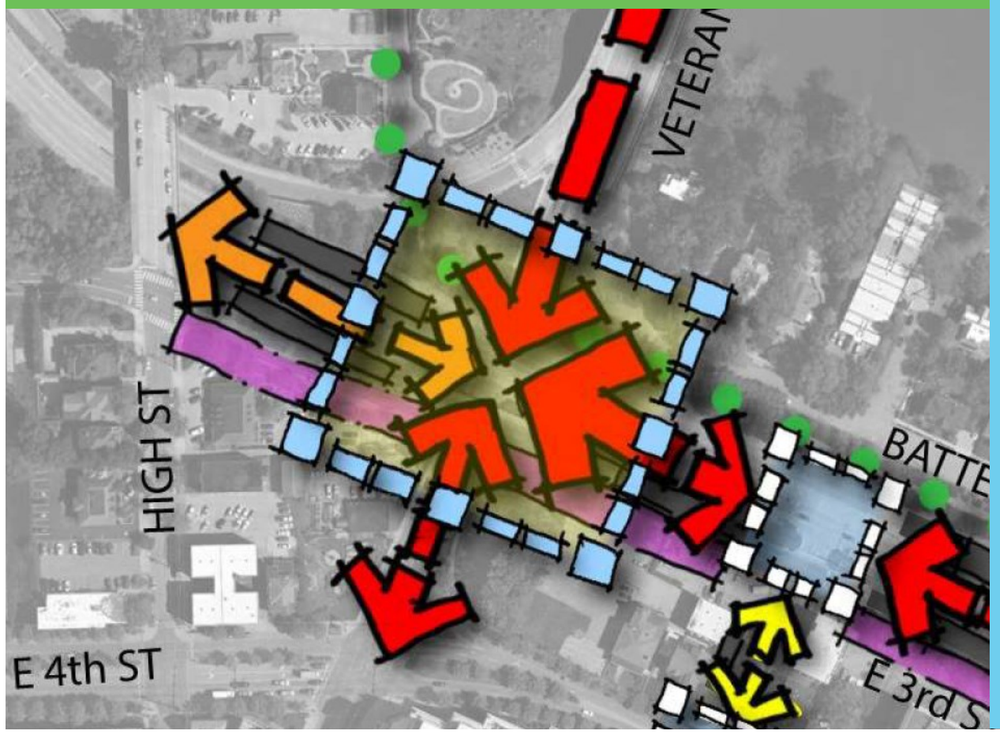
3RD & 4TH STREET IMPROVEMENTS

3RD AND 4TH STREET IMPROVEMENTS PLAN

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

INTRODUCTION

The City of Chattanooga is seeking to transform the 3rd and 4th Street corridor, including the connection to Riverfront Parkway, into an aesthetically pleasing, safe, and accessible facility that reconnects and extends the downtown grid. Expanding upon the changes to Riverfront Parkway that occurred in 2001, the new connections to the existing neighborhoods, the University of Tennessee at Chattanooga, the Chattanooga School for the Arts and Sciences, as well as Siskin and Erlanger hospitals are intended to encourage economic development and provide an enhanced connection among the community assets. More direct connections to the Tennessee Riverwalk, as well as improved vehicular, transit, pedestrian, and bicycle amenities are also key components of the 3rd and 4th Street Improvements project.

Transportation and Economic Development

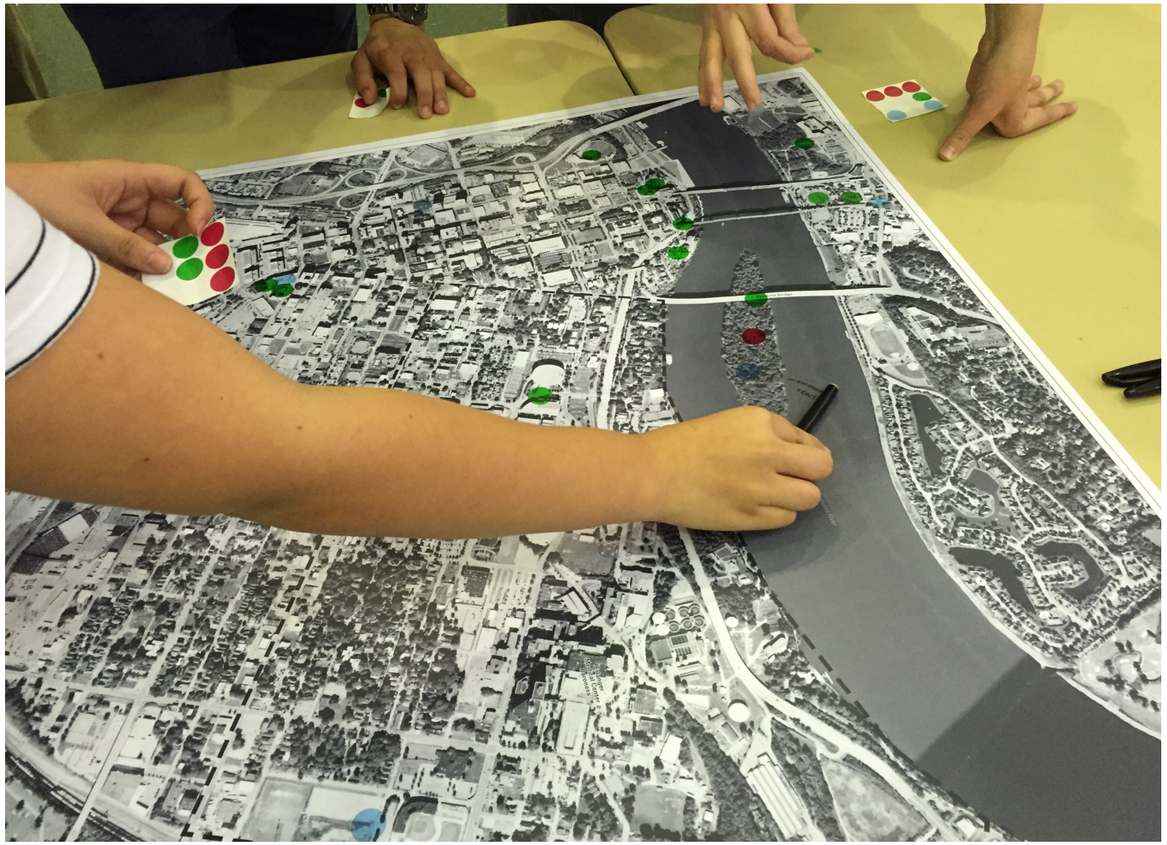
At the same time the 3rd and 4th Street Improvements project was kicking-off, the project team became aware that the River City Company had hired a consultant team to prepare an economic development study for the 3rd and 4th Street corridor. The economic development study encompassed a much broader area than the 3rd and 4th Street Improvements project, but because of the close connection between transportation, land use, economic development, and urban design, the two teams partnered for the public outreach efforts within the combined study corridor to gather input and engage stakeholders.

Stakeholder and Public Outreach

One of the objectives of both projects was to reach a wide variety of neighborhood residents, property and business owners, community groups, commuters, and other stakeholders with a vested interest in the study area. Key stakeholders for the project were identified and individual stakeholder meetings were undertaken in a group or one-on-one setting to introduce the project. These stakeholders included major property owners in the corridor and other companies or agencies having an interest in transportation and development.

As part of the project, a three-day stakeholder charrette was held at the end of September / early October 2015. At the conclusion of the charrette, a public meeting was held to gather additional input from interested parties. Highlights from the charrette and public meeting included engaging the public and stakeholders in identifying issues, confirming the goals and objectives along with the purpose and need for the study area, and explaining how the vision for the project connects to broader community goals.

The project team also conducted a three-day design charrette in mid-November 2015. Both consultant teams worked cooperatively over the three days to refine designs and test new designs for the potential transportation concepts and land use recommendations in response to stakeholder feedback. Again, at the conclusion of the three-day design charrette the concepts and ideas that were generated and refined throughout the week were presented during a public meeting.



Existing Conditions

The existing street network within the study area is a grid of two and four-lane roadways. Riverfront Parkway, 3rd Street, and 4th Street are the primary east-west routes. The north-south roadways within the study area are Lookout Street, High Street, Georgia Avenue, Lindsay Street, Houston Street, and Mabel Street. One-way pair roadways (Lindsay Street and Houston Street) and the on-ramp from 4th Street near Siskin Drive provides access to Riverfront Parkway.

Under present conditions, most roadways within the study area operate within ten miles per hour of free-flow speeds during peak hours and traffic signals, while not interconnected, do not present significant levels of delay during current peak hours. As a result, this project is focused on reconnecting and extending the downtown grid, encouraging economic development, and providing enhanced connections among the community assets within the corridor.

Currently, Riverfront Parkway provides no direct connection to Georgia Avenue / Veterans Bridge, forcing traffic to navigate through residential areas along 4th Street to cross the Tennessee River. 3rd Street closely parallels Riverfront Parkway from High Street to the 4th Street ramp, and 3rd Street is elevated on a bridge over the ramp connecting Riverfront Parkway and 4th Street.

Due to the close, parallel proximity of 3rd Street to Riverfront Parkway, a series of tight, congested intersections with unsuitable storage length capacity for turning vehicles exists at Lindsay Street, Houston Street and Mabel Street.

The lack of interconnectivity, one-way roadways, overpasses and consistent wayfinding can result in confusion for drivers unfamiliar with the area in and around the University of Tennessee at Chattanooga and the Erlanger and Siskin hospital district.

TRANSPORTATION CONCEPTS

To address connectivity goals for the project, three transportation concepts were developed as part of the planning process. The common components of each of the three concepts, include:

- Removal of 3rd Street from High Street to Siskin Drive
- Removal of the off-ramp from Riverfront Parkway to Battery Lane
- Creation of an at-grade intersection at Riverfront Parkway and Georgia Avenue
- Conversion of Lindsay Street and Houston Street from one-way to two-way

For each of the concepts, it is also assumed that the planned extension of Central Avenue to connect with Riverfront Parkway is in place at the time of implementation of the proposed improvements.

Interconnected Grid Intersection

The interconnected grid intersection concept (Figure 1-1) separates the main flow of traffic along Riverfront Parkway from the main flow of traffic along 3rd and 4th Streets. Connections between the two corridors are accomplished via existing or newly established at-grade intersections.

Major Intersection

The major intersection concept (Figure 1-2) provides for a full intersection at Riverfront Parkway and 3rd and 4th Streets. The number of lanes on Riverfront Parkway, 3rd Street and 4th Street vary between two options that are being explored for this concept.

Roundabout

The roundabout concept (Figure 1-3) would function similar to the major intersection concept, but would provide continuous flow of traffic between Riverfront Parkway, 3rd Street and 4th Street.

Figure 1-1. Interconnected Grid Intersection

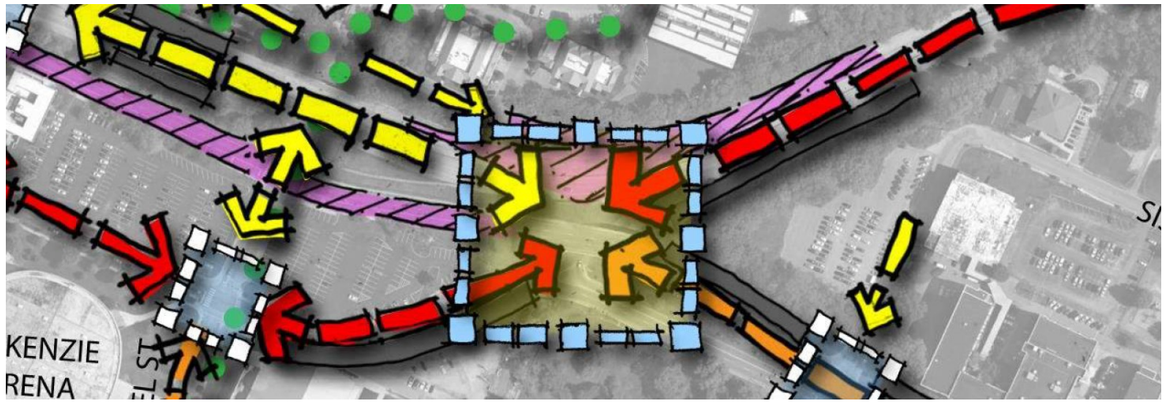


Figure 1-2. Major Intersection

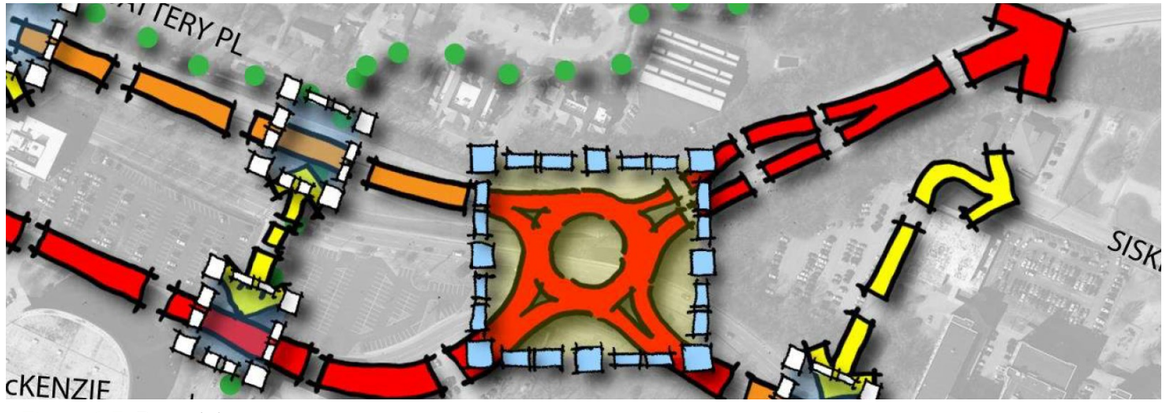


Figure 1-3. Roundabout

EXECUTIVE SUMMARY

STREETS

Connectivity and the development of a "complete street" is at the forefront of the 3rd and 4th Street Improvements project. Paired with this connectivity is the desire to provide safe and accessible facilities for vehicles, bicycles, pedestrians and transit.

The typical sections proposed for each of the roadways in the study area include combinations of sidewalks, shared-use paths and bike lanes, as well as opportunities for on-street parking. Additionally, hardscaping and landscaping enhancements are included to complement the "complete street".

Riverfront Parkway

Riverfront Parkway is proposed as either a two-lane or four-lane roadway with curb and gutter. On-street parking on both sides of Riverfront Parkway is planned to support future mixed-use development within the footprint of the former 3rd Street corridor. To enhance connectivity within the corridor, bike lanes (separated or along shared-use paths) as well as sidewalks are planned on both sides of Riverfront Parkway (Figures 1-4 and 1-5).

3rd and 4th Street

The 3rd and 4th Street corridor is proposed as either a two-lane or four-lane roadway with curb and gutter. The portion of 4th Street between Lindsay Street and Houston Street is constrained due to the proximity of historic residential buildings and an existing retaining wall. There are also right-of-way constraints along the northern side of 3rd Street within the Siskin and Erlanger hospital district.

Figure 1-4. Riverfront Parkway BEFORE

Figure 1-5. Riverfront Parkway AFTER

INTERSECTIONS

Riverfront Parkway and Mabel Street

Converting the intersection of Riverfront Parkway and Mabel Street to an at-grade intersection would create a new main entrance to the University of Tennessee at Chattanooga campus, as well as an improved entrance to the Battery Place neighborhood. The economic development study envisions Mabel Street enlivened with mixed-use development (Figure 1-6), including ground-level restaurants and retail stores, and residential units on the upper floors.

Riverfront Parkway and Georgia Avenue

As part of this masterplan, it is recommended that an at-grade intersection be constructed at Riverfront Parkway and Georgia Avenue. Under this concept, the Riverfront Parkway bridge over Georgia Avenue would be removed as well as the approach embankments, but the existing Tennessee Riverwalk pedestrian bridge would remain.

Figure 1-6. Mabel Street Vision
Source: Urban Design Associates, 2015.

EXECUTIVE SUMMARY

NEW CONNECTIONS

An overarching goal of the 3rd and 4th Street Improvements project is improved connectivity to the downtown grid and better connections to both Siskin and Erlanger hospitals. Today, emergency vehicles traveling westbound on Riverfront Parkway exit at Battery Place, turn on Mabel Street, and turn again on 3rd Street to reach Erlanger hospital.

To address this issue of connectivity, this masterplan proposes that three new intersections along Riverfront Parkway be studied as part of the transportation concepts (Interconnected Grid Intersection, Major Intersection, Roundabout). Each of the proposed new intersections present implementation challenges, and these challenges, along with buy-in from the adjacent property owners, will factor heavily into the feasibility of each proposed intersection as additional evaluation is undertaken during the next phases of the project.

Riverfront Parkway / Siskin Drive

The proposed new connection of Siskin Drive to Riverfront Parkway (Figure 1-7) is a continuation of the northbound leg of Siskin Drive from 3rd Street along the western edge of the Chattanooga School for the Arts and Sciences. This proposed connection would provide direct access to Riverfront Parkway for the Chattanooga School for the Arts and Sciences, Siskin Rehabilitation Hospital, and St. Barnabas Nursing Home. This new connection is challenging due to the significant grade difference between the elevation of the northernmost portion of Siskin Drive and Riverfront Parkway. This connection may not be feasible due to its close proximity to either the Major Intersection or the Roundabout intersection concepts.

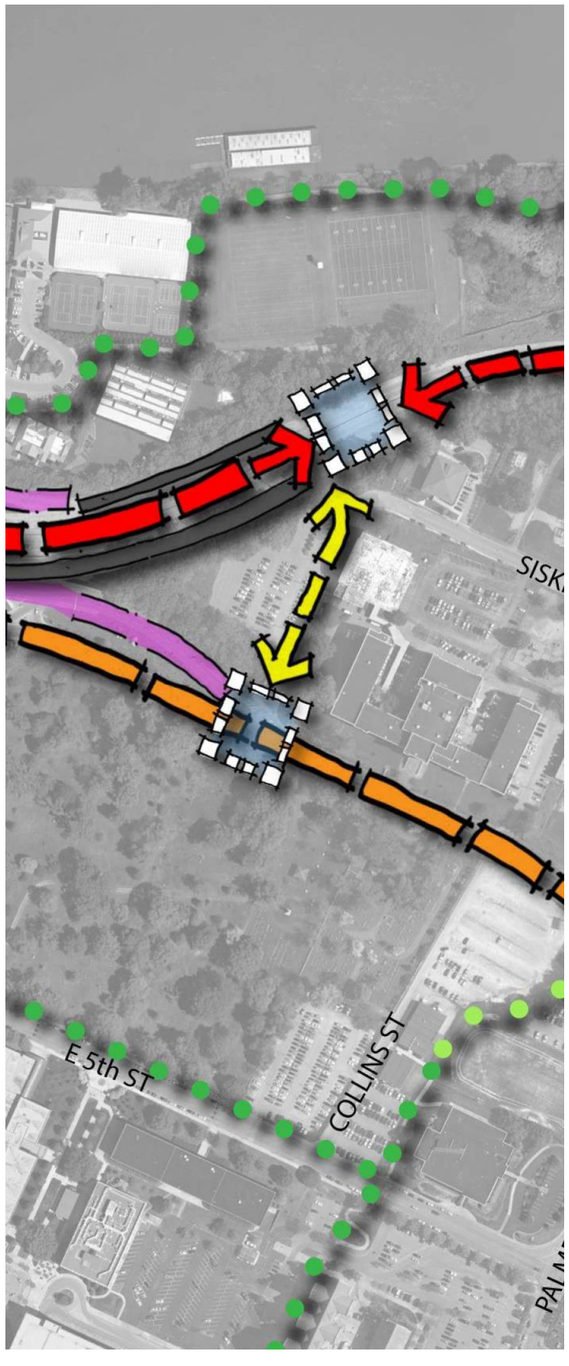


Figure 1-7. Riverfront Parkway / Siskin Drive

Riverfront Parkway / Palmetto Street

This proposed connection (Figure 1-8) may involve acquiring property from Siskin Rehabilitation Hospital, St. Barnabas Nursing Home, the Chattanooga School for the Arts and Sciences, and the Hamilton County Health Department, as well as potential impacts to an electrical substation.

Implementing this connection will need to involve close coordination with all parties to evaluate potential impacts and how those impacts can be mitigated. The proposed typical section for the roadway would feature a combination of on-street parking and/or bicycle lanes, as well as sidewalks. An opportunity to extend the existing greenway, which currently ends at the Hamilton County Health Department parking lot, under 3rd Street to connect to Riverfront Parkway and the Tennessee Riverwalk, will also be explored.

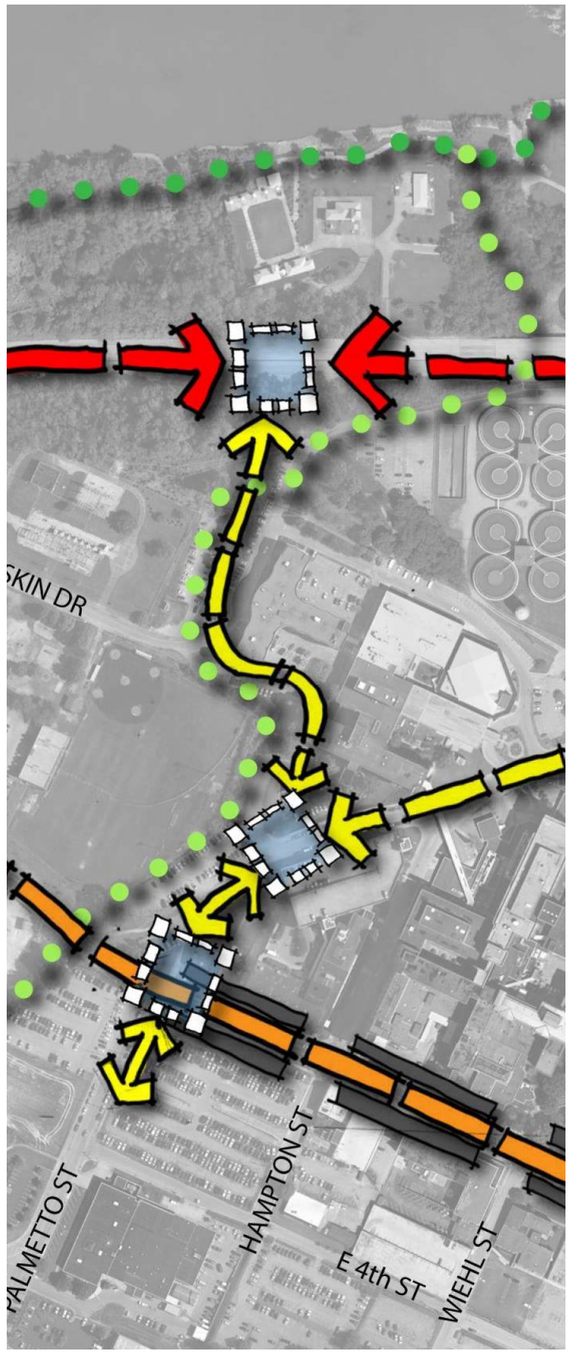


Figure 1-8. Riverfront Parkway / Palmetto Street

Riverfront Parkway / Blackford Street

This new connection concept (Figure 1-9) is envisioned as a two-lane extension of Blackford Street, near the electrical substation and the mechanical building for Erlanger hospital. This roadway currently terminates at the entrance to the Tennessee American Water Company property.

This proposed connection would follow the alignment of the maintenance road through the Tennessee American Water Company property to connect with Riverfront Parkway. Because water treatment plants are a security risk, any new connection would involve fencing or other protections to ensure security of the facility, as well as ingress / egress for facility maintenance and operations. The new connection would feature bike lanes and sidewalks along both sides of the road. The advantage of this connection is that it provides direct access into the Siskin and Erlanger hospital district from Riverfront Parkway.

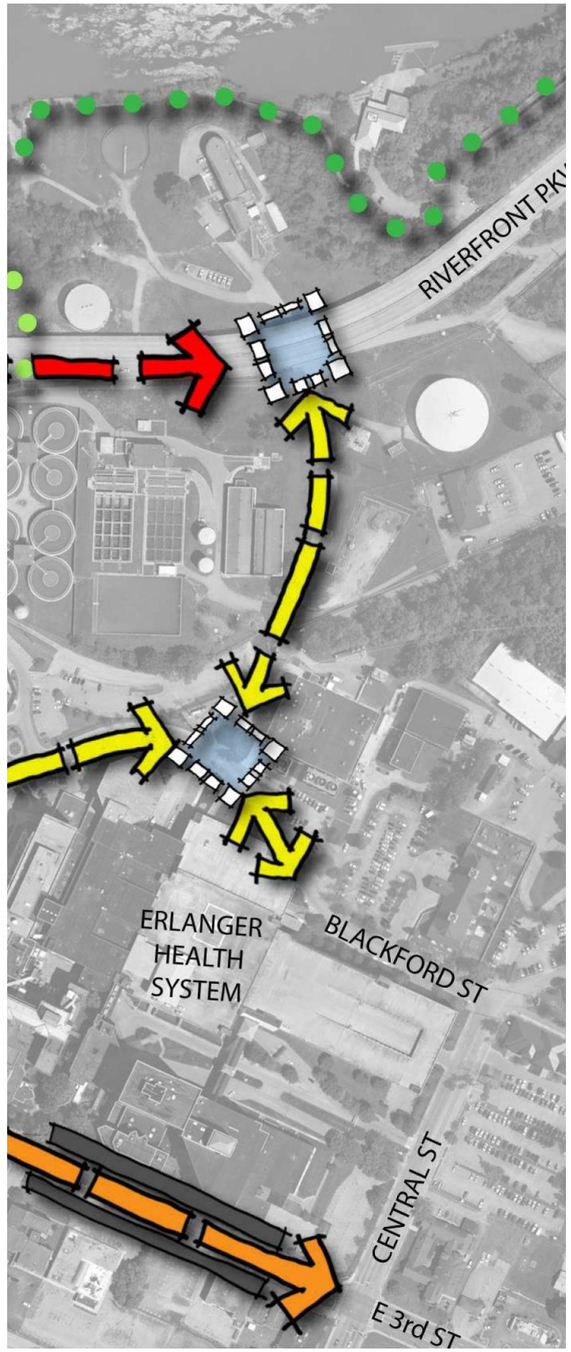


Figure 1-9. Riverfront Parkway / Blackford Street

ONE-WAY TO TWO-WAY CONVERSIONS

It is recommended that Lindsay Street and Houston Street both be converted from one-way to two-way operation (Figure 1-10) to support the project goals of improving connectivity, reducing driver confusion, and increasing safety. Conversion from one-way to two-way operation would provide full access to both roadways from Riverfront Parkway.

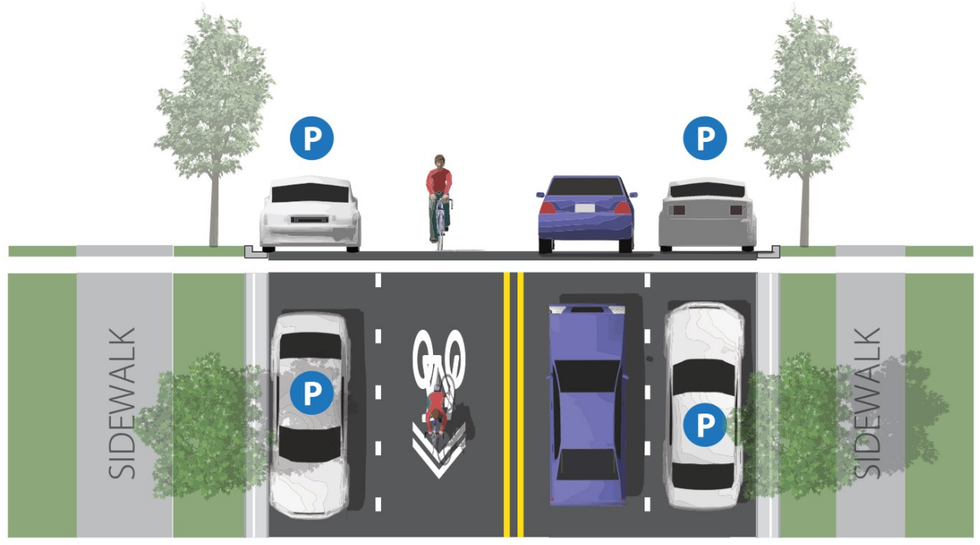


Figure 1-10. Lindsay Street and Houston Street | Proposed Two-Way Cross-Section

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TRANSIT

Design for the 3rd and 4th Street corridor should consider its inherent potential for enhanced transit service to connect key corridor destinations. This includes a primary route alignment along 3rd Street and, depending on feasibility and long-term CARTA plans for service development, an alignment on Riverfront Parkway or on a reconfigured 4th Street. Potential station or enhanced stop locations are shown in Figure 1-11.

Transit Stops and Amenities

To improve the passenger experience and encourage additional ridership, sufficient space should be provided along the corridor for bus stops, even if only for select stops at key locations. It is also recommended that CARTA expand the real-time information displays that it currently uses on downtown routes along the 3rd and 4th Street corridor.

Bus Bays for Layover Stops

As part of the project, the proposed street improvements should incorporate CARTA's preference for bus bays along key corridors so that heavy passenger loading activity does not disrupt regular traffic operations. Drivers should have designated locations for short breaks, brief layovers, or pauses in runs.

Enhanced Transit Operations

Numerous stakeholders discussed the extension of the CARTA Electric Shuttle to the corridor, reflecting the popularity of that service in downtown Chattanooga where it connects CARTA's north and south parking facilities. This potential transit option would benefit from the same capital investments that would enhance other transit services, such as signal priority, station amenities, and layover locations.

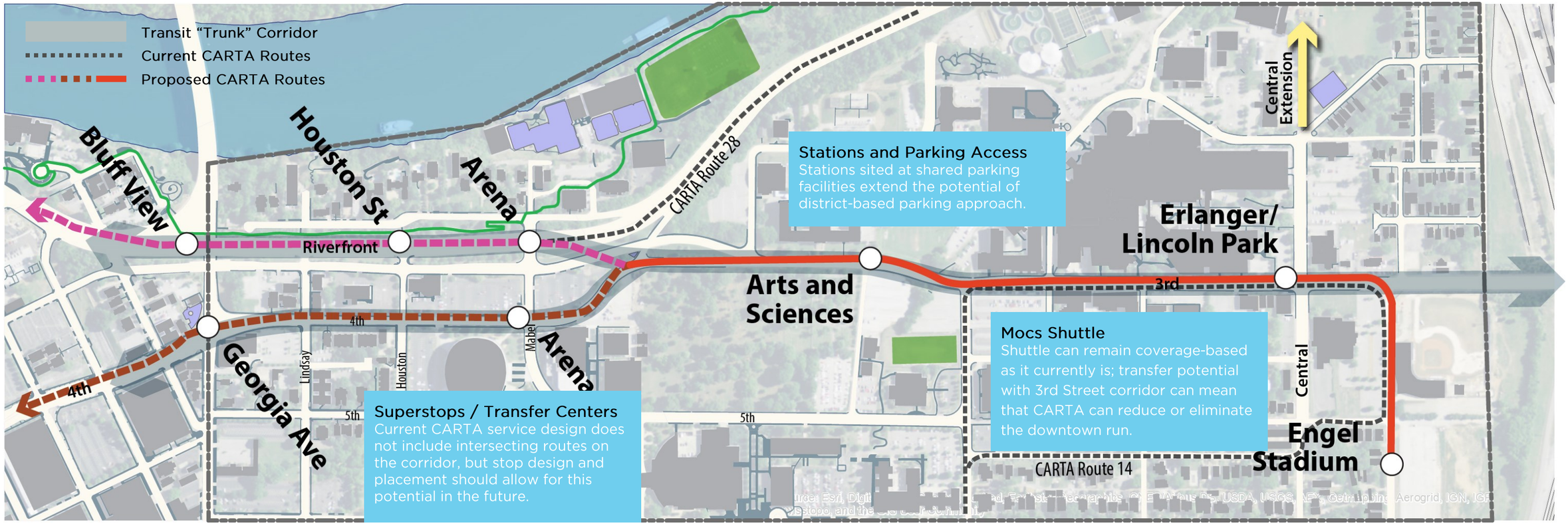


Figure 1-11. Corridor Transit Recommendations

The City and CARTA already have a well-understood transit stop design that requires a relatively modest amount of curbside and sidewalk space in the right-of-way. Enhancements to transit stops throughout the corridor should be explored as part of the 3rd and 4th Street Improvements project

The City of Chattanooga is currently advancing the installation of prioritized traffic signals along the Brainerd Road corridor to improve transit operations and reduce travel times. The City should explore the installation of prioritized traffic signals as part of the 3rd and 4th Street Improvements project.

Premium Service Opportunities

There are other opportunities for transit along the corridor that are either being studied separately or addressed in parallel efforts. The City should work with CARTA to develop service along the 3rd and 4th Street corridor to provide faster, potentially limited stop service with similar operating characteristics to bus rapid transit (BRT).

The City's ongoing studies of rail transit potential have focused on repurposing existing rail corridors lying primarily to the east and south of the 3rd and 4th Street corridor. The design of the 3rd and 4th Street corridor should support the City's ultimate vision of providing a connected bus, streetcar, and rail transit system.

BICYCLES

Bicycle accommodations are an important component of providing a full array of multi-modal options within the 3rd and 4th Street corridor. Within the corridor, there currently is only one shared bicycle lane marking on 3rd Street near Hampton Street and the only off-road facility is the Tennessee Riverwalk, located along the Tennessee River.

Lindsay and Houston Streets

Lindsay and Houston Streets are proposed to be converted from one-way to two-way. Given the right-of-way constraints, even continuous conventional bicycle lanes are not feasible due to the existing on-street parking and potential need for new left-turn lanes. Conventional bicycle lanes could be implemented with the loss of on-street parking between intersections, but the stakeholders voiced clear preference for more parking opportunities.

If the proposed volumes and operating speeds of these roadways warrant it, shared-use markings could be implemented. The other proposed north-south bicycle facilities outlined in the *Chattanooga Bike Implementation Plan* appear to be better choices than the Lindsay and Houston Street corridors.

4th Street

4th Street currently has four lanes from Georgia Avenue to Lindsay Street and three lanes between Lindsay Street and Lansing Street. Many comments received during the design charrette and public meeting were focused on turning 4th Street into a neighborhood street and diverting more of the through traffic, specifically truck traffic, onto Riverfront Parkway. Given the right-of-way constraints, even continuous conventional bicycle lanes may not be feasible along 4th Street. Like Lindsay and Houston Streets, if the proposed volumes and operating speeds warrant it, shared-use markings could be implemented.

3rd Street

3rd Street between Lansing Street and Central Avenue currently alternates between three- and five-lanes within the study area. A one-way separated bicycle lane may be feasible in certain portions of the corridor. There is a potential pinch-point at the Chattanooga School for the Arts and Sciences that will need to be studied further during later phases of the project.

Riverfront Parkway

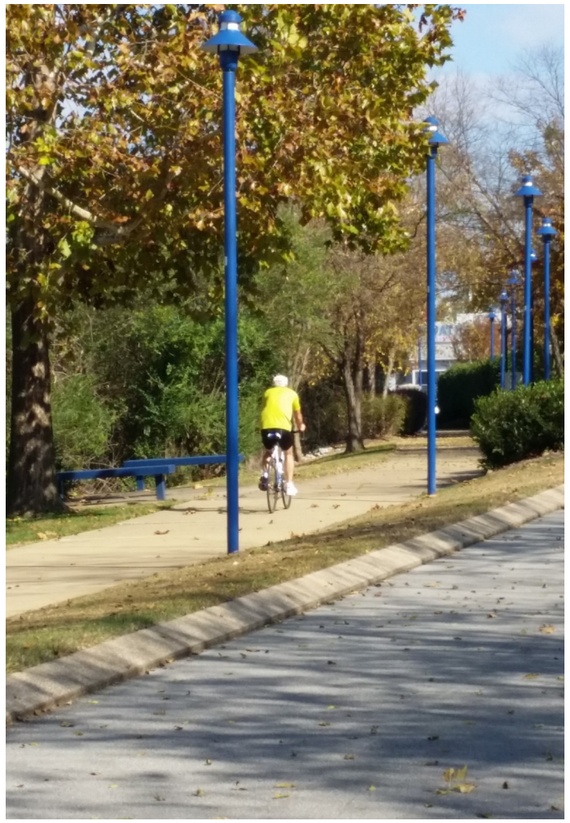
Riverfront Parkway has the most available right-of-way of any of the corridors within the study area. Even under the four-lane concept for Riverfront Parkway from the east project limits to Georgia Avenue, one-way separated bicycle lanes can easily be implemented. In fact, additional width may exist to provide a raised, planted separator that could also serve as a biofiltration swale.

The connection point between the facilities on Riverfront Parkway and 3rd Street will need to be determined after a specific roadway option is identified. Connections between the proposed bicycle facilities on Riverfront Parkway and 3rd Street with the various bicycle facilities in the area, both existing and proposed, will also be explored.

Greenway

A direct connection from the University of Tennessee at Chattanooga Greenway to 3rd Street will need to be analyzed during future phases of the project. In addition, the proposed extension of the greenway from 3rd Street to the Tennessee Riverwalk will also need to be explored as part of a comprehensive bicycle network.

These proposed connections will help to create a well-connected bicycle network that will serve numerous destinations, both within and outside the study area.



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PARKING

Throughout the planning and design charrette process, parking was a frequently-cited concern among area residents and stakeholders. Parking has direct impact on the overall operations of the 3rd and 4th Street corridor in that it potentially adds travel demand. A consolidated parking strategy (Figure 1-12) for the area is a key factor in ensuring that the corridors serve travel demand safely and efficiently.

In addition, the economic development study for the 3rd and 4th Street corridor identified the potential development of a multi-story, shared parking garage, along with office and retail space, and the incorporation of recreational facilities on the upper level in the current location of the CSAS athletic field.

Additional On-Street Parking

Changes to the cross-sections, especially on Riverfront Parkway, will likely yield additional space for on-street parking. This change offers an important asset for the overall corridor area, especially for the University of Tennessee at Chattanooga, in that it increases the supply of short-term visitor parking and allows existing off-street facilities to be repurposed for other needs. It also provides convenient parking for new commercial land uses in the area that may result from corridor redevelopment.

Wayfinding for Parking

Many private employers in the corridor provide their own parking, although several of these (University of Tennessee at Chattanooga, Siskin, and Erlanger) are facing constraints and are currently exploring new sites for additional parking. A shared system of parking that allows joint use of facilities might help to forestall the need for new parking facilities to be constructed. At a minimum, such a shared system would help to

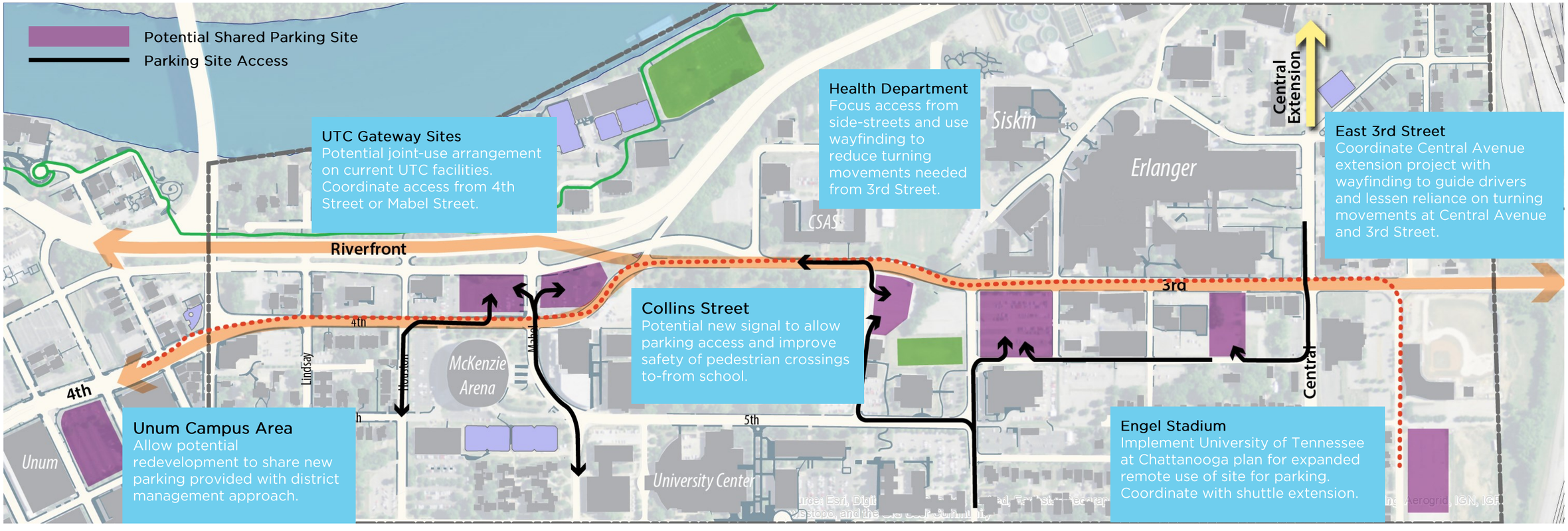

Figure 1-12. Corridor Parking Recommendations

ensure that new parking is used at greater efficiencies.

The wayfinding for parking could be incorporated into the larger recommendation of development and implementation of a city-wide wayfinding system compliant with the Manual of Uniform Traffic Control Devices (MUTCD) standards and adapted to a variety of street and travel contexts (such as different speeds and different roadway designs).

Management of Private Lots

In past planning efforts, private parking owners (especially major employers) presented with the idea of opening parking to public use would express concerns over maintenance and security of their facilities. The City should engage a third-party entity to offer management services to private facilities to expand overall parking supply for the area and update informational materials to help inform potential customers of available parking resources.

Mobile Technology

Incorporating the same equipment and mobile payment option throughout the area creates a uniform parking and enforcement environment. The Chattanooga Parking Authority currently uses the ParkMobile payment system. The benefits to neighbors and visitors include less frustration and a more pleasurable parking experience in the public and private sectors.

GREENWAY

The proposed extension of the University of Tennessee at Chattanooga Greenway would connect the existing greenway through campus with the Tennessee Riverwalk along the route proposed when the greenway was originally constructed. This connection was not built in the past due to a lack of funding.

This extension (Figure 1-13) would provide a more direct and safe connection for greenway users than the current connector, which follows existing sidewalks along 5th Street. The extension is proposed as a multi-use path consistent with the current greenway design, which consists of an eight– to ten–foot wide concrete path, signage, lighting and landscaping.

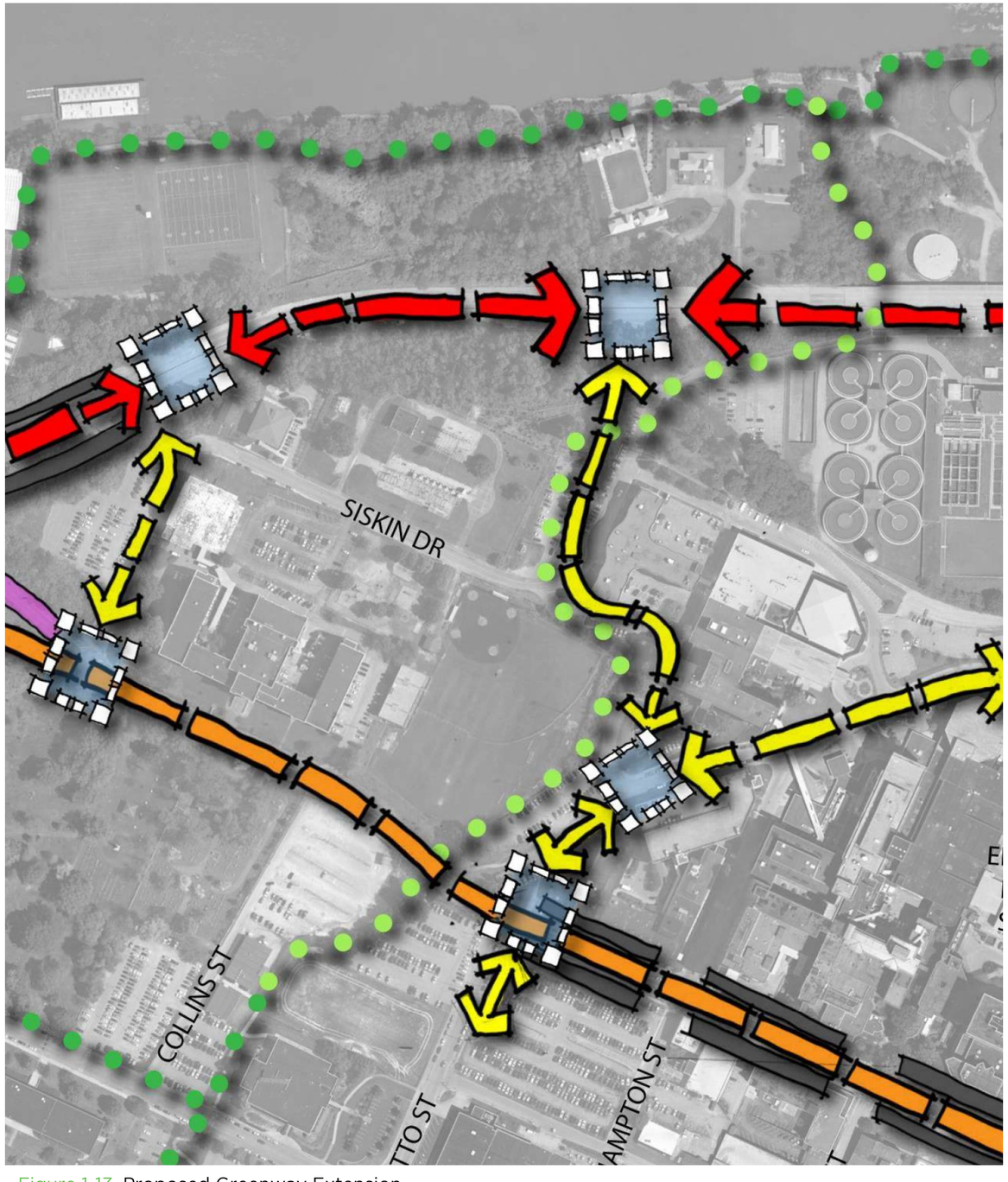

Figure 1-13. Proposed Greenway Extension

EXECUTIVE SUMMARY

WAYFINDING

A recommendation of this masterplan is the development and implementation of a city-wide wayfinding system compliant with the MUTCD standards for community wayfinding signs for motorists, pedestrians, and bicyclists.

To sign all of the appropriate destinations within an area and keep the amount of instruction and sign clutter to a minimum, only attractions and public service facilities that generate substantial public visitations should be eligible. Attraction eligibility requirements should be developed in conjunction with the wayfinding system. Within the context of this study corridor, wayfinding could be beneficial for the Siskin and Erlanger hospital district, the Chattanooga School for the Arts and Sciences, the University of Tennessee at Chattanooga, the Bluff View Arts District, and the Tennessee Riverwalk.