality of services and welcoming nature of the community, such as good customer service. Others noted that newcomers do not feel welcomed into city leadership and decision-making. People gave mixed reviews of some specific services and infrastructure issues, especially police, telecom, and storm water management. Figure 10.8 repeats the four-question exercise used with the steering committee (Figure 10.4) but with a bigger audience of about 75 people who attended the community forum in October 2023.

Figure 10.8: Community Forum Four Questions Exercise Comments Related to Public Facilities/Services and Infrastructure

Biggest Opportunities	Biggest Challenges	One Big Dream	One Big Fear
<ul style="list-style-type: none"> • One school/not combined • Welcoming community • Young population interested in our community • Self-sustaining 	<ul style="list-style-type: none"> • Money (for community services and infrastructure) 	<ul style="list-style-type: none"> • Stay a small welcoming Iowa town 	<ul style="list-style-type: none"> • Loss of school, loss of identity • Rapid growth that the city cannot cope with for school and infrastructure • Going “boom” – large class sizes • To keep growth from ruining what we have

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 facilities and infrastructure.

- 75% feel that environmental sustainability should be a high priority.
- The group is slightly (55%/45%) in favor of focusing public dollars on quality-of-life items versus infrastructure.

Figure 10.9: Type Preference Exercise Results: Services

Earlham Project Types Preference Exercise

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.

Services



This exercise helps us understand the relative importance of different types of investments in each category. The “services” category was judged by 20 people, 13 of which said they support youth and/or adult athletic and recreation options. Improvements to the library, a larger or different type of community center, and volunteerism investments were given two votes each.

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 Facilities

As outlined in Chapter 4, Earlham has an adequate overall level of service for things like fire, EMS, and other public services provided by the City of Earlham. Therefore, Earlham’s issues and concerns can generally be defined to the following, when considering the future needs:

- Improvements needed and/or desired for facilities to be more efficient and effect for staff and customers.
- Improvements and/or expansion of services to meet future needs as the town grows to 1,800 residents.

Improvements to Meet Ongoing and Evolving Needs

During the public engagement process and when talking with public officials, there were identified several shortcomings in current facilities. Some of these were identified in the 2012 Capital Improvements Plan. Key needs and recommendations are found in the goals, actions, and policies section of this chapter and in Chapter 13. Factors that should be considered are needs for the comfort and productivity of staff and volunteers, needs to ensure the public is served well, and budget needs (cost to build, renovate, and operate). Some of these issues are explored in the design standards part of this chapter.

During the planning process, a few projects of this nature were mentioned. One of them is converting the current city hall entirely into a new fire/rescue/public safety building and moving the city administration to a different building or building a new fire/rescue/public safety building elsewhere. Another item discussed is new or more modern public works vehicles and a new public works building.

Improvements to Meet Future Growth Needs

As the town grows to 1,800 people, the city facility demand will begin to outgrow the overall space and staffing numbers now available. Probably a total of 1 new FTE staff person capacity will be needed. Further, it is anticipated that a net growth of 5,000 SF of public facility space will be needed to support Earlham by 2040.

The steering committee specifically mentioned the need for fire and EMS expansion as the area grows, as not just Earlham but the surrounding area is impacted by those services. Likely by 2040 fire and EMS capacity will need to expand by 25% compared to today, meaning more volunteers and potentially an additional vehicle.

Potential Need for New Infrastructure

The steering committee stated that Earlham is ahead on some infrastructure and behind on others. The community survey results seem to bear this out. The survey results reflect overall satisfaction with everything but telecom/broadband and, to a lesser extent, storm water management. Clearly, there can be improvement in all the local utilities, but most people accept services that are provided. Normally broadband is provided by the private sector, but the city can have a role. Likely, however, many residents are not dissatisfied with the speed but with the quality and/or cost of the service they choose to pay for. For example, the City of Earlham has no real role in what cell or internet service providers choose to serve an area once the broadband infrastructure is in place.

Improvements to Meet Ongoing and Evolving Needs

The 2012 CIP was focused more upon infrastructure serving the current development of Earlham than the future. In terms of water, sewer, and storm water, the plan focused on expanding capacity within the existing system and to areas of development that were underserved or unserved. It has been partially implemented, but much of the work identified in that plan remains. The plan identified 18 water projects, most of them water main replacements and/or expansions to a larger water main size. The CIP included sewer lining projects impacting about a quarter of the mains in the city, concentrated along 6th Street. Stormwater projects yet to be complete are North Chestnut Avenue culvert installation north of the school, North Chestnut Street storm water lining, and Phase 2 of westside lining mostly along NW 3rd Street. As funds are available, those projects should proceed if they are deemed still necessary.

Improvements to Meet Future Growth Needs

Infrastructure issues will be enhanced with new growth. With growth to 1,800 people by 2040, infrastructure will be required for some areas of new housing, commercial, and industrial. Therefore, Earlham's greatest need in the next twenty years will shift gradually from maintenance to responsible expansion of capacity and new infrastructure, especially stormwater management systems. Large projects like water towers, new sewer lagoons, and new water plants are not projected with this level of planned growth. However, almost all development in Earlham will require road extensions, new water mains, new sewer mains, and storm water management projects.

Those utilities provided in the rural area are outside of City control, which means the City of Earlham must consider how to interact with those utilities when planning development if annexation occurs to accommodate growth. Therefore, ongoing conversations with providers early on is important so that local needs are considered as that infrastructure is planned.

Design Standards and Considerations for Effective and Efficient Public Facilities and Infrastructure

Since infrastructure can be very expensive to build and then must be properly maintained, it is important that infrastructure planning anticipate growth needs but not outbuild those needs. It is also wasteful to under-build infrastructure so that future growth requires premature replacement of existing systems. For example, if Earlham builds a 6" water main along a street to replace an old main but then new development five years later requires that this same water main be replaced by an 8" main, that is wasteful.

Targeting System Improvements

System improvements should be focused to where development is planned, and development should not be planned where improvements are too expensive to build or where maintenance of the infrastructure is most challenging. Future development should be considered where it is relatively easy to extend infrastructure. Similarly, improvements should be incremental. It does not make sense to overextend infrastructure when development will not result in new users (such as houses built on lots) for years after it is built.

Low-impact and Nature-sensitive Design

Where and when possible, consider the topography and environment when building infrastructure and designing developments. This is most true with stormwater management. "Green" or nature-based practices should be used when possible. Examples are shown to the right and below, such as rain gardens, bioswales, retention basins, and other landscaping techniques. The goal is to use the existing land and resources to reduce development impact and likely also reduce long-term maintenance costs. Iowa's Storm Water Management Manual (available on the IDNR's website) offers many more details. Grants are available to assist with this kind of infrastructure.

Focus on Customer Service

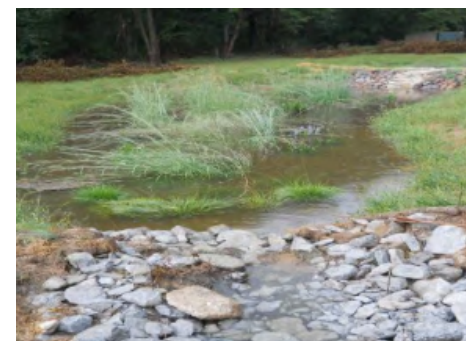
In the execution of projects and actions to improve community facilities over time, retaining good customer service is vital. The more business you can do online, such as obtaining a parking or building permit, the better off a community will be. This increases transparency and efficiency. A positive experience of someone visiting city hall and knowing who to visit for services is important. Customers should always feel welcomed, no matter how busy the office may be.



Dry swale with vegetation to support absorption – courtesy: Iowa DNR



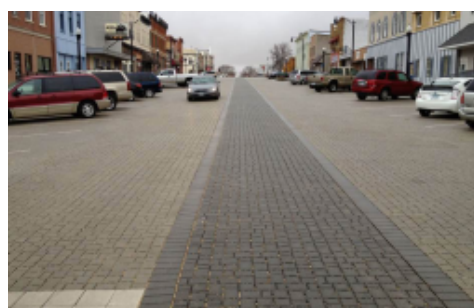
Wet grass swale with check dams – courtesy: Iowa DNR



Bioswale – courtesy: Iowa DNR



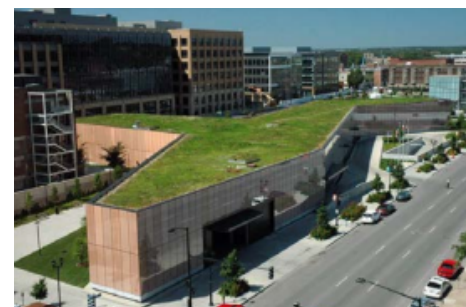
Native plantings, such as a rain garden – courtesy: Iowa DNR



Pervious pavers (West Union, Iowa) – courtesy: Iowa DNR



Stormwater wetland concept – courtesy: Iowa DNR



Green roof – courtesy: Iowa DNR

Consistent Standards

Standards and designs that the existing system can accommodate and that can be retrofitted to rural infrastructure are vital. This requires collaboration with outside infrastructure providers and a long-term engineering relationship.

Consistent Mapping and Maintenance

The City of Earlham should maintain its own mapping system that has detailed information about the entire system, especially for streets, water, sewer, and stormwater. This is one way to improve maintenance, avoid overreliance on the knowledge held by staff that can leave the city, and avoid poor decisions about where to develop that may not be consistent with infrastructure in place.

Effective and Efficient Public Facilities and Infrastructure Goals, Policies, and Action Items

Several goals, actions, and policies have been created to help local leaders and partners create effective and efficient public facilities and infrastructure.

Goals are statements 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.



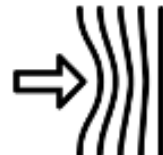
Welcoming Community



Active Lifestyle



Preservation and Culture



Resiliency and Maintenance



Managed Growth



Affordability

Effective and Efficient Public Facilities and Infrastructure Vision

Earlham's facilities and infrastructure grow in pace with the development of the city, remain viable and sustainable, and retain great value, while offering great customer service and innovative programming.

Goal 1

Maintain high quality, transparent, efficient, and consistent public service.

Action 1A

Annually evaluate staff and elected official public service using a third-party evaluation tool and come to agreement on a few specific areas of improvement each year.

Action 1B

Complete activities and events to reward good service.

Action 1C

Increase the amount and scope of services offered online or that can be initiated online.

Action 1D

Expand City of Earlham interaction and collaboration with other public bodies and non-public providers of services (civic clubs, childcare, etc.) to see where improvements are needed.

Action 1E

Provide resources and encouragement of staff and leaders to remain informed; attend trainings and programs about topics beyond the usual things; learn about planning topics, for example.

Policy 1A

Identify and codify policies and procedures to make the city as efficient, transparent, and consistent as possible.

Policy 1B

Seek to engage and grow the number of volunteers who work with the City of Earlham; engage civic groups.

Policy 1C

Always proactively engage social media and traditional media so the public is aware of what is going on and how they can voice their concerns.

Policy 1D

Engage students and consider a youth advisory team that will provide insight on public decisions and what should be improved throughout the community.

Goal 2

Over time, improve public facilities so that Earlham has the best quality and most energy efficient facilities possible.

Action 2A

Engage with grant programs to complete an energy efficiency evaluation of all public buildings and other buildings that play a role in public life.

Action 2B

Complete a community facilities evaluation and identify how best to accommodate growth in needs for police, fire, EMS, and city administration.

Action 2C

Invest in buildings per the facilities evaluation.

Action 2D

Collaborate with the school and childcare providers to ensure that those needs can continue to be met within the city.

Action 2E

Using community policing best practices, hold events that engage the public and law enforcement to help build public trust and respect.

Action 2F

Continue to invest in broadband technology and telecom options.

Policy 2A

When considering land use changes and development requests, use some matrices to evaluate their potential impacts on public facilities and staffing needs.

Policy 2B

Use sustainable design principles for all facility investments.

Policy 2C

Seek to beautify public spaces to set an example for the general public.

Policy 2D

Consider peer cities (Van Meter, Winterset, De Soto, Dexter, Stuart, etc.) to see how they address public facilities needs as they grow.

Policy 2E

Continue vehicle and equipment maintenance schedules and create the same for buildings and properties.

Goal 3

Build and maintain quality and reliable critical infrastructure.

Action 3A

Engage with grant programs to complete an energy efficiency evaluation of all public infrastructure, namely streetlights and other electrical systems, sewer treatment facilities, etc.

Action 3B

Increase mapping and data management capacity in-house; use GIS to track improvements to water, sewer, storm water, street, and sidewalk systems.

Action 3C

Evaluate needs and continue water, sewer, and storm water projects outlined in the CIP; focus on key corridors and the downtown area.

Action 3D

Develop storm water infrastructure using a combination of gray and green technologies.

Action 3E

Expand infrastructure over time to enable residential, commercial, and industrial growth in the city and in the planning area.

Policy 3A

When considering land use changes and development requests, use some metrics to evaluate their potential impacts on public infrastructure needs.

Policy 3B

Engage rural utility providers and county government officials related to standards for infrastructure to ensure growth and annexation can be accommodated economically.

Policy 3C

Use sustainable design principles for all facility investments; consider initial investment and long-term maintenance.

Policy 3D

Create a policy that encourages public and private property use of clean and renewable energy that also balances public concerns through a sensible scale.

Policy 3E

Consider future development needs and demands when planning and updating water and sewer infrastructure within the existing city.

Policy 3F

Consider the topography and environment when building infrastructure and designing developments.

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.