



Bethany Trail Plan

City of Bethany, Missouri

March 2021



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Introduction



The Bethany Trail Plan presents a strategy for a more complete walking and biking network in the City of Bethany. This document is divided into two sections. The first section focuses on potential improvements on City-owned property located between Memorial Park and South Harrison High School. Building on past planning and community outreach, this section identifies site assets and program opportunities for the site, with the goal of shaping future connectivity improvements to support existing and long term uses.

The second section of this document looks more broadly at opportunities for connectivity citywide. A Priority Network of walking and biking improvements is proposed that focuses on safe, comfortable, continuous infrastructure connecting important destinations. The Bethany Trail Plan provides a comprehensive and phased approach to implementing this

network with recommendations for design and project delivery that provide a feasible path to a more walkable and bikable community.

The citywide analysis begins with an analysis of the existing sidewalk network, including conditions and coverage of existing sidewalks. A Priority Network is proposed that builds upon existing sidewalk infrastructure to connect all major destinations and neighborhoods in the community. Design options for these priority connections are explored, including sidewalks and alternative approaches to pedestrian connectivity that can help to address some of the cost and logistical challenges to traditional sidewalk construction. The Bethany Trail Plan also looks at best practices for project delivery that can support the implementation of projects through coordination with regular street maintenance and other planned street projects.



Site Opportunities

Site Evaluation



① **Open pasture: Opportunity for larger program uses or building site**



② **High point of site: Access to existing parking & key views in all directions**



③ **Potential crossing location south of high school entry drive**



④ **Potential location for accessible trail connection to Memorial Park**



⑤ **Potential trail route on eastern edge of site**



⑥ **Entry to existing forest trail**



Design Concept

The following design concept illustrates one potential scenario of site programming and improvements for Memorial Park and the adjacent City-owned property. The purpose of this design concept is not to prescribe specific improvements, but rather to consider how various community priorities and interests for the site might be accommodated with one another. The goal is to understand how potential connectivity improvements - trails, paths, and sidewalks - should be located and designed to support and connect future programming elements. The different site programming elements illustrated on this design concept were based on guidance from City staff and community stakeholders, as well as previous Bethany community surveys. The phasing of connectivity improvements on the site is explored in more detail later in this document.

LEGEND:

- ① **PAVED OUTDOOR WALKING & BIKING TRAILS**
- ② **GAZEBO PERFORMANCE STAGE OR PICNIC SHELTER**
- ③ **MULTI-USE SPORTS FIELD**
- ④ **FITNESS STATIONS**
- ⑤ **OPEN RECREATIONAL SPACE (INTERIM USE)**
- ⑥ **OUTDOOR CLASSROOM**
- ⑦ **CORN HOLE COURTS & HORSESHOE PITS**
- ⑧ **OUTDOOR GAME AREA**
- ⑨ **LOOK-OUT TOWER**
- ⑩ **VOLLEYBALL/BADMINTON COURTS**
- ⑪ **PICKLE BALL COURTS**
- ⑫ **WETLAND BRIDGE & WALK**
- ⑬ **FOREST TRAILS**
- ⑭ **PARKING**
- ⑮ **CROSSWALK IMPROVEMENTS**
- ⑯ **CONCESSIONS (POSSIBLE RAIL DEPOT RELOCATION)**



Program Elements



Paved Outdoor Walking and Biking Trails



Soccer and Flag Football Field



Gazebo Performance Stage/Picnic Shelter



Volleyball/Badminton Courts



Frisbee Golf Course



Corn Hole Courts



Pickle Ball Courts



Horseshoe Pits



Outdoor Classrooms



Ball Pit



Lookout Tower



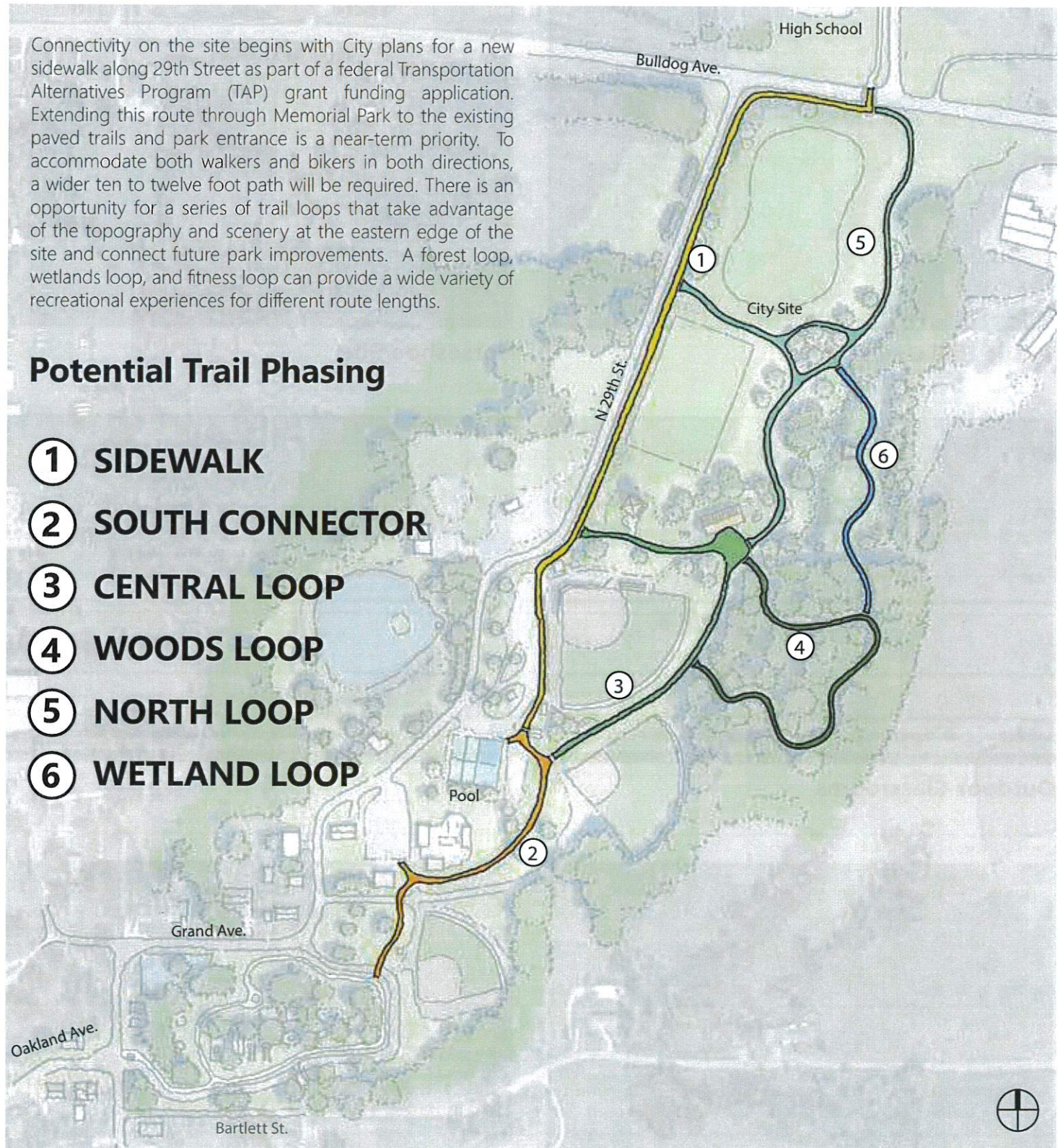
Fitness Stations

Site Connections

Connectivity on the site begins with City plans for a new sidewalk along 29th Street as part of a federal Transportation Alternatives Program (TAP) grant funding application. Extending this route through Memorial Park to the existing paved trails and park entrance is a near-term priority. To accommodate both walkers and bikers in both directions, a wider ten to twelve foot path will be required. There is an opportunity for a series of trail loops that take advantage of the topography and scenery at the eastern edge of the site and connect future park improvements. A forest loop, wetlands loop, and fitness loop can provide a wide variety of recreational experiences for different route lengths.

Potential Trail Phasing

- ① SIDEWALK
- ② SOUTH CONNECTOR
- ③ CENTRAL LOOP
- ④ WOODS LOOP
- ⑤ NORTH LOOP
- ⑥ WETLAND LOOP



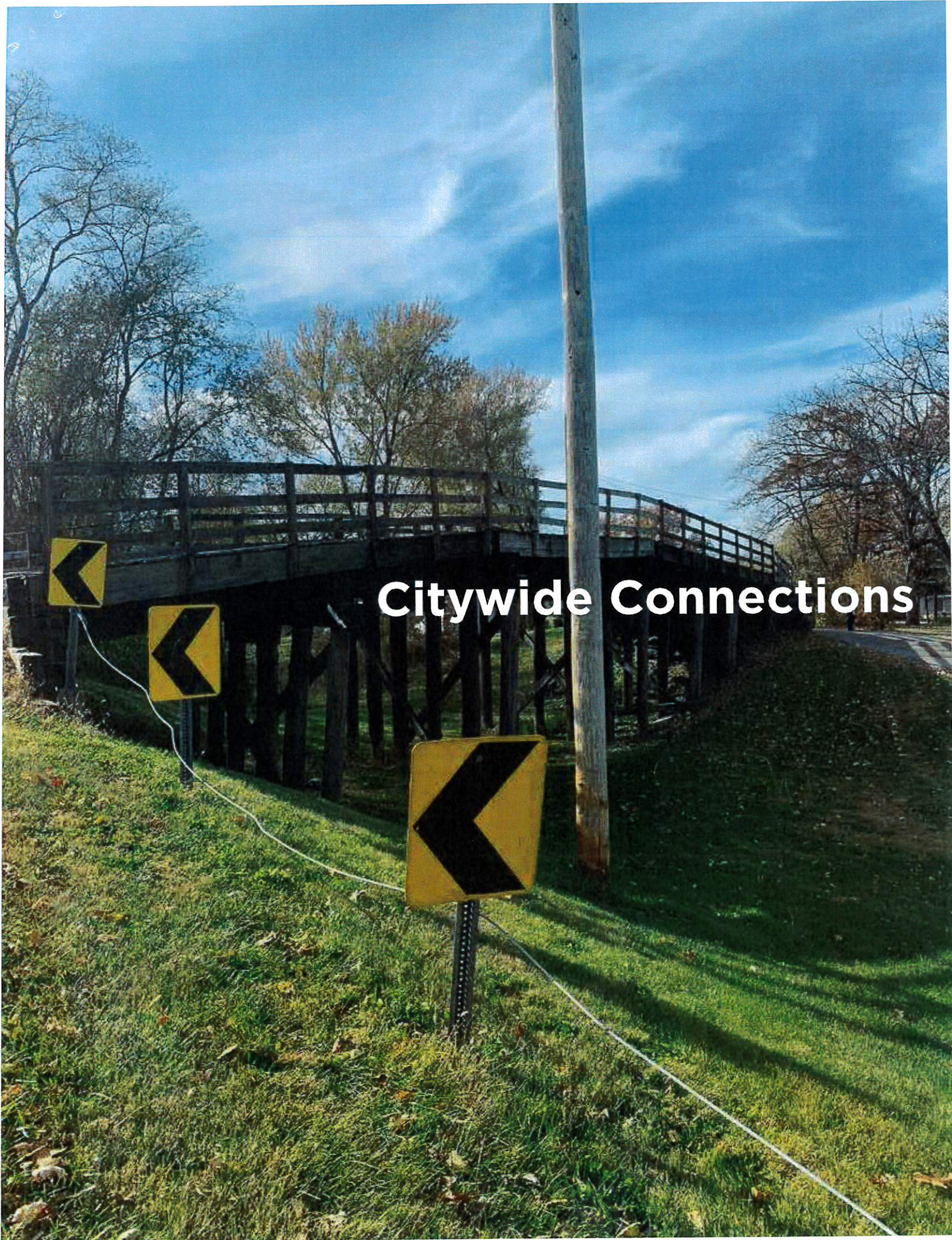
Future Community Facilities

Construction of a new community center would require significant capital investment and land area to accommodate. The following diagram illustrates where future facilities could be located on the site based on access, parking, and topography needs. In the interim, the northern section of the city-owned property can function as a multi-purpose lawn space, while other permanent programming elements benefit from being located further south, closer to the existing amenities of Memorial Park.

LEGEND:

- ① GYM & COMMUNITY BUILDING FOOTPRINT
- ② PARKING





Citywide Connections

Existing Conditions

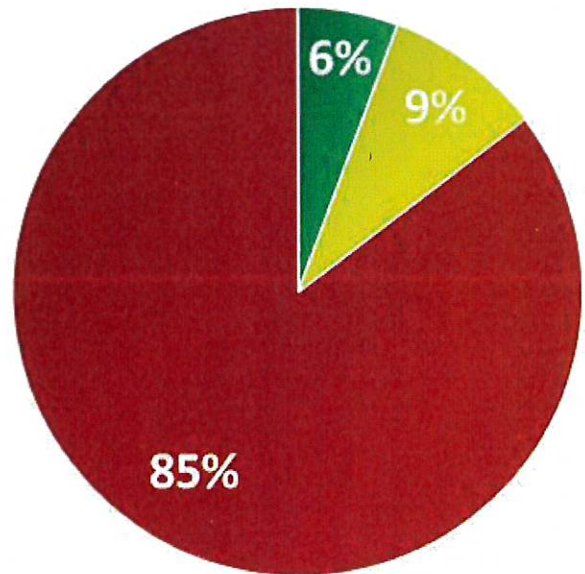
The first step in planning for trail and sidewalk improvements is understanding the location and condition of existing sidewalks. The following sidewalk inventory includes the location, repair, and general coverage of sidewalks in Bethany. This data was collected through a mix of field observations and analysis of aerial photography and digital mapping sources.

Sidewalk Coverage

There are approximately 74 centerline miles of streets in Bethany, excluding Interstate 35. Approximately 11 miles (15%) of these streets have sidewalks of some kind. 9% of streets have sidewalks on one side of the street, while about 6% of streets have sidewalks on both sides. In total there are approximately 14 miles of sidewalks in Bethany, including streets with sidewalks on both sides and off-street trails.

Miller Street, 39th Street, and streets in the downtown area generally have sidewalks on both sides of the street. Other major arterial streets throughout Bethany and residential streets in the southern and western parts of the city generally do not have sidewalks. Memorial Park is the location of the only existing paved off-street trail.

Bethany Sidewalk Coverage



- Sidewalks on Both Sides
- Sidewalks on One Side
- No Sidewalks



Sidewalk Condition

An assessment of sidewalk conditions was completed using aerial photography, block by block digital photography, and direct field observations. Sidewalk conditions are organized into three categories: good, fair, and poor.

Good sidewalks have a smooth and continuous paved surface with minimal cracks or upturned segments. Good sidewalks are separated from automobile conflicts with a curb or landscape buffer and well-defined driveway crossings.

Fair sidewalks are continuous and paved but may have cracks or upturned segments that make use difficult for those with mobility challenges. Some Bethany sidewalks have encroaching vegetation which shrinks the already narrow walking path.

Poor sidewalks are in significant disrepair, are overgrown, or are missing large segments entirely. These sidewalks are functional only for the able-bodied in ideal weather conditions.

Sidewalk conditions in Bethany are mixed. Generally newer sidewalks on Miller Street, 39th Street, Beekman Street, 22nd Street, and 24th Street are in good conditions. Sidewalk conditions in the downtown area are generally fair to good. Many residential sidewalks have significant disrepair, to an extent that they are no longer functional.

Roughly 5.7 miles of sidewalks are in good condition. This represents 40% of all sidewalks in Bethany. 3.1 miles of sidewalks are in fair condition while 5.5 miles are in poor condition.

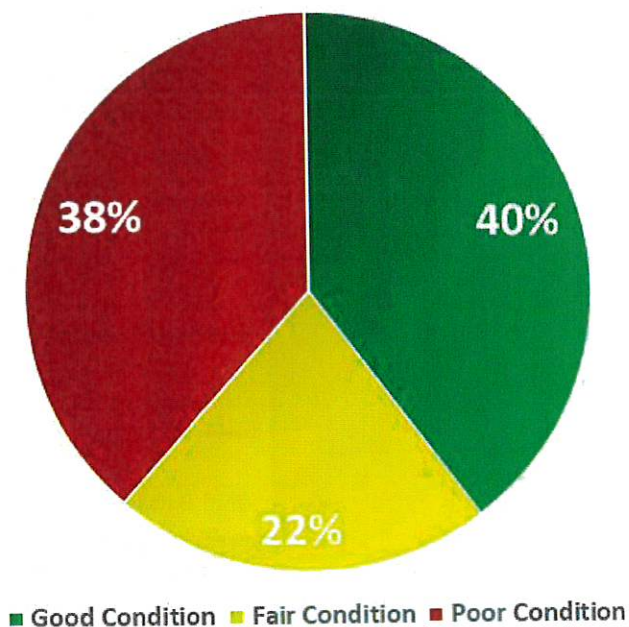


Example of Sidewalk in Good Condition

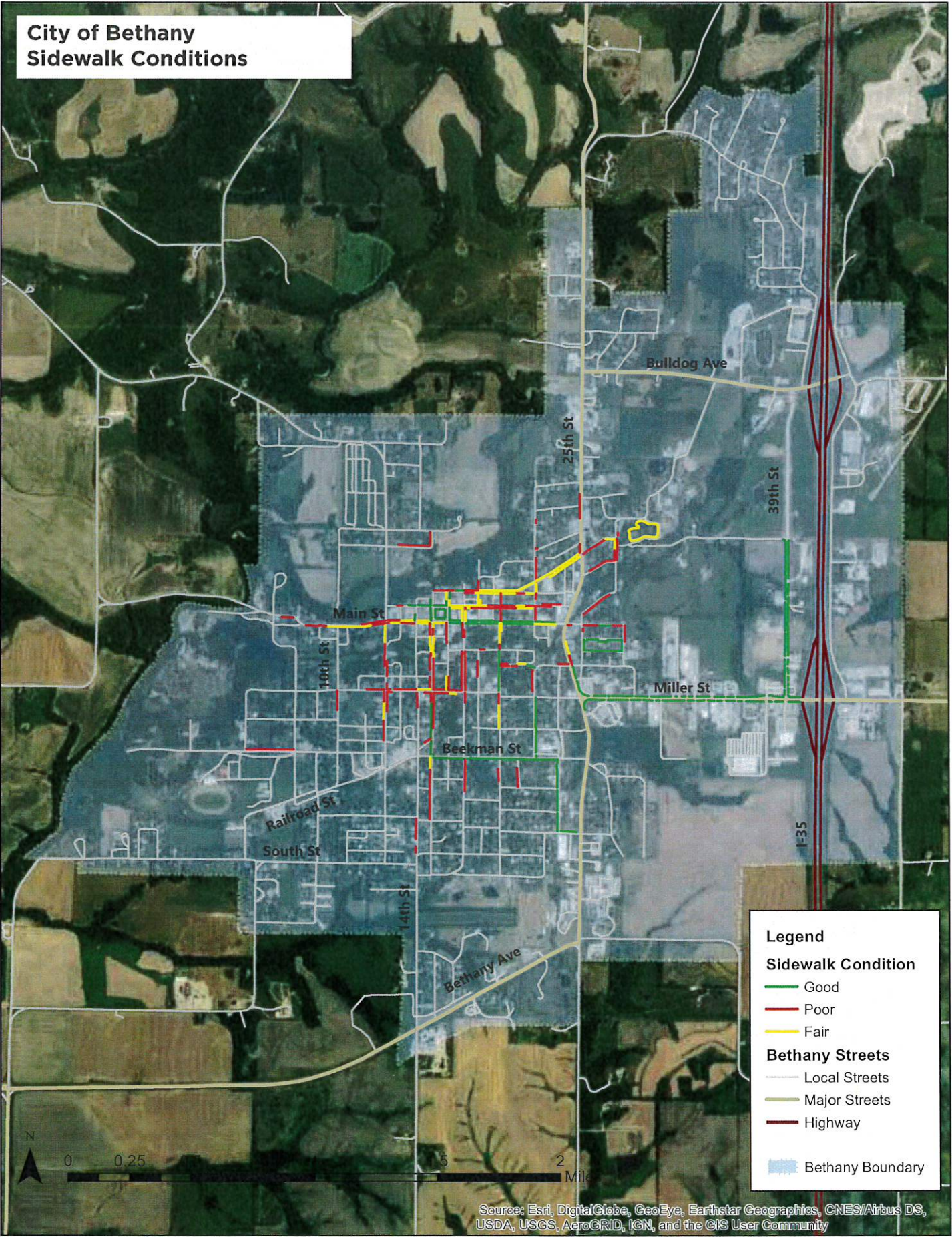


Example of Sidewalk in Fair Condition

Bethany Sidewalk Conditions



Example of Sidewalk in Poor Condition



Challenges for Walking and Biking in Bethany

Challenge: Much of the existing sidewalk network is in desrepair.

Broken pavement, encroaching vegetation, and missing segments on many Bethany sidewalks mean that only around 60% of existing sidewalks can reasonably be incorporated into a future citywide network without major reconstruction.



Challenge: Generally, Bethany's busiest roads have the fewest sidewalks.

Locations with high volumes or high speeds of traffic present increased safety risk to all road users. These are places where dedicated infrastructure for walking and biking can have the greatest impact on the comfort and character of the street. With some exceptions, most of Bethany's busiest streets do not have sidewalks.



Challenge: The geometry of some intersections impacts comfort and safety.

Wide slip lanes at many intersections increase crossing distance and encourage motorists to make turns at higher speeds. Both of these conditions reduce comfort and safety for walking and biking. There are also some locations where the angle or number of intersecting streets create points of uncertainty or conflict for all road users.



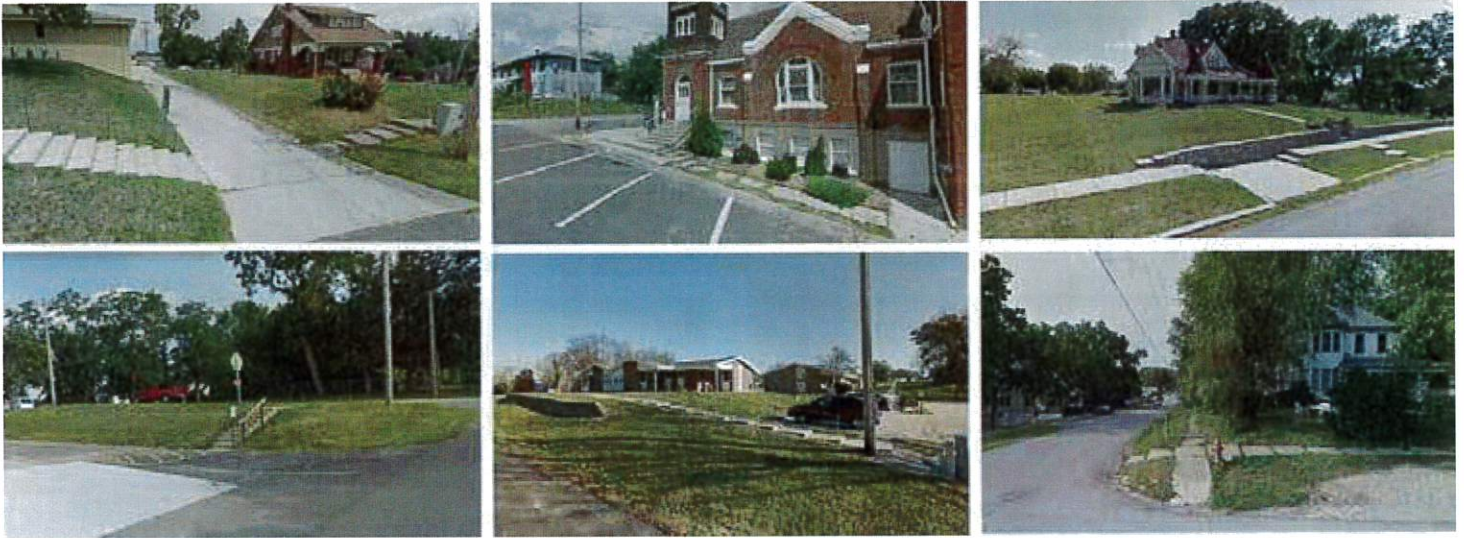
Challenge: Unmanaged driveways create uncertainty and points of conflict.

Many locations lack curbs and driveways. In these places, it is possible for drivers to turn on and off the roadway at any point. This condition makes the entire street frontage a zone of conflict between drivers and people walking or biking. It also limits the potential for dedicated pedestrian spaces like sidewalks.



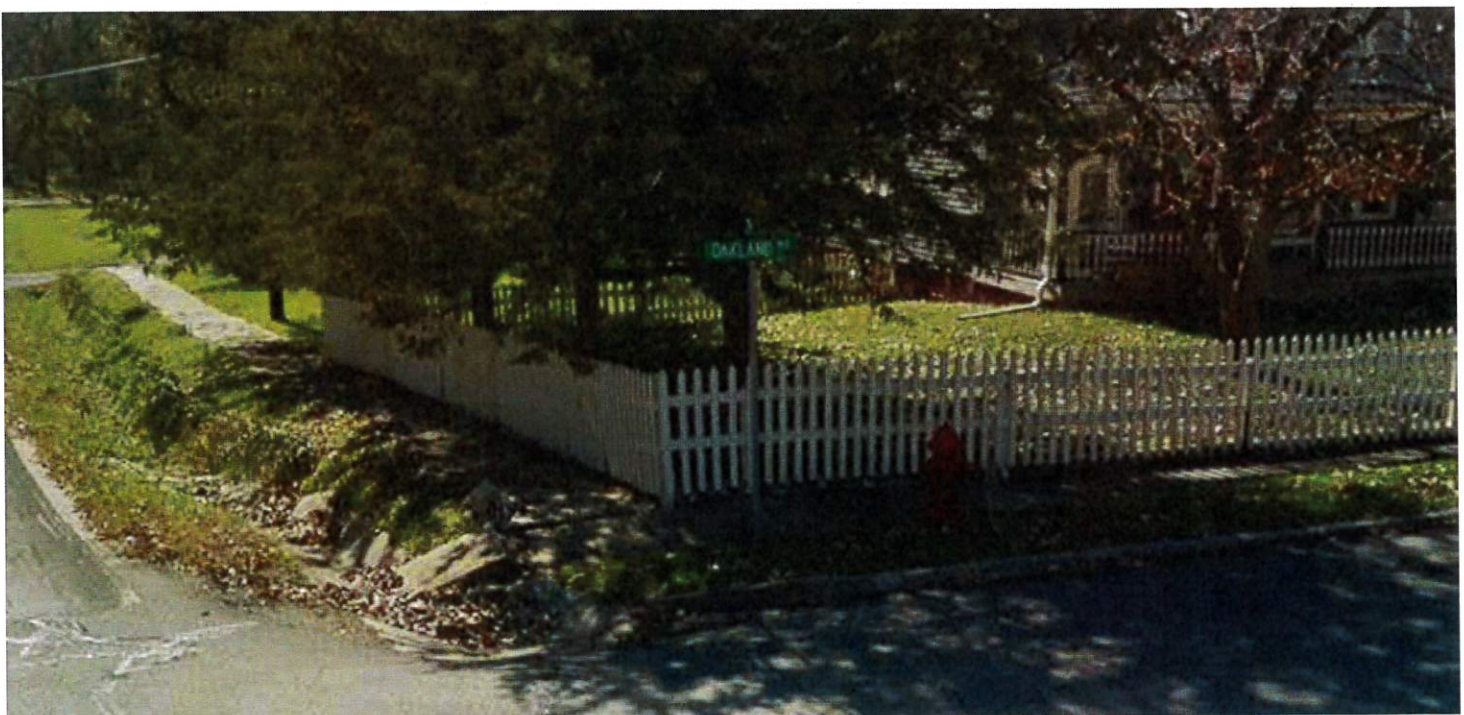
Challenge: Barriers make some sidewalks inaccessible for many users.

Barriers like stairs, curbs, and broken pavement limit the functionality of Bethany sidewalks, including some recently constructed sidewalks. These sidewalks are not accessible for people using a wheelchair, pushing strollers, and others with particular visibility or mobility challenges, and limit the connectivity of the sidewalk system as a whole.



Challenge: Drainage ditches complicate sidewalk access at intersections.

Many Bethany streets manage drainage with ditches parallel to the roadway. These ditches complicate the construction of sidewalks, which require special culverts and other infrastructure at intersections. Sidewalks alongside ditches must also be located further from the street, which can be challenging in locations with constrained right-of-way.



Destinations

The strategy for improving walking and biking infrastructure in Bethany focuses on connecting people to the City's major destinations with safe, comfortable, direct routes. Many existing streets in the City do not have sidewalks and resources are not available to construct sidewalks everywhere they are missing. By focusing infrastructure improvements to serve key destinations, Bethany can ensure that new trails and sidewalks serve the areas with the greatest latent demand for walking and biking trips, and that investments will have the greatest possible utility to residents of the community.

Data from the National Household Travel Survey tells us that recreation is the single most common purpose for walking trips. However, most walking trips are for specific tasks like shopping, personal services, or walking to work. By understanding where Bethany residents go for the daily activities of their lives, especially where those destinations are concentrated together within a short distance, we can understand where the greatest demand exists for sidewalks. In Bethany, the downtown area, Miller Street, and 25th Street are the primary shopping and service destinations. South Harrison High School and Memorial Park are key destinations in the northeast part of the city. Community facilities and multifamily housing throughout Bethany are also important destinations.



Destination: Downtown



Destination: Miller Street Retail Area

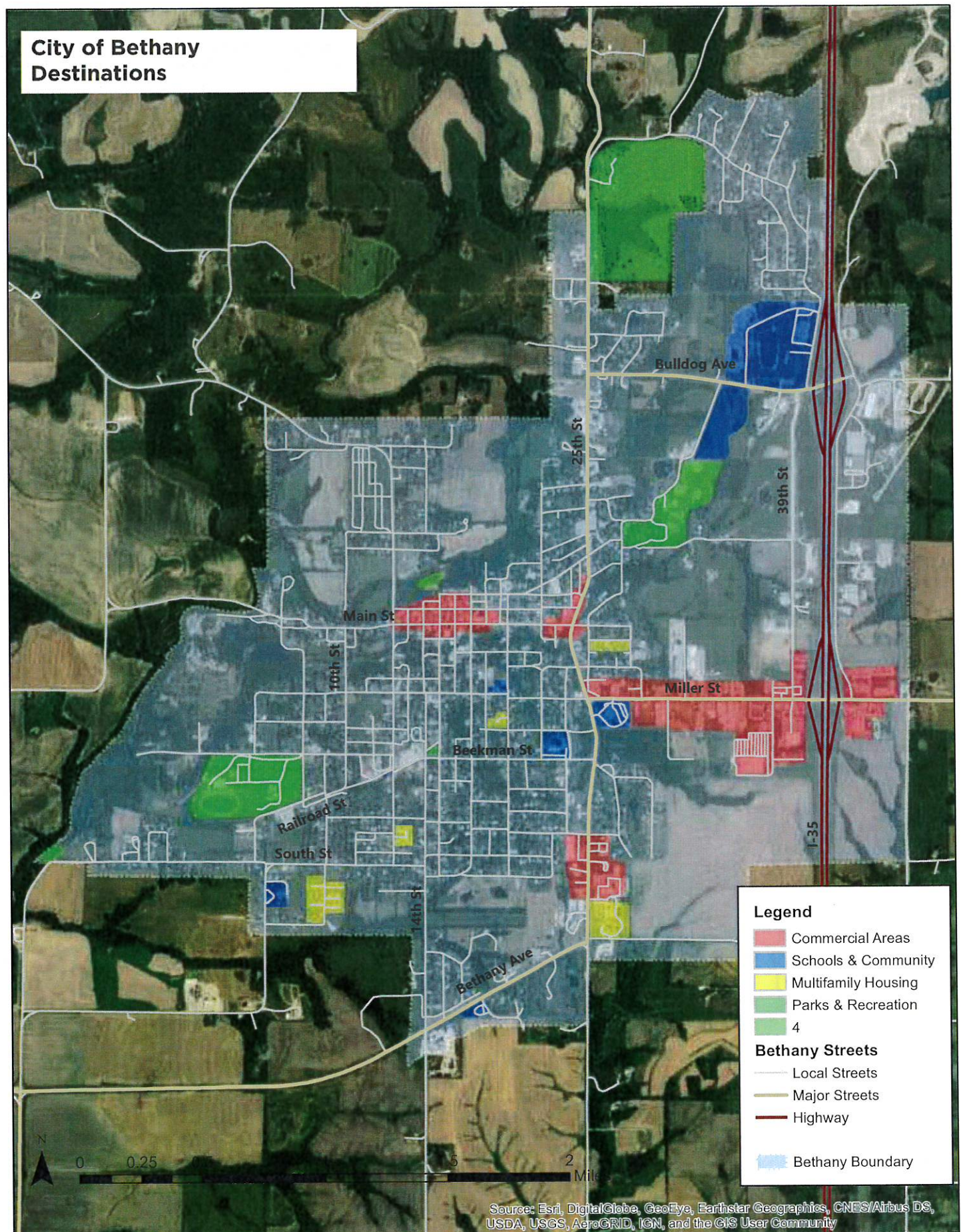


Destination: Memorial Park



Destination: Multifamily Housing

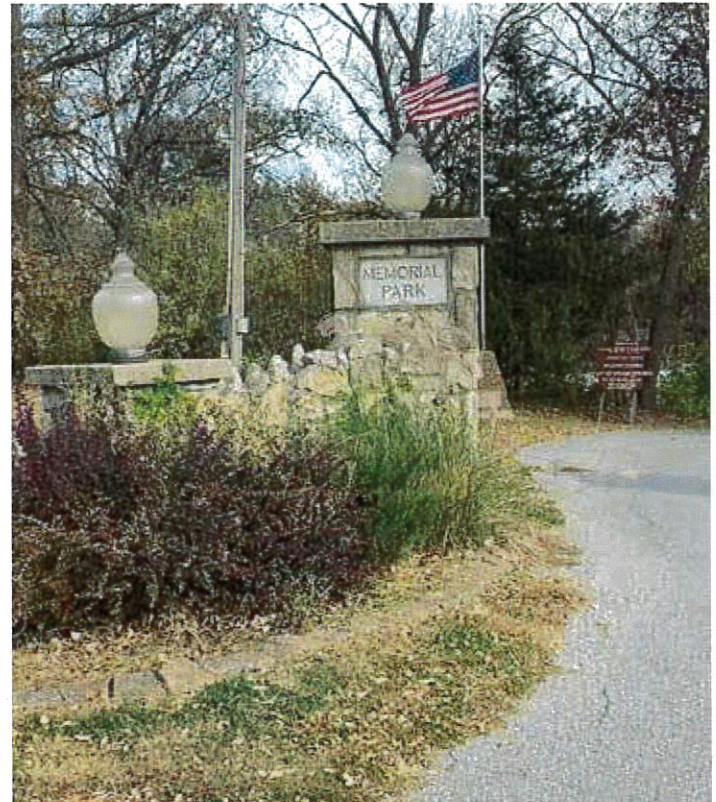
Destinations



Community Priorities

Community engagement is crucial to establish priorities for walking and biking infrastructure in Bethany. The project team used several methods to collect and organize feedback that informed recommendations in this report. Ongoing and expanded outreach to the entire community will be important as Bethany plans for and prioritizes walking and biking improvements to improve connectivity and enhance quality of life for residents.

Engagement for this process included several stakeholder input sessions to share information on community needs. The project team reviewed previous outreach including surveys conducted by Bethany's Land Advisory Committee. The project team also deployed an online mapping survey to ask people what routes they walk or bike today and what routes they would like to walk or bike if it was safe and comfortable. The survey also asked about popular destinations and locations where barriers made walking or biking feel unsafe or uncomfortable. Expanded outreach will strengthen the trends and findings identified.



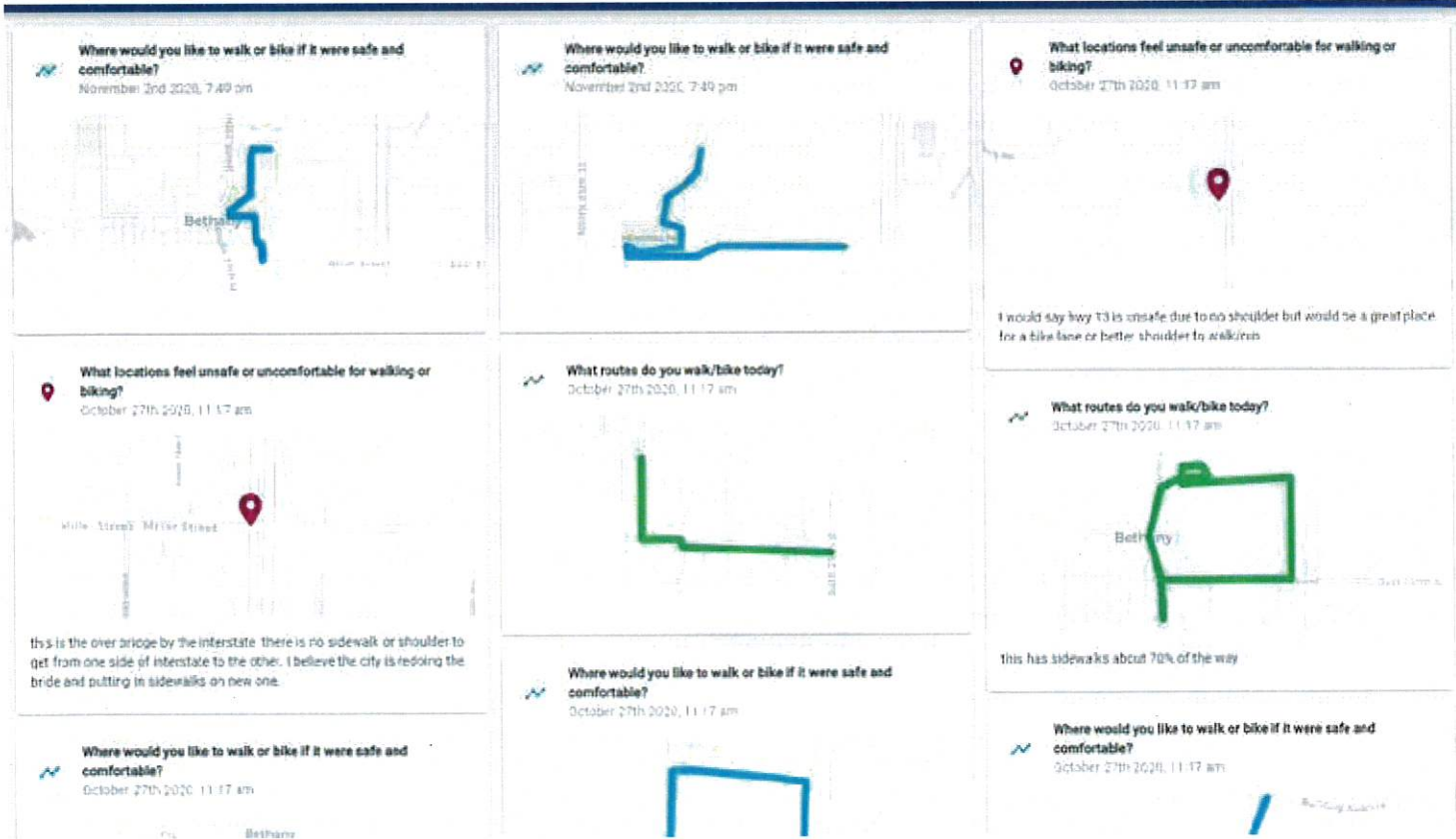
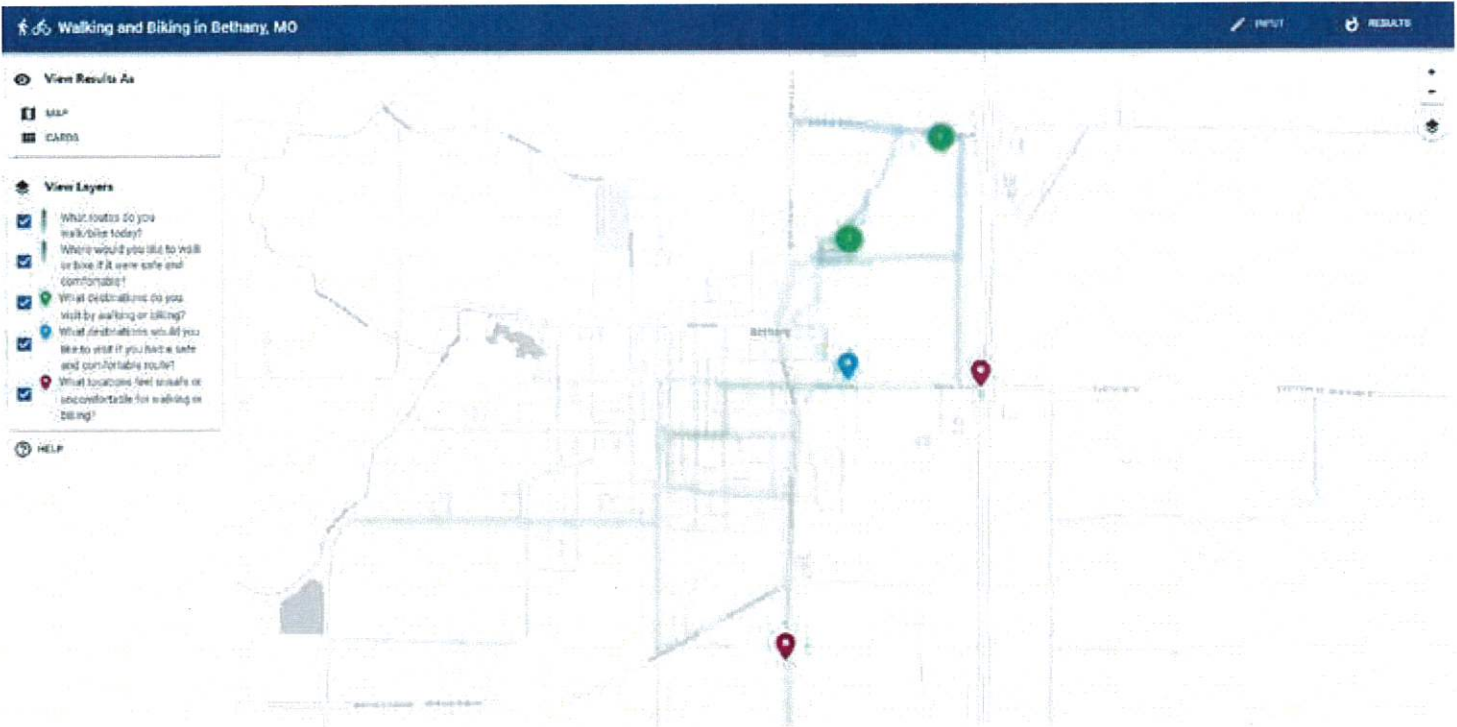
City of Bethany Land Advisory Committee Survey Analysis

Table 9

Prioritization ranking by ranked and non -- ranked data

Non – Ranked Data		Ranked Data
1	New Gym/Community Center	1
2	Paved Outdoor Walking/Biking Trail(s)	2
3	Gazebo Gathering Area	3
6	Volleyball/Badminton Courts	4
8	Horseshoe Pits	5
7	Dog Park	6
12	Pickle Ball Courts	7
9	Frisbee Golf Course	8
13	Gaga Ball	8
4	Soccer Field/Flag Football Field	10
10	Corn Hole Courts	11
11	T-Ball Field	12
5	Ballpark	13

Online Mapping Survey Feedback



Priority Network



The following principles guide the location and design of improvements identified in this strategy. Walking and biking connections in Bethany should be:



Safe and Comfortable for All Ages and Abilities

Routes and facility designs should ensure that people of all ages and abilities can safely travel, and support streets that are inviting, comfortable, and functional for all users.



Direct and Continuous

Routes should provide a direct and efficient path to destinations without gaps or barriers, while also being located so that all areas of the city have convenient access to high-quality facilities nearby.



Connecting Important Destinations

People walking or biking want to travel to the same destinations as motorists. Routes should be located and prioritized to connect people to the destinations they want to visit.



With a focus on leveraging existing infrastructure and connecting important destinations, a Priority Walking and Biking Network can be established. The Priority Network is an interconnected citywide network of pedestrian routes that connect to all major destinations and neighborhoods in the community. This network identifies the best routes for direct and comfortable connections to places that people want to go. Many of these routes have sidewalks today, but there are also many gaps where no sidewalks exist.

Based on an assessment of existing infrastructure and destinations, the Bethany's Priority Network focuses on the following outcomes:

- **Make Community Destinations More Accessible to Residents**
- **Link Downtown and Memorial Park**
- **Establish a Network that Serves All Parts of the Community**
- **Provide New Amenities that Add Value and Enhance Quality of Life**
- **Leverage Recent Improvements to Minimize Cost and Maximize Coverage**

Many of Bethany's streets were constructed without sidewalks, and many of Bethany's historic sidewalks are in significant disrepair. The cost and scale of providing sidewalks on every street where they are missing is beyond the capacity of Bethany's budget and the resources of the community.

The purpose of the Priority Network is to provide a roadmap for walking and biking infrastructure that is focused on the segments with the greatest potential to benefit residents and connect important community destinations.

Existing Network: The Priority Network for Bethany was crafted to take advantage wherever possible of existing sidewalks, and to supplement these sidewalks with additional segments that expand their usability and connectivity. Approximately 3.5 miles of the Priority Network are existing sidewalks.

CityWalk Trail: A multi-phase shared use path for walking and biking is proposed that builds upon the planning and momentum around Memorial Park, the high school, and new city owned property. This shared use path functions as part of the citywide sidewalk network connecting important destinations throughout the community. It also has the potential to function as a high quality amenity that provides recreation and economic opportunities for Bethany. Supportive wayfinding and branding of this "CityWalk" trail can enhance user experience, celebrate community landmarks and history, and raise the profile of this amenity within and without the City of Bethany. The proposed trail includes urban, residential, and natural segments, tying together a variety of unique experiences for users. The proposed CityWalk trail is 6.74 miles in total.

Additional Priority Sidewalks: Various new sidewalk segments are recommended to connect key gaps in the existing sidewalk network, repair or replace sidewalks on important corridors that are in disrepair, and ensure that there is safe and convenient pedestrian infrastructure that serves all neighborhoods and destinations in the community. 6.21 additional miles of sidewalk are proposed.

Priority Network: Project Segments

Priority Network Segment		Segment Type	Length (miles)	Design Width (feet)
1	CityWalk Trail Phase 1 - High School to Memorial Park	Shared Use Path	.94	10'-12'
2	CityWalk Trail Phase 2 - 25th St & Downtown Loop	Shared Use Path	2.12	10'-12'
3	CityWalk Trail Phase 3 - Rail ROW to Big Creek	Shared Use Path	1.79	10'-12'
4	CityWalk Trail Phase 4 - Future Creekside Loop	Shared Use Path	1.89	10'-12'
5	25th St - Miller St to Bethany Ave	Sidewalk	.99	6' min
6	14th & 15th St - Beekman St to South St	Sidewalk	.44	6' min
7	South St - W 20th Ave to 14th St	Sidewalk	.65	6' min
8	Vandivert St - 14th St to 24th St	Sidewalk	.60	6' min
9	Miller St - 10th St to 15th St	Sidewalk	.38	6' min
10	10th St - Miller St to Railroad St	Sidewalk	.38	6' min
11	9th St - Railroad St to South St	Sidewalk	.27	6' min
12	Miller St - 20th St to 25th St	Sidewalk	.32	6' min
13	Beekman St - 24th St to 25th St	Sidewalk	.12	6' min
14	Miller St - 39th St to E 220th Ave	Sidewalk	.46	6' min
15	Bulldog Ave - 25th St to 39th St	Sidewalk	.86	6' min
16	25th St - Bulldog Ave to Oakland Ave	Sidewalk	.74	6' min
Total			12.95	

City of Bethany Priority Walking and Biking Network

Priority Network

- CityWalk Phase 1
- CityWalk Phase 2
- CityWalk Phase 3
- CityWalk Phase 4
- Existing Priority Sidewalks
- Additional Priority Sidewalks

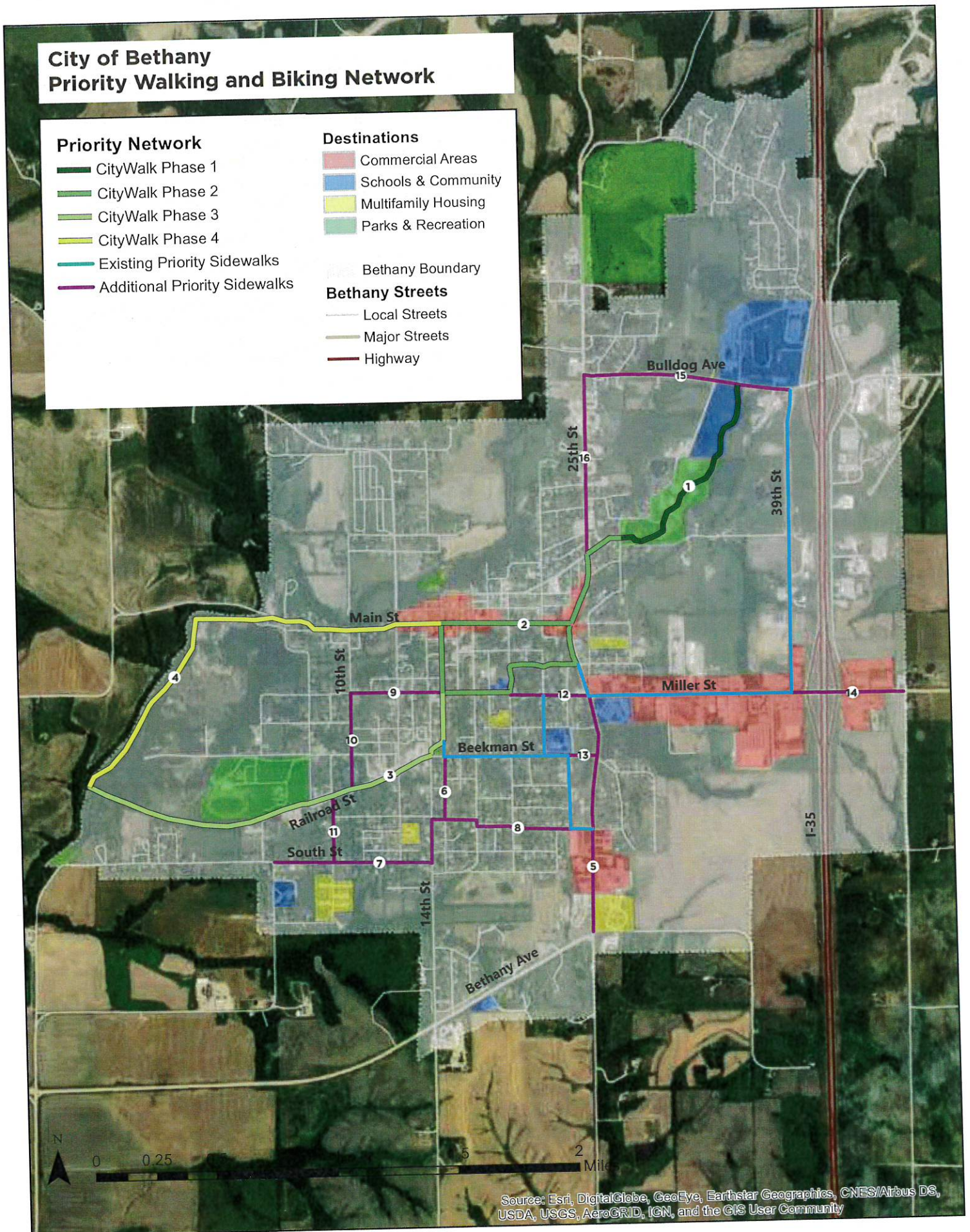
Destinations

- Commercial Areas
- Schools & Community
- Multifamily Housing
- Parks & Recreation

Bethany Boundary

Bethany Streets

- Local Streets
- Major Streets
- Highway



Bethany CityWalk Trail



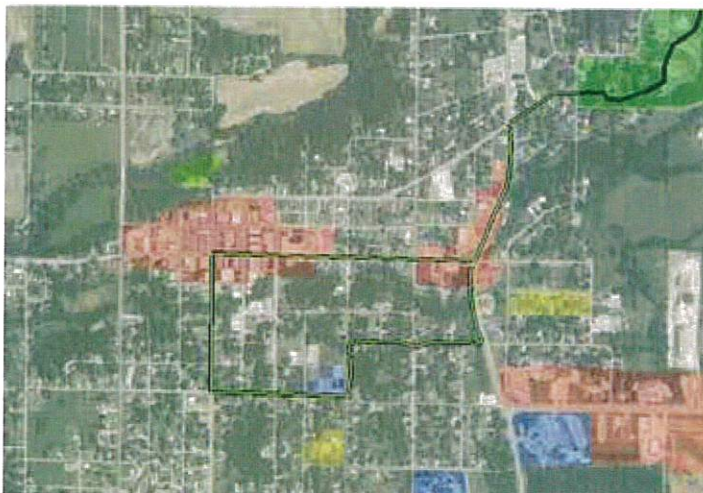
CityWalk Trail Phase 1:

- Connects South Harrison High School, Memorial Park, and new City-owned property
- Connects multiple recreation amenities
- Potential fitness loop and nature walk



CityWalk Trail Phase 3:

- Connects area, historic train depot, fairgrounds and Big Creek
- Follows old rail line within City right-of-way
- Opportunity for creekside picnic area
- Serves western part of city where fewer amenities exist today



CityWalk Trail Phase 2:

- Connects Downtown to Memorial Park
- Incorporates unique wooden railroad bridge on Newburn Street
- Connects City Gym
- Provides safe infrastructure on Hwy 69 / 25th St in commercial area where there are no sidewalks today
- On-street and rail right-of-way options
- Opportunity for Downtown creek access



CityWalk Trail Phase 4:

- Follows Big Creek from old rail line back to Downtown
- Creekside nature trail completes a large loop traversing the entire city
- Requires easement/access negotiation with private property owners, but single ownership for entire route simplifies process
- Unique recreational amenity adds value. Investment may incent private partnerships

Shared Use Path Benefits

The proposed CityWalk trail is envisioned as a ten to twelve foot wide shared use path. This width provides adequate space for people walking and biking in both directions to comfortably mingle. It also provides a comfortable width for families or groups walking together.

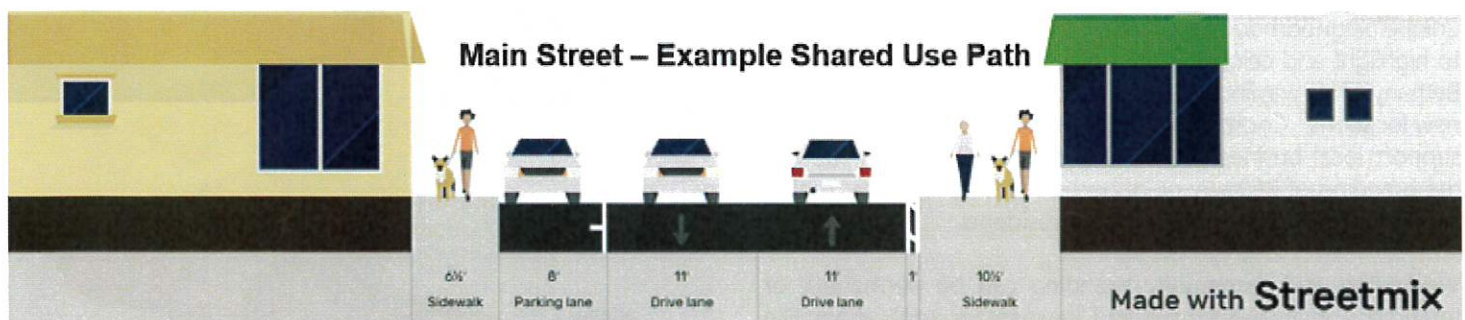
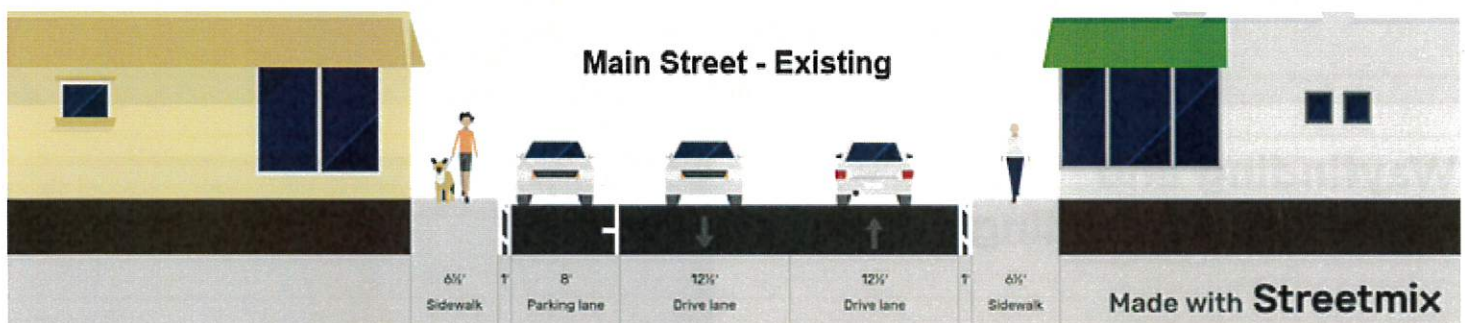
Most of Bethany's streets are too narrow to comfortably accommodate dedicated bicycle infrastructure within the existing pavement. A shared use path provides major safety and comfort benefits by separating walkers and bikers from auto traffic on narrow streets.

A shared use path is appropriate and feasible in a variety of settings and contexts including Downtown Bethany, neighborhood streets, and natural settings.

The shared use path provides both a recreational amenity and high quality access to destinations. In this way it helps to form the backbone of a citywide sidewalk network and fills in important gaps where sidewalks are missing today.



These example street sections illustrate how a shared use path could be incorporated onto downtown Bethany streets without disrupting existing travel lanes or on-street parking. In addition to providing high comfort walking and biking infrastructure, a shared use path in Downtown would also enhance the frontage of downtown businesses and calm traffic. Together these effects can support a more comfortable and desirable downtown environment for residents, customers, and visitors.

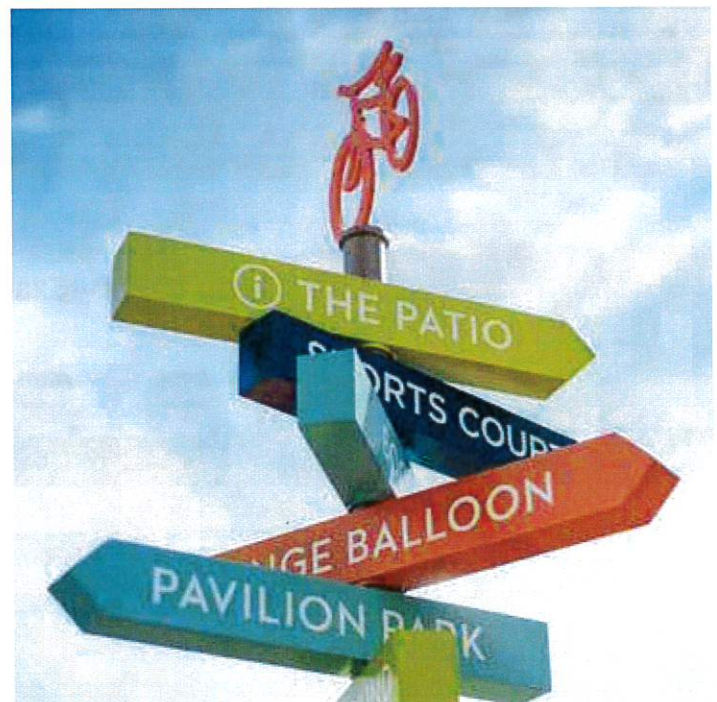




Wayfinding and Community Branding

A citywide trail can be about more than transportation. By linking various historic sites, community destinations, and unique neighborhoods, a CityWalk trail provides an opportunity to highlight and celebrate the unique history and character of Bethany. Fun wayfinding can encourage trail users to explore new locations. Coordinated marketing can position the trail to support local businesses. Trail signs or exhibits can support the branding of Bethany neighborhoods to reflect what makes them special and desirable for local residents.

Wayfinding and community branding can be permanent or temporary, including simple and inexpensive applications like the school spirit paw prints shown on Bethany's sidewalks in the image above.





Trails and Economic Development

Trails have a long-studied relationship with adjacent businesses and developments. A high-quality recreation amenity adds value to the surrounding community and brings new visitors and customers to destinations along the route. Likewise, interesting and accessible destinations give potential visitors reasons to use the trail and explore new places. Transportation and recreation investments can support economic activity along the route, including businesses that cater specifically to trail users. The image above shows an ice cream shop in a former rail depot that is frequented by walkers and bikers along the Monon trail in Indiana. Bethany's former rail depot has similar potential for reuse alongside a new CityWalk trail. The City of Bethany is also exploring relocation of the rail depot to Memorial Park in coordination with trail and other improvements to the area.

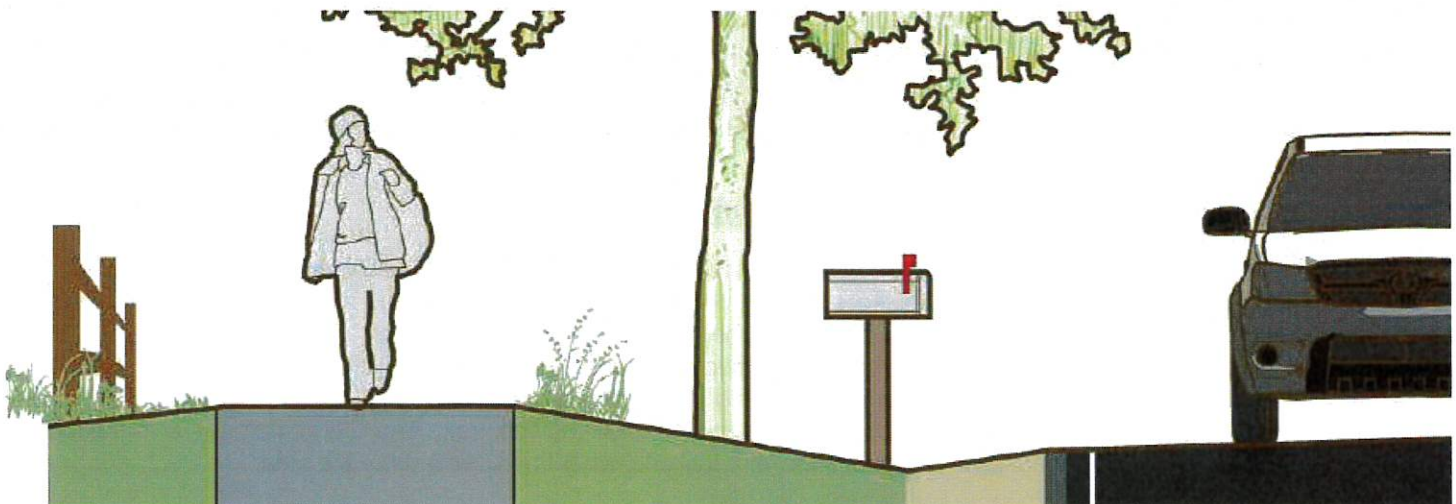
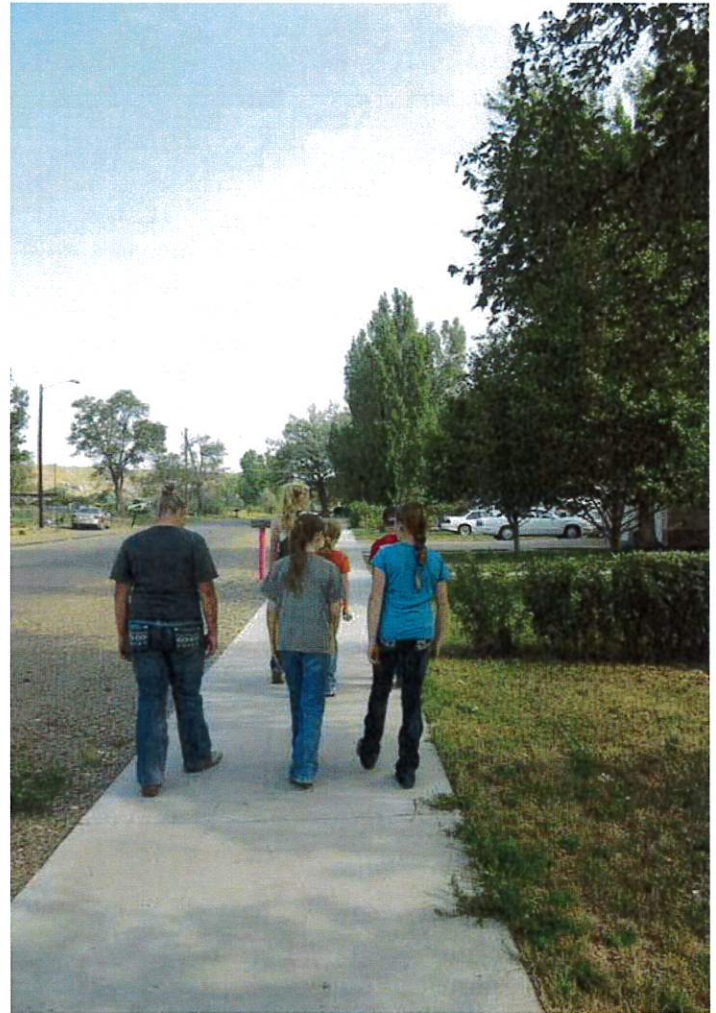
Design Options

Sidewalks

Sidewalks are the common standard for pedestrian infrastructure and provide a dedicated space for walking that is physically separated from traffic by a curb or buffer space. Physical separation from the roadway provides a space for pedestrians that offers the highest standards of safety, comfort, and accessibility to all ages and abilities.

Sidewalks are appropriate on all types of streets and are the preferred infrastructure for pedestrians in any environment that has moderate to high traffic speeds and volumes. Because they are located outside the edge of the existing roadway, sidewalks require a larger cross-section within the right-of-way. The construction of sidewalks can also be expensive, especially in locations without curbs, gutters, and stormwater infrastructure.

New sidewalks in Bethany should be constructed at least six feet wide. This allows two people to walk side by side. It also provides sufficient space for turning and maneuvering to meet accessibility guidelines. A six-foot sidewalk is wide enough to provide an accessible “through zone” around obstructions including utility poles, street furnishings, signs, lighting, and other obstructions. When constructed adjacent to roads with no curbs or gutters, it may be beneficial to locate sidewalks to the far side of the adjacent drainage ditch where conditions and available right-of-way permit. This configuration allows for sidewalk construction that does not interfere or require changes to existing drainage ditches, reducing the overall scope and cost of new sidewalk construction projects.



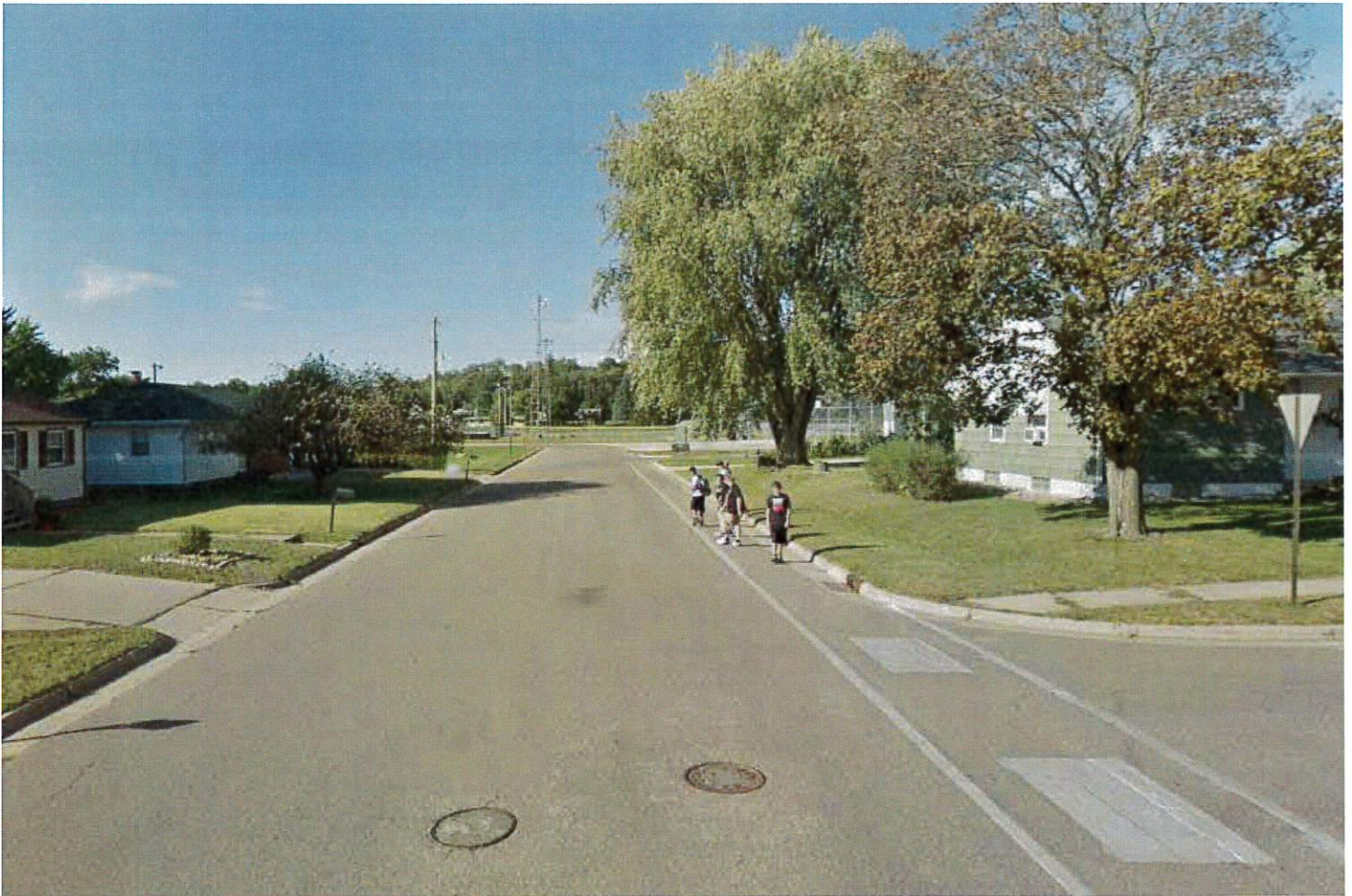
On streets without curbs, constructing sidewalks to the far side of drainage ditches can reduce costs associated with stormwater infrastructure, and also increases the buffer area between pedestrians and traffic. Image from FHWA Small Town and Rural Multimodal Network Guide.



Paved Shoulders

Many of Bethany's arterial streets have shoulder areas that could be paved to make them more functional and comfortable for pedestrians and cyclists. Because they provide dedicated space outside of motor vehicle travel lanes, paved shoulders can be an appropriate design on streets with moderate to high traffic volumes and speeds. Paved shoulders are typically less expensive and require less space than traditional sidewalks. As the volume and speed of traffic increases, the level of comfort on paved shoulders declines, as does the number of people willing to make walking trips in these conditions.

The width of paved shoulder areas should scale with traffic volumes ranging from four feet for low volume collector streets to eight feet for busy arterials. Rumble strips, contrasting pavement colors and materials can all help differentiate the shoulder areas from the roadway and reduce encroachments of motor vehicles into the paved shoulder area.



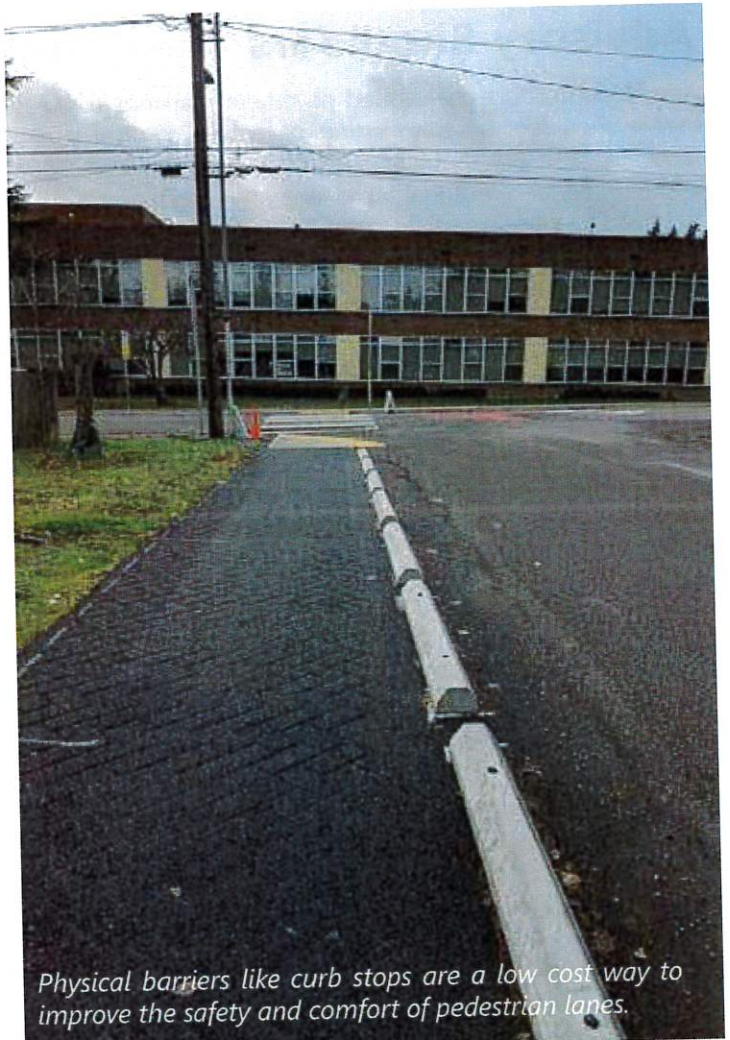
Pedestrian Lanes

In some locations, Bethany streets are wider than necessary to serve the level of traffic present on the street. In these locations, pedestrian lanes may be an appropriate solution to serve pedestrians. Pedestrian lanes provided dedicated space for pedestrians within the paved area of a street. They essentially function as sidewalks that are at the same grade as adjacent auto traffic lanes.

Where existing street sections permit, reallocating excess pavement is a much less expensive strategy to provide pedestrian connections than new sidewalk construction. Because they function like sidewalks, pedestrian lanes should follow standards for accessibility, especially in advance of intersections, because it is more difficult for people with vision impairment to recognize they are entering crosswalks or areas of conflict with automobiles.

At their most basic, pedestrian lanes may consist of a striped white line with periodic PED ONLY markings in the pedestrian area. The use of concrete curb stops or flexible delineator posts can increase separation and improve safety for pedestrian lanes. However, these physical separations must be coordinated with street maintenance strategies including street sweeping and snow removal.



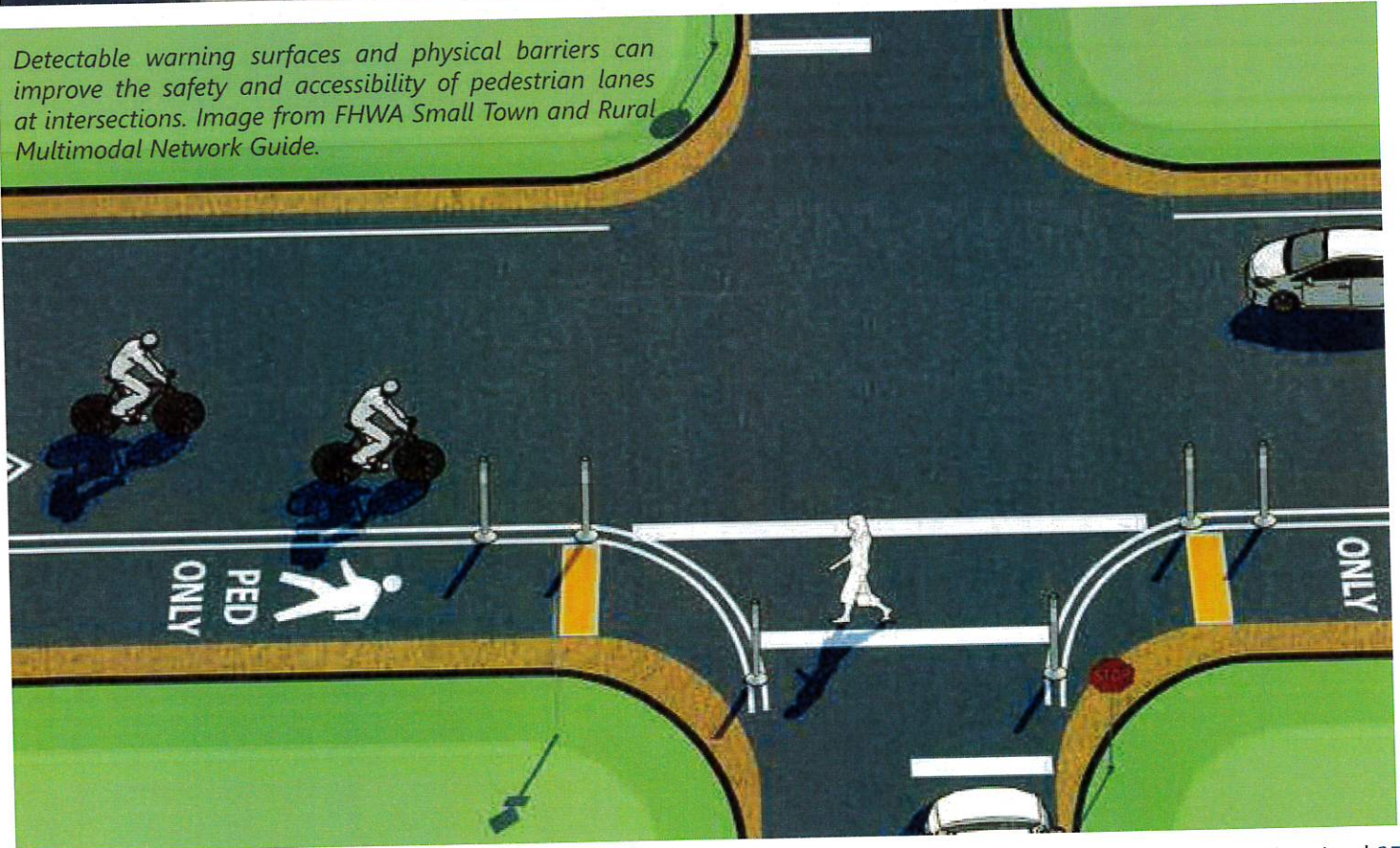


Physical barriers like curb stops are a low cost way to improve the safety and comfort of pedestrian lanes.



Pedestrian lanes can integrate with the traditional sidewalk network.

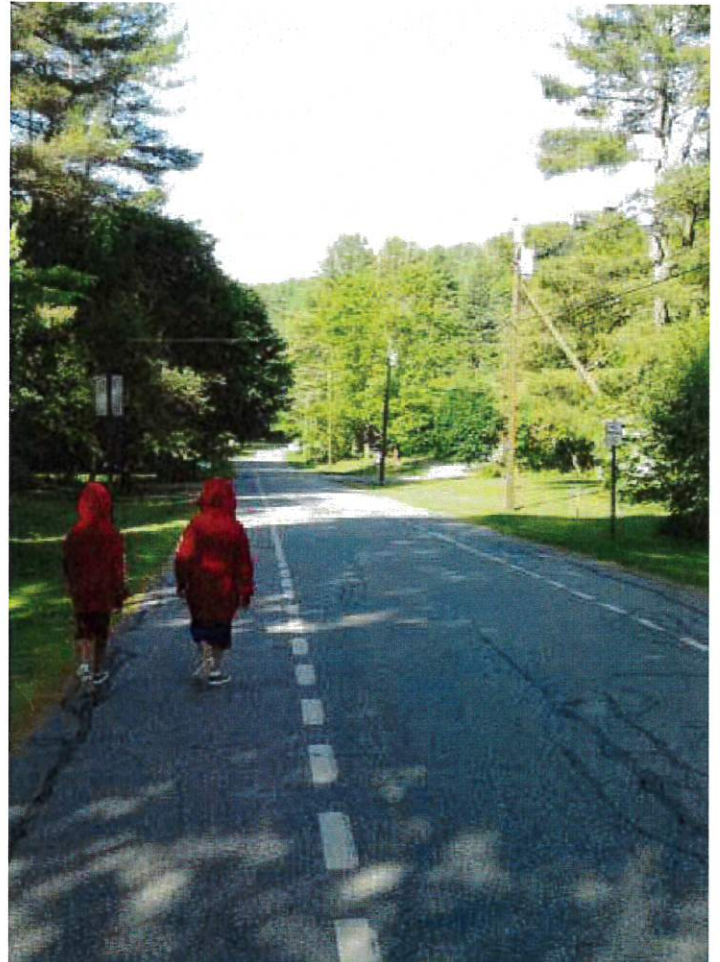
Detectable warning surfaces and physical barriers can improve the safety and accessibility of pedestrian lanes at intersections. Image from FHWA Small Town and Rural Multimodal Network Guide.

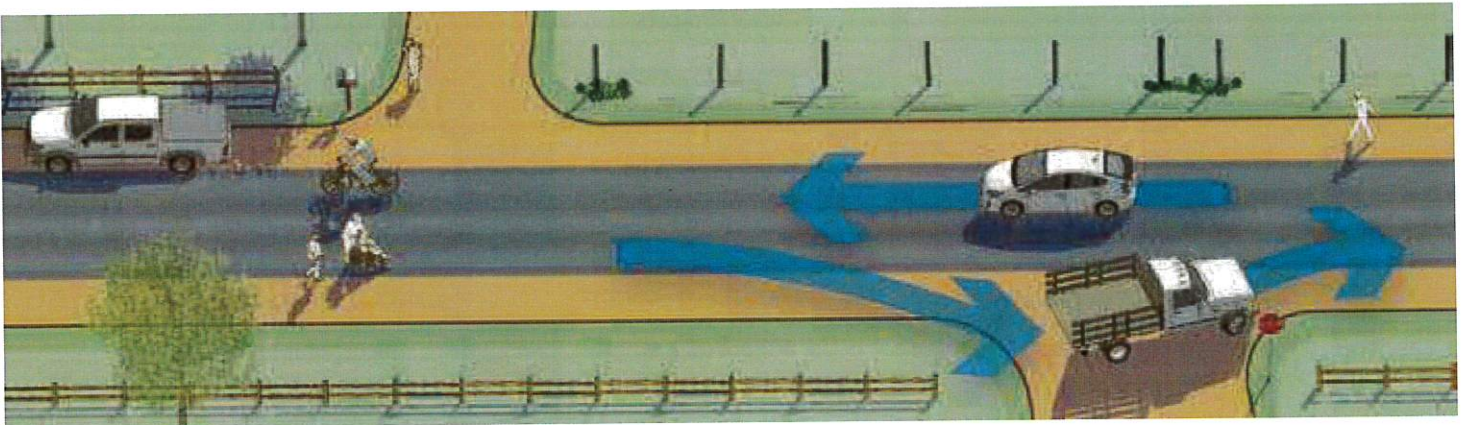


Advisory Shoulders

Advisory shoulders use dashed pavement markings to create usable shoulders on the existing pavement of local streets. Generally, advisory shoulders convert two narrow traffic lanes into a single, bi-directional travel lane and use the extra space to provide a place for pedestrians. Where two cars are passing in opposite directions, they encroach into the shoulder area only for the distance necessary to safely pass oncoming traffic.

Advisory shoulders are appropriate on streets with low to moderate traffic and moderate traffic speeds. They are most useful when streets are too narrow to provide two travel lanes and dedicated space for pedestrians. With wider street sections, other solutions like Pedestrian Lanes may be more appropriate because they provide greater comfort and separation from traffic.





On yield streets, drivers may use driveways or shoulder areas to pass. The narrow travel lane increases safety by ensuring slower speeds. Image from FHWA Small Town and Rural Multimodal Network Guide.

Yield Streets

Yield streets provide a low speed travel area without lane markings that is shared by motor vehicles, pedestrians, and bicyclists. Yield roadways are appropriate only in locations with very low traffic volumes and traffic speeds. In these conditions, they may effectively serve pedestrian needs for minimal cost.

A narrow, constrained roadway is an important design element to ensure vehicle speeds remain slow and that yield streets function effectively. Typically, a yield street will have a single, bi-directional travel lane for automobiles where infrequent

passing cars use shoulder areas or driveways to pass. Streets with paved areas wide enough for two lanes of traffic generally encourage traffic speeds that are too high for a safe and comfortable mixing of cars and pedestrians. FHWA's Small Towns and Multimodal Networks guide recommends yield streets between twelve and twenty feet wide.

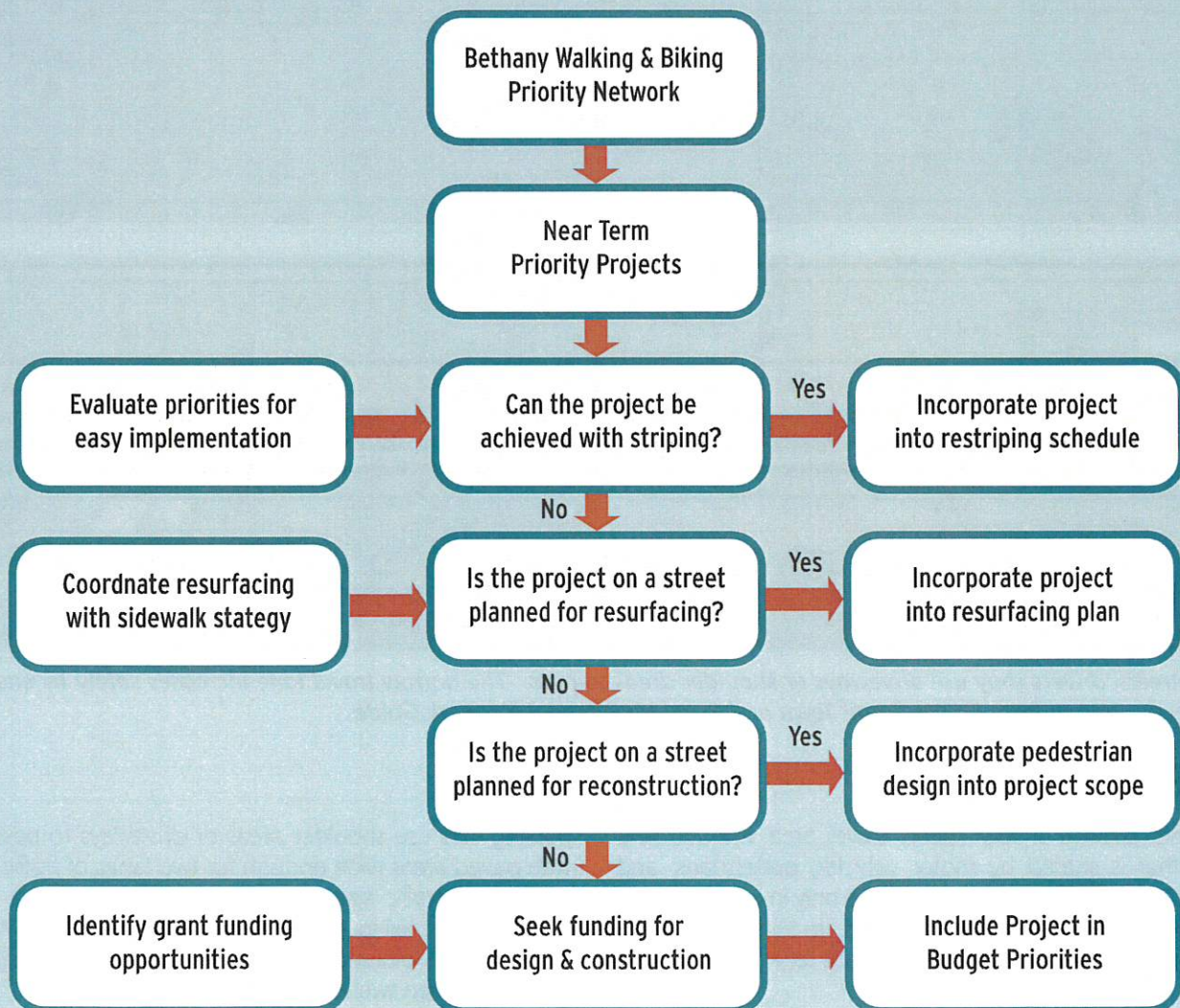
Signage and pavement markings may enhance yield streets, providing wayfinding, branding, and encouraging additional awareness for drivers that there are other users in the street.

Implementation Resources

Coordination with Existing Projects

Sometimes implementation of Bethany walking and biking projects will depend on projects of opportunity. Over the life of the plan, routes identified on the Priority Network will see routine restriping, resurfacing, and in some cases reconstruction. These are opportunities to coordinate pedestrian and bicycle improvements, save money, and support community goals more efficiently. There are also numerous grant opportunities that can support implementation of the plan. Where projects are eligible and competitive for these opportunities, implementation of Bethany trails and sidewalks can be accelerated.

This project coordination chart outlines a decision process to assist with the implementation of the Bethany's walking and biking infrastructure. By aligning projects in the Priority Network with existing funding streams for maintenance and other infrastructure, the overall cost and timeline of implementation can be reduced.







Project Delivery Strategies

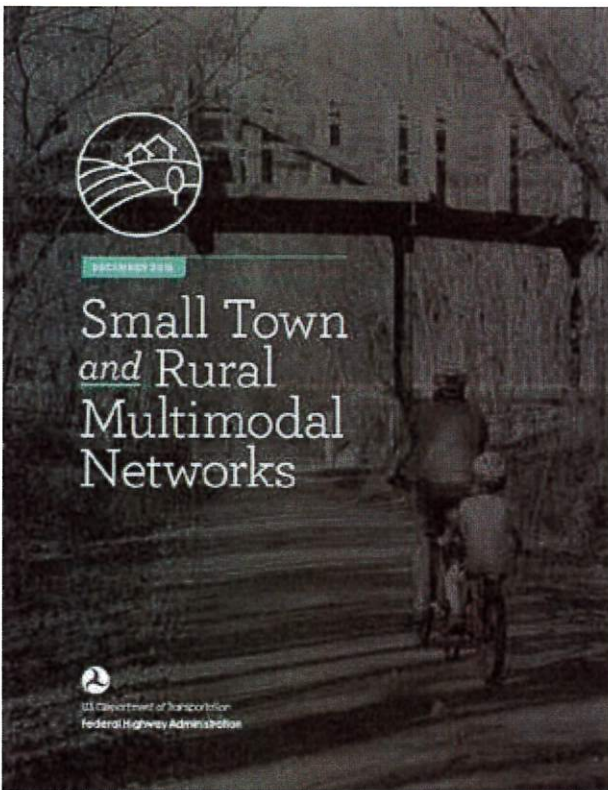
Unlike traditional infrastructure projects that can be slow, expensive, and permanent to build, many pedestrian infrastructure projects can be implemented quickly and adjusted over time. Cities that are successfully implementing pedestrian and bicycle infrastructure are increasingly pursuing new models of project delivery that are faster, more flexible, and ultimately more efficient in achieving community goals.

As Bethany evaluates project priorities and phasing, there are opportunities to pilot and test configurations before permanent improvements are made. Projects can also be implemented iteratively, beginning with basic features like paint and signage and incorporating more permanent infrastructure over time. This approach can deliver benefits to safety and ridership quickly without requiring a large upfront investment. This approach also builds confidence in more permanent improvements because incremental improvements can demonstrate how they will function.

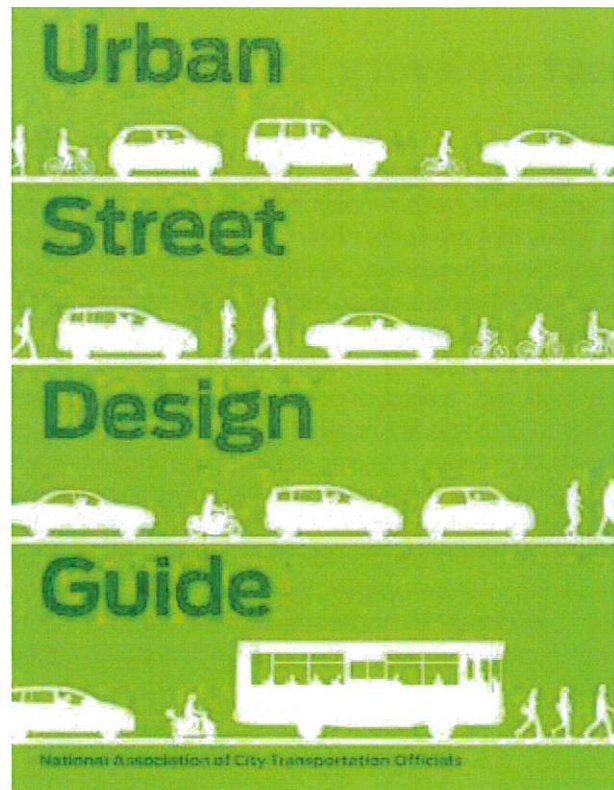


			
Demonstration	Pilot	Interim Design	Permanent Installation

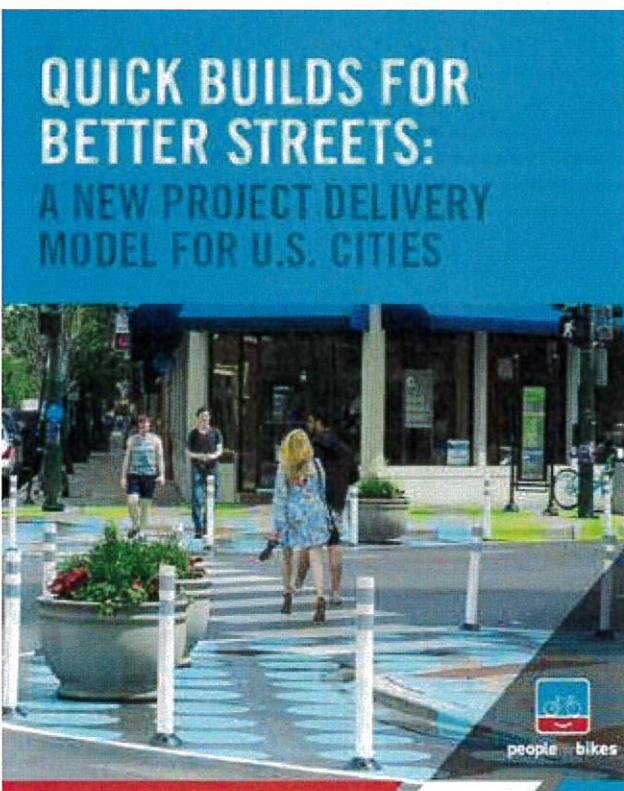
Additional Resources



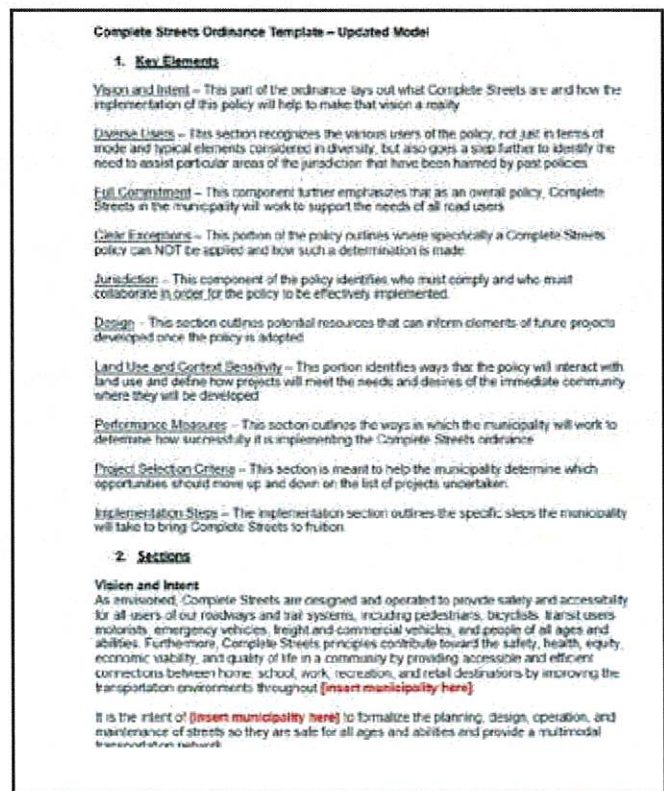
FHWA - Small Town and Rural Multimodal Networks Guide
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/



NACTO Urban Street Design Guide
<https://nacto.org/publication/urban-street-design-guide/>



Quick Builds for Better Streets: A New Project Delivery Model for U.S. Cities
peopleforbikes.org



Model Complete Streets Ordinance
<https://bikewalkcc.org/planning/policycodes/>



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*Our mission is to redefine our streets as places
for people to build a culture of active living.*



Missourians for Responsible Transportation

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