

# Final Report and Feasibility Study

## Wapello, Iowa



Prepared By:



Steve Ford Landscape Architecture



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Program Partners:

Iowa Department of Transportation  
Iowa State University  
Trees Forever



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# About Design Team

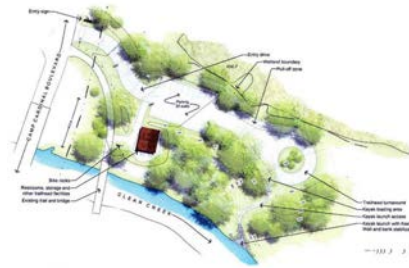


## Steve Ford Landscape Architecture

**Steve Ford**, Professional Landscape Architect, opened SFLA | Steve Ford Landscape Architecture in July of 2016. A Landscape Architect for more than 35 years, Steve has worked for a handful of highly reputable architectural, engineering and landscape architecture firms. His wide ranging experience includes campus and master plan design, urban design, sports facilities, parks and trail design, memorials, and residential landscape design.

He received his training at Iowa State University and worked in city planning and at an architectural firm in South Dakota early in his career. Following that, he worked in the Minneapolis metro area doing residential landscape architecture for a design build firm before moving to the Iowa City area permanently. Some of his local projects include the Iowa Firefighters Memorial and the Clear Creek Trail in Coralville, the University of Iowa Credit Union headquarters and the new entries to Carver Hawkeye Arena and the Fountain Entrance at UIHC.

Steve believes the success of a design project begins early in the visioning phase where all ideas are good and unimagined design options can be explored. He calls this the big picture and uses the technique to understand and the needs of the client and discover all creative possibilities for a project.



## Martin Gardner Architecture

Martin Gardner Architecture P.C. has been providing excellent in architecture, design, master planning, needs assessment, creative placemaking, and other consulting services in eastern Iowa for over 35 years. We have artists, architects, landscape architects, interior designers, community planners, historic preservationists, graphic designers, drafts-people, and construction industry specialists to ensure that every tool is available to meet the challenges of every project. Together we have a dynamic Team with a wide-ranging portfolio of over 2,000 projects.

**Michael LeClerc**, Assoc. AIA & ASLA, LEED Green Assoc., CDT - Architectural and Landscape Architectural Associate. Michael was born into a fourth generation farming family in NE Iowa. He went on to study design at The University of Iowa and The University of Oregon with a focus on community revitalization, creative placemaking, preservation, and sustainability. During his time at The University of Oregon he was a member of designBridge whose goal is to bring the resources and energy of design students to communities and organizations that need assistance. These interests lead him to first tackle issues of decline in his rural hometown of Coggon, IA. He currently is a member of the Linn County Historic Preservation Commission, volunteer with the Community Design Program through the IA Architectural Foundation and is involved in the Community Visioning Program run jointly through ISU, IA DOT, and Trees Forever. These experiences were fundamental to him in illustrating the effects of making design more visible and accessible as a strategy to enhance street life, stimulate local economies and mitigate decline. He focuses professionally on utilizing the design process to educate, empower, enhance, and sustain healthy communities to make great places to live, work, and play.

**Wan Wei** is a Landscape Architecture graduate student at Iowa State University from China. She gained a Bachelor of Science degree from Shandong Agriculture University, China, and a Master of Science (in Horticulture) degree from University of Nebraska-Lincoln. Wan loves plants and landscape design, and hope to create an environmentally-friendly world.



# Program Overview

Wapello is one of 10 communities selected to participate in the 2018 Iowa's Living Roadways Community Visioning Program. The program, which selects communities through a competitive application process, provides professional planning and design assistance along transportation corridors to small Iowa communities (populations of fewer than 10,000).

Goals for the Visioning Program include:

- Developing a conceptual plan and implementation strategies with local communities
- Enhancing the natural, cultural, and visual resources of communities
- Assisting local communities in using external funds as leverage for transportation corridor enhancement

Each visioning community works through a planning process consisting of four phases of concept development:

- Program initiation
- Needs assessment and goal setting
- Development of a concept plan
- Implementation and sustained action
- Improved access

Each visioning community is represented by a steering committee of local residents and stakeholders who take part in a series of meetings that are facilitated by field coordinators from Trees Forever. Iowa State University organizes design teams of professional landscape architects, design interns, and ISU faculty and staff. The program is sponsored by the Iowa Department of Transportation.

## Community Themes & Goals

The Wapello Visioning Committee identified a number of themes and goals during the visioning process, which are outlined below:

### Trails

- Connect parks
- Circle the town
- Connect to trails outside of town
- Connect destinations

### River

- Celebrate and promote as community feature
- Promote water trail designation
- It's a destination

### Natural Areas

- Promote and Celebrate the natural resources
- Plant more trees to replace the ones being lost
- Add more nature to North End Park
- Accommodate all users-ages, abilities, uses

### Safety

- Enhance street crossing for pedestrians and bicyclist
- Remove pedestrians from streets
- Stricter standards/ordinance enforcement
- Hwy visibility improved - side streets too
- Access improved

### Identity Projects

- Entryway for new entry off new Hwy 61
- Defining destination to attract
- Create a sense of belonging
- Merging new and old Hwy 61
- Emphasize the Iowa River as culture and identity

## Capturing the Vision

Based on the needs and desires of the local residents, as well as a detailed inventory of community resources composed by ISU, the design team developed a conceptual transportation enhancement plan. This plan, as well as the inventory information, is illustrated in a set of presentation boards to follow. For the sake of clarity and legibility, the summary text from the reduced scale map pages created by ISU have been pasted next to the map and cited with the following notation: "- ISU: 2018 Community Visioning." Additional observation notes by the design team follows this content at the bottom of the page.

It is the design team's experience, that community members themselves are the best experts to understand what their needs are and what challenges their community faces. However, many of the small cities and towns lack necessary resources, funding, time, or professional experience to utilize existing resources in order to execute desired improvements or visualize and plan for them. In addition, many of these local governments have few full time employees to take these types of projects on. Likewise, many rural government employees and citizens organizations are unfamiliar with the tools, processes, goals, and outcomes of creating a Master Plan. In this regard, your design team would like to champion all that the Community Visioning Program offers under-served communities through out Iowa. Our goal in this program has been to provide your community with a very abbreviated version of a long-range Master Plan and introduce the community to the processes and products of long range planning that look out past our own lifetimes. This can be a difficult task both for designers and residents to plan for what is realistic today and visualize future possibilities as best we can despite many unknowns and the constraints of the present. No one knows exactly what opportunities or challenges the future may hold, but we can plan for future growth with the understanding that over time buildings and infrastructure age and property changes hands. With this in mind, we examine the goals and challenges the community faces today, address what we can in the near future, and look for possible opportunities the future may hold. Our goal has been to provide Wapello with strong visual aids and tools to accompany future grant applications or to give future designers an ample head start in taking these concepts to construction documents in order for the project to be bid and built. It is our intent that portions of this feasibility study and images from this document and the presentation boards can help the community elevate future grant applications to stand out among other applicants. Most grant applications require a project narrative to describe the purpose and goals of a project, and adding sound data and strong visual aids to your grant application will further strengthen it when reviewers are deliberating among other applications.

Although the scope of some of the proposed design interventions may seem impossible today, their scale and complexity are intended to grow with the community through time. Additionally, each intervention can be broken down into more manageable sub-phases. For example, a streetscape improvement plan could be implemented a

## Program Overview

few blocks at a time to make the project more financially feasible in the short term. Taking into consideration community input and the priorities established through the focus groups, surveys, and visioning meetings, we have attempted to start with smaller, simpler, and more cost effective design interventions that are easier to execute, and save the more complex ones for later in time in order to start small, gain momentum and public support, demonstrate small successes along the way, and to provide time for fund raising or grant applications in order to undertake larger improvement projects.

To make such a large undertaking and investment more manageable and realistic for a community of this size, starting on page 46, design interventions have been broken down into phases and each has been assigned a conceptual timeline for implementation. It should be noted that each phase, priority, and timeline are intended to be flexible as ultimately determined by the community themselves. Phases and timelines are by no means static and are intended only to demonstrate how large-scale improvements and community Master Plans can be realized by implementing small scale projects strategically over time to achieve cohesive broad reaching goals. This document should not in itself be considered a complete Master Plan, but serves only as an abbreviated form of one to help demonstrate how Master Planning helps communities of all shapes and sizes achieve great things. Master Plans ultimately need brought before City Council, approved, and officially adopted. Master Plans of any kind are intended to be living documents that outline a general direction for community growth and development and must be revised periodically to address changing needs, priorities, budgets, challenges, and opportunities.

The design team would like to take this opportunity to encourage Wapello to think strategically over time and to think big! There will always be a million reasons why something can't be done, but good things do not happen by focusing on what can't be done, rather positive change happens by focusing on potential and what things can become. It is often hard and scary to make bold moves when a community is already struggling, but bold moves are necessary to help historically agricultural based economies adapt to offer more opportunities and experiences to a wider range of people in order to remain vibrant and dynamic to enable future growth. As farming changes, technology improves, farms grow larger, become more efficient, and fewer families farm them, bold moves are necessary for communities to adapt and survive. A perfect example is Lanesboro, MN with a population of only 754 which now thrives on tourism by attracting visitors to views of the limestone bluffs surrounding the town nestled next to the Root River. A community of this size strategically adapted their local economy and planned a community vision to take advantage of the river and their location and now supports two theater companies, river and bike trails and recreation companies, over 11 bed and breakfasts, 2 resorts, 15 eating establishments, downtown camping opportunities, and a number of galleries and retail establishments to successfully fill and revitalize every Main Street building. Wapello, has equally great views to the Iowa River, some of the best in the state, and there are plenty of recreation opportunities, a historic downtown, and has just as much potential as Lanesboro. In the end, the only thing that limits what can be done, is what one is willing to imagine possible and strategically plan for.





### Community Visioning Program Overview

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  - Implementation and sustained action

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transportation enhancement plan. This plan, as well as the inventory information, is illustrated in the following set of presentation boards. To make such a large undertaking and investment more manageable and realistic for a community of this size, design interventions have been broken down into phases and each assigned a conceptual timeline for implementation:

1. Program Overview
2. Bioregional Assessment
3. Transportation Assets and Barriers Assessment
4. Transportation Behavior and Needs Assessment
5. Transportation Inventory
6. Phase I—Critical Crosswalks & Safe Routes, 1–5 years
7. Phase II—Connect Old Town to the River, 3–10 years
8. Phase III—Celebrate the River at Every Opportunity/Enhance Main St., 6–15 years
9. Phase IV—Domesticate Hwy 61 & Enhance Franklin St., 10–25 years
10. Phase V—Easement Improvements to Designate Clear Route to Old Town, 25–50 years
11. Phase VI—River Trail to Connect North & South Parks, 25–80 years
12. Phase VII—Gradually Est. Blocks to Connect New Town, Old Town, & River, 80–100 years
13. All Phases



**Wapello**

## Program Overview

### Design Team

Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Tees Forever | Iowa Department of Transportation





# Bioregional Assessment

## Settlement Patterns

This board uses maps from A.T. Andreas' Illustrated Historical Atlas of the State of Iowa, 1875 overlaid with present-day town boundaries and water bodies. Published in 1875, Andreas' Atlas is an extraordinary resource showing the post-Civil War landscape of Iowa including settlement features (towns and villages, churches, schools, roads, railroads, etc.) and landscape features (water bodies, vegetated patches such as "timber" and "swamp," and major topographic features.) High-quality scans of the Atlas have been arranged to correspond closely with present-day maps revealing major landscape changes as well as features that have persisted, such as railroad rights-of-way and in some cases remnant vegetation patches.

### Wapello in Context

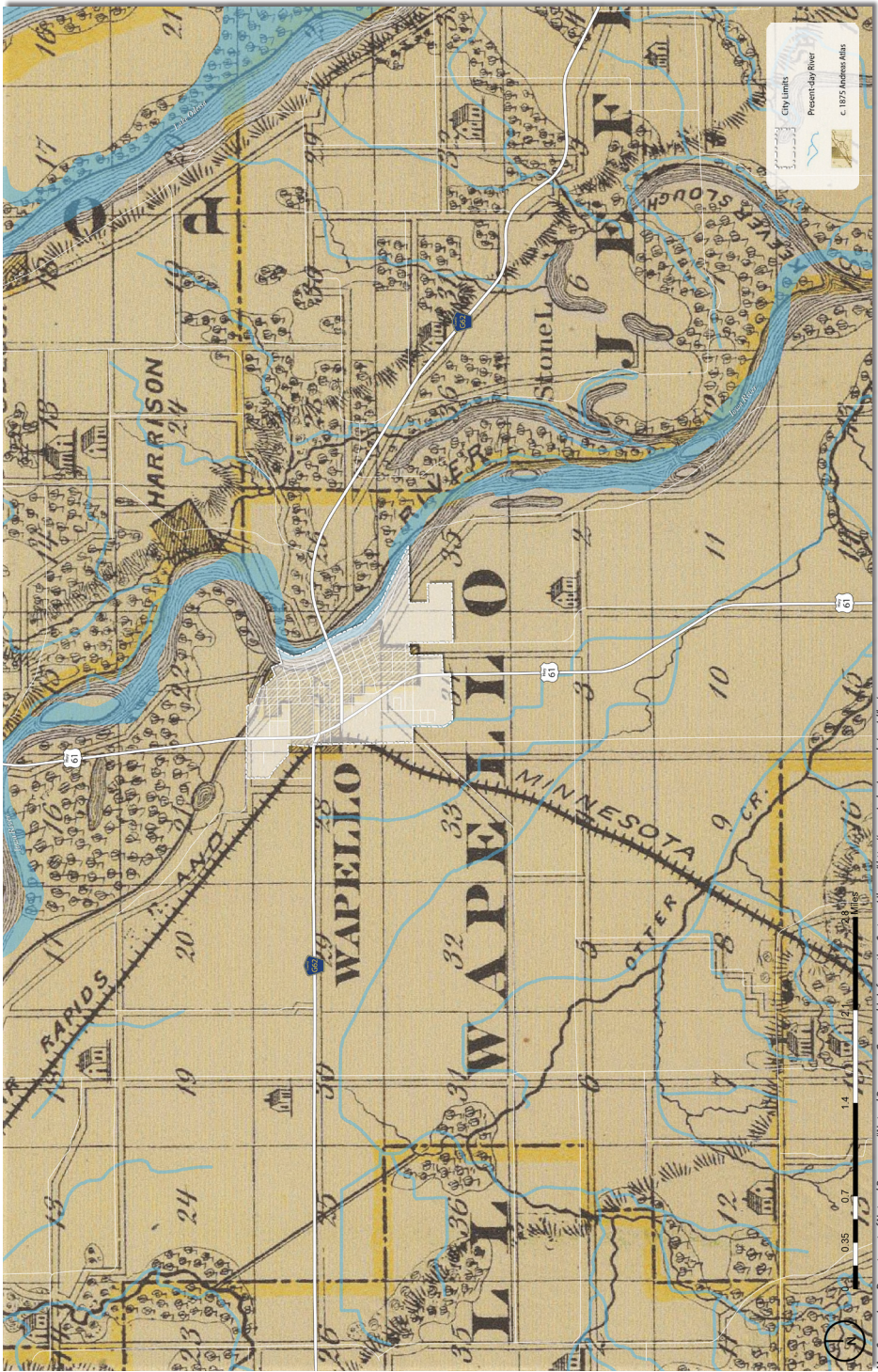
Compare the 1875 boundaries of your town to the current boundaries. How much has your town grown?

Compare the course of the rivers in 1875 to their current course, are there major changes in alignment or location? Are there vegetation patches shown in the 1875 map still in existence?

- ISU: 2018 Community Visioning

### Additional Notes from Design Team

It should be additionally noted how Wapello has grown through out time slightly to the north but mostly to the south. The east has been largely constrained by the river, and the west side to this day still carries the remnant constraint imposed by the former railroad line. Growth has primarily occurred on the south end of town but has expanded east-west along the souther portion between those two constraints.



**Settlement Patterns**

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**Wapello**

Settlement Patterns

**Bioregional Context**

Julia Badenhop, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine  
Iowa State University | Trees Forever | Iowa Department of Transportation



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.gisb.uiowa.edu/ingb/lib/>.

# Historical Vegetation

The vegetation information shown here is derived from township maps made by the General Land Office (GLO) surveys beginning in 1836 through 1859. The vegetation information was digitized in 1996 as a resource for natural resource management and is useful "...for the study of long term ecological processes and as baseline data for the study of present day communities."<sup>1</sup>

The names of plant communities mapped by the GLO surveyors varied. The original terminology used by the surveyors who made maps has been preserved. Not all communities will have all vegetation types.

The vegetation names commonly used by the GLO surveyors include the following<sup>2</sup>:

1. Field: Cultivated lands of early pioneers or Native Americans.
2. Grove: Isolated dense stand of trees.
3. Marsh: Perennial wetlands, basins of irregular shape.
4. Prairie: Dominated by prairie grasses with individual or few scattered trees.
5. Thicket: Impenetrable blocks of shrubs, often thorny.
6. Timber: Contiguous blocks of trees extending to the horizon in at least one direction.

1. J.E. Ebinger, "Presettlement Vegetation of Coles County, Illinois," Transactions of the Illinois Academy of Science (1987): 15-24, quoted in Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using Government Land Office surveys and a Geographic Information System" (master's thesis, Iowa State University, 1995), 8.

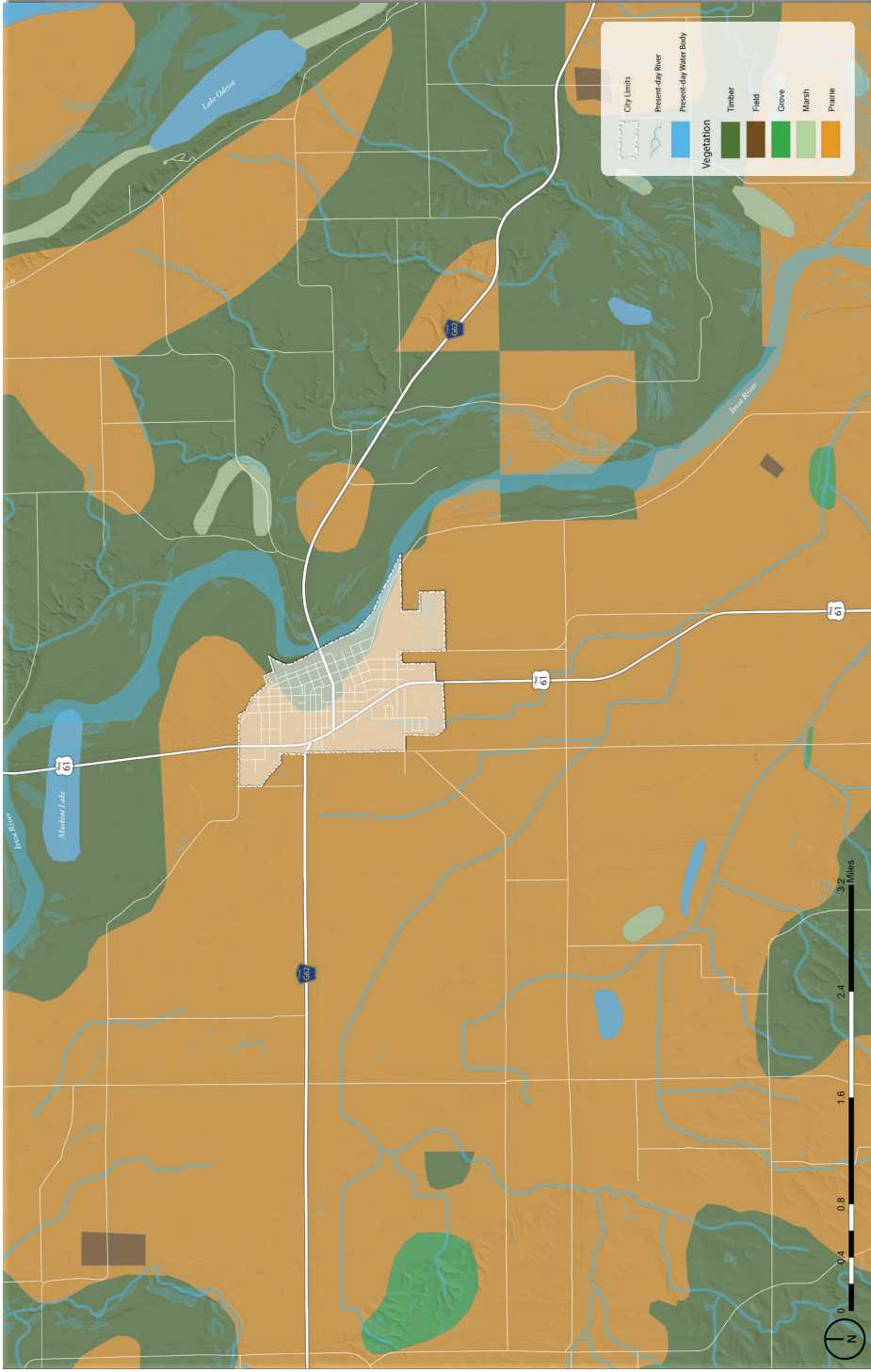
2. Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using Government Land Office surveys and a Geographic Information System" (master's thesis, Iowa State University, 1995), 134-135.

- ISU: 2018 Community Visioning

## Additional Notes from Design Team

It should be noted that the historical vegetation map is largely reinforced by the previous map that depicts the Illustrated Historical Atlas of the State of Iowa (1875). These should also be contrasted with present day where the majority of the "Prairie," and some of the "Forest," vegetation has been replaced by agriculture more appropriately represented by the "Field" category.





Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.gisb.uiowa.edu/ingb/lib/>.

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1. J.E. Boyer, "Presentment Vegetation of Cedar County, Iowa," Transactions of the Illinois Academy of Science (1927), 15-24, quoted in Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using Government Land Office surveys, 1836-1859," *Geographic Information Science* (PhD diss., Iowa State University, 1999), 82.

2. Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using present-day GIS," *Geographic Information Science* (PhD diss., Iowa State University, 1995), 134-135.



# Historical Vegetation

### Bioregional Context

Julia Badenhope, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine  
Iowa State University | Trees Forever | Iowa Department of Transportation



## Change Over Time

In [these] images to the left, you can observe how land use has changed over time from the observed landscape patterns in the 1800's Andreas Atlas, to the present day. By looking at landscape development patterns over time, one can begin to understand how technology, infrastructure, economic forces and desired lifestyles have interacted with landform, climate, and processes to create present day development patterns.

For example, consider how agricultural land use has changed land cover patterns. In general, one can see impacts of technology in larger field sizes, the reduction in wetlands and sloughs, and the elimination of fence lines as diverse farm crops and livestock production has given way to monoculture field crop production.

New roads have been developed, usually cutting across the landscape topography on compacted roadbeds. Highways usually have low slopes and more gentle curves to facilitate high speed movement, while roads targeted to more localized traffic can have steeper slopes and tighter curves. The result of these differences can be seen the earthwork used to flatten the roadbeds near highways, and the creation of "borrow pits" that sometimes appear as geometric ponds alongside highways.

Other observable changes are development that responds to floodplains. In many cases, development will avoid floodplains, because of the risks of property damage. Between the 40's and 60's, development was placed in floodplains with the protection of levees. These earthworks are less effective with today's intense summer rainfall patterns, and in the most recent image, this floodplain development may have moved as a result.

- ISU: 2018 Community Visioning

### **Additional Notes from Design Team**

Members of the Steering Committee indicate that potential future annexation would continue to occur to the south originally near the most recent residential development for Wapello. Although already incorporated into the community, the City may want to investigate developing the fields directly south of the grain elevators first in order to better compliment downtown and to set the stage for future enhancements to existing Hwy 61.



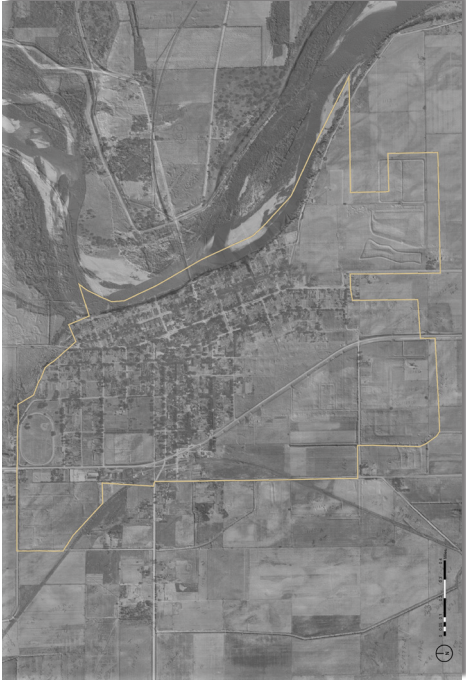
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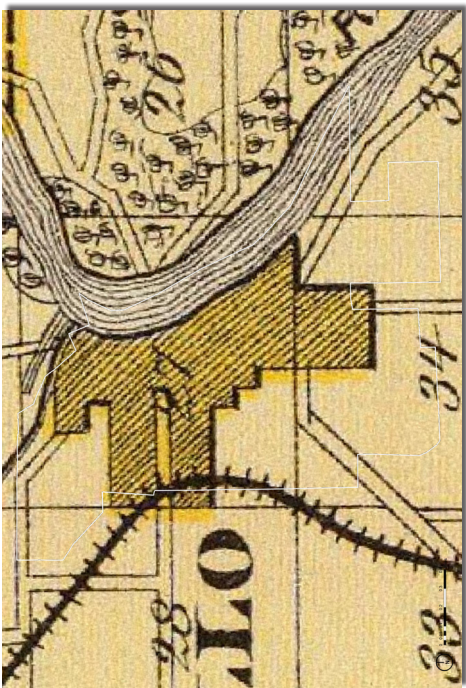
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1930s



2015



1875 Andreas Atlas



1970s

Map Source: ISU GIS Facility, "Iowa Geographic Map Server," <http://www.http://orho.gis.iastate.edu/>.



**Change Over Time**

**Bioregional Context**

Julia Badenhop, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine  
Iowa State University | Trees Forever | Iowa Department of Transportation



## Regional Watershed

A watershed is a defined area or ridge of land with a boundary that separates waters flowing to different rivers, creeks, or basins. Watershed boundaries show the extent of a drainage area flowing to a single outlet point, and determines whether precipitation is directed into one watershed or an adjacent watershed.

It is important to note that there are multiple levels of watersheds, for instance the Iowa River watershed is composed of a dozen smaller watersheds, and the Iowa River watershed is a sub-basin of the Mississippi River watershed.

Where a community is located in relation to its surrounding watershed(s) determines its capacity to manage regional watershed issues such as flooding. For example, a community located near the end of a watershed (close to the outlet point) will have little capacity to reduce the amount of water draining toward it from upland areas.

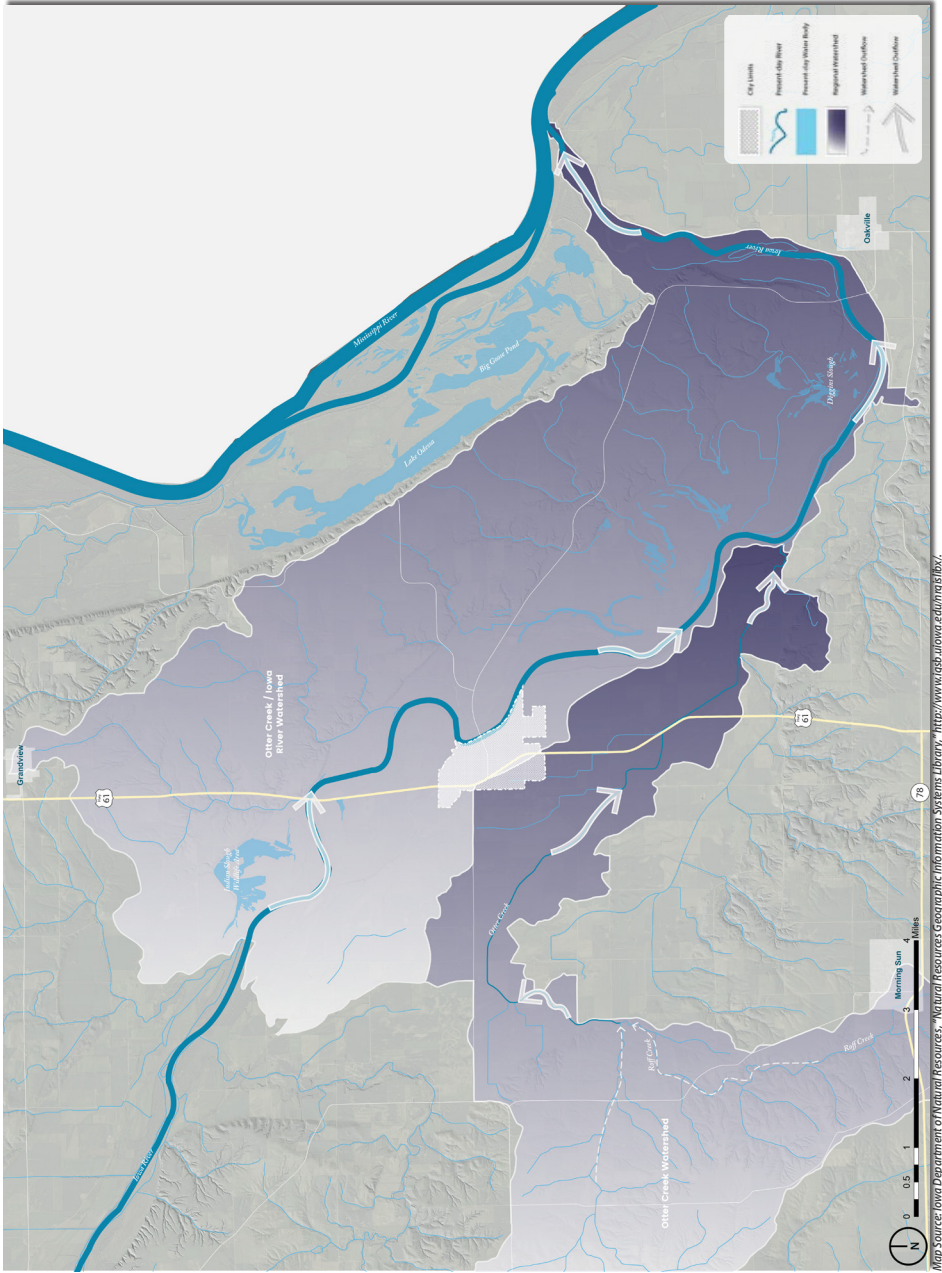
- ISU: 2018 Community Visioning

### **Additional Notes from Design Team**

Regional watershed data show Wapello near the convergence of two watersheds: the Otter Creek Watershed and the Iowa River/Otter Creek Watershed. These two converge south of Wapello and then shortly thereafter discharge into the Mississippi River. These conditions indicate that a lot of water is processed through the soils and waterways around Wapello. This is very evident by the public wetlands that span from the northern end of town up to the Iowa River and is reinforced by the following two maps: Depth to Water Table, and Elevation & Flow.

It is important to note that anything that is processed through the soils in Wapello very shortly join the Iowa River and shortly thereafter is discharged into the Mississippi River and beyond.





**Regional Watershed**

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## Depth to Water Table

The water table is defined as the distance below the surface at which the ground is saturated with water. Depth to water table is represented as a range because it varies due to seasonal changes and precipitation volumes. For example, following spring snow-melt an area with a depth to water table ranging from one foot to three feet is likely to be at or near one foot depth.

The map shows how close to the surface groundwater can be. Pavement and foundations are affected by groundwater near the surface. Freezing and thawing, and upward pressure of rising groundwater can cause cracks or "frost boils" in pavement. Foundations can be wet and require "dewatering," which can be expensive.

Where the value is less than 0ft, water can well up out of the ground. This causes localized flooding, even if there is no surface water draining to the area.

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### **Additional Notes from Design Team**

The majority of Wapello has a very shallow depth to water table. As the map indicates, the most of Wapello lies within less than 6ft. to the water table with the SW portion becoming more shallow at -1ft to 1ft.

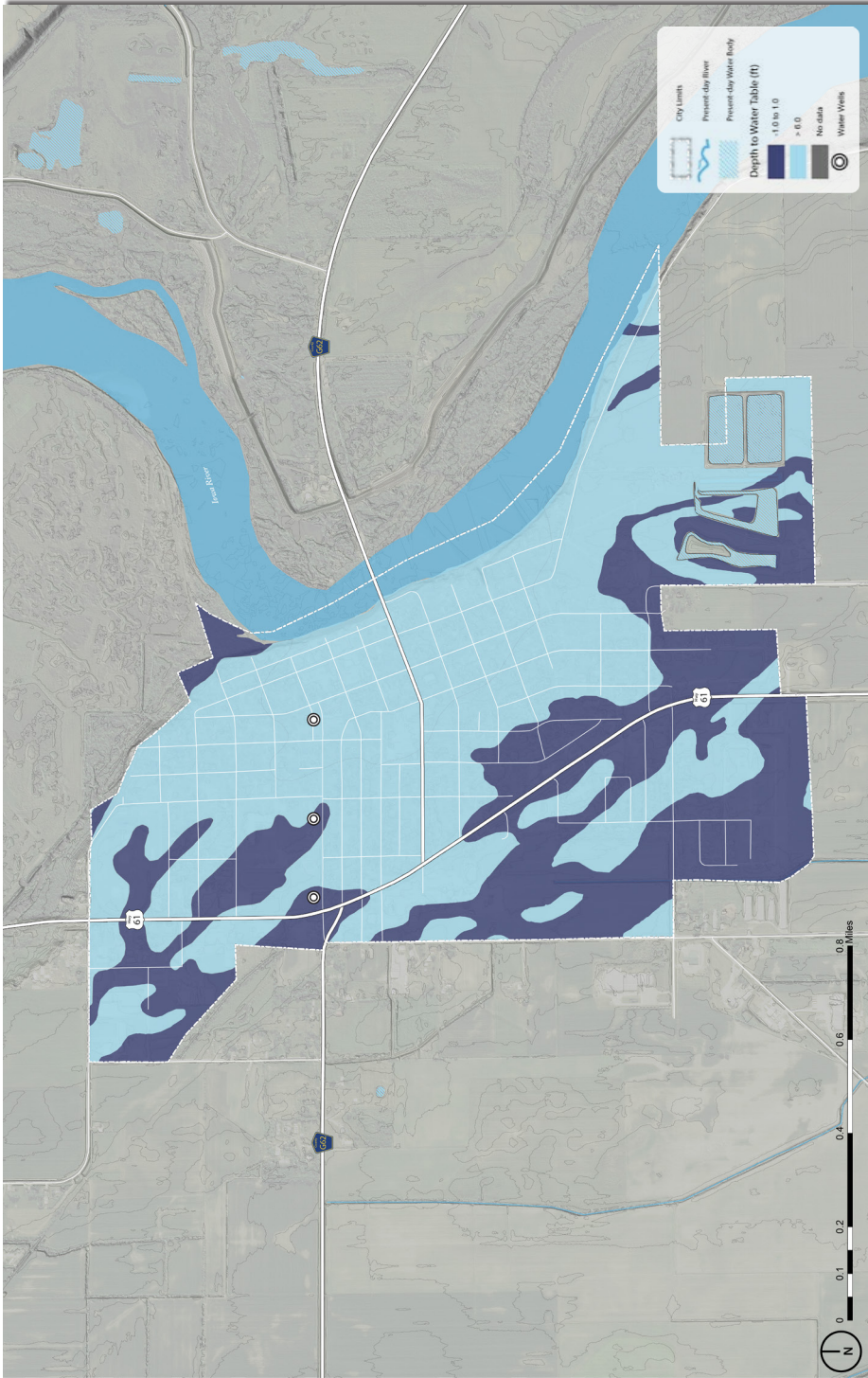
As noted above, this makes the costs of building and maintaining building foundations more expensive, which makes it less desirable to build there, although by no means impossible. This SW area and further to the south is however, the location of the most recent development and land the City indicates may get annexed some time in the future. Although it is not impossible to build in this location, the City may want to consider future annexation of river front land east and south of South Park fully noting the location of the sewage treatment lagoons and as permitted by floodplain regulations.

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Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.gisb.uiowa.edu/ingb/lib/>.



# Depth to Water Table

**Bioregional Context**

Julia Badenhop, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine  
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## Elevation and Flow

[This] map to the left displays topographic differences in elevation using a combination of contour lines and the color gradient depicted in the legend. The high points and low points have also been located.

Note the relationship of your community to the surrounding elevation; is it located in a valley or on high ground, or is it split between the two?

If your community lies within or near a floodplain or floodway, the map reflects these features. Not all communities will have these elements; their absence on this map indicates none are present.

Flood risk is correlated to low-lying land, this map also shows your community's flood risk as defined by the Federal Emergency Management Agency (FEMA) Flood Map Service Center. This map shows the two most important flood zones, the Base Flood and the Regulatory Floodway (consult legend.) Base Flood is the zone having a one percent chance of being equaled or exceeded in any given year, also referred to as the "100-year floodplain." The Regulatory Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% flood discharge can be accommodated without increasing the base flood elevation.

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### **Additional Notes from Design Team**

It is important here to point out the location of the levee on the eastern side of the river indicated by the purple line following the curves of the river. This levee was constructed to help control flooding on the eastern side, but also raises the elevation of flood waters on the high western bank of Wapello. The curve alongside this bank has experienced erosion in the past, at one time taking out part of Water Street, which use to be continuous. This bank has since been reinforced with rip rap.

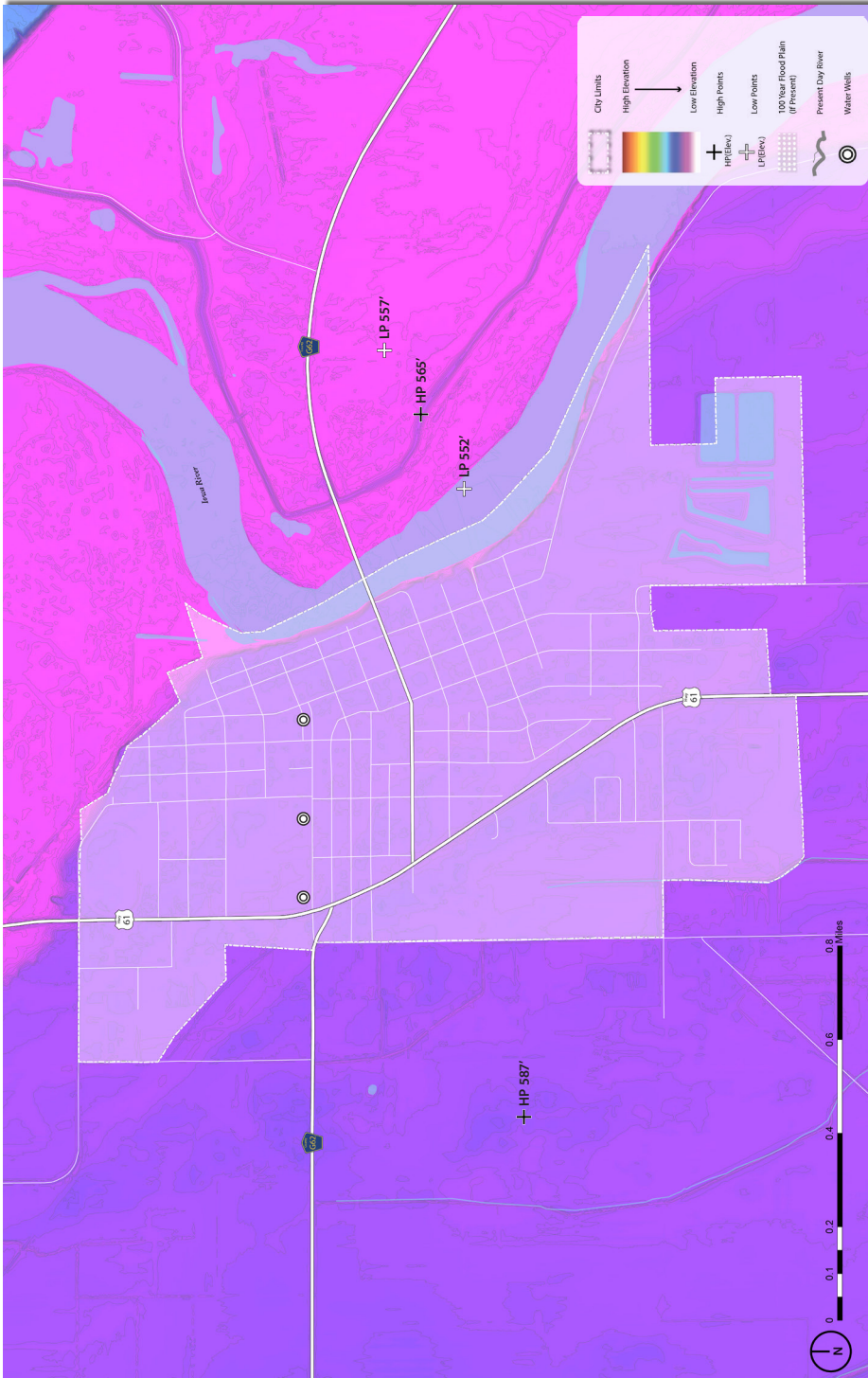
It should also be noted that the Iowa River's natural propensity is to eventually cut directly N-S and flow past the levee leaving Wapello with an oxbow lake along the majority of its eastern boarder.

**Elevation and Flow**

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**Elevation and Flow**

**Bioregional Context**

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## Present Day Land Cover

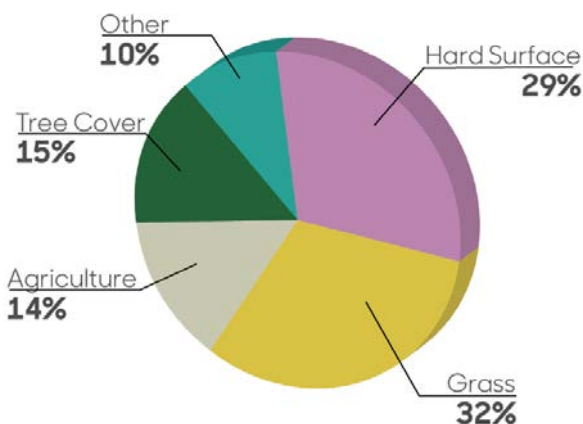
The land cover map depicts both natural and man-made land cover types with aerial imagery. The Iowa DNR created 15 unique classes for this dataset to differentiate land covers. Refer to the legend for a breakdown of land cover types within your community boundaries.

What do you observe about the dominant land cover types in your community?

Where is the tree canopy most concentrated?

Compare the amount of impervious surfaces (e.g., parking lots, roads, buildings) to the other surfaces (e.g, water, grass, and agriculture.) What does this mean for surface water movement?

Tree cover affects microclimate. Are places surrounded by canopy more pleasant in the summer? How do these places feel in the winter?



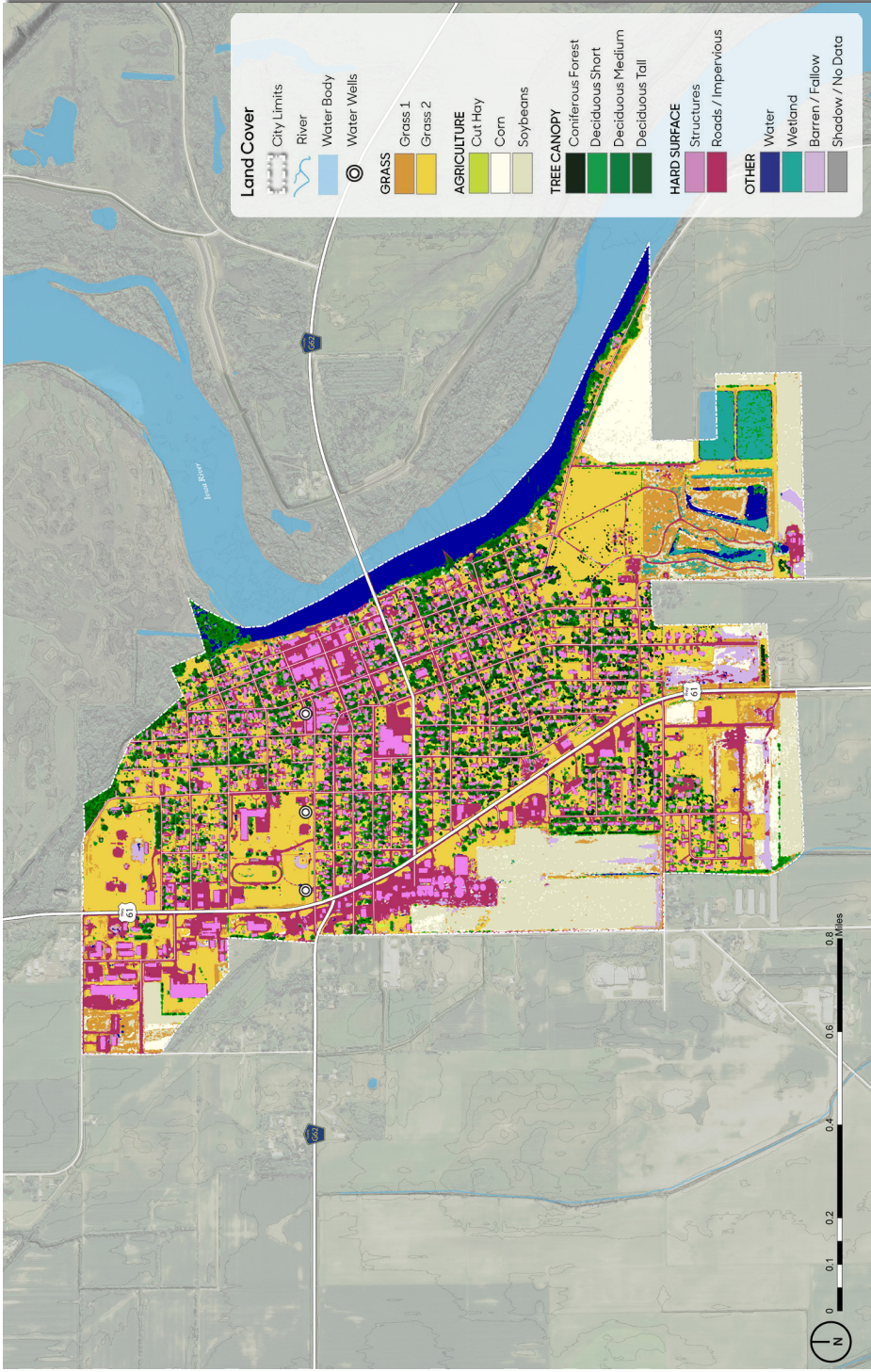
**Percent Land Cover Type**

- ISU: 2018 Community Visioning

### Additional Notes from Design Team

It would be helpful to note the amount of hard surface that exists in Wapello contrasted with the percentage of tree cover. This indicates that there is plenty of opportunity to utilize some of the paved surfaces for street trees, swales, and natural plantings. According to the Depth to Water Table Map, swales would provide some help with infiltration but remains pretty constrained. However, even slowing the flow of run off to the river helps sediments settle out of the soil before entering the river body, which aides in the overall health of the river as an amenity.





### Present Day Land Cover

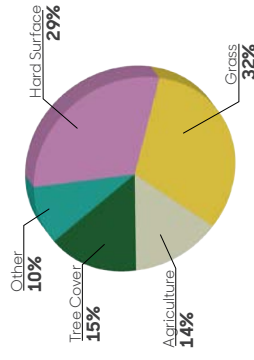
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## Urban Forest

[This] map ~~on the left~~ depicts city owned trees that have been surveyed by the Iowa Department of Natural Resources (Iowa DNR).<sup>1</sup> The trees are divided into three categories: healthy trees, hazard trees, and ash trees.

"Hazard" trees are distinguished with a yellow triangle symbol. The hazard designation reflects tree condition using the Iowa DNR's priority rating. Trees highlighted on this map are "dangerous, dead, or dying, and no amount of maintenance will increase longevity or safety;" or are infected by "insects, pathogens, or parasites."

"Ash" trees are distinguished with a purple cross. They are under imminent threat from the Emerald Ash Borer (EAB),\* an invasive beetle that disrupts circulation in the tree resulting in the loss of tens of millions of ash trees in North America.<sup>2</sup> EAB was first discovered in Iowa in 2010 and was confirmed in 30 Iowa counties as of 2016.<sup>3</sup>

The graphic above shows how many of the city's trees are of the same species. There is a strong possibility that 9% (Ash trees) of Wapello's city owned trees will die once EAB is carried to the area. With proper planning and management, the city's canopy can be improved by planting suitable trees that can gradually replace hazard trees and Ash trees. Improving species diversity will create a more resilient urban forest.

1. Iowa Department of Natural Resources Community Tree Inventories, <http://www.iowadnr.gov/Conservation/Forestry/Urban-Forestry/Community-Tree-Inventories>

2. EAB is a significant threat to our urban, suburban, and rural forests because it kills stressed and healthy ash trees. EAB is so aggressive that ash trees may die within two or three years after they become infested. Ash trees are as important ecologically as they are economically in the forests of the eastern United States. Emerald Ash Borer the Green Menace, USDA Program Aid No. 1769, 2008, [https://www.aphis.usda.gov/publications/plant\\_health/content/printable\\_version/EABGreenMenace-reprint\\_June09.pdf](https://www.aphis.usda.gov/publications/plant_health/content/printable_version/EABGreenMenace-reprint_June09.pdf).

3. "Iowa Tree Pests website," Entomology and Plant Science Bureau of the Iowa Department of Agriculture and Land Stewardship (IDALS), last updated February 9, 2016, [http://www.iowatreepests.com/eab\\_home.html](http://www.iowatreepests.com/eab_home.html).

- ISU: 2018 Community Visioning

### **Additional Notes from Design Team**

The important issues to note with this map are the amount of hazard trees, ash trees, and maple trees currently in Wapello. The hazard and ash trees already compose a large portion of tree population. These most likely are lost trees. If a maple blight were to strike, the majority to trees in town would be gone. It is recommended that a replanting program be initiated in town that encourages planting of species other than maple.

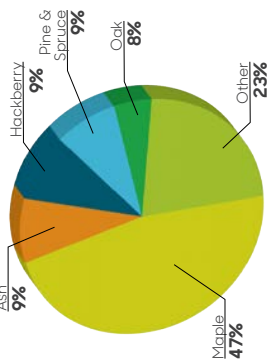


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 3. Iowa Department of Natural Resources, Emerald Ash Borer, <http://www.iowadnr.gov/Conservation/Forestry/Urban-Forestry/EAB>



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.gis.iowa.gov/dnri/gislib/>.

**Bioregional Context**

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# Transportation Assets and Barriers

## Overview

Transportation is integral to small-town life and a vibrant economy. In the context of the Community Visioning Program, we recognize walking, biking, and driving as quintessential modes of travel to various destinations important to residents and visitors. Access to these destinations is crucial for many everyday activities—getting to work and school, participating in community events, and providing for basic needs such as food, health care, and healthy activity.

In this participatory assessment, we want to find out which factors and conditions affect transportation use in Wapello, where these factors and conditions are most prevalent, and how they influence route and transportation choices locally. Because residents have the best knowledge of how Wapello's transportation system works, we use focused, small-group conversations, mapping, and photos of the best and worst to understand local transportation.

### Different Users = Different Needs

To capture insights about transportation from a variety of perspectives, we invited Wapello residents with different transportation needs to participate in focus groups. A total of 73 residents attended Wapello's workshop. Participants were separated into five user groups and the Wapello steering committee.



Actives

(14 participants): This user group represents those in the community who engage in outdoor recreation, including cycling, walking, running, swimming, skiing, etc. The availability of multiple venues for outdoor recreation matters to this group.



Mobility Impaired

(9 participants): This user group is directly affected by accessibility barriers such as high curbing and uneven sidewalks that make it difficult to operate mobility-aiding equipment effectively. Handicapped parking, curb ramps, and smooth surfaces are critical transportation features.



Older Adults

(19 participants): Accessibility—both in terms of physical access and proximity—is a major concern for this user group. Because some people in this user group do not or are unable to drive, having goods and services within walking distance is important.



Youth

(10 participants): This group uses primarily non-motorized modes of transportation, so pedestrian- and bike-friendly streets and sidewalks are important. These users value the ability to get to destinations on foot or via bicycle and having goods and services within walking distance.



Parents

(13 participants): Safety of their children is a primary concern of this user group. Access to safe and easy routes to school activities is another significant factor to this group. Parents of young children desire smooth, wide surfaces for strollers.



Steering Committee

(8 participants): The common denominator for this user group is that their observations are influenced by special knowledge of the transportation system acquired during the Community Visioning assessment process. As a result, this group is more representative of decision makers.

## What Factors Affect Transportation in Wapello?

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Barrier: Near the school, sidewalks are too narrow to accommodate people and busy traffic conflicts with pedestrian crossing.



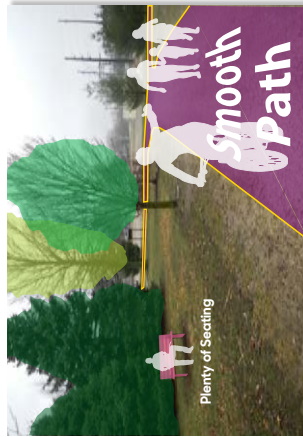
Barrier: Poor lighting makes downtown scary at night.



Barrier: Sidewalks are uneven and missing all over the city, making walking and using a wheelchair difficult.



Asset: Welcome sign at the North and South of Highway 61 showcase the community.



Plenty of Seating

Asset: Many benches and smooth walking trails in South End Park.



Easy Access to Iowa River

Asset: Boat ramp provides access to Iowa River.

Wapello

Overview

## Transportation Assets and Barriers Analysis

Julia Badenhope, Sandra Oberbroeckling, Clare Kiboko, Abby Schafer, Dominick Florer, and Tim Kerkhove.

Iowa State University | Trees Forever | Iowa Department of Transportation





# What People Said

"I would like to bike and walk more just because we are a small community, but we don't generally have safe pathways. I drive Highway 99 to Oakville, and that way, it's... unsafe because there [are] no shoulders."

"...it's nice to be in nature when you walk because it reduces stress, but it would be nice if there was something that you could walk around along the river."

"[I walk] just for health benefits; [sidewalks] go around onto Second Street or onto Main Street, and as you go around, the sidewalks literally just disappear."



"I think [at] this [south] end of town, it's nice to have those nice shaded trees, but they are blocking the street lights now because they have grown. I mean, it's beautiful during the daylight, but at night it's [dark]."

## Actives

"...little kids and they're going to face the same problems we did when our kids were little. The parks are on that side. Tough to cross the highway...the only way for them to do anything, unless they're playing in their driveway, is to cross 61 to get to the South End Park."

"If you look before school or after school, you will see the majority of our elementary kids walking in the road because the sidewalk either is gone or it's so torn up, nobody is going to walk it."

"Cars are traveling faster [on Highway 99]...we had a couple close calls on 99, my kids, just thinking it was another road."

"One thing I'm looking forward to...getting from one side of Wapello to the other without having to cross 61. Yet, a lot of older people have trouble crossing 61 to go to the grocery store because it's on the west side and they live on the east side and they have trouble. My mom had an accident years ago crossing 61 there."

"Wapello is tremendously dark...We want people to walk in town. We want to promote that, but after dark, you can't do it."



## Parents

"Before when we were little, crossing 61 was exceptionally treacherous with all the traffic. Even now, it's probably still treacherous."

"The post office not handicapped accessible...First you got to pull up. Then you got to climb over that curb. Then up the step to get into the building...[I saw] a lady fall there and had to pick her up."

"I like the small town. It's easy to get around in. I don't like to drive, and I won't drive in big cities, but we don't have any red and green stoplights or anything. There's not any traffic hassles, so that's what I like."

"You never know when you need to use the restroom. Especially if elderly people want to go and... walk around the park. You never know."



## Mobility Impaired

"At one time they talked about having a trail from the landing...up to north of the business district... [it] would be nice to walk along and see the river."



"I fell in love with the water when I moved here. I like the Iowa and the Mississippi...and even just along north of town, we have all the little drainage ditches that are full of ducks...I have young kids so we do the parks quite a bit."

"We do use the North End Park a lot. That's actually where our rodeo is. It's the only FFA that runs a national or pro rodeo in the nation, so it's kind of cool that it's here in the small community. It's great for kids to get the experience."

"One of the biggest problems I see is on 61... some of th[ose] side streets are hard to see who's coming and where they're coming from, and 61 is always busy."

"I like the river, the access, [and] the boat landing. I don't think we [en]capsulate the river or natural resources as much as we should. We...need to celebrate that we are a river town."



**Steering Committee**

"Well, coming through these trees...on Van Buren...this is all super dark...I've walked that going back and forth to high school activities from downtown. There's no lights and it's—it can definitely use improvement. There's a lot of traffic there."

"Not when I'm...outside, [the river] is not a problem, but when my bus driver drives, she's not really safe. One day, it was [an] icy day, and she was driving really fast. Someone on our bus had to yell at her to slow down."

"[I would like] more entries to Mill Race because it is really is fun down there."

"When I go through to Roy El Road, it's a really bumpy road, and then on through Kennedy Drive, it's still really bumpy."



**Youth**

"You can't see around the [corner of G62 and 61]. It completely turns this way and turns this way. You can't see anything."

"If you were at South End Park for a while for the soccer game, getting home would be kind of scary. There needs to be more lighting at South End Park."

"Very caring and that's very important and because I raised all my children here. I mean, someone -- if something happened, they had a little bicycle accident, someone came out and took care of them, never had to worry. And the safeness of it too."

"A really big issue is kids riding bikes. They cross [by the nursing home]. It's a really speedy highway and traffic cannot judge. [This] problem is going to get [worse] because more houses with young people are being built [across the highway]. The kids are going to want to go to the pool on the bikes. The school is over there. The soccer fields are over there, and they live on the other side of the highway.."

"Some of...the sidewalks are okay, and then you hit a spot that's sunken in, and it's filled with dirt or mud, and then you go out around it. So most of time, I skip the sidewalks and just walk on the streets."



**Older Adults**

"The city keeps the town looking [good] as far as mowing the grass and keeping down weeds. They do an excellent job."

"...the walks are just—they just crumbled. Just hardly any sidewalks along [Highway 99], but I think it would be nice if they paved the walking thing out at the park."

## Emerging Themes

**Active adults** engage in activities such as walking and biking to stay healthy. Some go out of town to hunt or play golf. This group identified bad sidewalks, unsafe intersections and poorly lit areas as barriers.

**Mobility-impaired individuals** enjoy a town with low traffic; nevertheless they are concerned about gravel roads and trails that impede their movement in town. They would like traffic control over Hwy 61 and paved trails.

**Older adults** enjoy their small and safe community. They walk to keep healthy and appreciate the work of the city in keeping the town clean. They are concerned about risky intersections with Hwy 61. They would like safe paths with access to wildlife.

**Youth** have issues getting around town because of the poor sidewalk conditions. Sledding at Major's Hill is a popular activity among them. They perceive unsafe intersections over Hwy 61 and around the schools and lack of lighting in many areas of town as barriers.

**The parents** appreciate the available opportunities for recreation in which their kids can participate. They consider Hwy 61 an unsafe road dividing the town that discourages travel between other parts of Wapello.

**The steering committee** appreciates Wapello's natural resources, especially the parks and waterfront. They are concerned about the challenges that Hwy 61, the poor sidewalk system, and lack of lighting represent for the residents. They would like an attractive community with enhanced parks and that is more connected to the river.



Transportation Assets and Barriers
Julia Badenhop, Sandra Oberbroeckling, Hatvany Gomez-Concepcion, Tim Kerkhove, Carol Joella Ustine, Mahsa Adib, Emma Lorenz

Iowa State University | Trees Forever | Iowa Department of Transportation



Emerging Themes

Table with columns: Destinations and Activities, Desirable Qualities and Features, Undesirable Qualities and Features, Most Desired Improvements and Activities. Rows include User Types (Active, Mobility Impaired, Older Adults, Youth, Parents, Steering Committee) and various feedback points like 'South End Park is an important destination for many people' and 'The pool is an important destination for residents'.

Active adults engage in activities such as walking, biking, and playing. They go out of town to hunt or play golf. This group identified bad sidewalks, unsafe intersections and poorly lit areas as barriers.

Mobility-impaired individuals enjoy a town with low traffic, nevertheless they are concerned about sidewalks, trails, and roads that impede their movement. In town, they would like traffic control over Hwy 61 and paved trails.

Older adults enjoy their small and safe neighborhoods. They appreciate the work of the city in keeping the town clean. They are concerned about sidewalks, trails, and roads that impede their movement. They would like safe paths with access to wildlife.

Youth have issues getting around town because of the poor sidewalk conditions. Stading at Major's Hill is a popular activity. Intersections over Highway 61 and around the schools and lack of lighting in many areas of town as barriers.

The parents appreciate the available opportunities for recreation in which their kids can participate. They consider Hwy 61 and the lack of sidewalks, the town that discourages travel between other parts of Wapello.

The steering committee appreciates Wapello's natural beauty, the parks and waterfront. They are concerned about the challenges that highway 61, the lack of sidewalks, and the lack of lighting represent for the residents. They would like an attractive community with enhanced parks and that is more connected to the river.

South End Park was mentioned by all the user groups as the primary destination for outdoor recreation in Wapello. The park has great views, trails, and playgrounds and trees.
North Park is an important destination for residents especially for kids and their parents. The mobility-impaired group value the pool and pool system as well as walking along the nice path by the pool.
Many user groups value the local school system with positive characteristics. The barriers mentioned in the survey are a lack of good access to the pool and examples of good access in Wapello.
Residents appreciate Wapello as a small town that is safe and friendly. Where every body feels at home. People also noted the low crime rate. Many parents of Wapello are a major concern for all user groups. People are forced to walk on bike on the sidewalks of Wapello to avoid bad sidewalks.
All groups said that the curvy conditions, fast traffic, and overgrown trees along Hwy 61 cause problems for walkers, bikers, and dogs. Hwy 61 causes problems for school buses, and along Hwy 61 cause problems for school buses. Participants said that the lack of safe paths or trails makes the region of high school and elementary school more complicated.
All user groups mentioned the poor lighting in many areas of town. Hwy 61 and Locust St, Pleasant St, Van Veen St, Pleasant St, downtown, and the parks. Many local benches, trash cans, drinking fountains, and lighting are not well cleaned and often broken.
Most of the users groups would appreciate a more complete, centrally town with wide sidewalks, especially where commercial areas are located.
Highway 61 specifically has addressing visibility issues in intersections and speed limit changes. They desire improvements to the park include more accessible clean equipment, drinking fountains, and picnic areas. A paved trail and playground on the west side of Highway 61 is also wanted.
Many users would like a designated biking trail along Hwy 61 and park to downtown. They also want benches and bike racks over the river for access to wildlife and to the scenic views of the river.
All groups want safety improvements made to Locust Street and Highway 61 to address the issue of intersections and speed limit changes. Highway 61 specifically has addressing visibility issues in intersections and speed limit changes. They desire improvements to the park include more accessible clean equipment, drinking fountains, and picnic areas. A paved trail and playground on the west side of Highway 61 is also wanted.
Many users would like a designated biking trail along Hwy 61 and park to downtown. They also want benches and bike racks over the river for access to wildlife and to the scenic views of the river.



# Transportation Behaviors and Needs Overview

The survey gives the visioning steering committee objective, representative information for the goal-setting phase of community visioning. The quantitative data collected from survey responses complements the qualitative information gathered from the focus groups at the transportation assets and barriers workshop.

The modes of transportation that residents use and the routes they take suggest suitable types of transportation enhancements in these areas. Having a sense for people's willingness to help either financially or with their time is important because many transportation enhancements are funded from multiple sources, including grants, private donations, in-kind contributions, and volunteers. Understanding what types of improvements are important to residents gives the committee insight into how to prioritize projects.

With assistance from Iowa State University's Survey Research Services staff in the Center for Survey Statistics and Methodology (CSSM-SRS), ISU visioning program staff conducted a survey to better understand the transportation patterns and behaviors, needs and desires of Wapello residents. Surveys were mailed to 300 randomly selected residents living in Wapello and the surrounding area. To increase the response rate, the study was publicized through the local media and follow-up packets were mailed to nonrespondents. With adjustments for ineligible respondents (e.g., incorrect addresses, no longer living in the community), the final sample size was 264. A total of 126 people returned surveys, for a response rate of 47.7%. (A response rate of 20% is considered valid.)

We asked survey recipients what routes they used most often for going to work, walking, and biking. We also asked whether or not residents would like a recreation trail and where they think it should be. We also discovered what residents think is most important in terms of transportation enhancements that address issues such as accessibility, mobility, and safety. Finally, we learned whether or not residents are willing to contribute their time or their financial resources to making enhancements to Wapello. This series of boards summarizes the results of the survey as follows:

% Willingness to Help

% Walking Routes

% Enhancement Priorities

% Biking Routes

% Commuting Routes

% Desired Trail Routes

## Why Do A Survey?

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## What Did We Find Out?

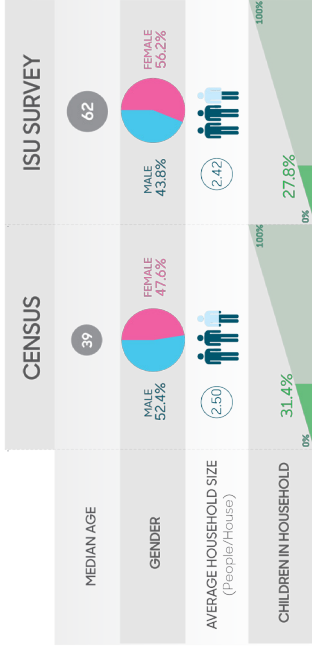
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# Wapello Overview

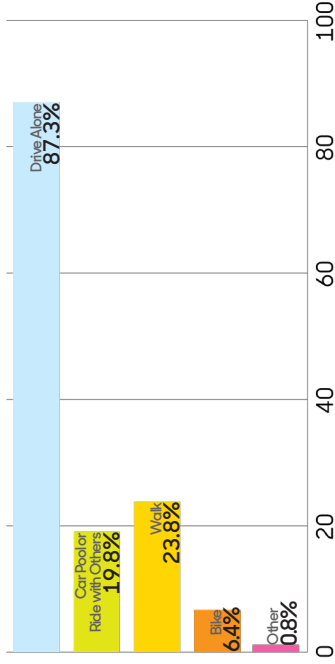
## How Did We Do?

The demographics of the respondents are somewhat different from those obtained from the 2016 American Community Survey Five-Year Estimate. For example, the survey respondents' median age of 62 is significantly older than the 2016 estimated average age for Wapello residents of 39. The average household size of respondents is similar to that of the 2016 estimate. In terms of gender and number of children in the household, survey respondents' demographics differ from the 2016 estimates.



## How Do Wapello Residents Travel?

Most survey respondents drive to important destinations such as the convenience store, the post office, school, and church (87.3%). More than 19% car pool or ride with someone else, 23.8% walk, and 6.4% bike.



\*Please note that some respondents indicated that they use more than one mode of transportation to get to work; therefore, percentages add up to more than 100%.



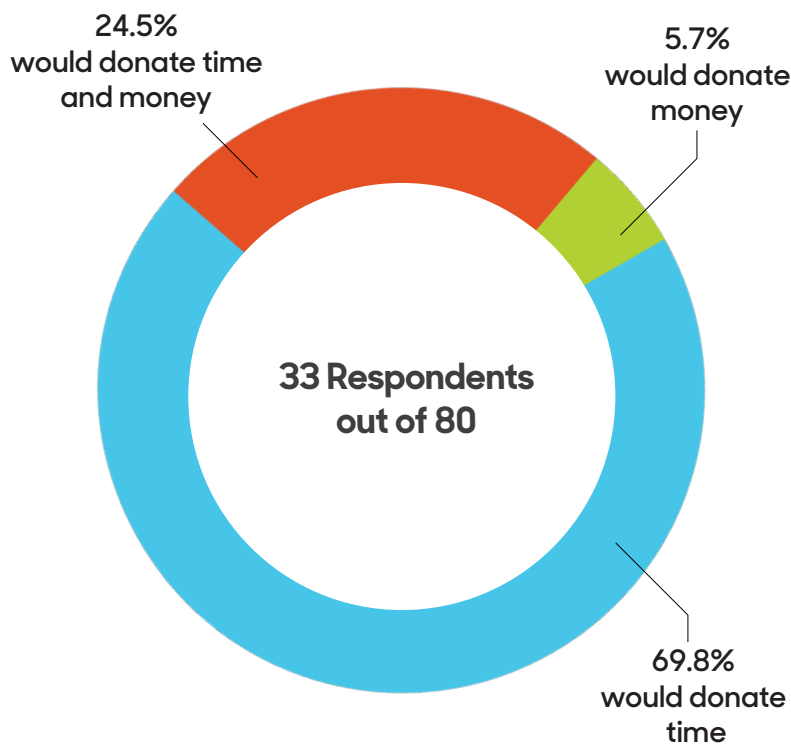
**Transportation Behavior and Needs Survey**  
 Julia Badenhop and Sandra Oberbroeckling

Iowa State University | Trees Forever | Iowa Department of Transportation

## Willingness to Help

Most survey participants who answered this question are willing to contribute their time and talent to community improvements (60.6%), while more than 30% would contribute both time and talent and financial help. Nearly 10% of respondents indicated that they would be willing to contribute financially.

Compared to other small towns in Iowa, Wapello residents are more willing to become involved in improving their community. In 2014, on average, 43% of residents in small, rural towns volunteered to help with a community project.<sup>1</sup> Wapello exceeds this average by 5%.



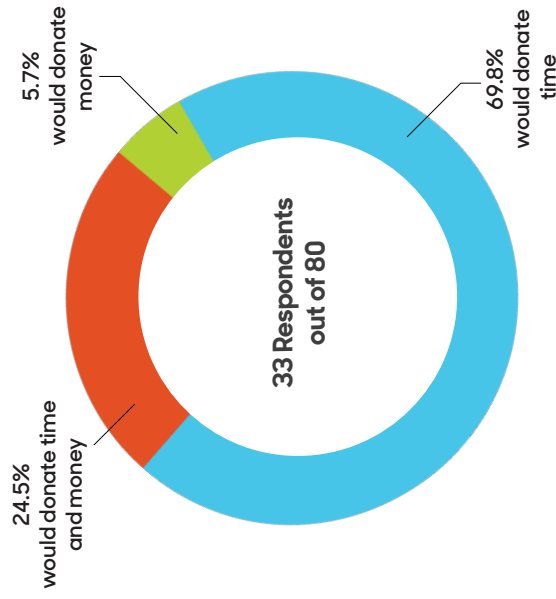
In 2014, the most common reason residents in small-town Iowa said they didn't become involved in community projects is that no one asked them (34%). Twenty-eight percent on average said that they don't have time, which is significantly lower than the 2004 average of 59%. Sixteen percent indicated that they didn't know how to become involved, and 7% said that no community project needed volunteers.<sup>1</sup> These results indicate that the best ways to get people involved in community projects is to simply ask, along with advertising opportunities through traditional and social media outlets.

<sup>1</sup> Sigma: A Profile of Iowa Small Towns 1994 to 2014 (Ames, IA: Iowa State University College of Agriculture and Life Sciences, 2015).



ARE PEOPLE WILLING TO HELP?

More than 48% said YES!



Willingness to implement change

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**Wapello**

Willingness to Help

WHAT DID PEOPLE SAY?

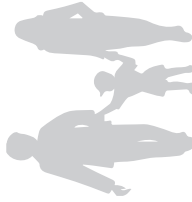
Survey Participants Said...



"Both the North Park and South End Park have great trails. Now if we could just connect them and maybe use the river front in it that would be really neat."



"When it is nice out, there are lots of residents who bike. People look out for each other."



"Wapello, needs family walking and bike trails. Sidewalks are so bad in town. Kids walk in the streets."

HOW DO YOU GET PEOPLE TO HELP?

Ask, Show, and Advertise Opportunities

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Transportation Behavior and Needs Survey

Julia Badenhop and Sandra Oberbroeckling

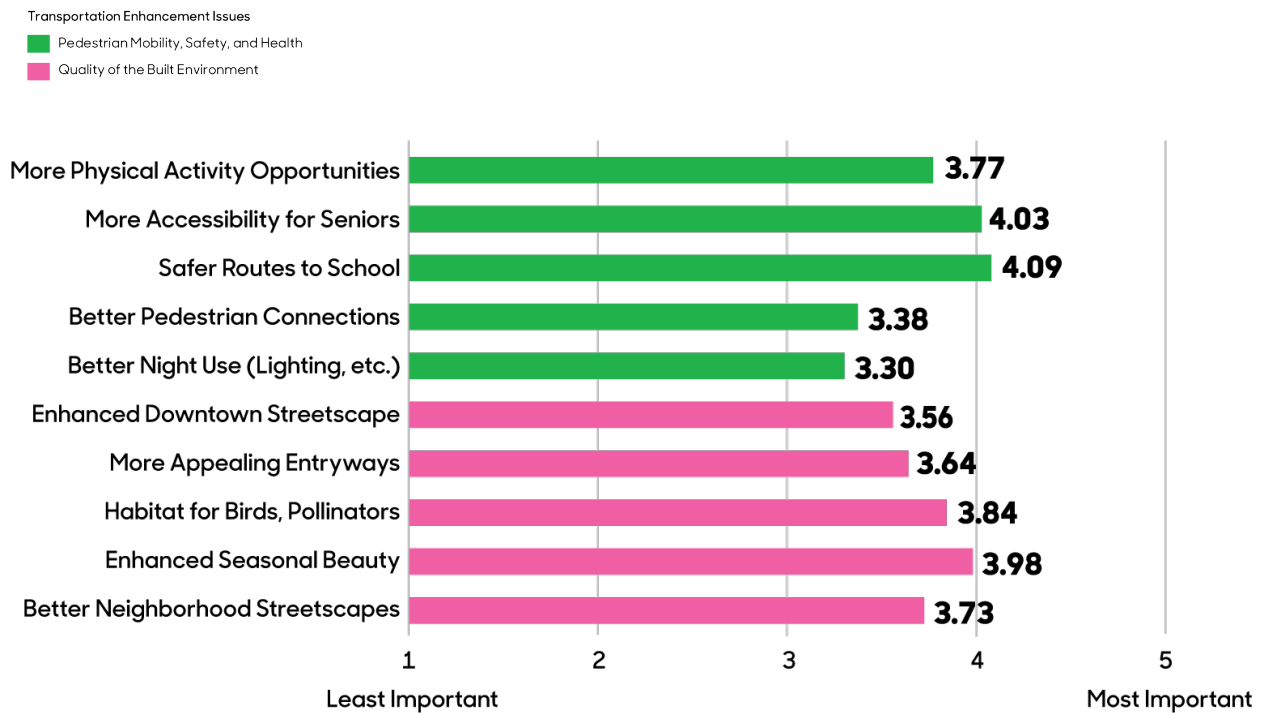
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# Priorities

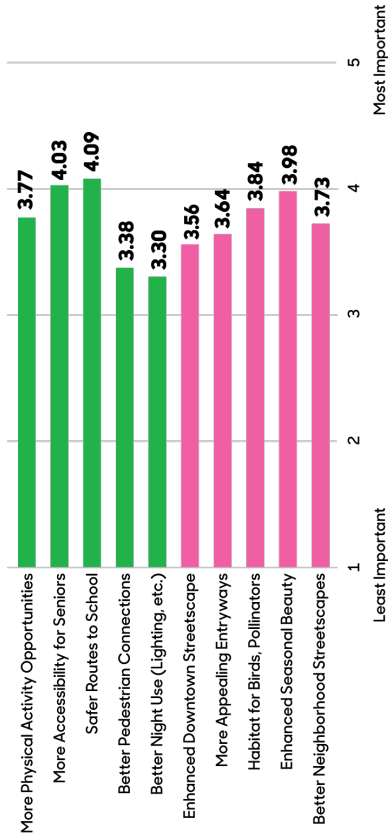
Importance of transportation enhancement by type (100 responses)

On a scale of 1 to 5, with 5 being the most important, participants in Wapello ranked creating safer routes to school as most important, with a mean value of 4.09. Other transportation enhancements that address pedestrian mobility, health, and safety are also considered important, such as providing more opportunities for physical activity (3.77), and accommodating mobility needs of seniors (4.03). In terms of quality of the built environment, enhancing seasonal beauty (3.98) and creating habitat for birds and pollinators (3.84) are considered important. These findings are consistent with the views expressed by focus group participants during the Transportation Assets and Barriers workshop held in April 2018.



## WHAT TYPES OF ENHANCEMENTS ARE IMPORTANT? Mobility, Safety, and Health!

Transportation Enhancement Issues  
■ Pedestrian Mobility, Safety, and Health  
■ Quality of the Built Environment



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## WHAT DID THEY SAY? Survey Participants Said...



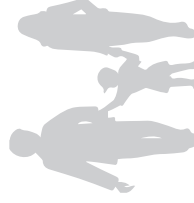
"More lighting would be nice for walking at night safely."



"If/when a senior loses his/her license to drive, they are not always able to walk to a destination... We need an affordable, regular form of transportation to address this."



"It would be nice to have sidewalks on Roy E1 side of highway. Ninety-nine percent of kids in town trick-or-treat out here and all have to walk on streets."



"Highway 61 is an extremely busy and [unsafe] corridor. The city needs a traffic signal to break the highway traffic into clusters to make it easier for vehicles and pedestrians to access/cross the highway from side streets."



# Commuting Routes

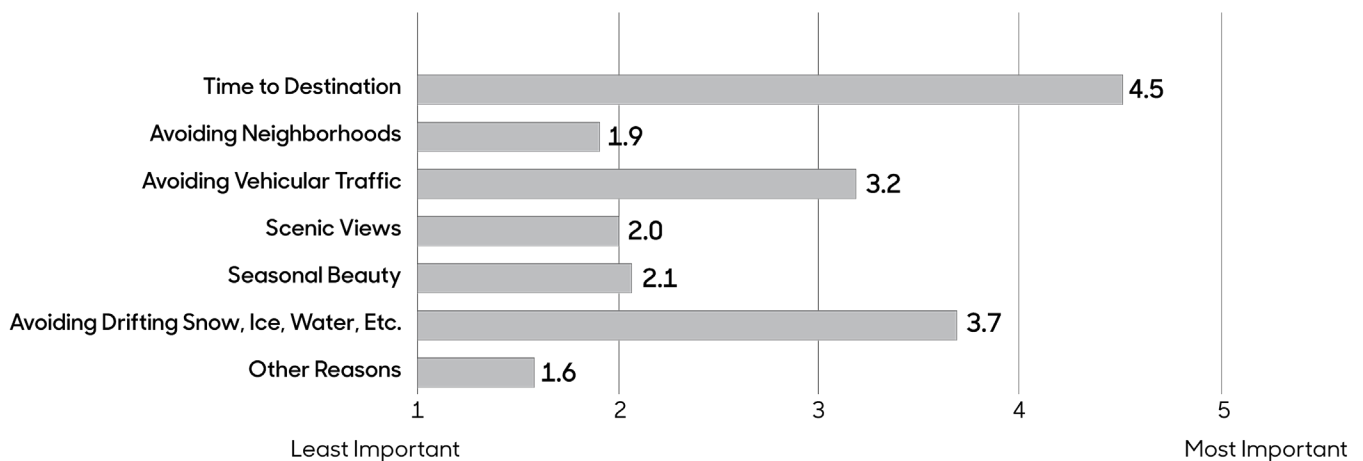
## How They Get There

This map shows the commuting routes identified by 60 survey respondents. The frequency that the routes are used is depicted by their thickness, with most frequently used routes being the thickest. The primary commuting corridor in Wapello is Highway 61. Some people also go west on County Road G62 and travel east on County Road X99. In town, Franklin Street is the most heavily traveled, especially between Main Street and North 2nd Street.

The circulation patterns that emerge when routes for biking, walking, and commuting are overlaid suggest suitable types of transportation enhancements. For example, where pedestrian and vehicular traffic intersect, such improvements could include creating better visibility, defining crossing points, or improving signage.

## Why They Go That Way

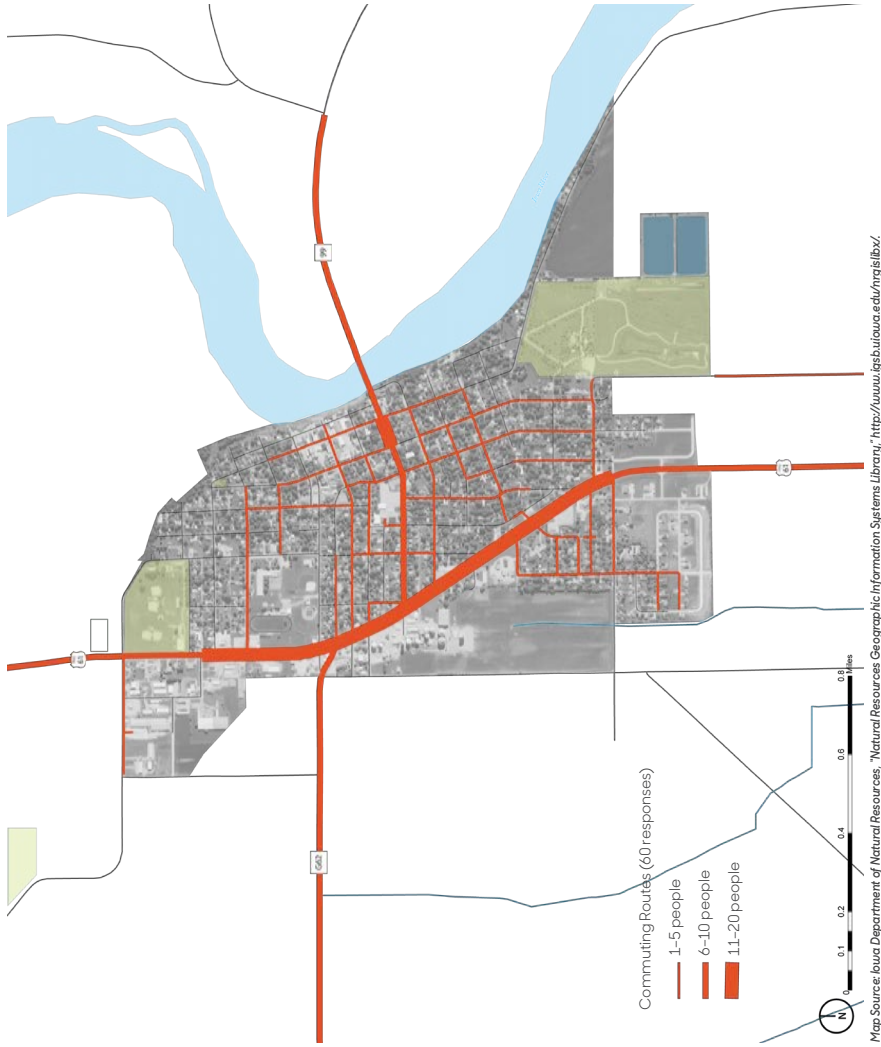
On a scale of 1 to 5, with 5 being the most important, survey participants ranked the characteristics and features that factored into their choice of commuting route. Among Wapello participants, time to destination is clearly the most important factor, with a mean value of 4.5. Avoiding weather-related issues such as snow and ice is also considered important, with a mean value of 3.7, followed by avoiding vehicular traffic (3.2). Avoiding neighborhoods, scenic views, and seasonal beauty are not critical factors in determining commuting routes.



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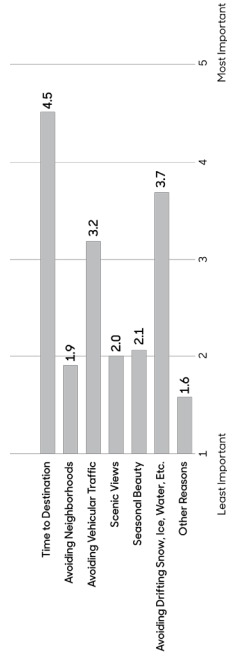
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# Wapello Commuting Routes

**Transportation Behavior and Needs Survey**  
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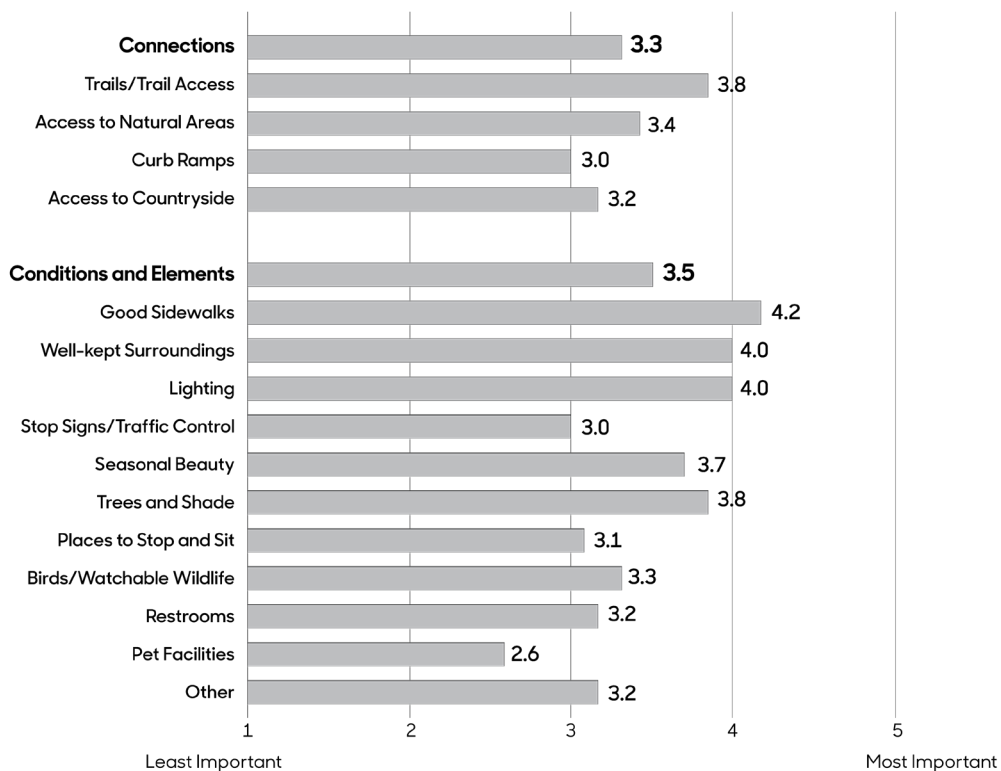
# Walking Routes

## How They Get There

This map shows the walking routes identified by 56 survey respondents. The frequency that the routes are used is depicted by their thickness, with most frequently used routes being the thickest. People walk more frequently in the south part of Wapello, particularly on the streets that are near South End Park. A number of respondents indicated that they walk on the trails in South End Park. A few people walk out of town, on River Road and J Avenue.

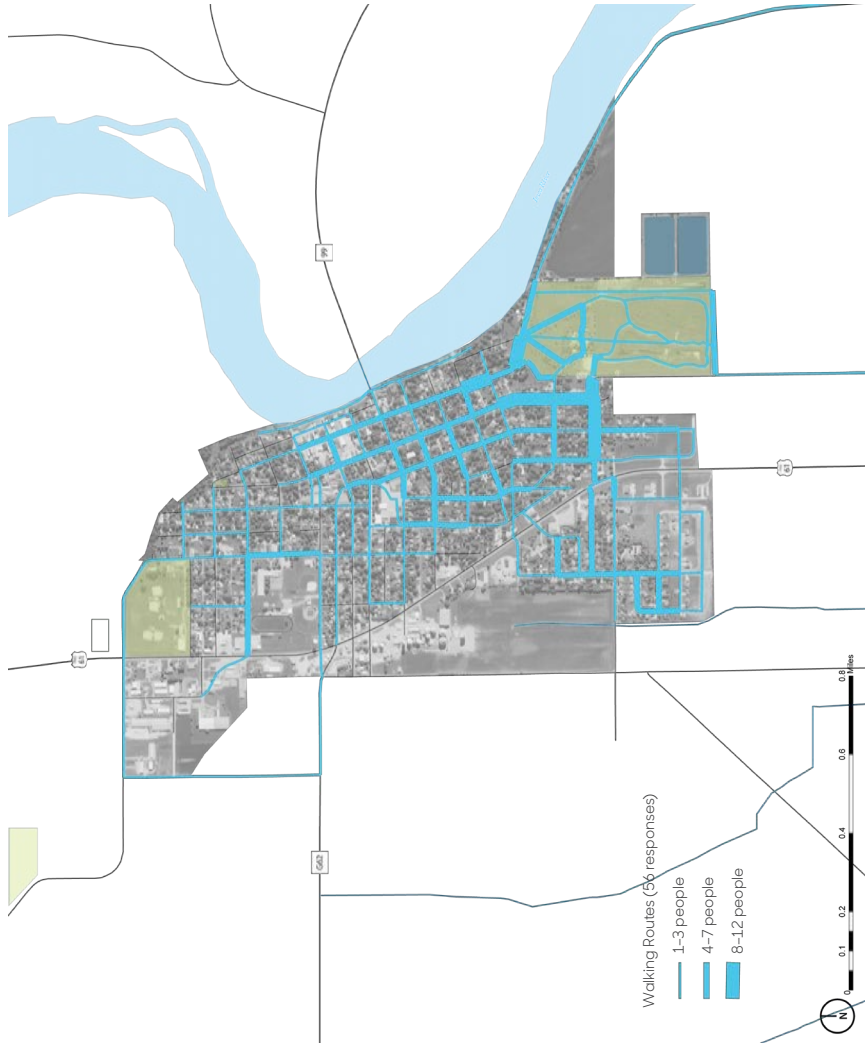
## Why They Go That Way

On a scale of 1 to 5, with 5 being the most important, survey participants ranked the characteristics and features that made their walking experience better. These features are categorized as either "connections" or "conditions and elements." Among Wapello participants, connections and conditions/elements are of similar importance, with mean values of 3.3 and 3.5, respectively. In terms of connections, access to trails is most important with a mean value of 3.8. Good sidewalks (4.2) are the most important element to walkers, followed by lighting and well-kept surroundings (4.0 each). Other significant factors include trees and shade (3.8) and seasonal beauty (3.7).



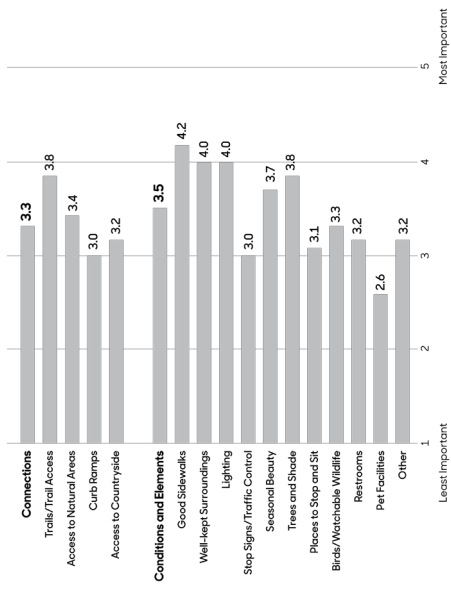
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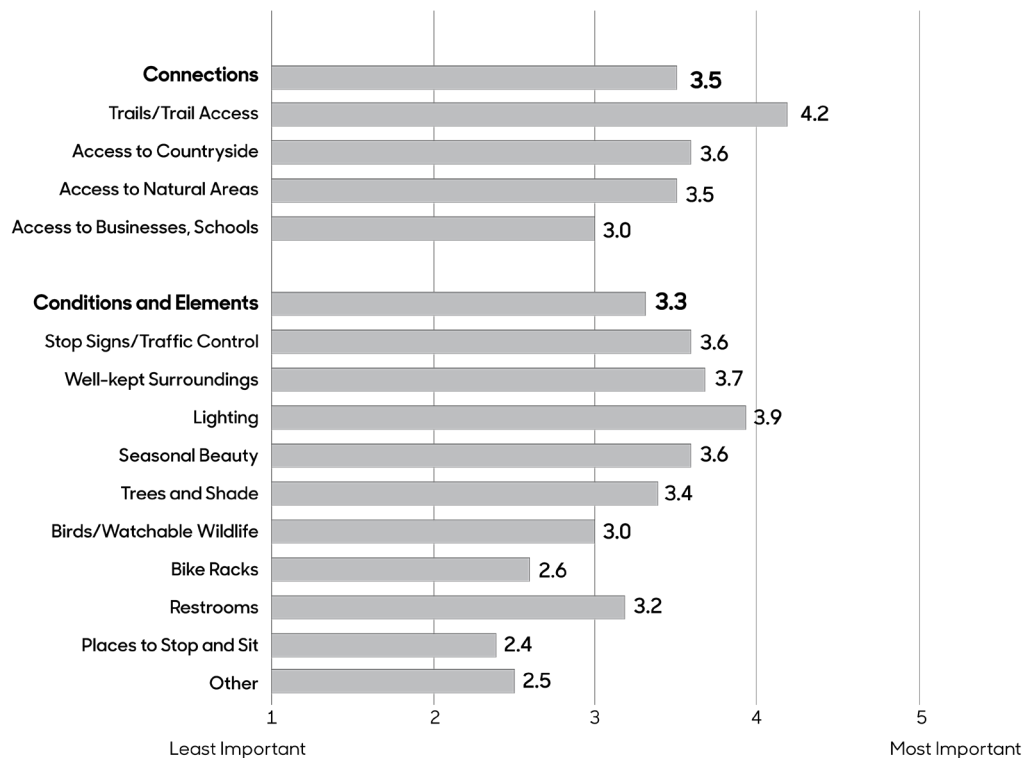
# Biking Routes

## How They Get There

This map shows the biking routes identified by 18 survey respondents. The frequency that the routes are used is depicted by their thickness, with most frequently used routes being the thickest. River Road and North Cedar Street by the school are the routes most often used by bikers in town. A few people ride out of town, on River Road and J Avenue to the south, County Road X99 to the east, and Highway 61 and 100th Street to the north.

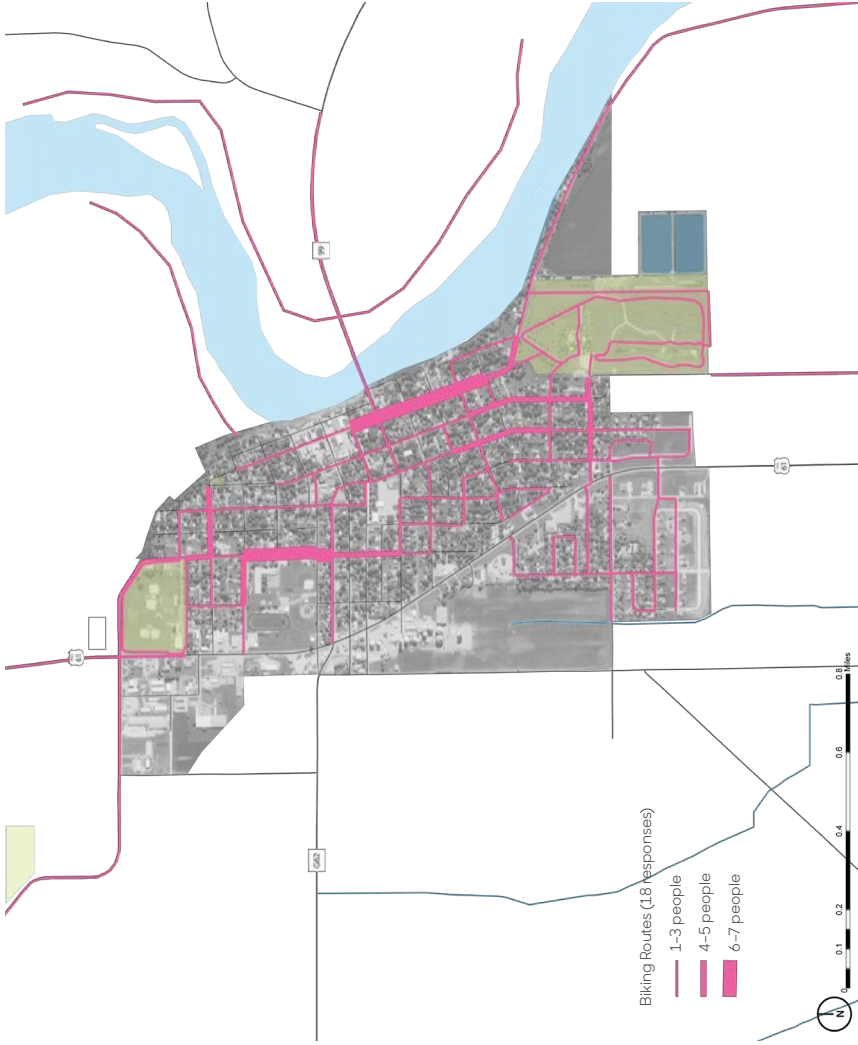
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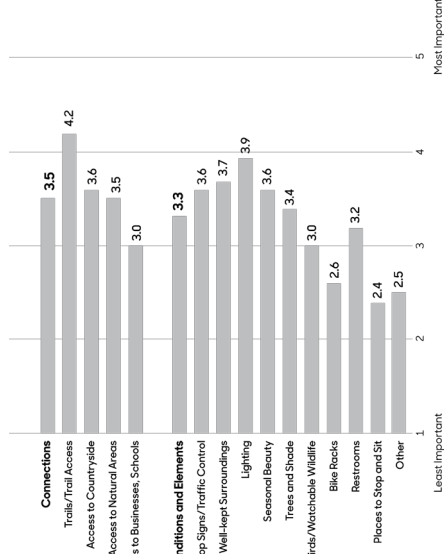
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Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.iagsb.uiowa.edu/ngislib/>.

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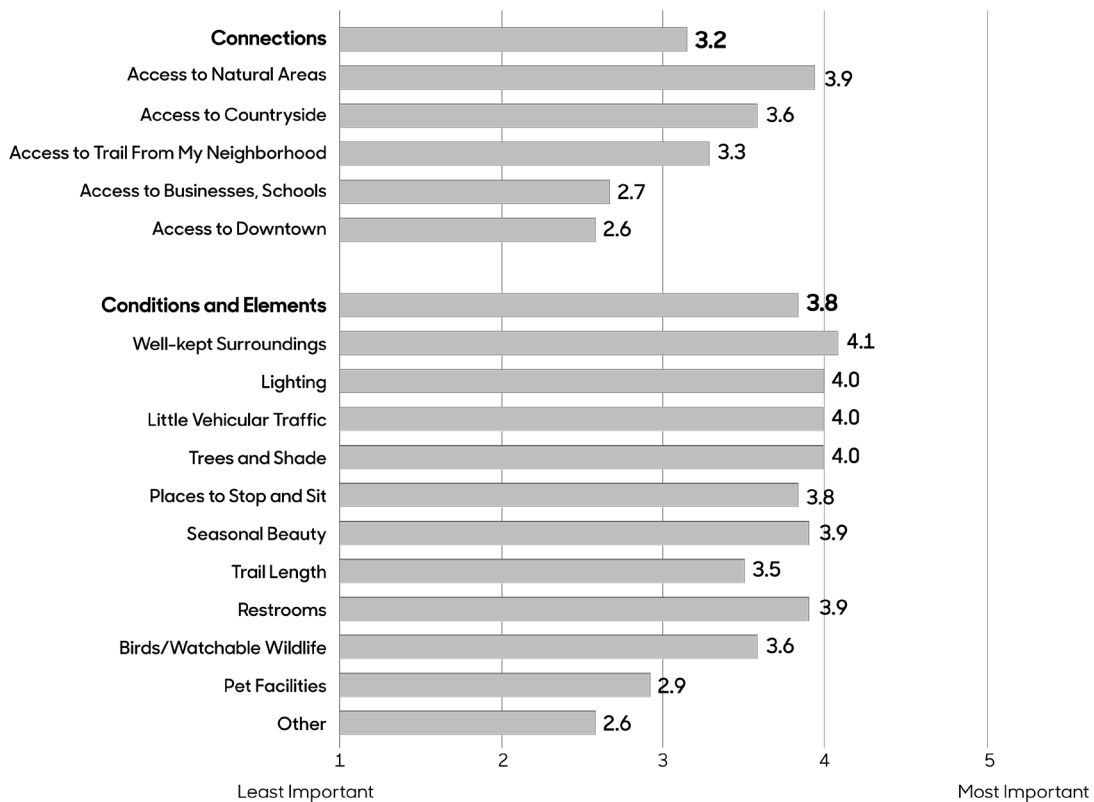
# Desired Trail Routes

## Where People Want Trails

This map shows the desired trail routes identified by 28 survey respondents. The frequency that the routes are identified is depicted by their thickness, with most frequently identified routes being the thickest. The most popular location for a trail among survey respondents is along the river. A trail around North Park and along North Cedar Street by the school were also suggested.

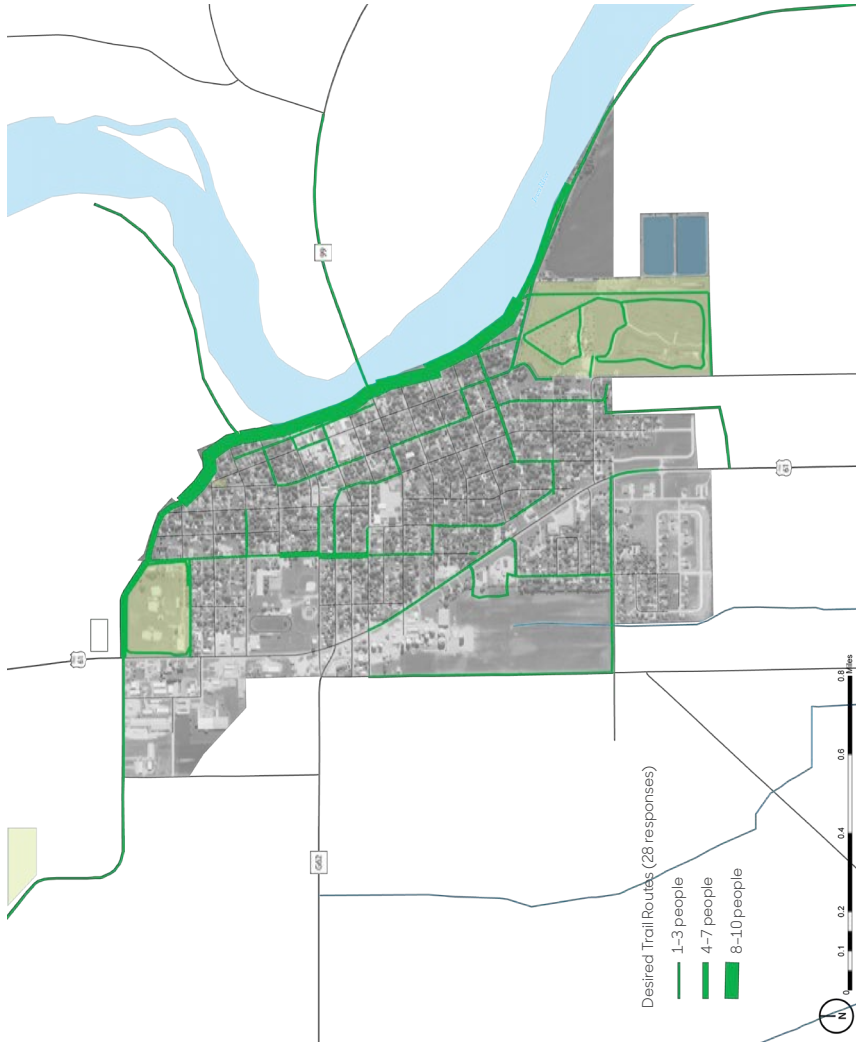
## Important Trail Features

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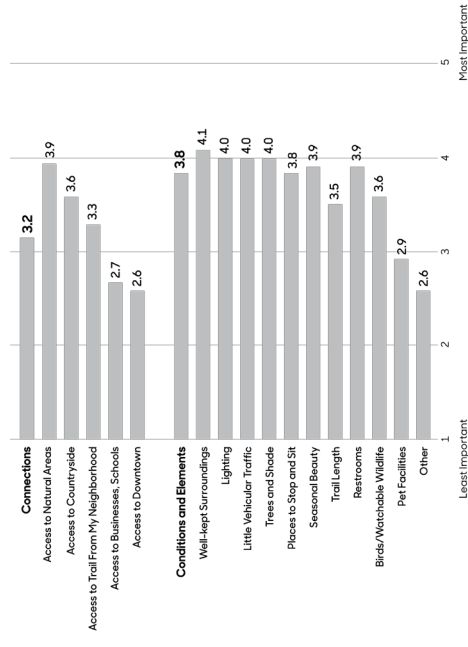
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## Wapello Desired Trail Routes



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 Julia Badenhop and Sandra Oberbroeckling  
 Iowa State University | Trees Forever | Iowa Department of Transportation



# Transportation Inventory

Through surveys, observations and discussions, community's concerns and needs were gathered and analyzed. According to the information, the themes and problems focused on are as follows:

## **Walking Connections**

Sidewalks to connect the two schools are desired and necessary. Many of the existing sidewalks are too narrow for two people walking side by side (3-4ft). Connections between North Park and South End Park are needed.

## **Safety**

Safe crossings are needed near two schools and on Hwy 61. Existing Hwy 61 is dangerous because of its curve, traffic speed, and visual barriers (including buildings, signage and vegetation). Lack of adequate lighting is another considered problem in downtown, preferred routes, and parks.

## **New Hwy 61 Realignment**

A new main entry into the town will be established with the new Highway 61 bypass. This provides opportunities to slow traffic, enhance safety, and establish better lighting and wayfinding on existing Hwy 61.

## **More Amenities**

Restrooms, benches, drinking fountains, lighting, trash cans, and other amenities are needed in the parks. Playground equipment should be maintained, improved, and also installed near new development west of Hwy 61, and safer connections established.

## **Walking Connections**

Trail along the Iowa River connecting North and South Parks is desired. To highlight the river as a major amenity, and attract more visitors. Existing trails in North and South Parks are unpaved (gravel). Smooth, even, walkable, and paved trails are needed. In order to accommodate strollers, bikes, the elderly, and mobility impaired.



## Design Overview

This accompanying map depicts an overview of all the design strategies together. No community should try to tackle such a plan all at once, nor should it be expected that the full extent of the plan will be implemented in one lifetime. This plan is meant to provide a flexible and adaptable framework for the City of Wapello to use as a guide to prioritize, plan, revise, fund, and implement public improvement projects. No long term planning projects are executed exactly as they were originally drafted, but having a unified framework to work from helps to ensure that every improvement no matter how small or large, contributes cohesively to the greater whole.

We understand that many who don't regularly work in the planning and design industry, often struggle to see the benefits of long term planning or see proposed improvements as actually feasible in their communities. By working from a cohesive framework, thinking long-term, and starting with smaller simpler projects then working up to larger ones, great things can be achieved by a community of any size. It is important to acknowledge that just because a proposed improvement may look like it affects a particular property, that improvement may not be implemented within this generation and that no proposal can infringe on individual property owner's rights. Any proposed improvements are intended only to explore future opportunities for the community taking into consideration that property changes hands every generation and that most modern construction has an average lifespan of only 70-100 yrs.

### How to Use the Boards

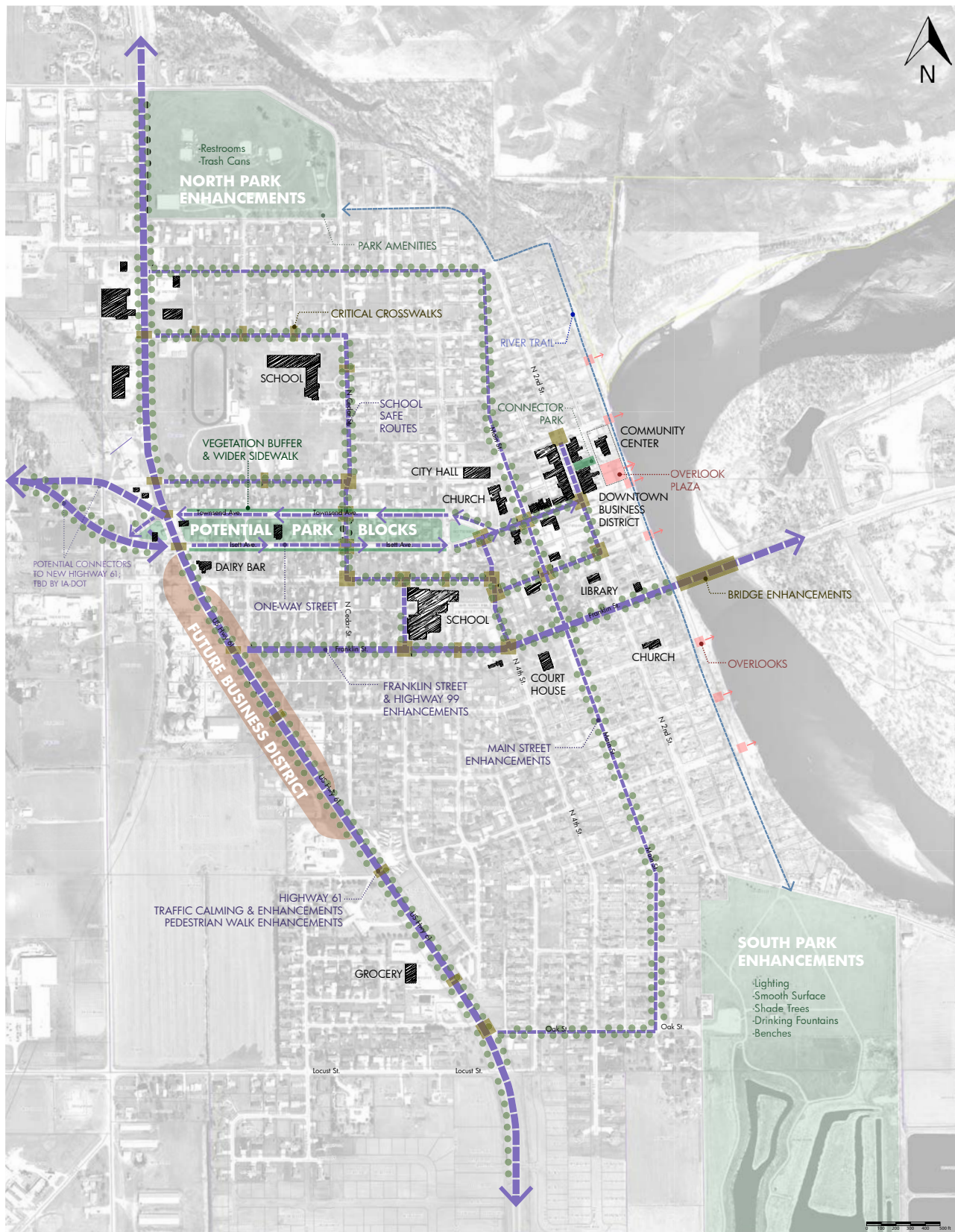
To make such a large undertaking and investment more manageable and realistic for a community of this size, design interventions have been broken down into phases and each assigned a conceptual timeline for implementation. Conceptual timelines purposefully overlap as some projects maybe undertaken concurrently or re-prioritized in the future as needed. Each phase is composed of two boards: Board 1 is composed with local photos and illustrations of typical conditions at the top illustrating what that phase focuses on and below that is a keyed map of the design interventions and their locations. The map is keyed to conceptual renderings and plans on Board 2, at the top of which features successful examples and precedents of similar design strategies implemented elsewhere. The conceptual phases are broken down as follows:

Phase I- **Critical Crosswalks & Safe Routes**, 1-5 years

Phase II- **Connect Downtown Town to the River**, 3-10 years

Phase III- **Celebrate the River at Every Opportunity/Enhance Main St.**, 6-15 years





NOTE: Each phase, priority, and time line is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

**Wapello**  
All Phases

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**  
Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Trees Forever | Iowa Department of Transportation





# Design Overview

Phase IV    **Domesticate Hwy 61 & Enhance Franklin St.**, 10-25 years

Phase V-    **Easement Improvements to Designate Clear Route to Downtown**, 25-50 yrs.

Phase VI-    **River Trail to Connect North & South Parks**, 25-80 years

Future Considerations-    **Future    Connection    Opportunities    Along    the  
Transporation Corridor**

Please note: Each phase, priority, and timeline are intended to be flexible and revised as determined by the community. No phase, priority, or timeline are static. Phases and timelines are intended only to help demonstrate how large-scale improvements can be achieved by implementing small projects strategically over time. Design interventions are meant to be flexible and adaptable to accommodate unique opportunities or unforeseen events and conditions. Design interventions should be considered design-opportunities rather than finalized prescriptive designs. Nothing herein has been taken through design development or construction documents for bidding or construction, and each intervention within each phase is meant to be undertaken individually or even further broken down into sub-phases as required to realistically complete the project. Each phase is further described detail below:

Phase I-    **Critical Crosswalks & Safe Routes**

Traffic calming, pedestrian safety, and safe routes to school are the major themes to initially focus on. These ranked high on the priority list as determined by focus groups and random sample surveys of citizens.

Routes to schools and critical crosswalks will be enhanced by increasing the width of the sidewalk and using raised crosswalks as speed bumps where practical. Other crosswalks can be decorative pieces of public art. Attention to crosswalks, wider sidewalk design, elimination of visual barriers at intersections, and adding vegetated buffers together slow traffic and reduce risks of traffic/pedestrian accidents. Meanwhile, these enhancements will also provide people with desirable walking and biking routes. These should initially be focused between the schools as well as downtown.

The one-way streets in the downtown business district should be designed to be two-way in order to make downtown more accessible and easy to navigate for those visiting Wapello for the first time. The portion of the City-grid that is misaligned near downtown in combination with the one way street make navigating the downtown area cumbersome. Existing angled parking on N 2nd St. will be changed into parallel/angled mixed parking to widen the street

and allow for sidewalk enhancements. Small pocket gardens called "Chicane" will be built along N 2nd St. for slowing traffic and providing sitting areas, street trees, & vegetation. In addition, better street and pedestrian lighting in the downtown business district should be enhanced and include banners for City/downtown branding or to include hanging baskets and seasonal decoration. This intervention this early in the phases in intended to support local downtown businesses, increase pedestrian traffic downtown, and to help make N. 2nd St. more attractive to other businesses and entrepreneurs.

## Phase II-     **Connect Downtown Town to the River**

"We are a river town," "Everyone in this town lives on that river," These were some of the quotes and statements from community members that stuck out. This priority focuses on celebrating the Iowa River, its connection to downtown, and the scenic views along the river. Wapello has some of the best river views of anywhere in the state, and Wapello should be positioned to celebrate that to the fullest extent. Truly embracing the river is the key to revitalizing Wapello. A helpful precedent example is Manchester, IA and their recently completed White Water Park. Like Wapello, Manchester had the river running through downtown, but all the downtown buildings had their backs facing the river. By removing an old roller dam and creating white play features in the river and softening the banks to allow access the community has completely rejuvenated life in their downtown.

An overlook plaza should be built next to the community center for outdoor gathering space that can host special events, compliment the community center, and provide interpretive information about the life and history of the Iowa River and Wapello. The plaza provides sitting areas, shade trees, ornamental plants, and a large open space for social activities, opportunities to take in the views, and would be an ideal place for the town Christmas tree during winter. A connector park should be constructed between downtown buildings to provide a direct uninterrupted connection from downtown (N. 2nd St.) to the river. The connector park can host outdoor movies, provide downtown seating and pedestrian space that accommodates all ages and mobility levels. It provides direct access and view to community center & overlook plaza.

In this phase, better amenities and improvements should simultaneously be undertaken in North and South Parks such as better play equipment, lighting, and trail surfaces that accommodate all. North Park improvement plans are already underway and have been approved by the City. See the schematic layout included on Board 1 of 2. Planned improvements include a new 4-seasons multipurpose shelter with restrooms and showers, a basketball & tennis court, a seal coated hard surface trail, and 26 RV camping pads which will be leveraged to generate income for future park/community improvements. This helps to address the need for more accessible trails as identified through the surveys and focus groups.

# Design Overview

## Phase III-     **Celebrate the River at Every Opportunity/Enhance Main Street**

This focus of this initiative is to take advantage of opportunities where E-W roads dead end at the river and making improvements to Main Street. This phase is an offshoot of the Phase II riverfront work and further works to celebrate and enhance the river experience in Wapello. Many of the existing dead ends along the river have a great opportunity to be developed into viewing decks and small pocket parks. Those decks and overlooks can serve as trail heads and nodes of connectivity along the river. These can be incorporated into the community center and the Johnnie B's building to help stimulate local business by providing complimentary outdoor spaces for people to relax, have meals, and overlook the river. These pocket parks could be tackled all together as one large project or broken up and developed one by one to make more manageable or to execute an easy project quickly. Grades, elevations, materials, and amenity selection should be coordinated with the overall riverfront boardwalk plan described in Phase VI. To ensure connectivity and some continuity for visitors all benches, trash cans, interpretive signage, railings, etc. should be the same through out.

Parts of existing Main St. near the courthouse are already designed as a boulevard street with two-way traffic separated by a nice median and good heritage trees. Overtime some of the trees in the median have been replaced by lower shrubs that compromise visibility. There are opportunities to extend this median, replace shrubs with large overhead trees, improve lighting and wayfinding, and improve the conditions of the existing (or non-existent) sidewalks. There is the potential to add bike lanes and wider sidewalks. These elements help distinguish this road as an important street through town, and these unifying elements help people navigate through town to find downtown.

## Phase IV     **Domesticate Hwy 61 & Enhance Franklin St**

When the DOT's new Hwy 61 bypass is finished the old Hwy 61 route through town will become under the management and control of the City. In this phase the major themes are existing Hwy 61 and Hwy 99 bridge enhancements. The new Hwy 99/Franklin St bridge is to be completed in 2019 and will include a bike/pedestrian path as part of its design. As part of this bridge replacement the City has already negotiated that conduit will be ran for future lighting of the bridge. After that work is completed the City should initiate creatively and artistically lighting the bridge, in order to highlight it as an important local landmark and attraction. Due to the 2019 completion date, the lighting of the bridge may occur in an earlier phase as to be determined by budget, funding, and City/community consensus.

To slow the traffic along existing Hwy 61, and additional traffic that will be entering into the city from new Hwy 61, a roundabout is proposed south of town according to the City's preferred new interchange option as shown. Whether the new Hwy 61 interchange occurs here or in

the option depicted in Phase V from IA-DOT, a roundabout is still recommended south of town along existing Hwy 61. As the City may annex property to the south in the future, this ensures that traffic is slowed before entering the edge of the town near future residential development. A new commercial business district will likely continue to grow along the existing Hwy 61 corridor where it has already started to develop. As business is important to the life of any community, this should be encouraged and allowed in order to welcome new businesses but should complement and be distinct from the downtown business district. For a community to remain healthy it should be allowed to grow in population and number of businesses. It is likely that existing Hwy 61 will serve Wapello in the future as a second Main Street once the new 61 bypass is installed, and that creates opportunity to maintain existing businesses, allow them to expand, and to attract more businesses along this corridor.

### Phase V- **Easement Improvements to Designate Clear Route to Downtown**

The goal of this design strategy is to establish a designated route from existing/new Hwy 61 to downtown and the river and to incorporate a roundabout near the north end of town to bookend existing Hwy 61 for traffic control. As previously mentioned the angled City-grid near downtown obstructs clear views or easy wayfinding for new visitors looking for downtown Wapello. Wapello will have to creatively position itself to attract visitors off the new Hwy 61 bypass into town, and this small wayfinding inconvenience is often enough to cause people to turn around or never explore past the existing Hwy 61. Townsend and Isett Ave. serve as ideal designated connector streets to downtown as they align near to where the IA-DOT preferred option for an on-off ramp connects to Wapello. These roads also ensure safety by each being a block removed from both Elementary, High School, and sports fields. The streets should be converted to one way, Isett traveling east and Townsend traveling west, in order to improve the width of the sidewalk and provide for a vegetated buffer. This also provides space to add lighting, pedestrian signage, a bike lane, and benches along both roads. These help indicate to visitors that these are special roads and lead to a special place: downtown Wapello and their amazing river!

Having roundabouts at both ends of town ensures that traffic is controlled and slowed along existing Hwy 61 and helps to domesticate that road into a City street and not just a thoroughfare. This helps make it safer for pedestrians and to better connect the businesses and homes on the west side of the road with the rest of the town on the east side, eliminating the road as a barrier which is how it functions today. A roundabout at this location accommodates the DOT's preferred option for the new Hwy 61 interchange and feeds traffic nicely into Isett and Townsend Ave. This approach allows Wapello to plan for either connection location to the new Hwy 61 bypass. It is recommended that regardless of the final determination, roundabouts be located at both locations on existing Hwy 61 north and south of town to control traffic and bookend the entrances to Wapello allowing for welcome/town signage or sculptures and planting signifying the entrance to town.

### Phase VI- **River Trail to Connect North & South Parks**

This theme of this phase is to connect North and South Parks with a trail running along the



## Design Overview

Iowa River. The proposed trail connects the overlooks proposed at each of the dead-end roads and the overlook plaza outside the community center along the river as illustrated in Phases II & III. The trail can run on grade along public or downtown properties but should be lowered in elevation along the side of the bank where it runs beside private properties or residential buildings. This ensures that views into yards are blocked and privacy is maintained meanwhile, property owners' views to the river will remain. This helps fulfill a major goal of the community by provided a connected loop of amenities and businesses. This further positions the community to hold events and gatherings along the rivers edge near downtown helping to attract patrons to the businesses there.

### Future Considerations-      **Future    Connection    Opportunities    Along    the** **Transporation Corridor**

This long-term consideration explores future opportunities to enhance the major transporation corridor that is to be established along Townsend and Isett Ave. As these roadways are improved they provide ample opportunities to create a grand and direct connection to downtown for vehicles, cyclists, and pedestrians. What is shown here depicts what the blocks along this corridor between existing Hwy 61 and downtown could aspire to. Though the grandest version of this concept it depicted, it should be noted that any portion or version of this proposal is acceptable and can/should be adapted over time. The important take away from this consideration is simply stressing to continually explore future opportunities within this area as properties change hands over the years and buildings age. Due to the large scale of this proposed intervention and its implimentation over time, it should not be considered as a separate phase in and of itself. Pursuing this in the immediate future is inappropriate, and attempting to do so all at once is inappropriate. A modest example of the appropriate application of this concept is the triangle shaped property east of N. Prairie St bordered on the other side by Townsend Ave & Isett/Van Buren. As the parking lot there is rarely full, a portion of the site or even the entire site would be an ideal location for a downtown statue and small neighborhood park or veterans/first-responders memorial right where the two city grid alignments converge and feed into downtown. Any time two grid alignments converge, it creates an opportunity. This would also serve as an ideal landmark location for visitors coming into town off Hwy 61 indicating that they have arrived at their destination: Downtown. A tall flag pole at this location would be another important indicator to people traveling along existing Hwy 61, that something important is located here. An enhanced welcome area, welcome sign, patio space, or pocket park could also be created on the west end of this corridor to pull in patrons to the existing Wapello Dairy Bar providing a welcoming rest stop for visitors to stretch their legs, enjoy some ice cream, and be lured into downtown.

As Wapello grows property to the south may be annexed in the future, and the city owned field on the west side of town may one day be developed. As property comes up for sale

there may be opportunity to extend the two pocket parks at either end of the Isett/Townsend Transportation Corridor. There might become property for sale that allows a third pocket park near the center-length of the corridor creating a "string of pearls-parks" that guide visitors to the riverfront. Over many years it may become possible for the City to acquire the full corridor while fully respecting property rights, owners rights, existing homes, existing families, and the rights to pass property onto their children. This option looks far into the future with the understanding that property changes hands over time and that buildings age and either need maintained or replaced. The existing blocks are currently residential, and property owners should be allowed to stay there as long as they and their families desire. Strategically, overtime a grand park block system could be created connecting the commercial businesses along existing Hwy 61 to downtown and the river. This system could be programmed to be income generating by featuring micro-retail areas like a drive through coffee stand, by providing vendor space, or providing rentable park space. The park system could host pop up businesses like seasonal flower stands, food carts, outdoor markets, yoga in the park, rentable performance spaces, rentable picnic shelters, hockey, skating, or curling rinks for winter sports and year round interest. The corridor can be programmed and managed as an outdoor focused-commercial connection between Hwy 61 businesses, downtown, and the river. The park blocks, or series of pocket parks, could serve as Wapello's red-carpet gateway to the best views of the scenic Iowa River. This is a large undertaking that should not cause alarm or misunderstanding. Residential property is sacred, and although it is sacrificed here, it should only be done on the condition that future residential property is developed in future annexed areas, redeveloped, and/or restored in others. An endeavor such as this would be implemented over many years but can be realized and funded by the city by renting the properties as they acquire them and implementing this concept as opportunities present themselves one block and one property at a time. This would also make adjacent properties more desirable and valuable and help to increase those property owners overall wealth. It may be possible that simply two end parks is appropriate for many years, or there may be opportunity to grow them along the corridor as needed. As previously stated, the important take away from this consideration is simply to continually explore future opportunities, whatever they may be, within this transportation corridor over time. The goal of this consideration is to strengthen the connection between existing/new Hwy 61 and downtown by establishing a grand transportation corridor in order to stimulate the economy downtown and draw people to Wapello's main attraction: the great Iowa River.

Existing Conditions



Install raised crosswalks: slow traffic (See High School Enhancements :B)



Eliminate edges and accommodate all mobility levels and ages

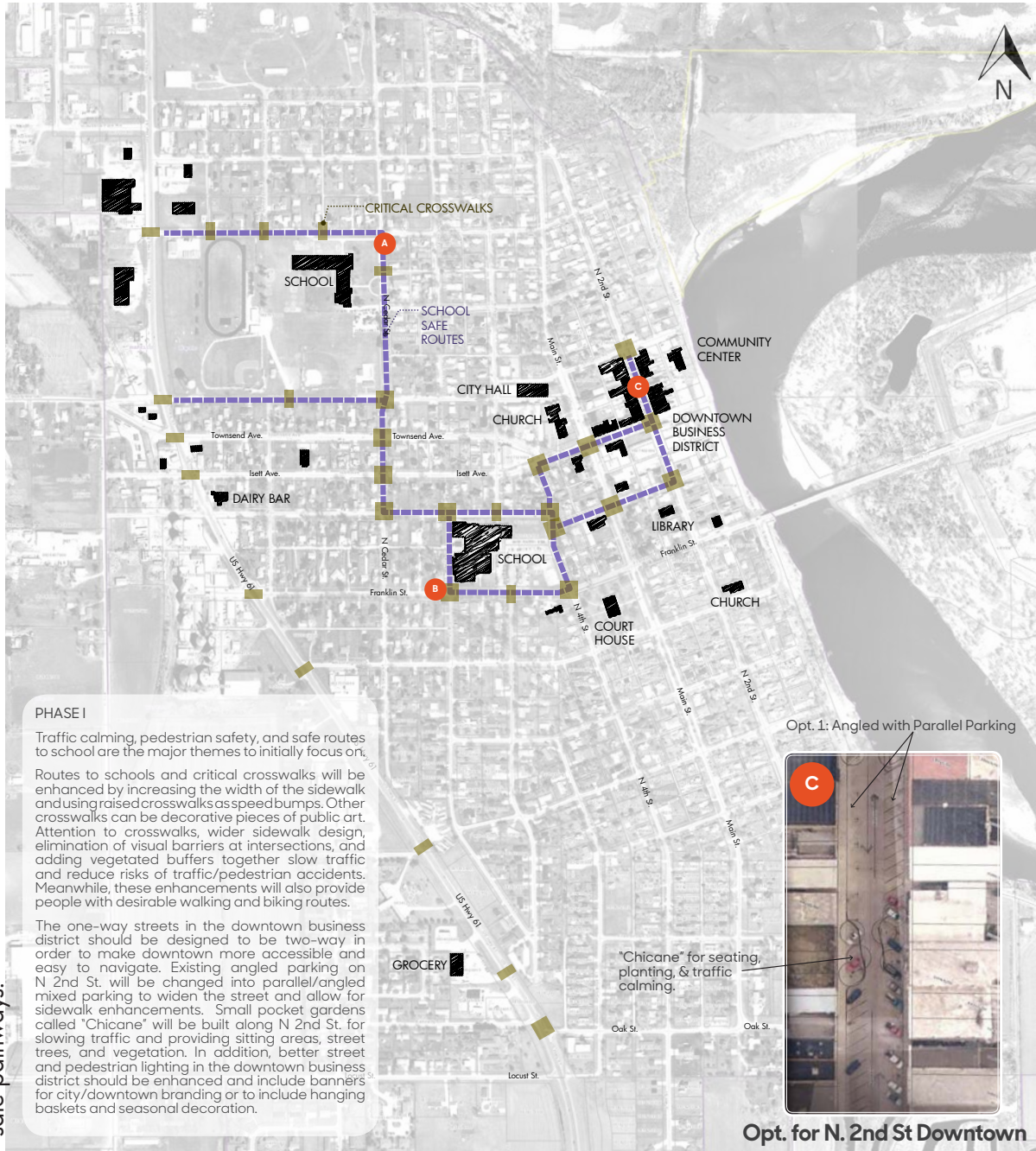


Remove dangerous visual barriers



Reduce speed limit on Hwy 61 and replace signage to help visibility

“I would like to bike and walk more just because we are a small community, but we don’t generally have safe pathways.”



**PHASE I**  
 Traffic calming, pedestrian safety, and safe routes to school are the major themes to initially focus on.  
 Routes to schools and critical crosswalks will be enhanced by increasing the width of the sidewalk and using raised crosswalks as speed bumps. Other crosswalks can be decorative pieces of public art. Attention to crosswalks, wider sidewalk design, elimination of visual barriers at intersections, and adding vegetated buffers together slow traffic and reduce risks of traffic/pedestrian accidents. Meanwhile, these enhancements will also provide people with desirable walking and biking routes.  
 The one-way streets in the downtown business district should be designed to be two-way in order to make downtown more accessible and easy to navigate. Existing angled parking on N 2nd St. will be changed into parallel/angled mixed parking to widen the street and allow for sidewalk enhancements. Small pocket gardens called “Chicane” will be built along N 2nd St. for slowing traffic and providing sitting areas, street trees, and vegetation. In addition, better street and pedestrian lighting in the downtown business district should be enhanced and include banners for city/downtown branding or to include hanging baskets and seasonal decoration.

Opt. 1: Angled with Parallel Parking



“Chicane” for seating, planting, & traffic calming.

Opt. for N. 2nd St Downtown

NOTE: Each phase, priority, and timeline is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

Wapello

Phase I Board 1 of 2  
 Critical Crosswalks and Safe Routes  
 1-5 Years

Steve Ford Landscape Architecture  
 Martin Gardner Architecture  
 Landscape Architect: Steve Ford/Designer: Michael LeClere  
 Intern: Wan Wei  
 Iowa State University | Trees Forever | Iowa Department of Transportation





**Precedents:** Where it has worked before



Crosswalks as art:  
City of West Sacramento, CA



Crosswalks as art

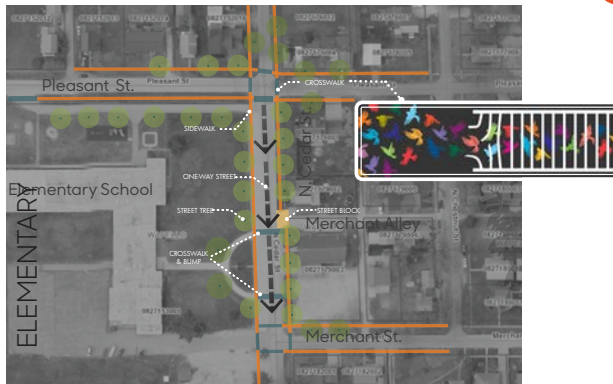


Raised speed bump crosswalk  
City of Lynchburg, VA



ADA curb cuts

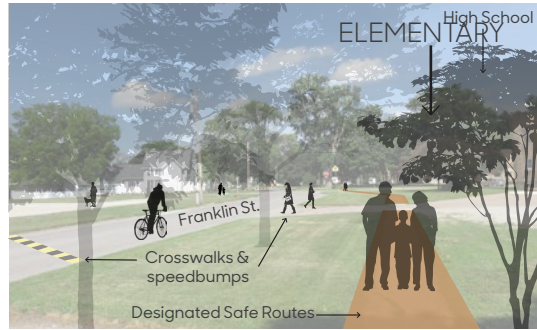
**A Elementary School Neighborhood Enhancements**



**B High School Neighborhood Enhancements**



**C Opt. 2 for N. 2nd St Downtown**



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**Wapello**

Phase I Board 2 of 2  
Critical Crosswalks and Safe Routes  
1-5 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**

Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Trees Forever | Iowa Department of Transportation





Existing Conditions



Existing view out to the river



Maintain parking, but provide space for pedestrians and outdoor gathering (See Overlook Park: A)

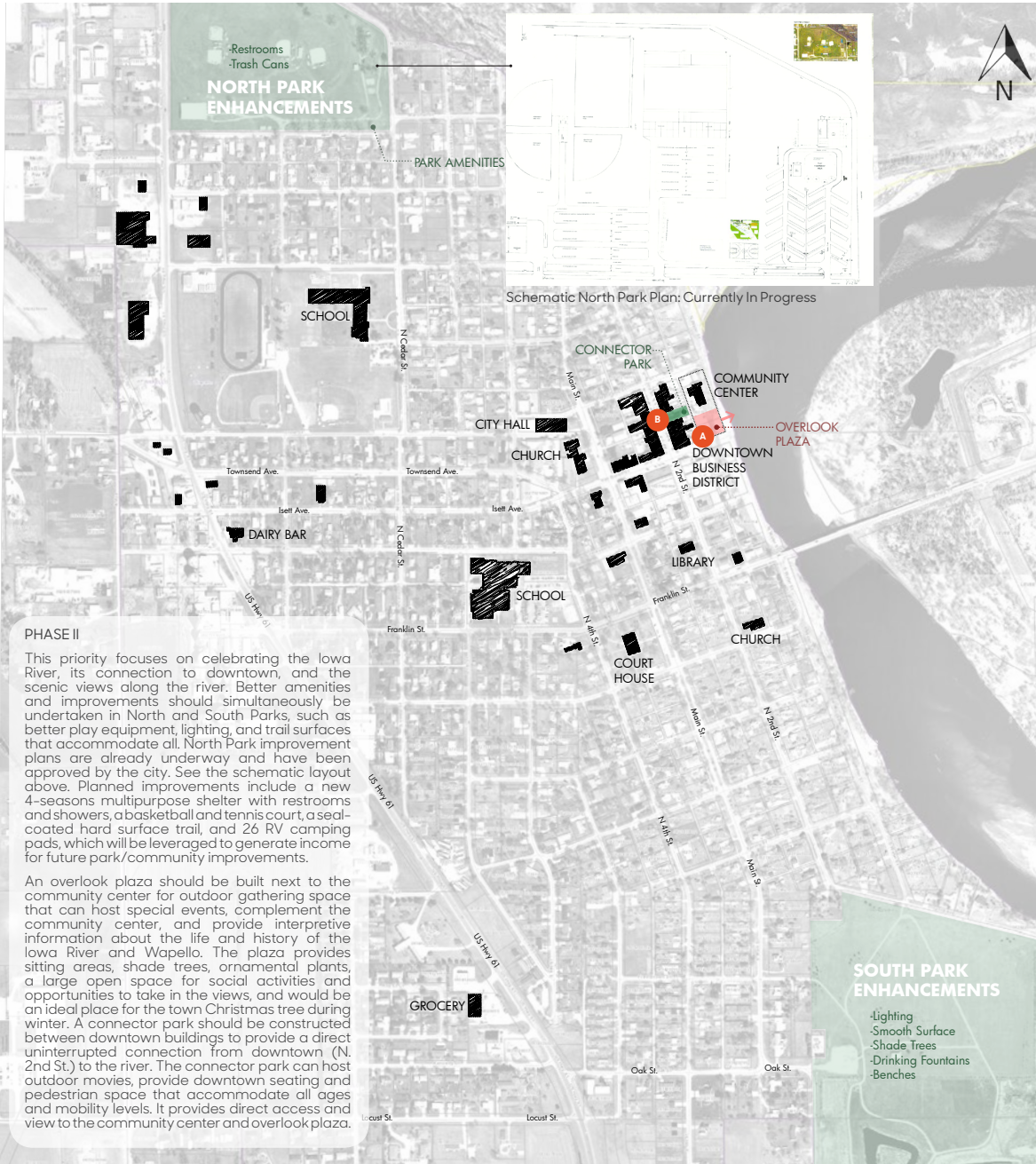


Encourage secondary "fronts" and outdoor spaces looking toward the river



Establish direct connection between uptown and river front (See Connector Park: B)

"I like the river, the access, [and] the boat landing. I don't think we [en]capsulate the river or natural resources as much as we should. We ... need to celebrate that we are a river town."



**PHASE II**

This priority focuses on celebrating the Iowa River, its connection to downtown, and the scenic views along the river. Better amenities and improvements should simultaneously be undertaken in North and South Parks, such as better play equipment, lighting, and trail surfaces that accommodate all. North Park improvement plans are already underway and have been approved by the city. See the schematic layout above. Planned improvements include a new 4-seasons multipurpose shelter with restrooms and showers, a basketball and tennis court, a seal-coated hard surface trail, and 26 RV camping pads, which will be leveraged to generate income for future park/community improvements.

An overlook plaza should be built next to the community center for outdoor gathering space that can host special events, complement the community center, and provide interpretive information about the life and history of the Iowa River and Wapello. The plaza provides sitting areas, shade trees, ornamental plants, a large open space for social activities and opportunities to take in the views, and would be an ideal place for the town Christmas tree during winter. A connector park should be constructed between downtown buildings to provide a direct uninterrupted connection from downtown (N. 2nd St.) to the river. The connector park can host outdoor movies, provide downtown seating and pedestrian space that accommodate all ages and mobility levels. It provides direct access and view to the community center and overlook plaza.

NOTE: Each phase, priority, and timeline is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.



**Precedents:** Where it has worked before



Riverfront Park, Mankato, MN



Formosa Park, West Hollywood, CA



Vest Pocket Park, Fort Lauderdale, FL

**A** **Overlook Plaza**

Johnnie B's Bldg.



Johnnie B's Bldg.



River Boardwalk



**B** **Connector Park**



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**Wapello**

**Phase II** Board 2 of 2  
Connect Downtown To The River  
3-10 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**

Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Trees Forever | Iowa Department of Transportation





Existing Conditions



Existing view out to the bridge (See View Deck & Outlooks: B)



Existing Johnnie B's building (See Outdoor Cafe Connects the Existing Building: C)

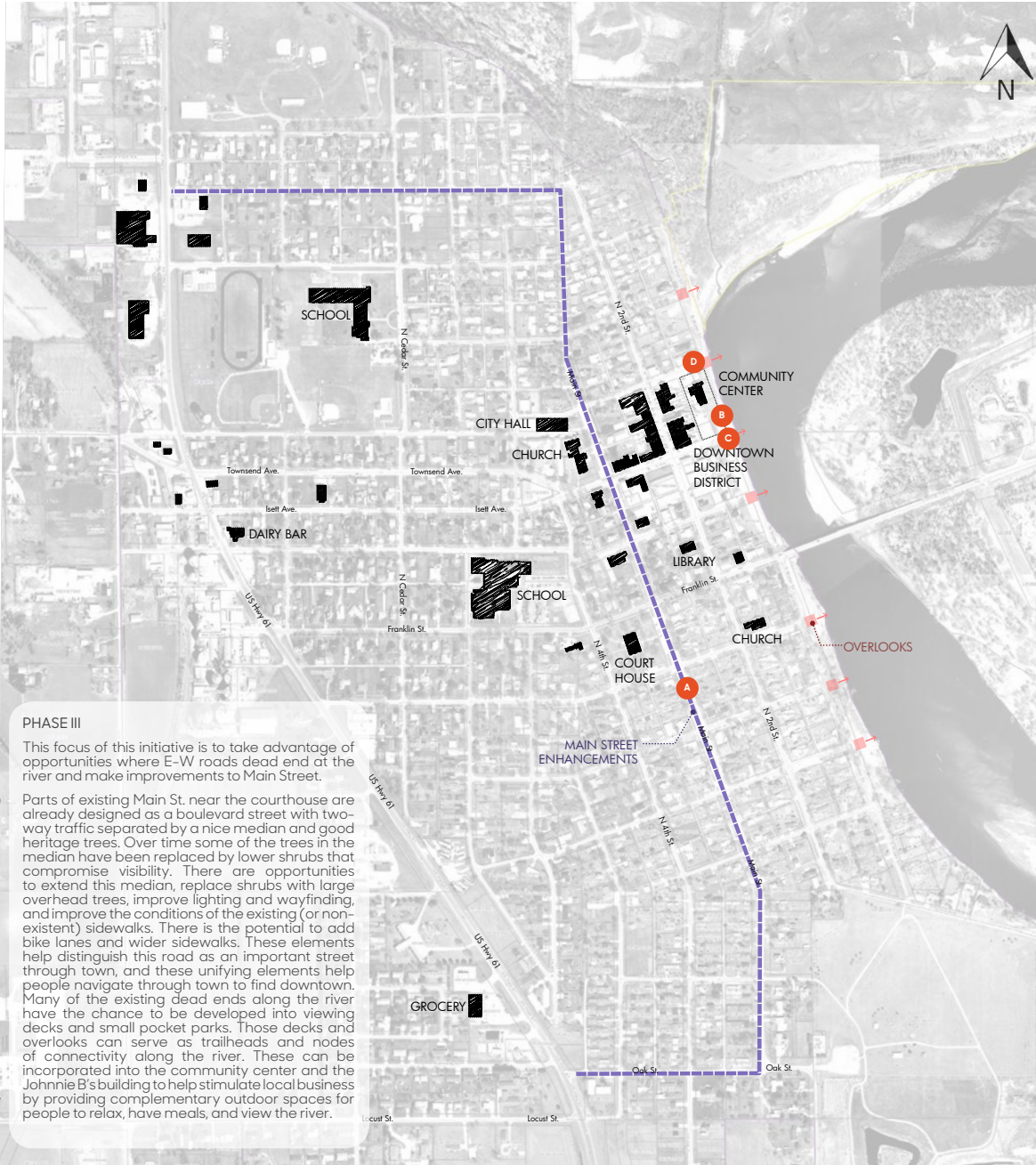


Existing dead end (See Outlook with Sitting Area: D)



Existing pocket park

“...it's nice to be in nature when you walk because it reduce stress, but it would be nice if there was something that you could walk around along the river.”



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**Wapello**

**Phase III** Board 1 of 2

Celebrate The River At Every Opportunity/Enhance Main St. 6-15 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**  
 Landscape Architect: Steve Ford/Designer: Michael LeClere  
 Intern: Wan Wei  
 Iowa State University | Trees Forever | Iowa Department of Transportation





**Precedents:** Where it has worked before



Create places to stop, rest, and take in the view:  
Suwannee River Hideaway Campground in Old Town, FL



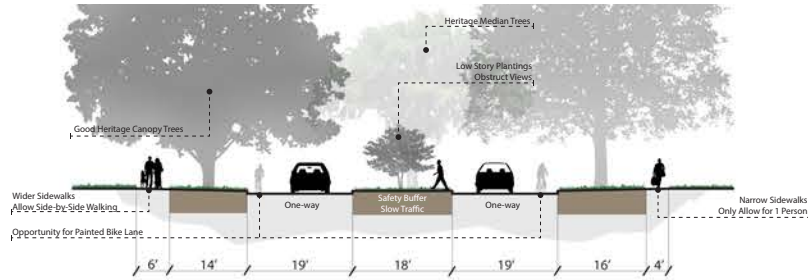
Incorporate art and interpretive signage:  
bighorn sheep landmark on Spokane River bank



Interpretive sign: the sign illustrates the history  
of the area near Passaic River, NJ

**A Assets and Barriers of Existing Main St.**

SCALE: 1"=10'



**B View Deck and Outlooks**



**C Outdoor Cafe Connects the Existing Building**



**D Outlook with Sitting Area**



NOTE: Each phase, priority, and time line is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

**Wapello**

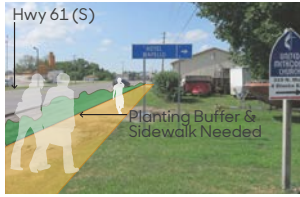
**Phase III** Board 2 of 2  
Celebrate The River At Every  
Opportunity/Enhance Main St.  
6-15 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**  
Landscape Architect: Steve Ford/Designer: Michael LeClerc  
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Existing Conditions



Provide sidewalk



Better lighting, branding and way-finding

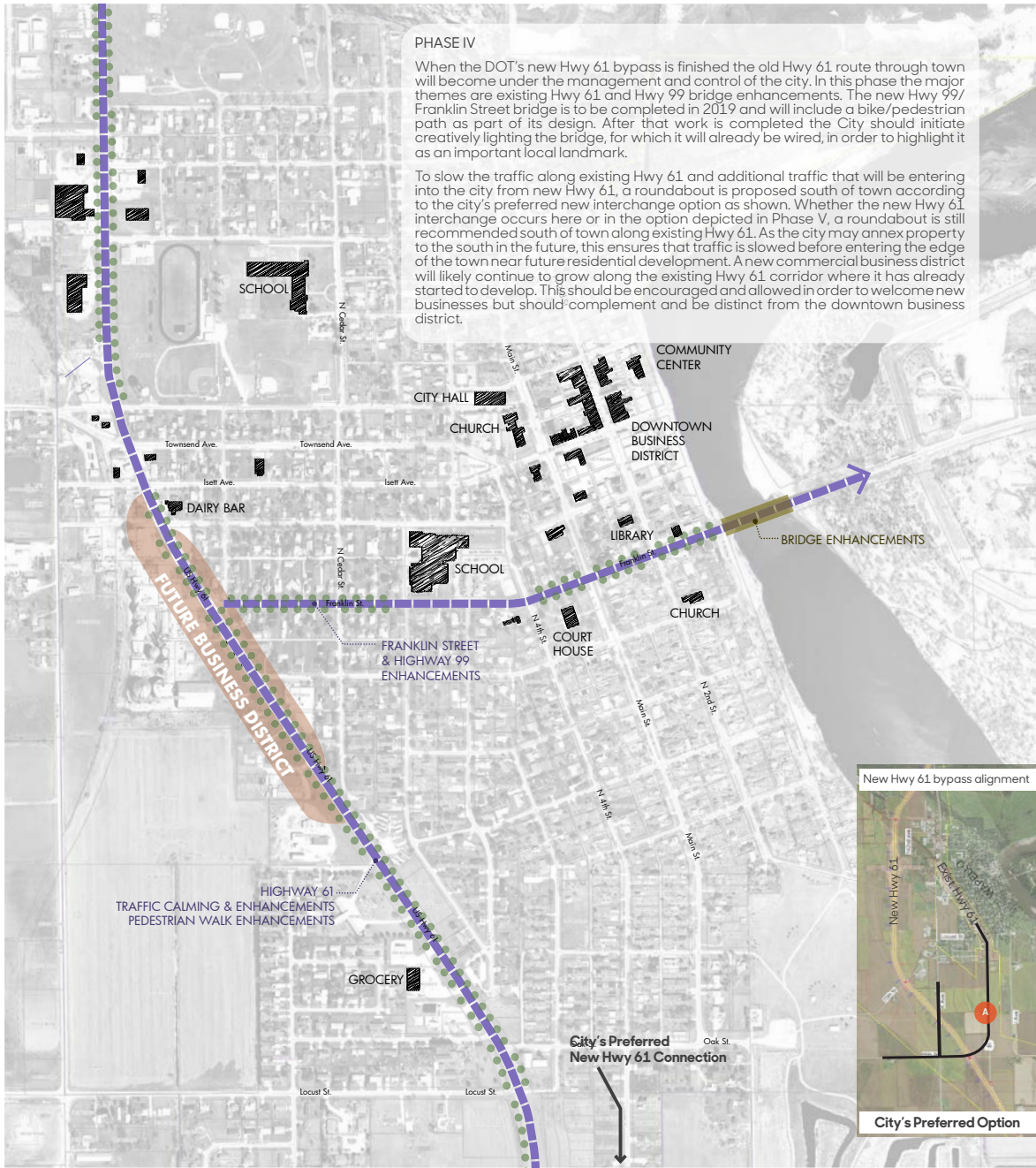


Welcome and retain new/existing businesses



Existing Hwy 99 bridge  
Speed limit on Hwy 99 and 61

“Cars are traveling faster [on Highway 99]... we had a couple close calls on 99, my kids, just thinking it was another road.”



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Wapello

Phase IV Board 1 of 2  
Domesticate Hwy 61 and Enhance  
Franklin St.  
10-25 Years

Steve Ford Landscape Architecture  
Martin Gardner Architecture

Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Trees Forever | Iowa Department of Transportation



**Precedents:** Where it has worked before



Council Bluffs Gateway  
Council Bluffs, IA



Light up bridge over Des Moines River, IA

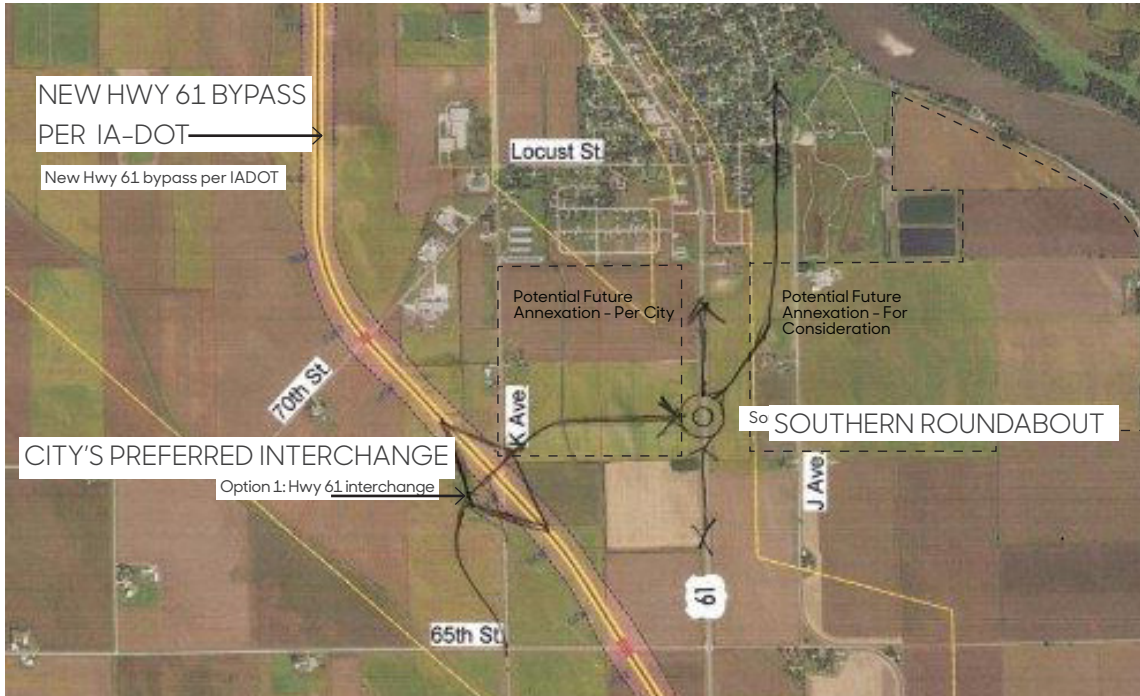


Treelined street in Pacific City, OR



Treelined street in Heber City, UT

**A** **Option 1: New Hwy 61 Interchange with Proposed Roundabout and Future Wapello Annexation**



NOTE: Each phase, priority, and time line is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

**Wapello**  
Phase IV Board 2 of 2  
Domesticate Hwy 61 and Enhance Franklin St.  
10-25 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**  
Landscape Architect: Steve Ford/Designer: Michael LeClere  
Intern: Wan Wei  
Iowa State University | Trees Forever | Iowa Department of Transportation





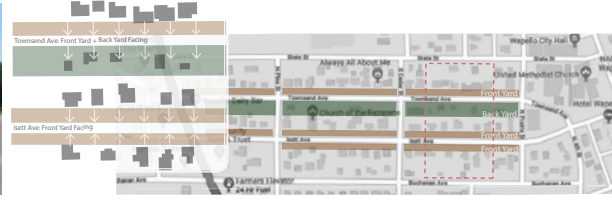
Existing Conditions



Existing Hwy 61

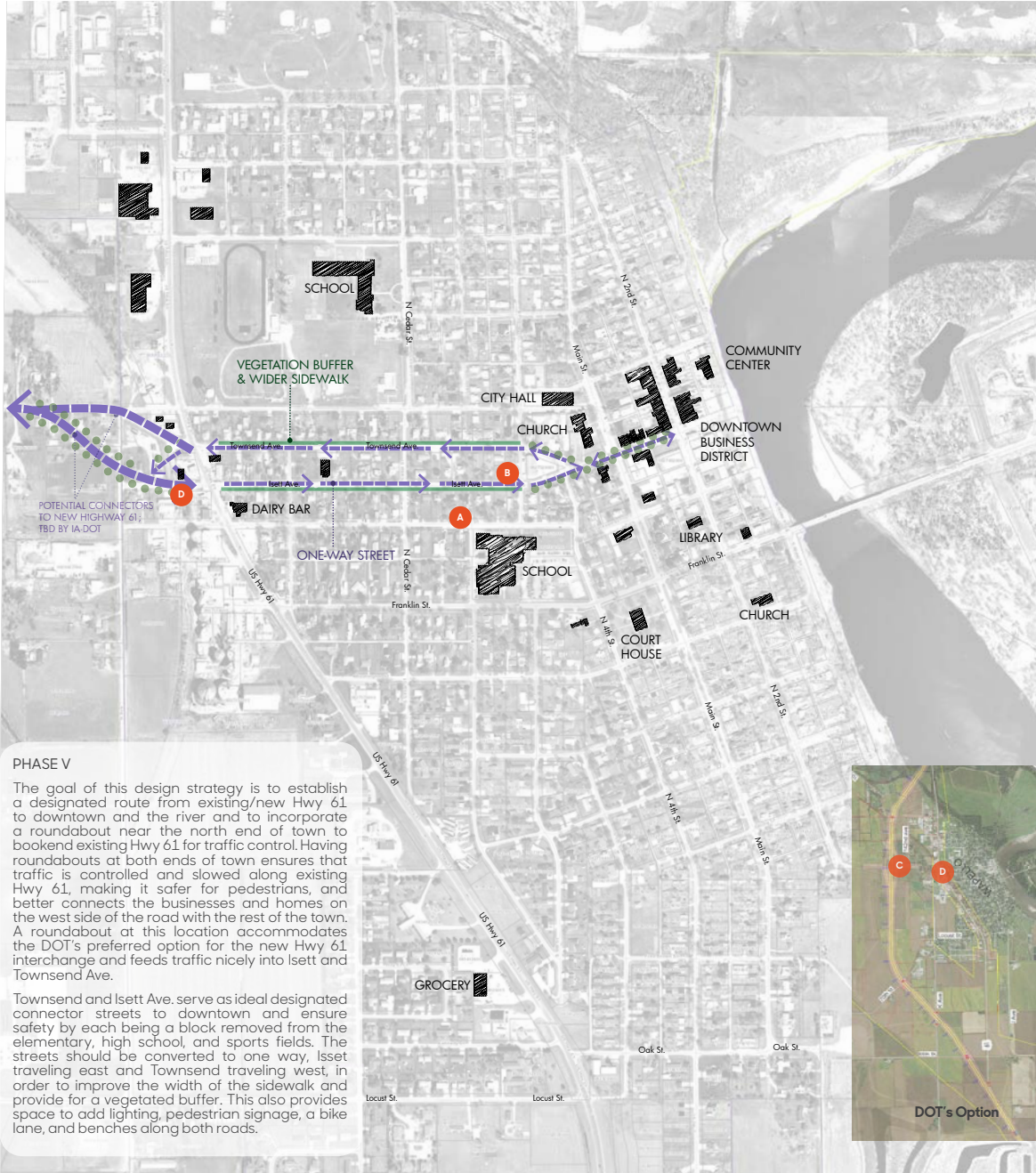


Existing Hwy 61 & G62



Existing condition diagrams of Townsend and Isett Avenue

"One of the biggest problems I see is on 61... some of th[ose] side streets are hard to see who's coming and where they're coming from, and 61 is always busy."



PHASE V

The goal of this design strategy is to establish a designated route from existing/new Hwy 61 to downtown and the river and to incorporate a roundabout near the north end of town to bookend existing Hwy 61 for traffic control. Having roundabouts at both ends of town ensures that traffic is controlled and slowed along existing Hwy 61, making it safer for pedestrians, and better connects the businesses and homes on the west side of the road with the rest of the town. A roundabout at this location accommodates the DOT's preferred option for the new Hwy 61 interchange and feeds traffic nicely into Isett and Townsend Ave.

Townsend and Isett Ave. serve as ideal designated connector streets to downtown and ensure safety by each being a block removed from the elementary, high school, and sports fields. The streets should be converted to one way, Isett traveling east and Townsend traveling west, in order to improve the width of the sidewalk and provide for a vegetated buffer. This also provides space to add lighting, pedestrian signage, a bike lane, and benches along both roads.

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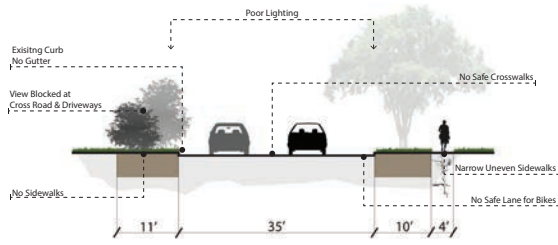
Phase V Board 1 of 2  
 Easement Improvements To Designate  
 Clear Route To Downtown/River  
 25-50 Years

Steve Ford Landscape Architecture  
 Martin Gardner Architecture

Landscape Architect: Steve Ford/Designer: Michael LeClerc  
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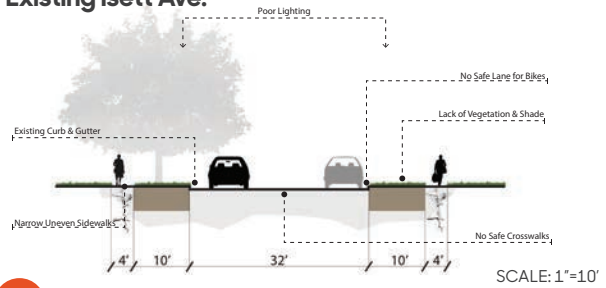


Existing Townsend Ave.



**A** Proposed Street Enhancements

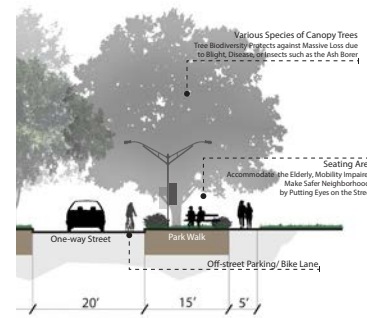
Existing Isett Ave.



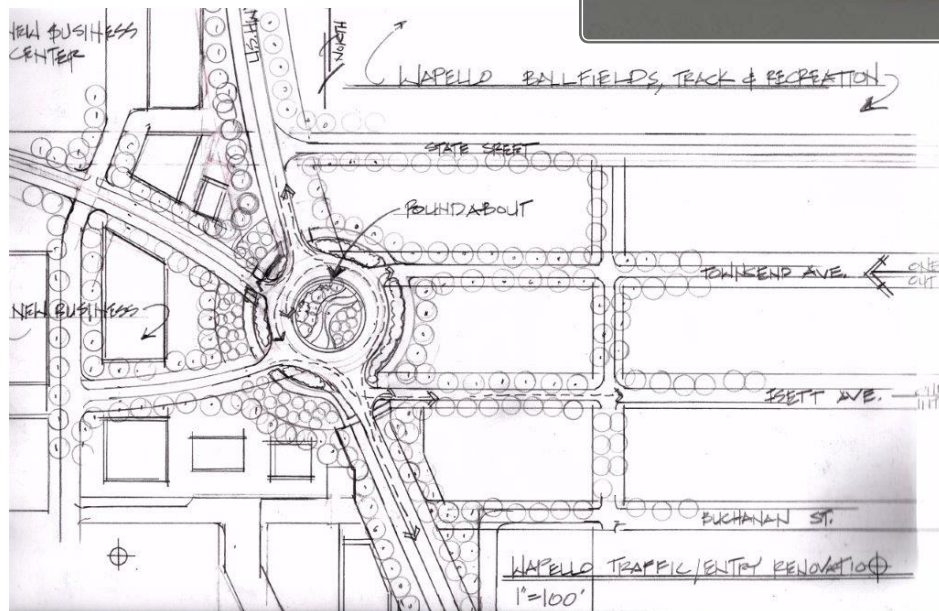
**B** Proposed Street Enhancements



**C** Option 2: New Hwy 61 Interchange



**D** Proposed Roundabout (if approved by IDOT)



NOTE: Each phase, priority, and time line is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

**Wapello**  
Phase V Board 2 of 2  
Easement Improvements To Designate  
Clear Route To Downtown/River  
25-50 Years

Steve Ford Landscape Architecture  
Martin Gardner Architecture  
Landscape Architect: Steve Ford/Designer: Michael LeClere  
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Existing Conditions



Existing river view  
(See Riverfront Trail Proposal: A)



Outlook opportunity

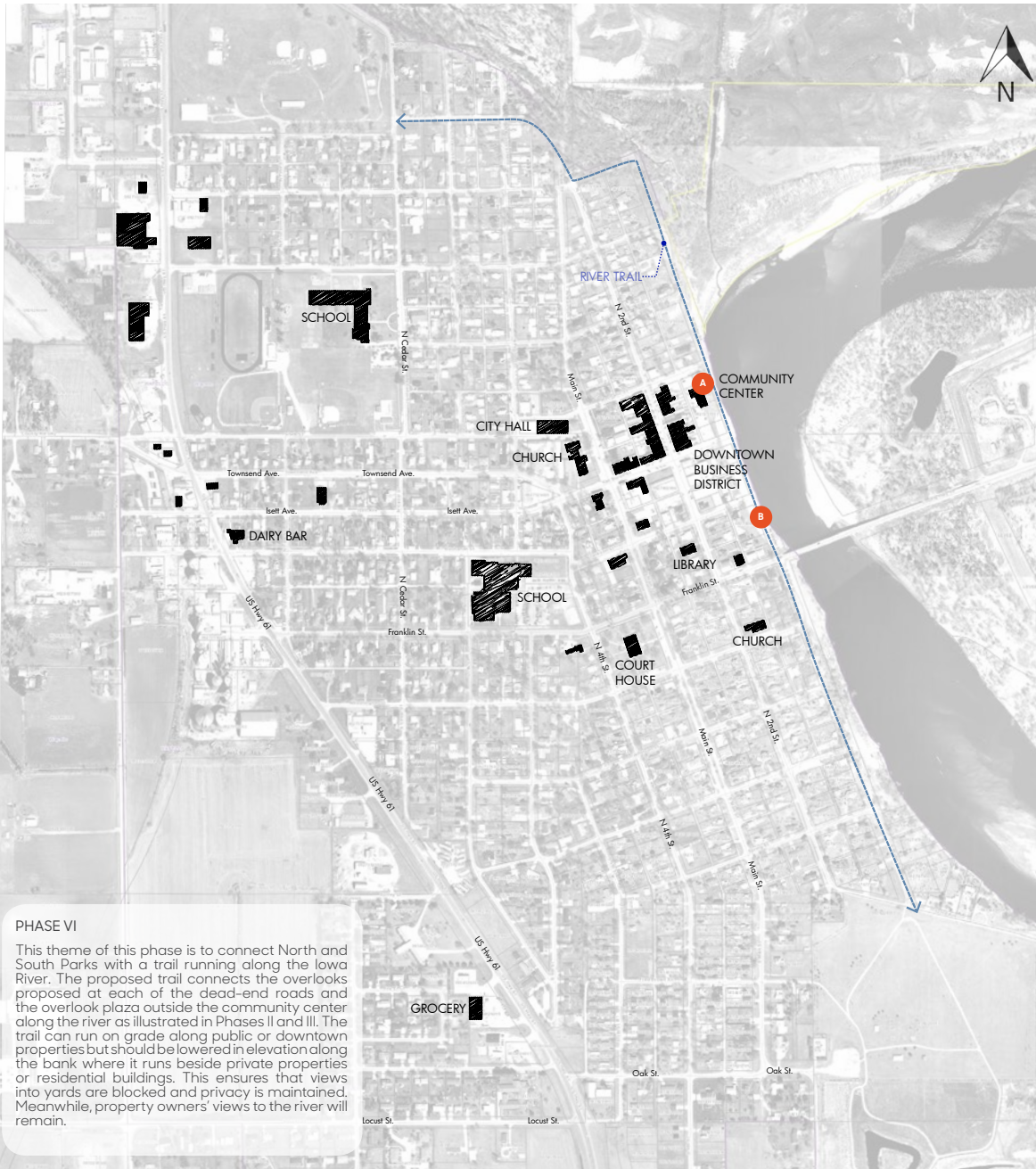


Trail opportunity



Trail opportunity

“At one time they talked about having a trail from the landing... up to north of the business district... [It] would be nice to walk along and see the river.”



PHASE VI

This theme of this phase is to connect North and South Parks with a trail running along the Iowa River. The proposed trail connects the overlooks proposed at each of the dead-end roads and the overlook plaza outside the community center along the river as illustrated in Phases II and III. The trail can run on grade along public or downtown properties but should be lowered in elevation along the bank where it runs beside private properties or residential buildings. This ensures that views into yards are blocked and privacy is maintained. Meanwhile, property owners' views to the river will remain.

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**Wapello**  
**Phase VI** Board 1 of 2  
 River Trail To Connect N and S Park  
 25-80 Years

**Steve Ford Landscape Architecture**  
**Martin Gardner Architecture**  
 Landscape Architect: Steve Ford/Designer: Michael LeClere  
 Intern: Wan Wei  
 Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways  
**community**  
**visioning**



**Precedents:** Where it has worked before



Running River Trail System  
Muscatine, IA



Boardwalk along the Tennessee River

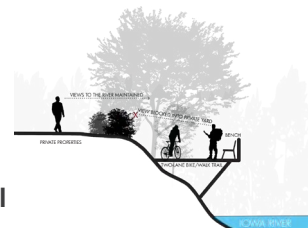


Green Bay Boardwalk  
Green Bay, WI

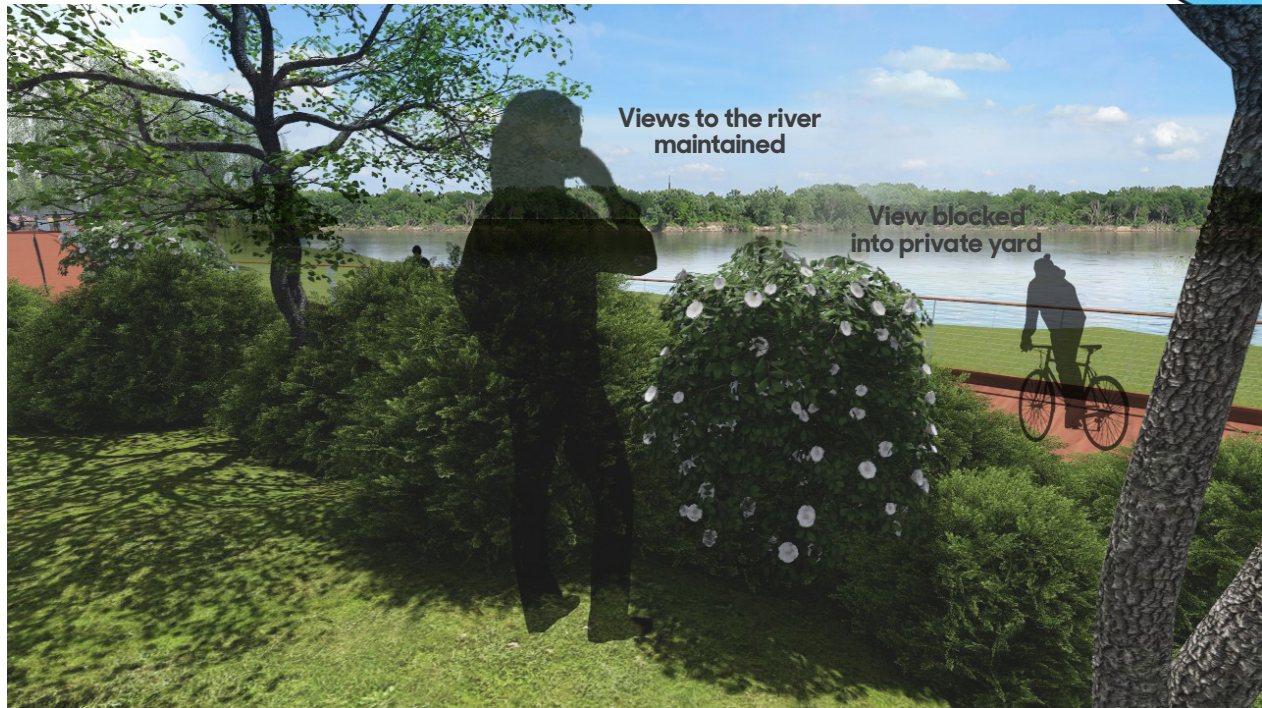


Funny River SRS Fishing Platform  
Kenai Peninsula Borough, AK

**A Riverfront Trail Proposal**



**B Privacy Maintained—Section and Perspective of the Proposed Riverfront Trail**



NOTE: Each phase, priority, and time line is intended to be flexible as determined by the community. Phases and timelines are intended only to demonstrate how large-scale improvements can be achieved by implementing small-scale projects strategically over time to achieve broader reaching goals.

**Wapello**

Phase VI Board 2 of 2  
River Trail To Connect N and S Park  
25–80 Years

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Existing Conditions



Existing Townsend Ave.



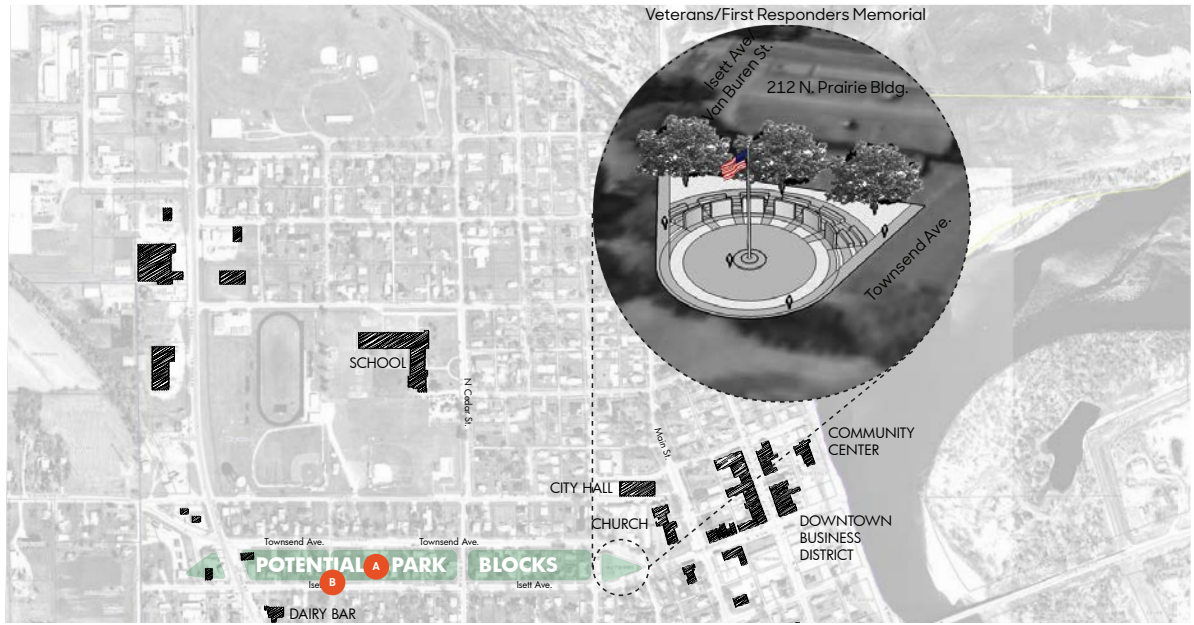
Existing Townsend Ave.



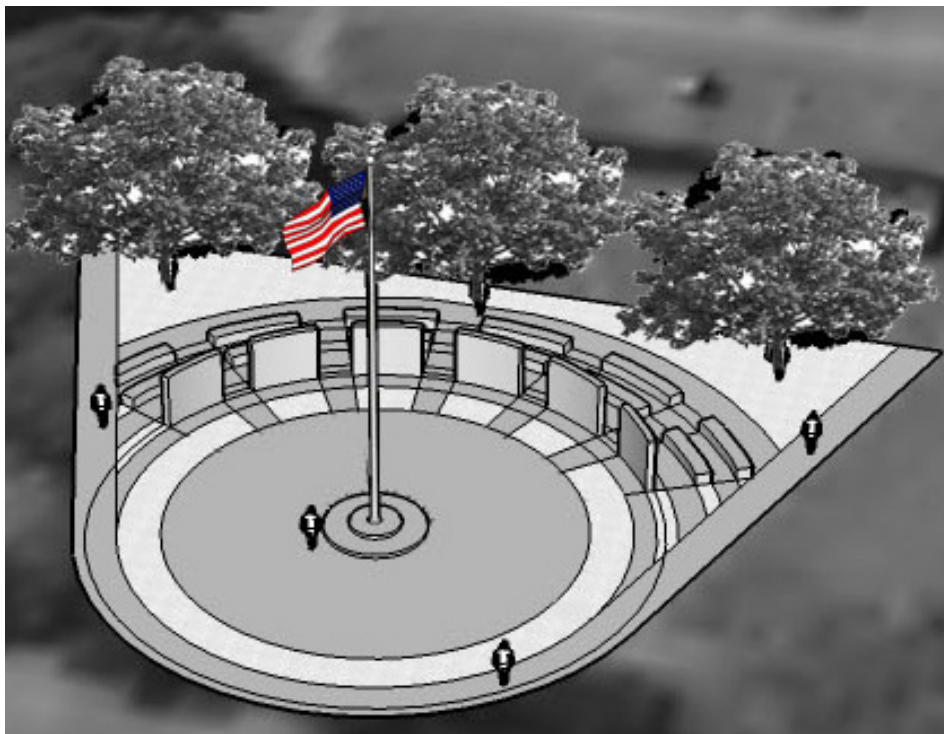
Existing crossing on Hwy 61



Existing crossing on Hwy 61



Potential Veterans Memorial at East end of Transportation Corridor



Future Considerations: Future Connection Opportunities Along the Transportation Corridor

**Precedents:** Where it has worked before



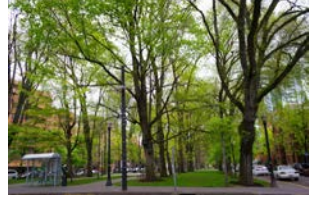
Park Blocks in Portland, OR



Park Blocks in Portland, OR



Park Blocks in Portland, OR



Park Blocks in Portland, OR

**A** Proposed Park Blocks Section



SCALE 1"=16'

**B** Proposed Park Blocks Perspective



Future Considerations: Future Connection Opportunities Along the Transportation Corridor



## Cost Estimates

The following provides rough cost estimates for portions of the earlier phases. It should be noted that each phase depicts multiple initiatives meant to be broken down into separate projects. In planning projects such as this it is not practical to estimate costs for projects that may be 80-100+yrs out into the future as the variability in material costs, construction costs, and inflation change year to year and even season to season. We have focused our efforts on estimating costs for several of the design interventions depicted in the early phases. As there is inherent overlap in portions of the phases, there will be overlap implied in the cost estimates. Where appropriate, these have been broken up to reflect the phases and individual projects within the phases as best as possible. These costs have not been derived from finished construction documents and specific materials, products, and manufacturers are unknown. We have tried to be as concise as is appropriate for schematic level design, and have provided allowances where there are multiple options or approaches. Sidewalk costs do not include storm intake as some locations already have a storm sewer while some do not. Whether or not to include storm sewers and where should be determined at the next level of design. These cost estimates are intended to help the City of Wapello prioritize, plan for, and fundraise in order to execute projects. This information is to serve the City by helping them target certain grants to fund certain projects, and to provide supporting material for future grant applications.

### Phase I- **Critical Crosswalks & Safe Routes**

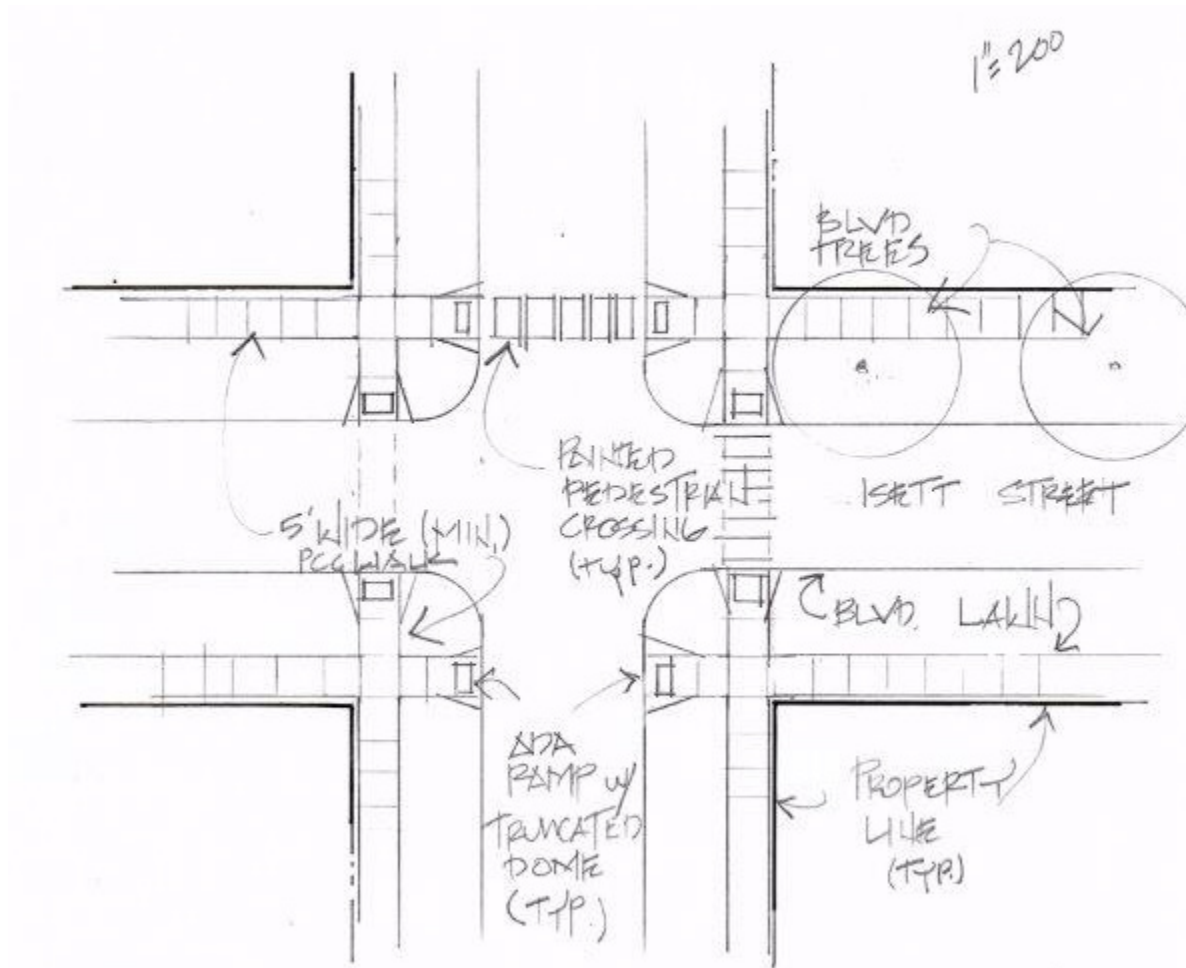
In order to price Phase I, and in order to make the design intervention scalable, it is most appropriate to look at the equivalent unit cost per crosswalk/street corner rather than trying to price the entirety of every crosswalk as represented in Phase I. This is the most appropriate approach as some crosswalk locations may be revised or re-prioritized as the community executes the project. This allows crosswalk enhancements to be implemented incrementally and within a realistic budget for the community.

The following costs have been determined by the typical four-way street crossing shown below. Line items taken into consideration are as follows:

- Remove Existing Sidewalk
- Install new 5ft. walk
- ADA Truncated Dome/Curb Cuts
- Earthwork & Restore
- Paint Crosswalk
- Allowance for Artistic Specialists

**Total:**

**\$7,500- \$10,000/Corner**



Typical Proposed Street Crossing

Phase II- **Connect Downtown Town to the River**

Phase III- **Celebrate the River at Every Opportunity/Enhance Main Street**

Phase VI- **River Trail to Connect North & South Parks**

For the purposes of estimating, Phases II, III, and VI have been combined. It should be noted that none of the major interventions depicted within these phases are designed to completion. As the focus of Community Visioning is on transportation and habitat enhancements, it would not be appropriate for us to design park spaces to the level of design that exact square footages can be determined or materials and products be selected. Rather, any visual representations of such spaces are intended only to illustrate the potential of these spaces. For more accuracy specific parks, outlooks, or areas should be taken to the next

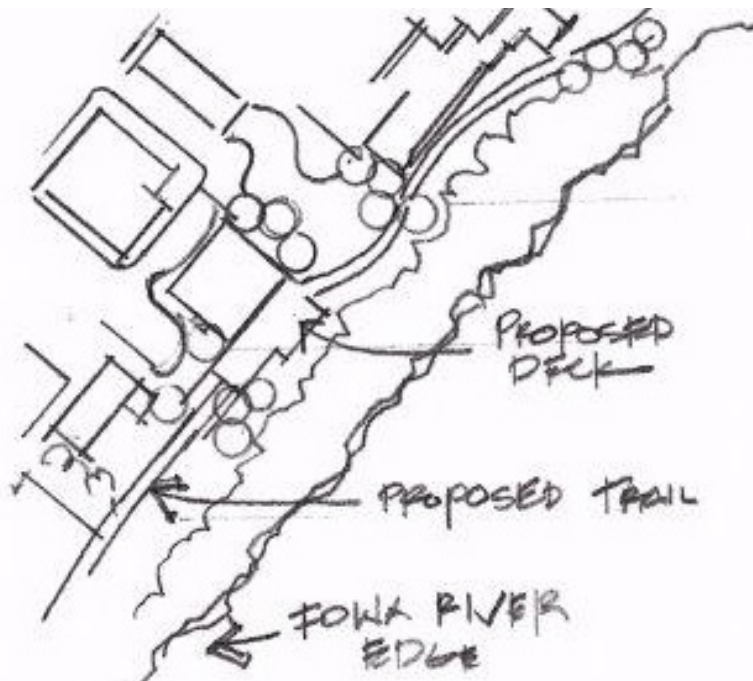
## Cost Estimates

level of design individually so that these determinations can be made. With that in mind, rough costs per square foot are the most appropriate route for estimating costs.

The following costs have been determined based upon typical trail systems & plazas/overlooks as illustrated below. These do not include land acquisition or any storm sewer or Civil work as that portion of work would need determined per specific project, and per location. Additionally, any superstructure or support systems required are to be engineered and estimated per location. Line items taken into consideration are as follows:

- SafPlank Decking System
- ADA Accessible Features
- ADA Truncated Dome/Curb Cuts where applicable
- Earthwork & Restore
- Paving

<b>Total:</b>	<b>\$30- \$60/Square Foot</b>
<b>Riverfront Trail:</b>	<b>\$350,000 - \$500,000</b>
<b>Riverfront Plaza:</b>	<b>\$200,000 - \$300,000</b>
<b>Connector Park:</b>	<b>\$400,000 - \$550,000</b>
<b>Pocket Parks:</b>	<b>\$75,000 - \$200,000</b>



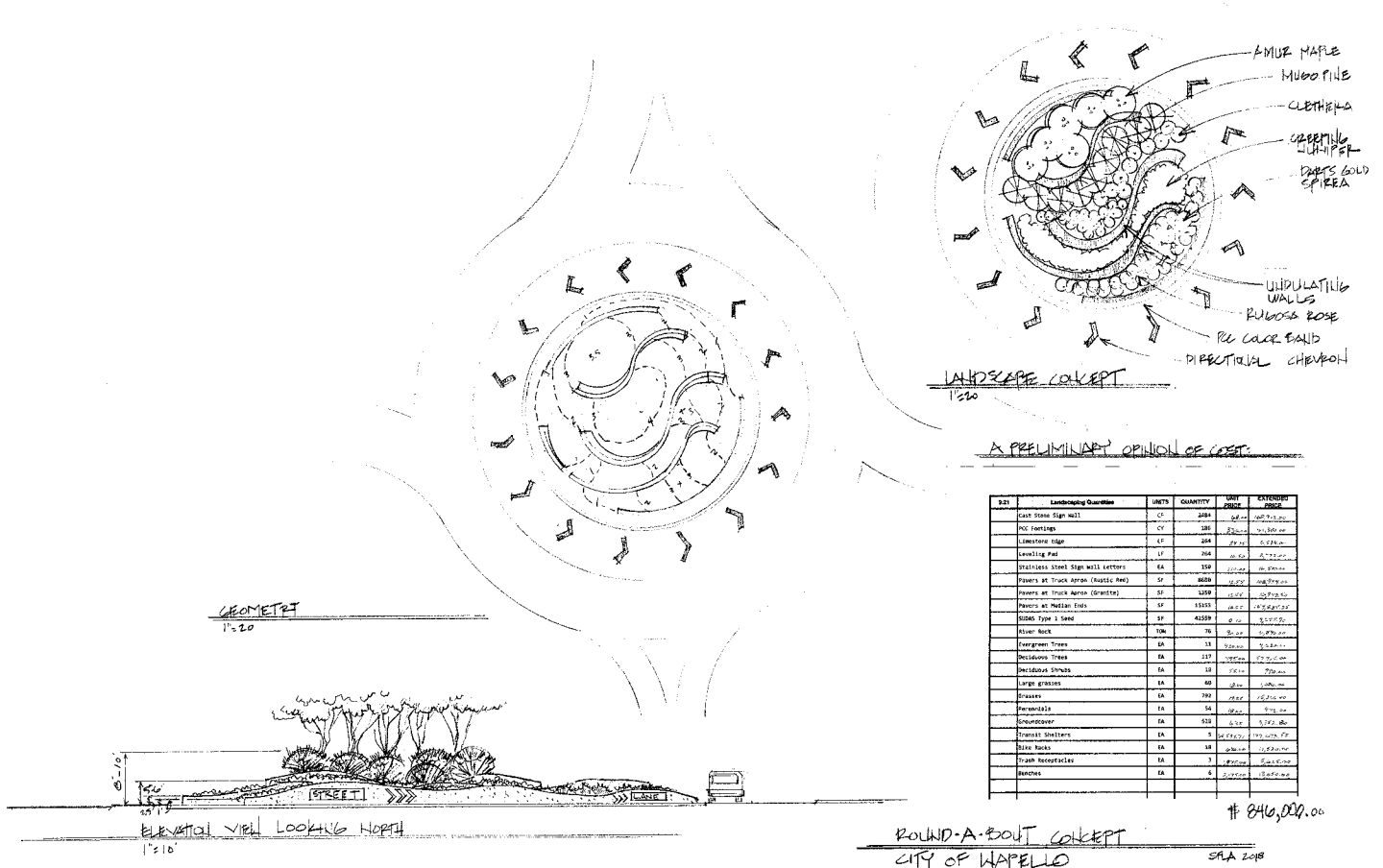
Plaza and Trail System at River's Edge



Phase IV Domestic Hwy 61 & Enhance Franklin Street

Phase V- Easement Improvements to Designate Clear Route to Downtown

The realignment of Hwy 61 and traffic control along existing Hwy 61 were major concerns of residents. Work on the new Hwy 61 bypass and its connection to Wapello ultimately will be determined by IA-DOT. Design interventions to accommodate this include book-ending existing Hwy 61 with roundabouts for the purpose of traffic calming and creating designated entryways into the community. Roundabouts can vary in complexity and detail making them have a wide price range. For the purposes of estimating here, costs have been based on previous experience and a rough design as detailed below. These line items have been further broken down in the spreadsheet that follows the illustration in order to help scale the project up or down per roundabout.

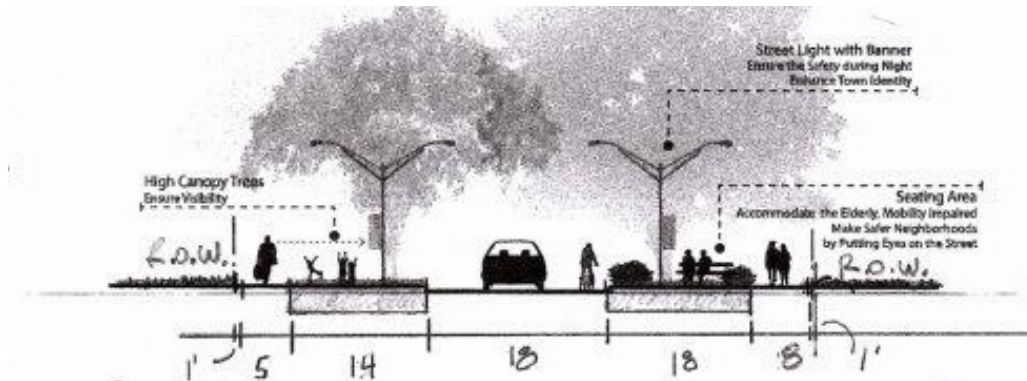


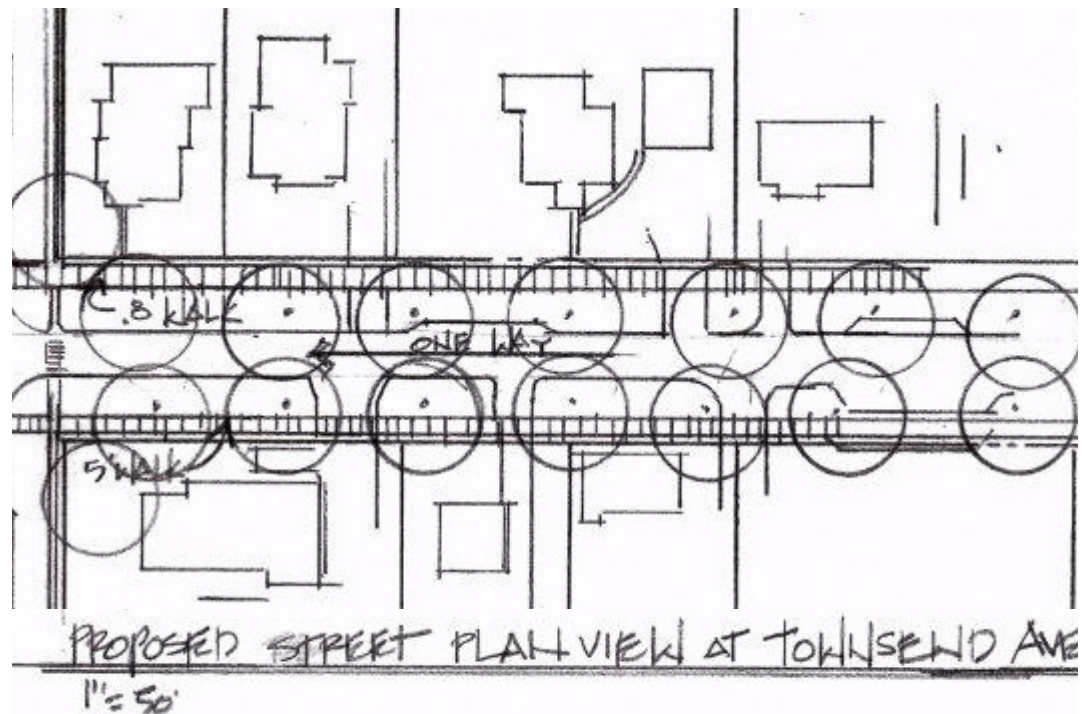
# Cost Estimates

LANDSCAPING LINE ITEMS	UNITS	QUANTITY	UNIT PRICE	EXTENDED PRICE
Cast Stone Sign Wall	CF	2484	68	168,912.00
PCC Footings	CV	186	330	61,380.00
Limestone Edge	LF	264	24.75	6,534.00
Leveling Pad	LF	264	10.5	2,772.00
Stainless Steel Sign Wall Letters	EA	150	110	16,500.00
Pavers at Truck Apron (Rustic Red)	SF	8680	12.55	108,934.00
Pavers at Truck Apron (Granite)	SF	1350	12.55	16,942.50
Pavers at Median Ends	SF	15,155	10.55	159,885.25
SUDAS Type 1 Seed	SF	42,559.00	0.1	4,255.90
River Rock	Ton	76	90	6,840.00
Evergreen Trees	EA	11	420	4,620.00
Deciduous Trees	EA	117	495	57,915.00
Deciduous Shrubs	EA	18	55	990.00
Large Grasses	EA	50	18	1,080.00
Grasses	EA	792	19.25	15,246.00
Perennials	EA	54	18	972.00
Groundcover	EA	528	6.35	3,352.80
<b>Grand Total</b>				<b>637,131.45</b>

## Phase V- Easement Improvements to Designate Clear Route to Downtown

Phase V, was addressed in the previous section, but only as it pertains to cost estimates for roundabouts. Phase V also deals with Townsend & Isett Ave roadway/easement improvements. For the purposes of cost estimating, we broke those two sections apart for better understanding. Roadway/easement improvements are based upon the roadway section and plan illustrated below:





The most useful way to estimate costs for a project like this at this stage of development would be to look at costs per block. That way the community can realistically tackle a project like this per block or all at once. It should be noted that with inflation, construction costs tend to increase over time. So pros and cons must be weighed in tackling a project over time as opposed to all at once, but ultimately budget constraints realistically determine what is & is not possible. Line items taken into consideration are as follows:

- Demolition
- Earthwork
- Sub-base Repair
- New Pavement for Streets & Sidewalks
- New Landscaping with Boulevard Trees
- Top Soil & Seed
- Street Lights
- Roadway Tiling
- Drive extensions

**Total:**  
**Qty. 3 Blocks:**

**\$480,000/Block**  
**\$1.4 - \$1.5 Million**



# Cost Estimates

## Future Considerations- **Corridor**

## **Future Considerations Along the Transportation**

It would not be appropriate to estimate costs for this project at this time. It is far enough out in the future that prices would fluctuate too much for any costs estimated at this time to be useful. In addition, due to the strategic incremental nature of this design intervention and its undetermined full scope, it would not be appropriate to estimate this as a whole. This phase would involve property acquisition over time, and property values themselves fluctuate over time. No actual design for potential green corridor space has been proposed from which to calculate an estimate. Costs should only be explored when a specific property and desired improvement have been identified.

**This Page Intentionally Left Blank for Notes:**