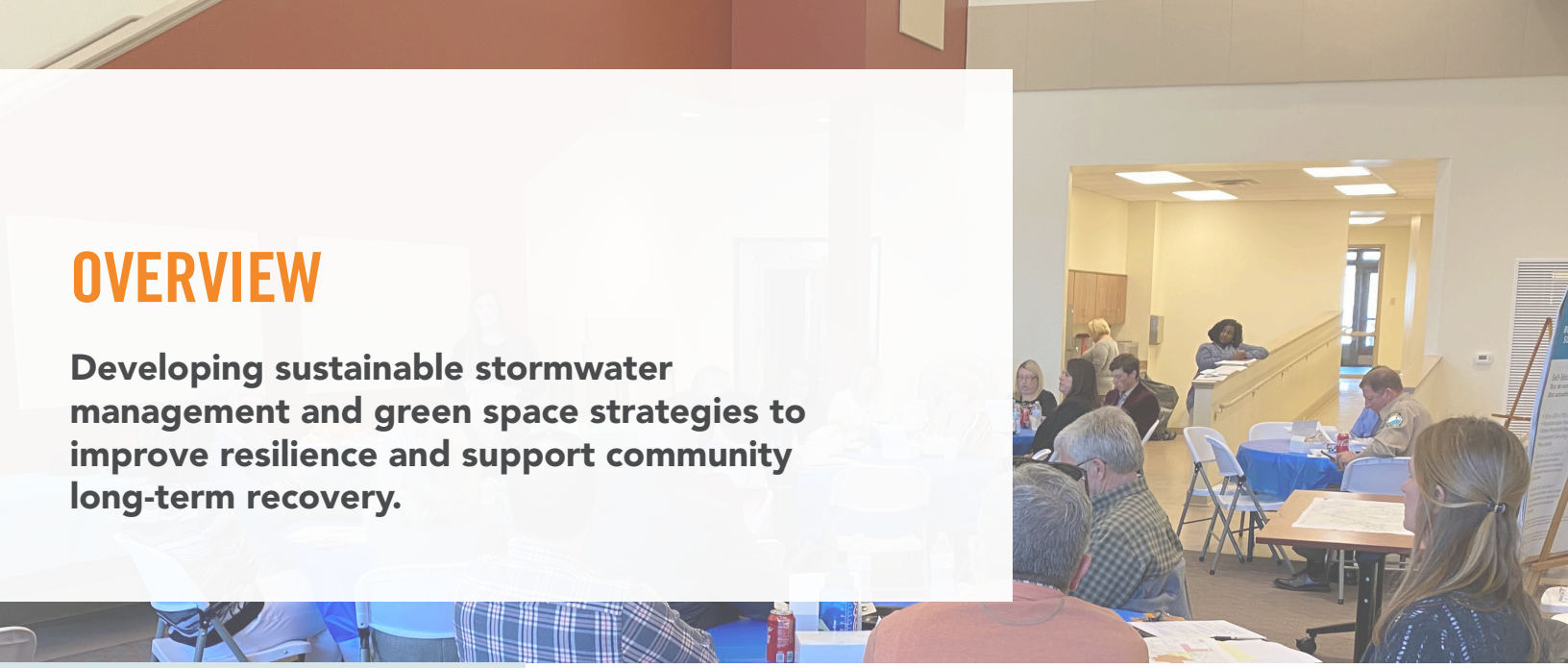
CITY OF MARIANNA

RECOVERY AND RESILIENCY PARTNERSHIP PROJECT

EPA United States Environmental Protection Agency

FEMA

SEPTEMBER 2020



OVERVIEW

Developing sustainable stormwater management and green space strategies to improve resilience and support community long-term recovery.

COMMUNITY INPUT

The project team worked closely with city staff and the community to respond to specific community goals and challenges with a set of sustainable design options that foster a strong sense of place. The project team provided the following range of virtual and socially-distanced options for community input in context of Covid-19 safety concerns.

- City Council meeting on June 4, 2020, with a call-in option.
- Posters on display at City Hall and outdoor community events accompanied by a paper survey.
- Virtual open house via the project web page with video presentations and online survey.
- Stakeholder meetings via conference call.

Overall the participants expressed support and enthusiasm for the proposed designs. The concepts on the following pages reflect the community input provided.

INTRODUCTION

The city of Marianna (the City) is challenged with the daunting task of recovering from the devastating impacts of Hurricane Michael, a Category 5 hurricane that made landfall in October 2018. To support physical and economic recovery in Marianna, the Recovery and Resiliency Partnership Project (R2P2) provided technical assistance by developing strategies and design concepts that bolster resiliency to stormwater impacts, improve quality of life and support sustainable redevelopment. The design process was guided by the following technical assistance goals:

- Integrate long-term sustainability and resilience into rebuilding.
- Support a vibrant and prosperous downtown with improved streetscapes.
- Create an attractive and welcoming West End gateway.
- Reduce stormwater runoff to protect Kelson Avenue and the Chipola River.
- Provide connections to businesses and community amenities.
- Improve pedestrian and bicycle safety at key connections.
- Create connections between downtown businesses and regional recreation opportunities.

ABOUT

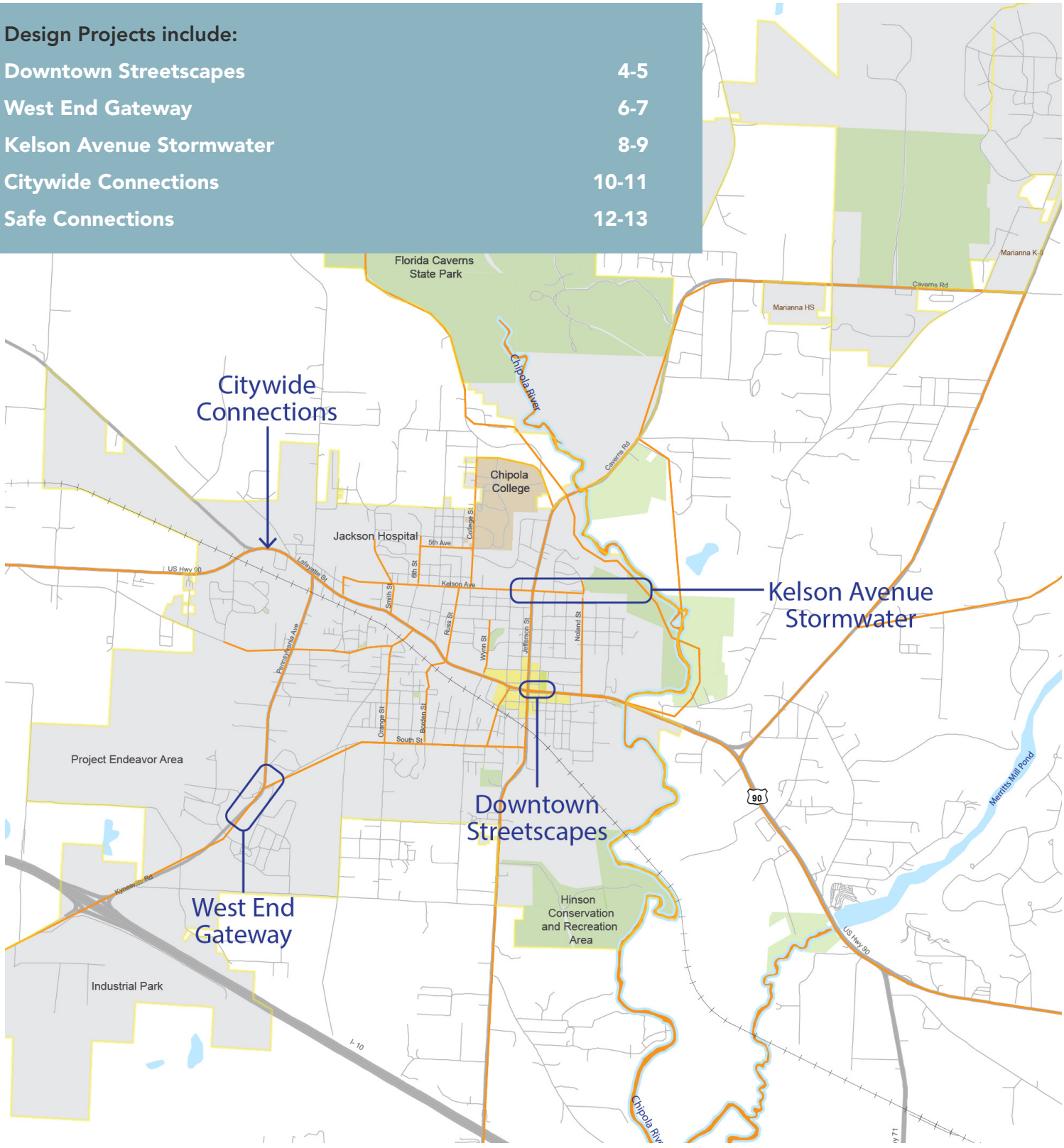
The Recovery and Resiliency Partnership Project (R2P2) is a technical assistance initiative to support the recovery of Florida Panhandle cities provided by the U.S. Federal Emergency Management Agency (FEMA) Integrated Recovery Coordination field operations and the U.S. Environmental Protection Agency (EPA), Region 4.

FOCUS

For the technical assistance, the City identified four areas where innovative conceptual designs can support revitalization, storm resilience and long-term economic recovery. The technical assistance team worked with the City to develop designs for each of the project sites, as well as a citywide connectivity plan that proposes safe pedestrian and bicycle options. Each design is informed by a set of sustainability principles and strategies described on pages 2-3.

Design Projects include:

Downtown Streetscapes	**4-5**
West End Gateway	**6-7**
Kelson Avenue Stormwater	**8-9**
Citywide Connections	**10-11**
Safe Connections	**12-13**



SUSTAINABILITY & RESILIENCE

Integrate long-term sustainability and resilience into rebuilding.

Image used with permission of Rundell Ernstberger Associates, Inc.

PRINCIPLES

The design options in this report address the City's specific goals and challenges by integrating the principles of resilience, alternative transportation, health and wellness, and vibrant public spaces into stormwater management. This approach increases resilience of the stormwater management while improving public spaces and opportunities to bike and walk.

COMMUNITY RESILIENCE

Design tools and strategies to support economic recovery and build resilience for future storm events are highlighted within each design concept. Designs include strategies to increase economic resilience by creating new greenways and green spaces that attract visitors and boost commercial opportunities and local employment. Sustainability features also increase resilience of the built environment during storm events by capturing stormwater and reducing flooding.

HEALTH & WELLNESS

Increasing opportunities for health and wellness can strengthen a community's resilience by increasing wellbeing and community ties through exercise and social interactions. In addition, recreation amenities can bolster economic recovery as recreational tourism grows in popularity. Providing opportunities to connect with the natural environment is linked to improved physical, social and mental health.

ALTERNATIVE TRANSPORTATION

Improving infrastructure for safe travel by foot and bicycle can help reduce vehicular traffic. Improvements to paddle sport access points can support a recreational economy that links biking, hiking and waterways that encourage healthier lifestyles.

VIBRANT PUBLIC SPACES

Creating attractive and welcoming public spaces can bring people into downtown areas, increase resident and visitor spending, boost local employment and drive local investment. Placemaking strategies such as signage, public art, and plantings help create vibrant spaces that build local pride and attract visitors to the area.

STRATEGIES

The design options on the following pages address specific challenges by integrating best practices to address stormwater while providing amenities to improve public spaces and biking and walking safety.

Each design option integrates one or more of the tools described on this page to help manage the volume, flow and/or treatment of stormwater and support natural ecosystems.

The icons are included on the concept design plans to indicate the tools used.

WETLAND RETENTION

Enhancing existing wetlands can provide stormwater detention, improved water quality, increased habitat and new recreational amenities.

WATERWAY RESTORATION

Vegetated buffers on either side of a waterway enhance watershed health by moderating water runoff quantities and improving water quality. The vegetation can intercept, absorb and infiltrate surface runoff to help moderate the peak runoff rates during rain events, which reduces erosion and sedimentation of the channel, keeps water cool and supports aquatic habitat.

POLLINATOR GARDENS

Many types of plants, including fruit and vegetable crops, depend on animals (such as butterflies, bees and birds) for pollination. Using pollinator-friendly plants can also help support these important species.

PERVIOUS PAVEMENT

Pervious concrete and asphalt surfaces have proven to be effective and viable alternatives to traditional paving systems. The surface allows stormwater runoff volumes to decrease, infiltration rates to increase, and pollutant loads to be reduced before reaching local water bodies.

NATIVE PLANTINGS

Incorporating vegetation into the landscape is a stormwater management technique that mimics natural drainage. Vegetated areas intercept and infiltrate rainfall to decrease stormwater volumes and can also remove pollutants.

WATER REUSE

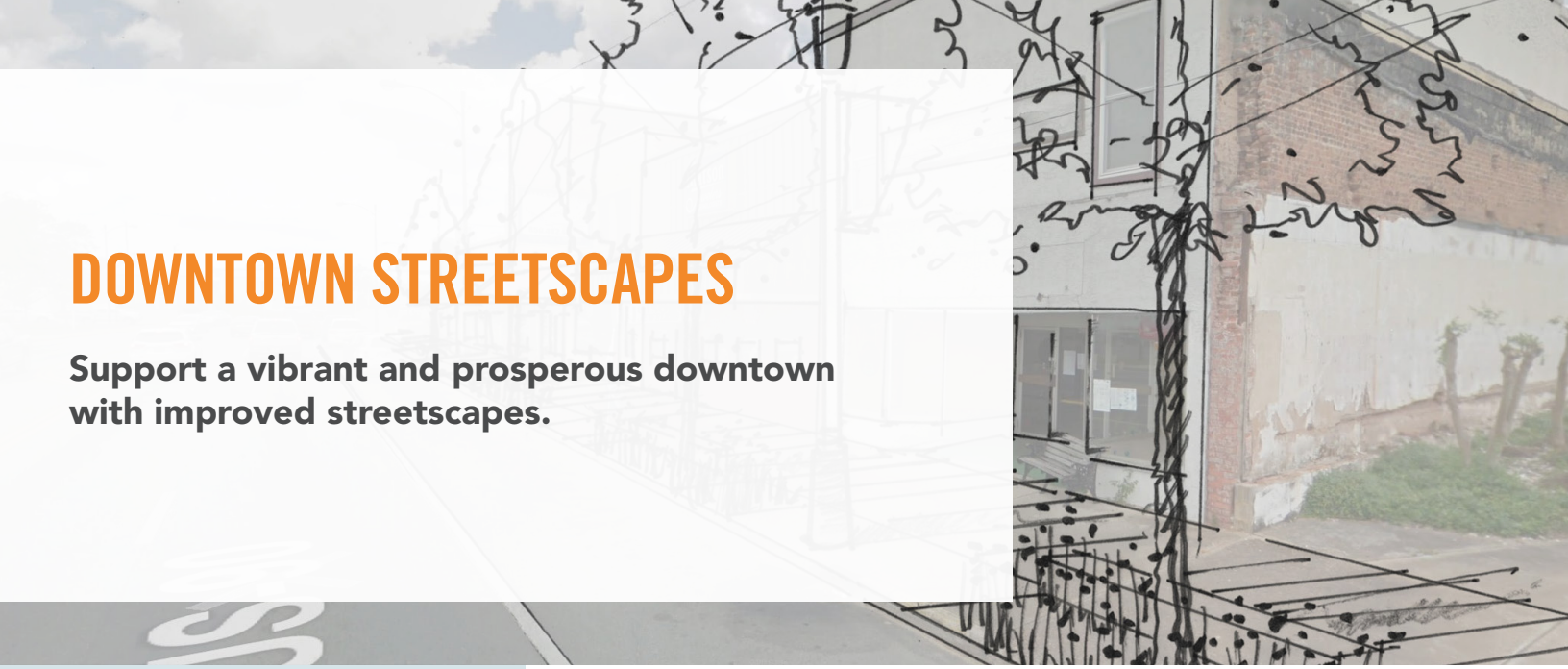
Water reuse reclaims water from a variety of sources then treats and reuses it for beneficial purposes such as irrigation, groundwater replenishment and industrial processes. Water reuse can provide alternatives to existing water supplies and be used to enhance water security, sustainability and resilience.

PLANTED SWALES

Vegetated swales, sometimes referred to as bioswales, are broad, shallow channels designed to convey and infiltrate stormwater runoff. Swales reduce stormwater volume and improve water quality through infiltration and vegetative filtering. Swales can be planted with grasses, perennials, shrubs and trees to increase aesthetic and habitat value.

RAINWATER STORAGE

Capture systems collect and store stormwater for specific purposes, such as irrigation, and often can hold water for a significant period of time.



DOWNTOWN STREETSCAPES

Support a vibrant and prosperous downtown with improved streetscapes.

EXISTING CONDITIONS

Cars and trucks move through downtown on Lafayette Street/ Highway 90 at high speeds, creating disruptive noise and causing concern for pedestrians crossing the street or people accessing parked vehicles from the street side.

Redevelopment is planned for the northern blocks at Market Street and Green Street. A new government complex is planned for the east side of Green Street, and Regions Bank is rebuilding the bank on the west side of Green Street.

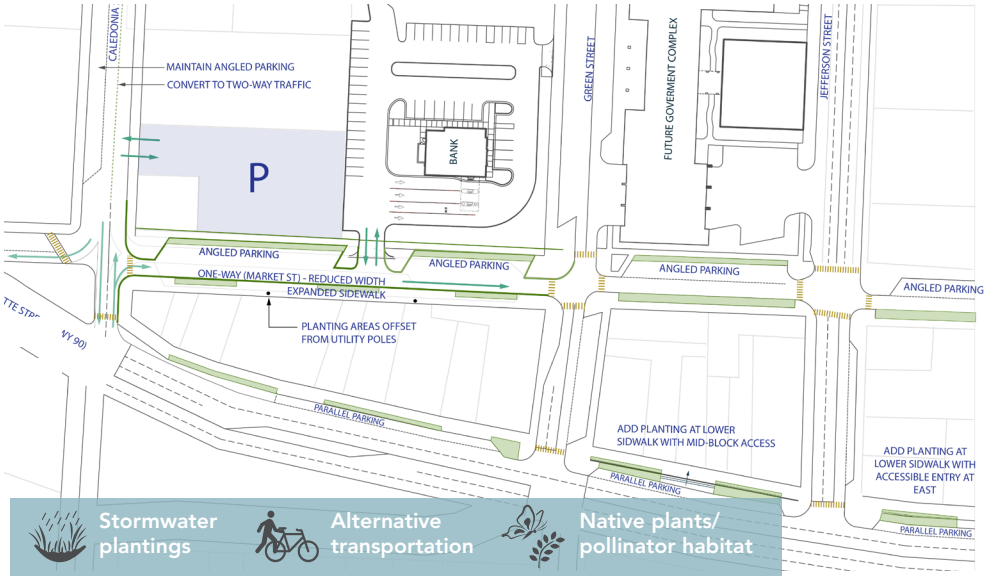
DESIGN CONCEPTS

Lafayette Street

Expanded planting areas, lighting and banners can enhance the pedestrian experience along this commercial corridor. Reverting Caledonia Street to handle two-way traffic and transitioning Market Street for one-way eastbound traffic can address pedestrian safety concerns. The plan recommends using native plants that are low maintenance.

Market Street

Creating a designated pedestrian area on side streets away from the noise of truck traffic can provide safe, convenient access to businesses and offer a second storefront. Angled parking along the north side of the street can create consistency along Market Street without reducing parking.



A complete street approach can increase aesthetic appeal and improve pedestrian safety while integrating stormwater management and slowing traffic in downtown.

LAFAYETTE STREET

Single Level Conditions

Along Lafayette Street between Caledonia and Green Streets, a wide pedestrian area can be enhanced with plantings, seating, lighting and safe crosswalks.

Illustrative view of Lafayette Street

Split Level Conditions

Along Lafayette Street east of Green Street, a lower level sidewalk offers access from on-street parking, while an upper level sidewalk provides a safe, accessible pedestrian path from Green Street. Plantings extend along the business entries, and stormwater infiltration planters along the street can capture runoff and pollutants from vehicles.

Illustrative view of Lafayette Street

MARKET STREET

Market Street between Caledonia and Madison Streets could be reconfigured with angled parking on the north side of a one-way drive lane. An expanded sidewalk would allow businesses to better utilize their rear entrances and create a larger pedestrian area that can also accommodate seating.

Illustrative view of Market Street

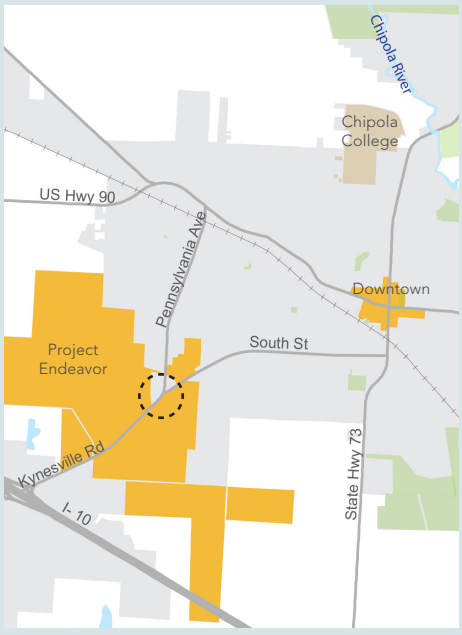
WEST END GATEWAY

Create an attractive and welcoming West End gateway.

EXISTING CONDITIONS

Penn Avenue (Route 276) is a key entry into Marianna. The corridor extends along the Project Endeavor property, which is planned as a mixed-use development to include offices, a museum, a school for students with autism, an industrial park and a mixed-density residential area.

Mixed uses and vacant property along the corridor, and the lack of pedestrian or bicycle infrastructure, make the entry roadway feel disconnected. The wide "Y" intersection of Penn Avenue and South Street presents safety issues for vehicles and pedestrians.



DESIGN CONCEPTS

The West End Gateway design concepts focus on intersection improvements, a multi-use path, and visible features such as plants and signage to identify the entrance to Marianna and improve the views into the Endeavor property as it transitions during redevelopment. Close coordination between the City, Jackson County and FDOT can support the community's goals for safety improvements, and align implementation of the multi-use trail with Project Endeavor redevelopment.

Intersection of Penn Avenue and South Street

Design features such as plantings and signage that highlight the area's valuable redevelopment potential can reposition this corridor as a welcoming entry into the city. Narrowed lanes and a traffic island can slow traffic and make the intersection feel more cohesive.

Multi-use Path

A wide, 12-foot paved path offers safe passage for pedestrians and bicyclists along the east side of the corridor. Vegetated swales along the path can capture stormwater and serve as a safety buffer between the path and roadway.

The path can link to pedestrian and bicycle improvements proposed for Penn Avenue and South Street, which link to key destinations in Marianna. The American Planning Association (APA) developed a Pennsylvania Avenue Corridor/West End Plan in 2018 to improve pedestrian and bicycle infrastructure connecting the West End to Lafayette Street/Highway 90. At South Street, the multi-use path can link to proposed continuous sidewalks and designated bicycle lanes that will provide a safe connection to downtown.

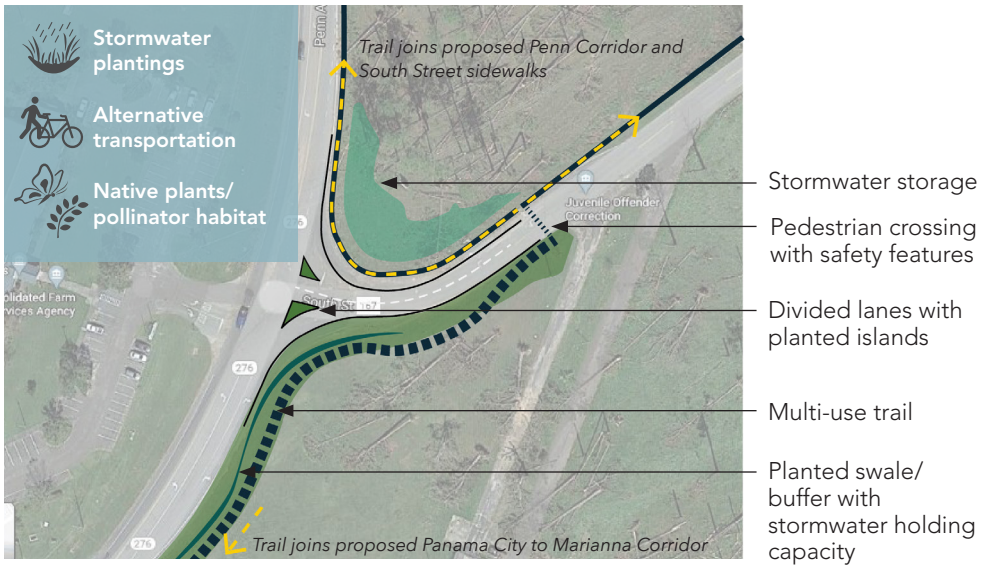
Access to greenways and trails has positive impacts on public health and wellness.

Trail-based tourism can be a major economic driver in many small communities by supporting local small businesses.

INTERSECTION OF PENN AVENUE AND SOUTH STREET

The plan view illustrates the narrowing of the South Street turnoff to slow down traffic and planting islands to divide travel lanes. The intersection includes a well-marked crosswalk to improve safety for pedestrians and bicyclists crossing South Street.

The dashed line indicates the location for a wide multi-use trail bordered by a native planting buffer to capture stormwater and a tree canopy for shade.



The proposed view shows the adjacent multi-use path to the right and enhanced streetscape for this gateway area.


Existing


View of proposed intersection improvements

MULTI-USE PATH

The proposed view illustrates the stormwater management swale and plantings adjacent to Penn Avenue. The two-way 12-foot wide multi-use path is framed by a tree canopy and naturalized planting. The path links to the proposed Penn Avenue Corridor (plan by APA, 2018) and the proposed Panama City to Marianna Corridor, a regional trail.


Existing


Illustrative view of multi-use path

KELSON AVENUE STORMWATER

Reduce stormwater runoff to protect Kelson Avenue and the Chipola River.

EXISTING CONDITIONS

Water Flow

During rain events, a large volume of water flows toward Kelson Avenue. The flow converges in a narrow drainage ditch at Jefferson Street and Kelson Avenue.

Erosion and Safety

Due to erosion, the ditch now encroaches on residences and poses a safety hazard to pedestrian and vehicle traffic. The most severe issues are located north of Kelson between Jefferson Street and Spring Street.

Plans In Progress

The City is developing designs for an underground drainage network to convey water along Kelson in a box culvert, releasing the water in a stormwater treatment pond east of Noland Street. Because the pond is located in the flood zone, it will likely be inundated in 50-year and 100-year storm events

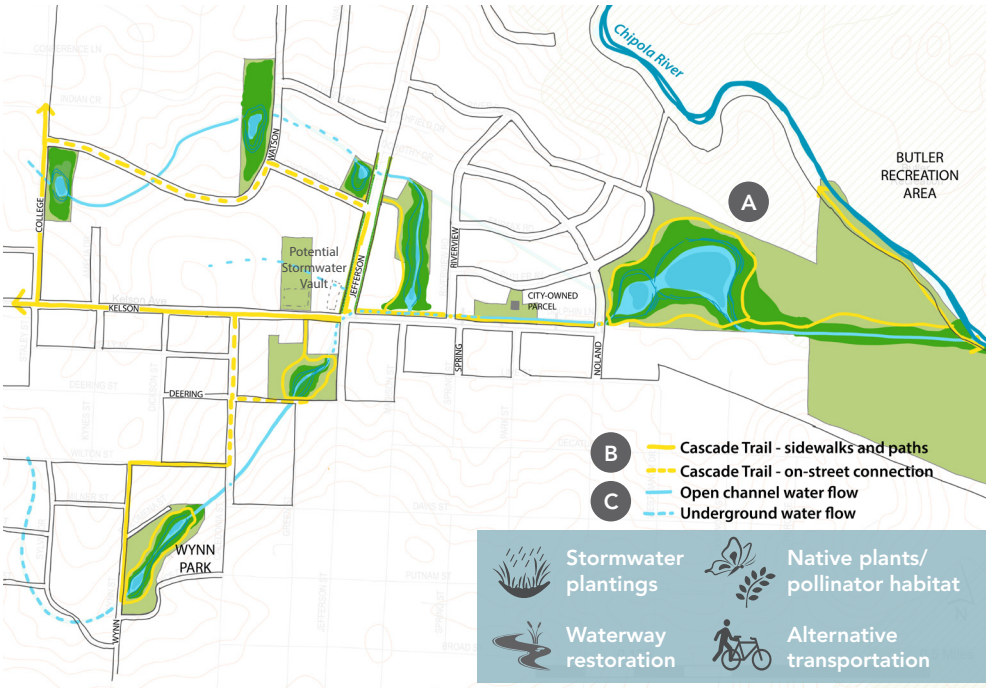
Chipola River

Stormwater from the ditch flows directly into the pristine Chipola River, carrying debris and pollutants with it. The scenic river, fed by 63 freshwater springs, flows nearly 100 miles through northwest Florida.

DESIGN CONCEPT

Cascade Approach

This concept proposes a hybrid network to stormwater management that includes traditional drainage (pipes) and natural drainage features to address erosion along Kelson Avenue while improving water quality, supporting a healthy Chipola River ecosystem and providing new recreation opportunities.



A Stormwater Park - can serve as both a stormwater management feature and recreation opportunity.

B Cascade Trail and Greenway Connections - can enhance connectivity from Chipola River to Chipola College and other destinations along Kelson Avenue.

C Upstream Mitigation - can help reduce flow by increased storage capacity upstream and enable natural drainage solutions along Kelson that include restoring and re-engineering the existing open channel east of Spring Street.


View of proposed stormwater park and trail

A - STORMWATER PARK

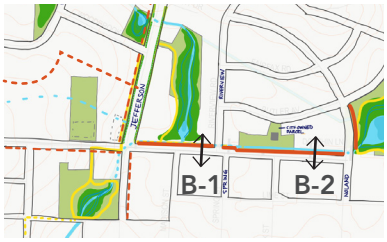
A Recreation Opportunity

A stormwater park that serves as a trailhead for the Chipola Greenway could include a 1/2-mile loop trail of gravel and boardwalk paths. Features might include: parking, birdwatching, fitness, gathering areas and connection to the Chipola Greenway.

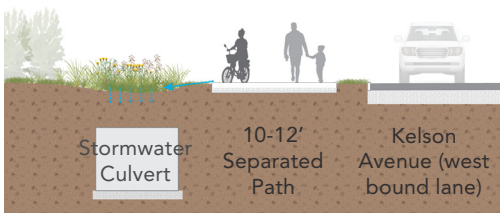

Existing

B - CASCADE TRAIL AND GREENWAY CONNECTIONS

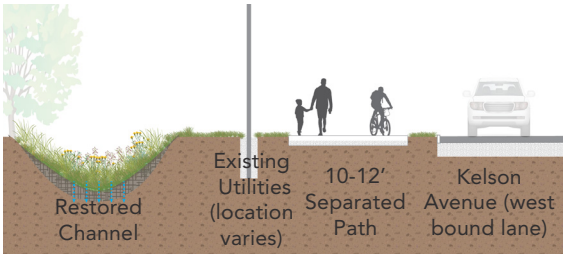
A pedestrian and bike-friendly 2-mile path can follow the upstream mitigation network, connecting Kelson Avenue sidewalks to the west and the Chipola Greenway to the east.



Cascade trail options.



Section B-1: Cascade trail along Kelson Avenue where box culvert may be necessary to address erosion and safety issues and allow space for multi-use path.

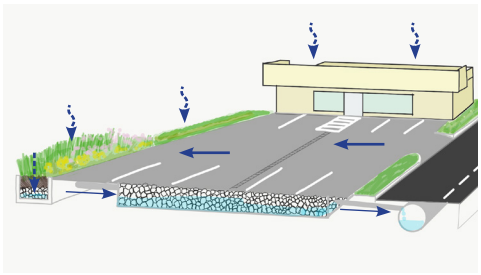


Section B-2: Cascade trail along Kelson Avenue with open channel and utilities. Upstream mitigation may allow existing channel to remain open.

C - UPSTREAM MITIGATION

Enhancing undeveloped parcels for stormwater management can protect the community and the Chipola River.

Creating bioretention features such as rain gardens on undeveloped properties can temporarily store water during rain events and improve the aesthetics, safety and recreational amenities in these areas while improving water quality entering the Chipola River. See the Appendix for more details.


Stormwater vaults hold water temporarily and slowly release as flood levels subside. A vault can be installed underground without restricting development.


Existing


Bioretention Example

CITYWIDE CONNECTIONS

Provide connections to businesses and community amenities.

CITYWIDE CONNECTIONS

Safe bike and pedestrian networks can increase quality of life, property value and economic development for cities of all sizes.

There are many cost-effective ways to integrate pedestrian and bike connections as part of road improvement and construction projects.

A concept plan that identifies where designated paths, lanes, sidewalks, street crossings and safety features are needed can inform future projects to accommodate pedestrian and bike infrastructure.

Priority streets that lack designated bike lanes and/or sidewalks include:

- Kelson Avenue
- Penn Avenue
- South Street
- South Jefferson Street
- Highway 90 (Chipola Bridge)

Safe connections can utilize existing infrastructure such as sidewalks, or new paths might be developed such as marked bike lanes, expanded shoulders, new sidewalks or separated paths.

In 2020, the City received funding from the Florida Rural Infrastructure Fund to develop a citywide connectivity plan to identify and prioritize key areas for improvements. The plan will build on opportunities identified to date through R2P2.

SAFE PEDESTRIAN AND BICYCLE CONNECTIONS

The map on the next page shows a proposed network for improved bike/pedestrian connections in Marianna. Following are several options for integrating bike/pedestrian safety based on road type and safety considerations.

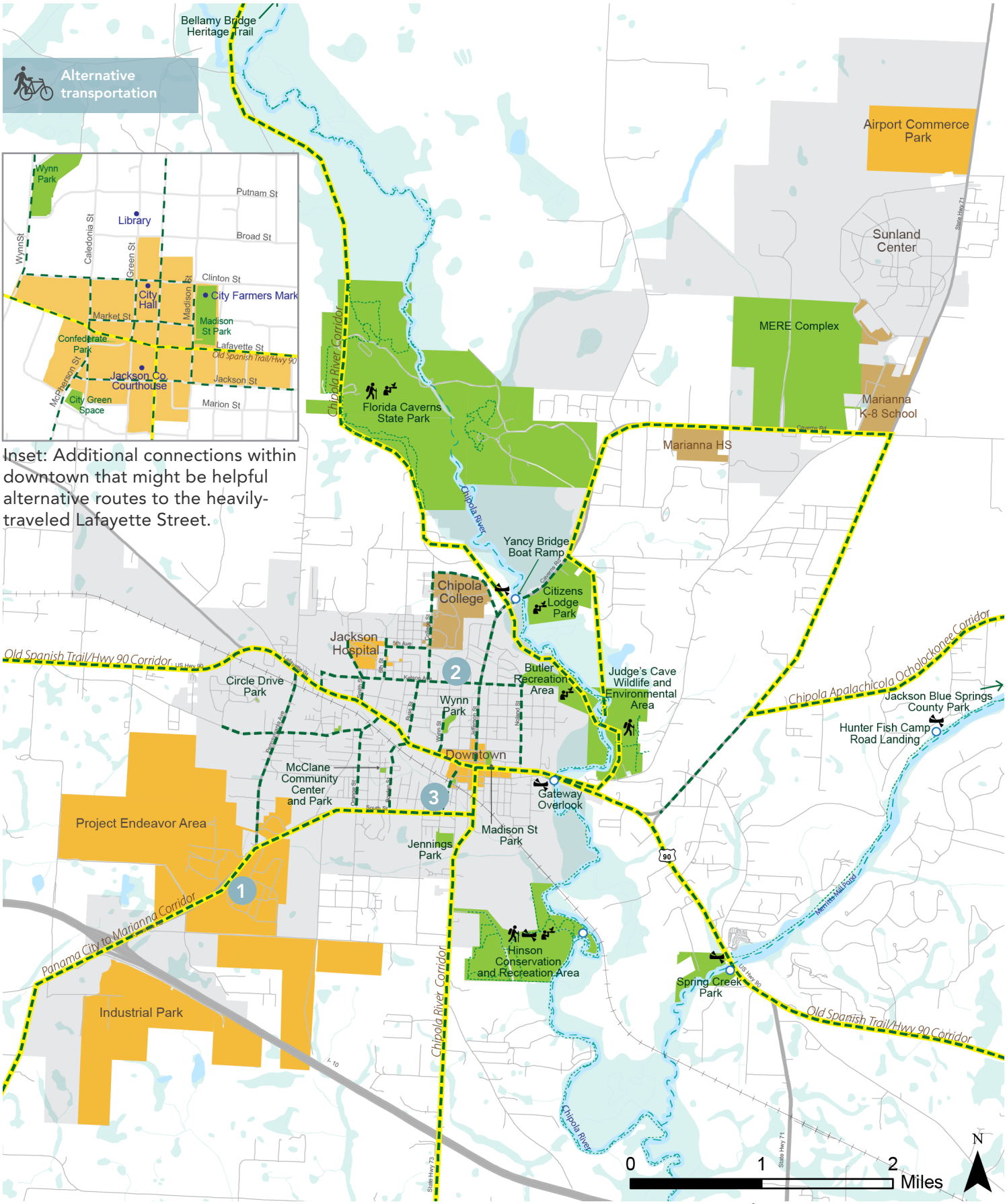
1. **Corridors and Highways** (example: Penn Avenue)
   Visually or physically separated paths that buffer traffic:
   - Separated bike lanes and sidewalk
   - Separated multi-use path
2. **Local Roads** (example: Kelson Avenue)
   Well-marked shared conditions if necessary, or separated paths:
   - Separated bike lane and sidewalk
   - Shared bike lane and sidewalk
3. **Neighborhood Streets** (example: McPherson Street)
   Yield street conditions allow all users to share the roadway safely.

Separated bike lanes
On-street or on-shoulder marked bike lanes designate space for bicyclists. (5 feet to 6 feet wide)

Separated multi-use paths
A wide paved path for a bicyclists, pedestrians, runners, scooters and others traveling for recreation or transportation. (8 feet to 12 feet wide)

Shared bike lanes
Bicycles and vehicles share the roadway marked with signs.

Yield streets
Pedestrians, bicyclists and motorists share narrow neighborhood streets. Pavement markings and signs can improve awareness and safety.

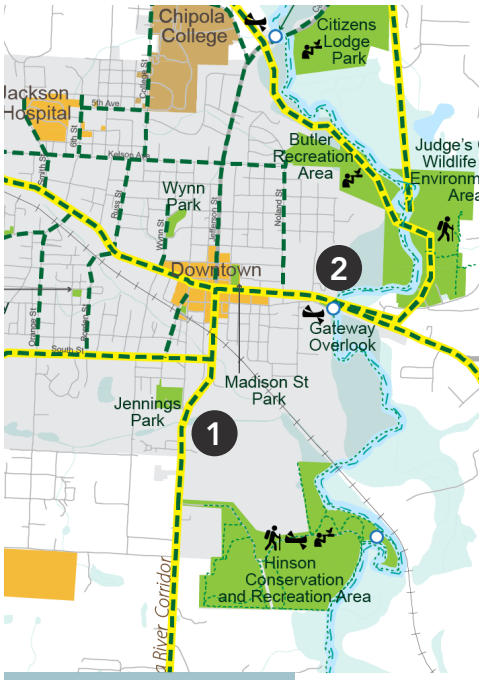


Inset: Additional connections within downtown that might be helpful alternative routes to the heavily-traveled Lafayette Street.

- City of Marianna
- Redevelopment and Growth Areas
- Schools
- Parks and Recreation Areas
- Wetlands
- Proposed Designated Multimodal Paths (infrastructure and/or markings to designate safe pedestrian and bicycle paths)
- Planned Regional Multimodal Connections (FL Greenways and Trails, Old Spanish Trail/Highway 90 Corridor)
- Boat launch areas
- Recreation trails (existing)
- Designated Florida Paddle Trails
- Hiking
- Boat access
- Birdwatching

SAFE CONNECTIONS

Improve pedestrian and bicycle safety at key connections.



Stormwater plantings

Native plants/ pollinator habitat

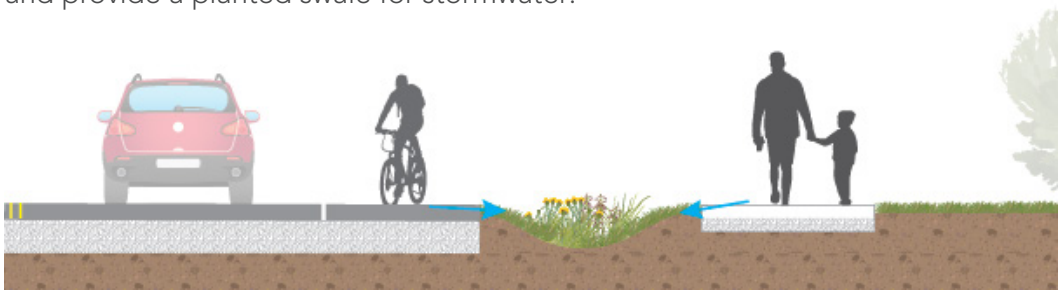
Alternative transportation

1 SAFETY IMPROVEMENT AREA: SOUTH JEFFERSON

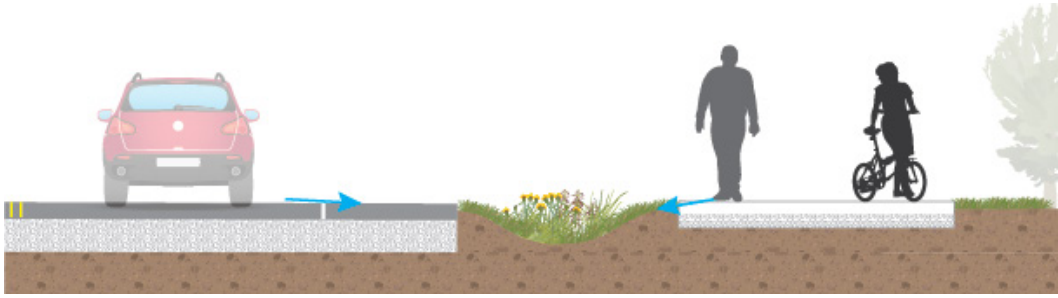
A worn path along the road indicates frequent pedestrian activity. This important section of Jefferson connects Downtown, Jennings Park and Hinson Conservation and Recreation Area.

Existing conditions: Jefferson Street between Jennings Park and Hinson Conservation and Recreation Area

The following two options can improve safety for pedestrians and bicyclists and provide a planted swale for stormwater:



Extend the existing shoulder 1 to 2 feet to create a designated bike lane and install a separated 6-foot wide sidewalk.



Install a 10- to 12-foot wide separated multi-use path to accommodate bicyclists and pedestrians.

2 SAFETY IMPROVEMENT AREA: HWY 90 BRIDGE

The existing bridge is unsafe for pedestrians and bicyclists. The narrow sidewalk is not separated from fast-moving cars and trucks, and there are no designed bike lanes.

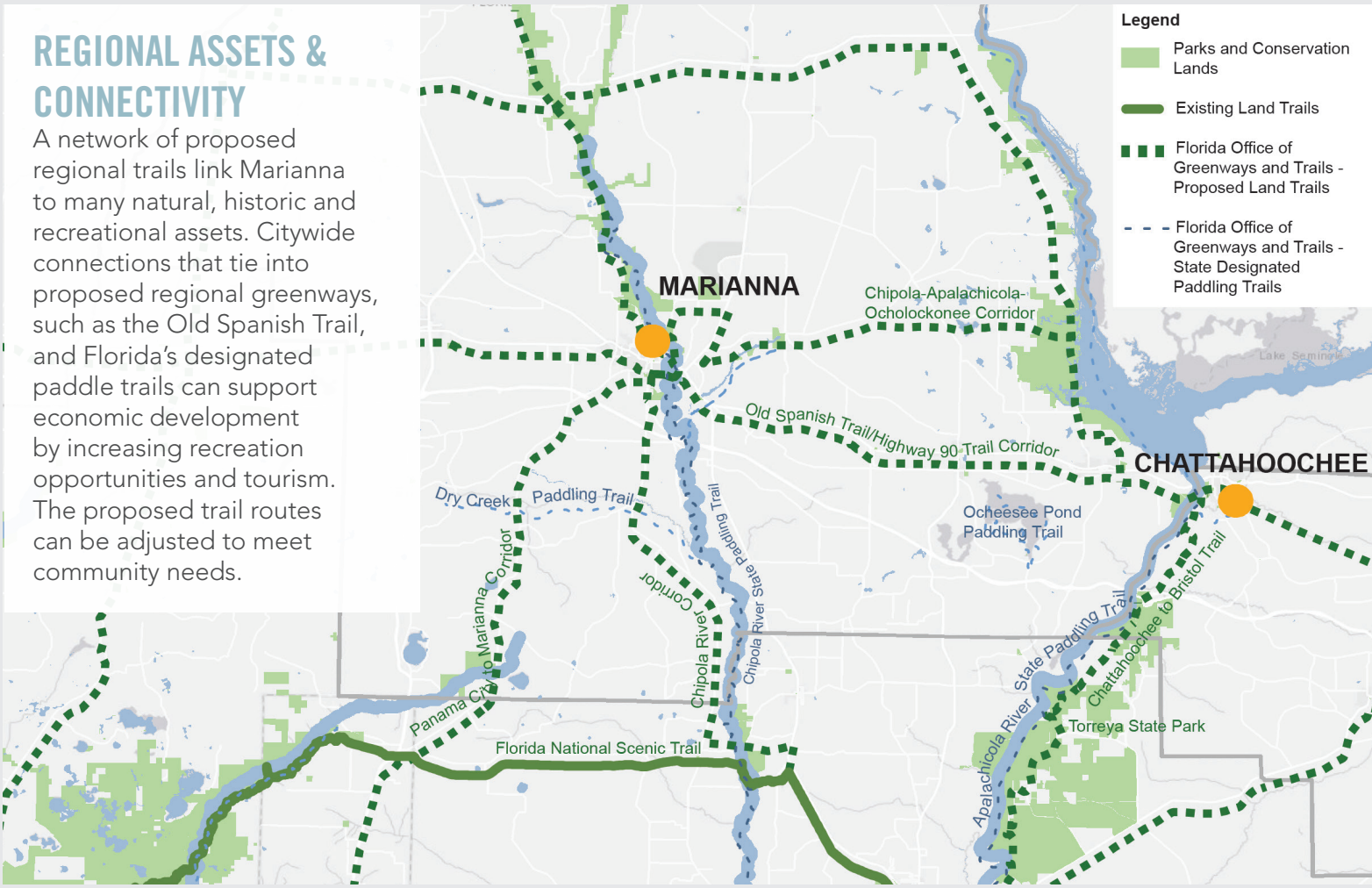
Planning separated bike and pedestrian lanes for future bridge improvements can address safety concerns and improve key recreation connections for regional visitors. Examples on the right show two approaches to consider when planning pedestrian and bicycle safety improvements for the bridge.

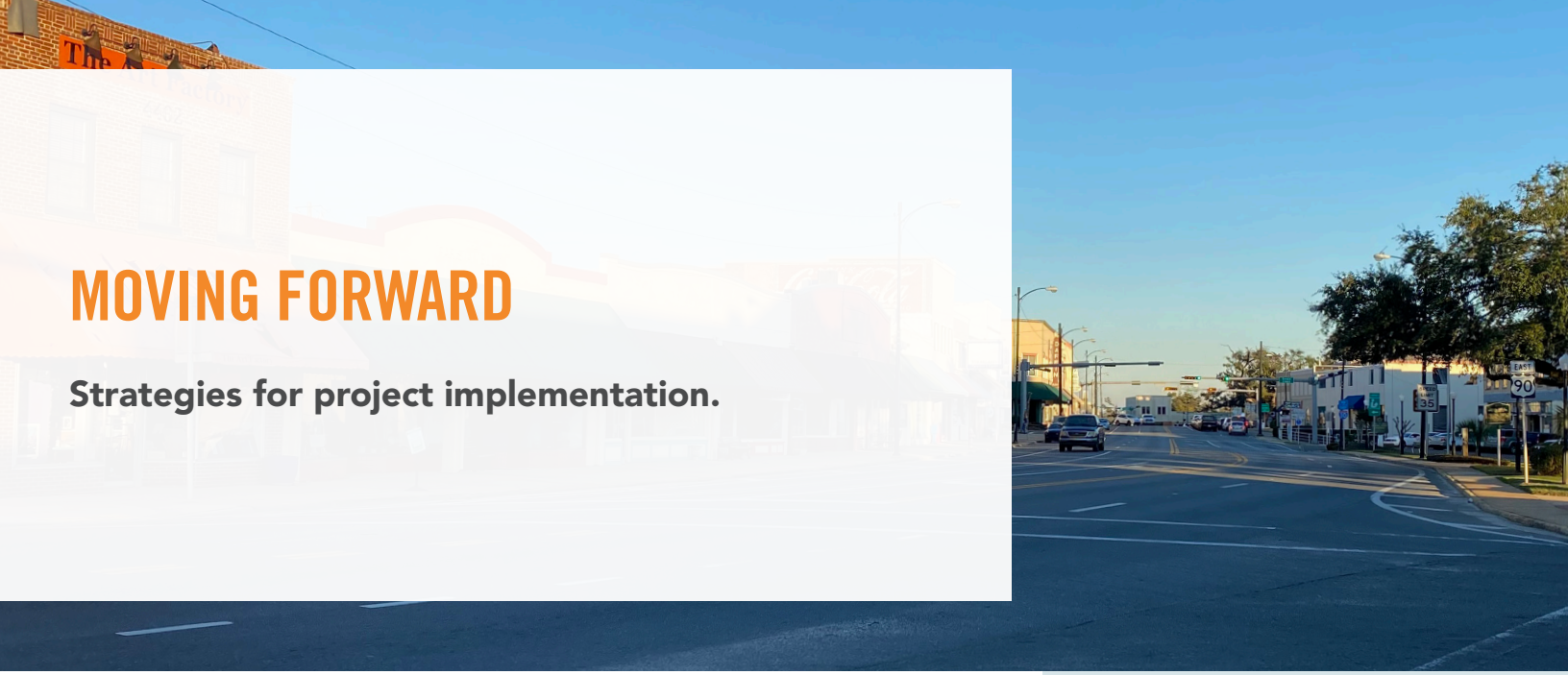

1 - Bridge with wide separated multi-use lane


2 - Separate bridge for pedestrians and bicyclists

REGIONAL ASSETS & CONNECTIVITY

A network of proposed regional trails link Marianna to many natural, historic and recreational assets. Citywide connections that tie into proposed regional greenways, such as the Old Spanish Trail, and Florida's designated paddle trails can support economic development by increasing recreation opportunities and tourism. The proposed trail routes can be adjusted to meet community needs.





MOVING FORWARD

Strategies for project implementation.

KEY NEXT STEPS

The Recovery and Resiliency Partnership Project technical assistance provides a robust vision to implement sustainable design strategies that support the City's recovery and improve resilience.

Implementation of the proposed design strategies will require a combination of actions to help move the projects forward. Key actions include:

- Continue to evaluate and prioritize which projects to initiate first.
- Identify project lead(s) and partners needed to implement and maintain the project.
- Continue to engage the public on timing, design development and design decisions.
- Conduct engineering studies and site plan designs to advance projects.
- Assemble funding, which may come from a variety of sources.
- Remain flexible and creative to respond to new opportunities as they arise.

ACKNOWLEDGMENTS

City staff and leadership provided guidance and direction throughout the project and the community offered valuable feedback to inform the design concepts. Staff from a range of regional, state and federal agencies and organizations offered their technical assistance and expertise in helping the City connect their vision to implementation opportunities.

ADDITIONAL INFORMATION

An appendix of additional information and resources to support the implementation of these design concepts is available at www.r2p2.skeo.com/marianna.

For more information about R2P2, please contact Rick Durbrow, U.S. EPA Region 4 at Durbrow.Rick@epa.gov or call 404-562-8286.

R2P2 Partners