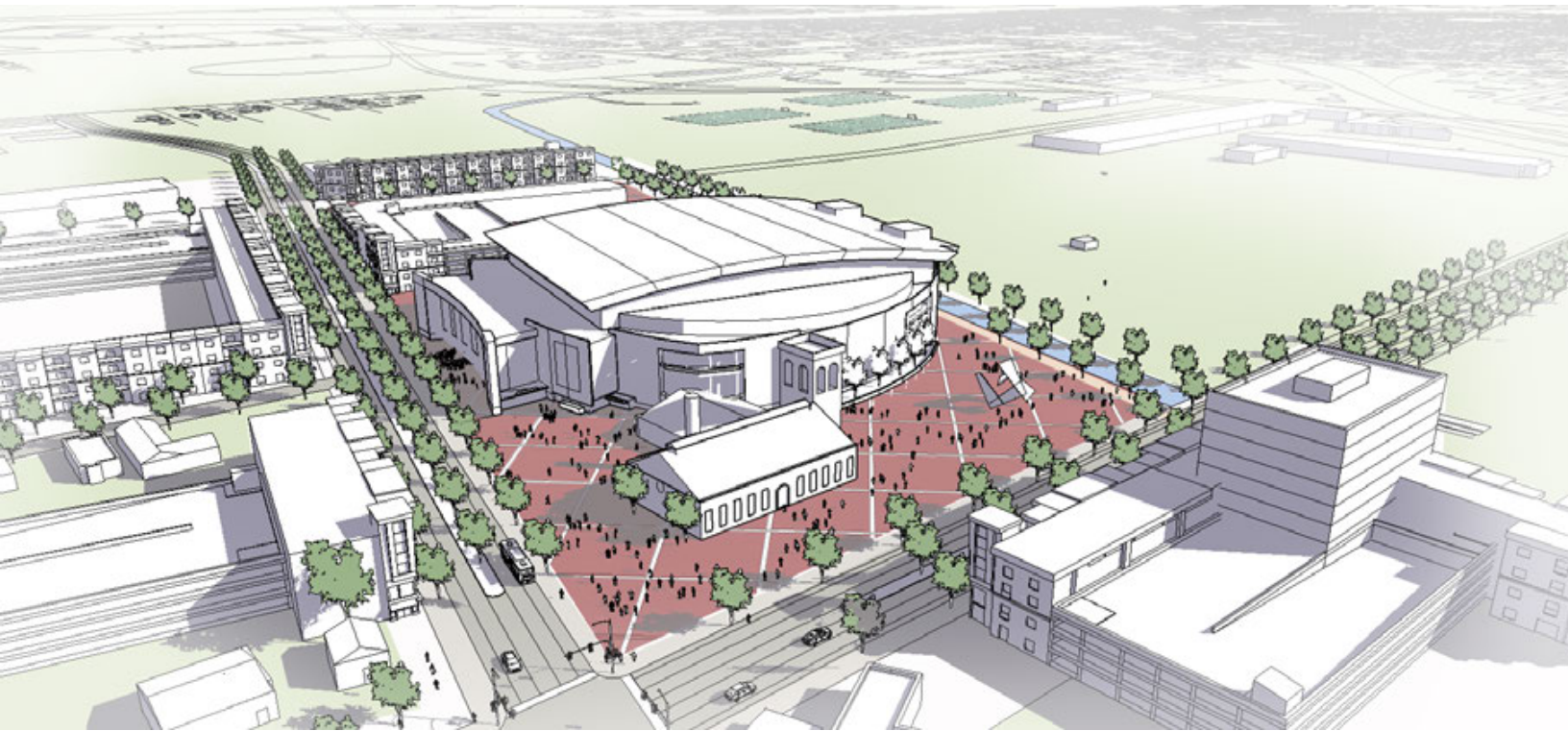


**CANAL DISTRICT MOBILITY AND TRANSPORTATION  
SUBCOMMITTEE REPORT**



**Prepared for**

**City of Savannah  
City Manager's Arena Committee**

**November 2015**





**Prepared for**

**Chatham County – Savannah Metropolitan Planning Commission  
Coastal Region Metropolitan Planning Organization  
110 East State Street  
Savannah, Georgia 31412**

**Prepared by**

**Jacobs  
10 Tenth Street NW, Suite 1400  
Atlanta, Georgia 30309**

The opinions, findings, and conclusions in this publication are those of the author(s) and those individuals are responsible for the facts and the accuracy of the data presented herein. The contents of this report do not necessarily reflect the views or policies of the Department of Transportation, State of Georgia, the Federal Highway Administration, or the Federal Transit Administration. This report does not constitute a standard, specification of regulation.

The Chatham County-Savannah Metropolitan Planning Commission (MPC) and Coastal Region Metropolitan Planning Organization (CORE MPO) are committed to the principle of affirmative action and prohibit discrimination against otherwise qualified persons on the basis of race, color, religion, national origin, age, physical or mental handicap, or disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program in its recruitment, employment, facility and program accessibility or services.

Prepared in cooperation with and funding from the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration and the Georgia Department of Transportation.

## TABLE OF CONTENTS

<b>1</b>	<b>Introduction</b> .....	<b>3</b>
1.1	Charge of Committee.....	3
1.2	Overview of members and participation.....	3
1.3	Committee Meeting History.....	4
1.4	Report Overview.....	7
<b>2</b>	<b>Roadway Access</b> .....	<b>8</b>
2.1	Regional Accessibility.....	8
2.2	Addressing Accessibility Issues.....	8
2.3	Event Traffic Management Policies.....	12
<b>3</b>	<b>Transit</b> .....	<b>14</b>
<b>4</b>	<b>Bicycle and Pedestrian Access</b> .....	<b>16</b>
4.1	Pedestrian Access and Proposed Facilities.....	16
4.2	Bicycle Access and Proposed Facilities.....	16
4.3	Walkable Character Districts.....	16
<b>5</b>	<b>Corridor Connectivity</b> .....	<b>21</b>
5.1	Oglethorpe Avenue Corridor.....	22
5.2	Liberty Street/Louisville Road Corridor.....	24
5.3	Cohen Street Corridor.....	26
5.4	Gwinnett Street Corridor.....	28
<b>6</b>	<b>Land Use Plan</b> .....	<b>30</b>
6.1	Canal Paths.....	30
6.1.1	Rustic and Rural.....	30
6.1.2	Paved and Urban.....	30
6.1.3	Developed.....	31
6.2	Pedestrian Underpasses as Gateways.....	32
6.2.1	Unlit Underpasses.....	32
6.2.2	Lit Underpasses.....	34
6.3	Arena Districts.....	35
6.4	Potential Land Uses in Savannah’s Canal District.....	37
6.5	Arena District Concept Layout.....	38
<b>7</b>	<b>Summary</b> .....	<b>47</b>

## TABLE OF FIGURES

Figure 2.1: Level of Service Description .....	8
Figure 2.2: Routes and Travel Times for Regional Access to the Arena Site.....	10
Figure 2.3: Level of Service along Regional Routes, 2040, and Proposed Improvements .....	11
Figure 3.1: Proposed Circulator Route .....	15
Figure 4.1: Existing Bicycle and Pedestrian Access and Pedestrian Trip Times.....	18
Figure 4.2: Proposed Bicycle and Pedestrian Facilities for Arena Access .....	19
Figure 4.3: Walkable Character Districts.....	20
Figure 5.1: Connectivity Corridors .....	21
Figure 5.2: Oglethorpe to Boundary or Canal Corridor.....	23
Figure 5.3: Liberty-Louisville Corridor .....	25
Figure 5.4: Cohen Street (With Proposed Extension).....	27
Figure 5.5: Gwinnett Street Corridor .....	29
Figure 6.1: Arena-Area Layout Concept.....	39
Figure 6.2: Rendering of the Potential Arena .....	40
Figure 6.3: Arena Street Framework.....	41
Figure 6.4: Arena District Aerial .....	42
Figure 6.5: Arena Walking Districts .....	43
Figure 6.6: Arena Context.....	44
Figure 6.7: Arena Parks and Trail.....	45
Figure 6.8: Arena Land Use Concept Plan .....	46

## 1 Introduction

### 1.1 Charge of Committee

The Canal District Committee reports to the City Manager of Savannah, and is charged with assisting in creating a vibrant new center of activity in the Canal District around the site of the proposed arena. The Mobility and Transportation Subcommittee is charged with addressing the various forms of transportation connecting the proposed arena and the Canal District with downtown Savannah and the Historic District. They also offer general assistance on matters of mobility and transportation. The subcommittee's work includes:

- Pedestrian walkways
- Bicycle paths
- Public transportation
- Accessibility to major roadways (I-16, I-95 and others)
- Parking
- Traffic
- Urban design
- Land use

### 1.2 Overview of members and participation

The committee is comprised of the following members/invitees:

- Tom Thomson, MPC, Chair of the Subcommittee
- Charles McMillan, Facilitator
- Dr. (Pastor) C. Brown
- Curtis Cooper, Cloverdale
- Earline Davis, HAS
- Wayne Dawson, Fair Housing
- Shawn Emerson, Mobility & Parking, COS
- Ellen Harris, MPC
- NickHelmholdt, CAT
- Monifa Johnson, HAS
- Willa Johnson, LeedsGate
- Katie Joyner, DNA
- Kevin Klinkenberg, SDRA
- Paula Kreissler, Healthy Savannah
- Marcus Lotson, MPC
- Larry McCloud, At-large
- Veleeta McDonald, Mobility and Parking, City of Savannah, COS
- Vanessa Miller-Kaigler, SCCPSS
- Leighton Reed, Metro South Railroad & Tatemville
- Ramond Robinson, CAT
- Josey Sheppard, Carver Village
- William Stewart, CAT
- Emma Washington, Traffic Engineering, COS
- Mike Weiner, Traffic Engineering, COS
- Mark Wilkes, MPC
- Katherine Williams, SDRA

COS	City of Savannah
CAT	Chatham Area Transit
DNA	Downtown Neighborhood Assn.
HAS	Housing Authority of Savannah
MPC	Chatham-Savannah Metropolitan Planning Commission
SCCPSS	Savannah Chatham Schools
Fair Housing	Savannah Chatham Fair Housing Council
SDRA	Savannah Downtown Renewal Authority

### **1.3 Committee Meeting History**

The committee began meeting in October 2014. The first effort was acquiring input from the MPC staff.

#### **September 11, 2014-MPC Brainstorming Session**

MPC staff was briefed on the Canal District concept and asked to provide ideas for goals, categories to consider, and other information to develop an approach to study the district. Goals included:

- Public safety
- Accessibility and connectivity to the downtown core
- Listening to the surrounding community
- Opportunities for public and private development
- Creation of jobs and mixed-use and work force housing
- Protection of historic resources
- Utilization of cultural resources and existing green space
- Creation of a potential gateway district

#### **October 9, 2014**

This initial meeting reviewed the scope, the MPC staff brainstorming information, and the subcommittee's suggested components. Members identified the on-going and recent studies or projects in or near the Canal District and in a brainstorming session indicated concerns or areas to address. Ongoing or related studies included:

- Arena Traffic Impact Study
- City 'Site Plan' for Arena
- Parking Structures and SCAD
- Gwinnett Road Improvements
- TIGER Streetcar Initiation
- Non-Motorized Transportation Plan

#### **October 17, 2014**

The subcommittee determined it would coordinate with the Communication, Business and Greenway Subcommittees. A draft scope outline was reviewed for the work plan of the committee. This discussion included definition of the study area, data needs, looking at other cities that have built an arena, environmental issues, traffic impacts and mobility (including various modes) and connectivity. Land use and urban design were also included.

#### **November 19, 2014**

In two groups, members discussed mobility and transportation concepts using a regional aerial map and a map focused on the downtown and Canal District area. The subcommittee considered connectivity and access, land use, and transportation across all modes.

#### **May 4, 2015**

The subcommittee discussed inventive ways of connecting to the arena site, creation of a zoning district of uses around the arena, restoration of historic uses and revitalization of nearby properties, challenges of site development, and traffic concerns associated with creating new east-west connections to serve the district and beyond.

#### **June 12, 2015**

The subcommittee discussed improving pedestrian access through creating new east-west connections and improving surrounding neighborhoods. They considered bicycle facilities, a water taxi, and bus access,

## Canal District Mobility and Transportation Subcommittee Report

including bus pick up and drop off areas, and exclusive bus lanes in and out of the site area. Automobile access concerns lead to the committee recommending improvements to Stiles Avenue. The subcommittee discussed responses to the community's concern and confusion over the arena plans.

### **July 16, 2015**

The subcommittee addressed adjacent land uses. The arena could function as an economic engine to increase land values, enhance desirability, induce private investment in the area, and provide more and better jobs. Land uses considered included a hotel, retail, neighborhood-oriented services like a drug store and a grocery. Transportation improvements discussed included roadway widening, refinements to the trail and bicycle network, removal of the I-16 flyover ramps to improve east-west street connections to the district, and transit routes including CAT event service and streetcar. Concerns included the ability of children to walk to school in the area, and other impacts to the existing residential area.

### **August 7, 2015**

At this meeting the subcommittee discussed and conducted a brainstorming session about the future land use plan, in particular focusing on the area on the west side of Stiles Avenue adjacent to the Arena site. The goal of the discussion was to address trying to link downtown into a westerly direction as well as east direction from the Arena. Recent developments on the west side of MLK Blvd include hotels, parking garage, CAT bus station, SCAD dorms and retail. In the land use plan, it is recognized the area to be the downtown expansion; residential stays residential and the remaining area to become mixed use as the downtown and not stay industrial. The subcommittee considered this area an opportunity to locate a mixed use development next to the Arena and provide a neighborhood serving area to transition to the adjacent residential areas.

### **August 27, 2015 - Field Trip**

The subcommittee took a bus trip (bus and driver were provided by the city) to look at the four corridors identified for consideration:

- i. Gaston/Cohen extended (new road/trail) to the Arena site
- ii. Gwinnett to Stiles to the Arena site
- iii. Oglethorpe to the Canal to the Arena site
- iv. Liberty Street/Louisville Road to Canal to the Arena site

### **September 18, 2015**

This meeting reviewed the four corridors listed above examined in the field trip on August 27 and developed a Pro and Con List to evaluate them. Other conclusions or suggestions were:

- All four links should be considered
- Possible look at improving both sides of the canal and build a small gauge railroad like at Disney
- We need to make what we do attractive to get people to leave their cars at home, park in a remote lot and walk or use transit: or park downtown and use transit, walk or bike to the Arena
- Consider "Arena Event" routes and services including remote P=R lots
- Need to have Arena Event MOT plans and if possible exclusive bus routes in/out of the Arena drop off areas

**October 16, 2015**

This meeting briefly reviewed the notes from the Pros-Cons Exercise. Most of the meeting was about the preparation for Prepare for October 21 Meeting with the Arena Consultant. An outline of questions and presentation for Arena Consultant was prepared.

**October 21, 2015 - Barrett Sports Group Talking Points**

The Canal District Mobility and Transportation Committee is made up of members of the City of Savannah, Chatham Area Transit, Downtown Neighborhood Association, Housing Authority of Savannah, Chatham County –Savannah Metropolitan Planning Commission, Savannah Chatham County School System, Savannah-Chatham County Fair Housing Council, Savannah Downtown Renewal Authority and several neighborhood associations and residents. This is an outline of the discussion, which partially summarizes the committee’s work.

**Roadway**

- Arena would have good regional access (except South Carolina with limited river crossings)
- In the vicinity of the Arena some improvements will be needed to I-16 ramps, various intersections and other roadways. Gwinnett Street is programed for four-lanes
- An “Arena Event” maintenance of traffic plan will improve access before and after events (the MOT should include reserving an exclusive lane for public and private buses)

**Transit**

- Buses should have a designated bus drop-off and pick-up site within a short walk to the Arena entrance. Also a remote parking area should be designated for buses to wait during the event.
- Chatham Area Transit will provide “Arena Event” Services from remote lots and downtown

**Bicycle – Pedestrian**

- Our recommendation will be to provide high amenity (paved, landscaped and lit among other features) pedestrian and bicycle facilities between downtown and the arena.
- Four corridors are under consideration. The canal will be a major feature in these corridors. (See below for list of corridors)
- This connectivity will encourage arena patrons to use the entertainment venues and parking availability located in the Historic District
- Sufficient bicycle racks and a Bike Share Station should be provided very near the Arena
- Consider specially marked and lit pedestrian paths from nearby streets or parking areas to the Arena entrance
- Address adequate handicap parking and access in the design

**Other**

- The bicycle – pedestrian facility improvements will have utility and benefits beyond serving access to the arena. It will be an enhancement for all members of the community to walk, bike and enjoy toward a healthier lifestyle
- Corridors listed in order of preference/constructability
  1. Liberty Street/Louisville Road to Canal to the Arena site
  2. Gwinnett to Stiles/Canal to the Arena site
  3. Oglethorpe to the Canal to the Arena site (Option use Boundary from Oglethorpe to Louisville Road)
  4. Gaston/Cohen extended (new road/trail) to the Arena site



## Canal District Mobility and Transportation Subcommittee Report

**November 10, 2015**

This was the final meeting of the subcommittee before turning in its report. The committee reviewed a slide show and draft report and provided comments.

### **1.4 Report Overview**

This report addresses:

- Roadway access, including regional connectivity and access to the site and event traffic management strategies
- Transit access
- Bicycle and pedestrian access
- Character of the corridors that connect to the canal district
- Land uses, including land uses from other successful arena districts, potential land uses within the district, and renderings of the potential Canal District from Stiles Avenue.

## 2 Roadway Access

The subcommittee was charged with determining roadway accessibility to the site from locations across the region. This section identifies regional routes to the arena site and recommends projects and techniques to address areas of congestion that impede access to the arena.

### 2.1 Regional Accessibility

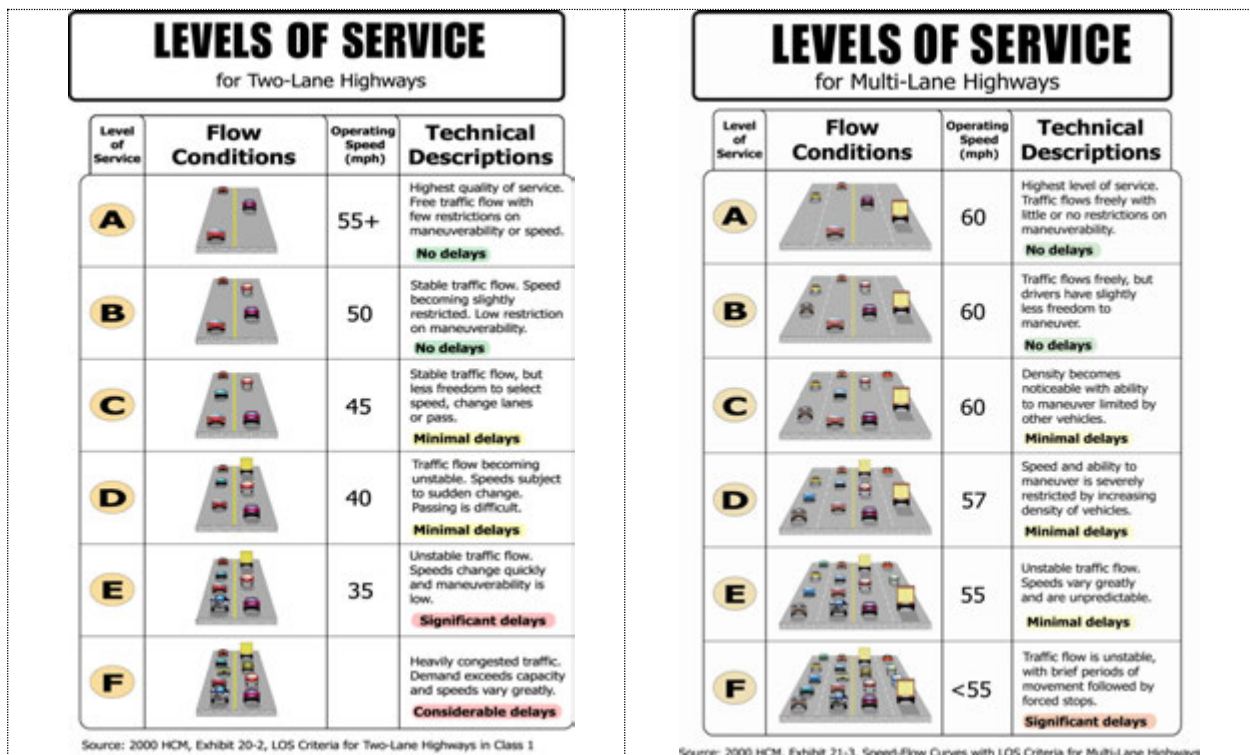
The various routes to the arena from Pooler, Richmond Hill, Skidaway Island, Tybee Island and South Carolina are mapped in **Figure 2.2**. As can be seen in this figure, Savannah has a wealth of interstates, state routes, and thoroughfares to carry regional traffic to the arena site. The site is within a 30 minute drive from Skidaway Island, Pooler, and Fort Wentworth. It is a slightly longer drive from Tybee Island.

### 2.2 Addressing Accessibility Issues

Level of service (LOS) is a standardized measure of congestion along roadway segments. It uses letter ratings from A to F to represent the amount of a given roadway’s capacity that is utilized along a roadway segment (**Figure 2.1**). By 2040, most regional routes to the canal district are projected to operate at LOS D or better according to the regional travel demand model (**Figure 2.3**). The region’s many interstate and thoroughfare options are more than sufficient to carry the additional trips an event would cause. Most issues of access are expected to arise in the vicinity of the site itself, where traffic level may exceed the limited capacity of the local street network. Therefore, the following roadway projects are recommended to support access to the arena and its surrounding district:

- Widening of Gwinnett Street to a four lane “complete street” and additional left turn storage from I-16 off-ramps.
- Widening of Stiles Avenue to a four lane “complete street”
- Extension of Cohen Street west

**Figure 2.1: Level of Service Description**



Gwinnett Street will function as the main roadway of access to the arena and associated parking. It is recommended that this facility be widened to four lanes to address projected vehicular traffic. The roadway should be constructed with in-street bicycle lanes and sidewalks on either side to support pedestrian and bicycle access to the facility as well.

Stiles Avenue will provide the only north-south vehicular connection in the area, and is projected to experience a lot of turning traffic in the vicinity of the arena. For these reasons, it should be widened to four lanes. The new roadway, like Gwinnett Street, should include bike lanes and sidewalks to provide pedestrian connections to and around the district.

Finally, Cohen Street should be extended west from its existing terminus at Boundary Street. If it is determined that the best function of the extended road is to improve east-west connectivity through the district between west and east Savannah, then the road should be constructed as a three or four-lane facility with sidewalks and bike lanes to accommodate all modes of travel to and within the district. If it is determined that the district would be better served by a new roadway that would serve only transit, pedestrians and bicycles, then it is possible that the new roadway would terminate at a turn-around just east of the canal.

**What are complete streets?**

“Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities.”

*National Complete Streets Coalition*

Figure 2.2: Routes and Travel Times for Regional Access to the Arena Site

Source: Regional travel demand model

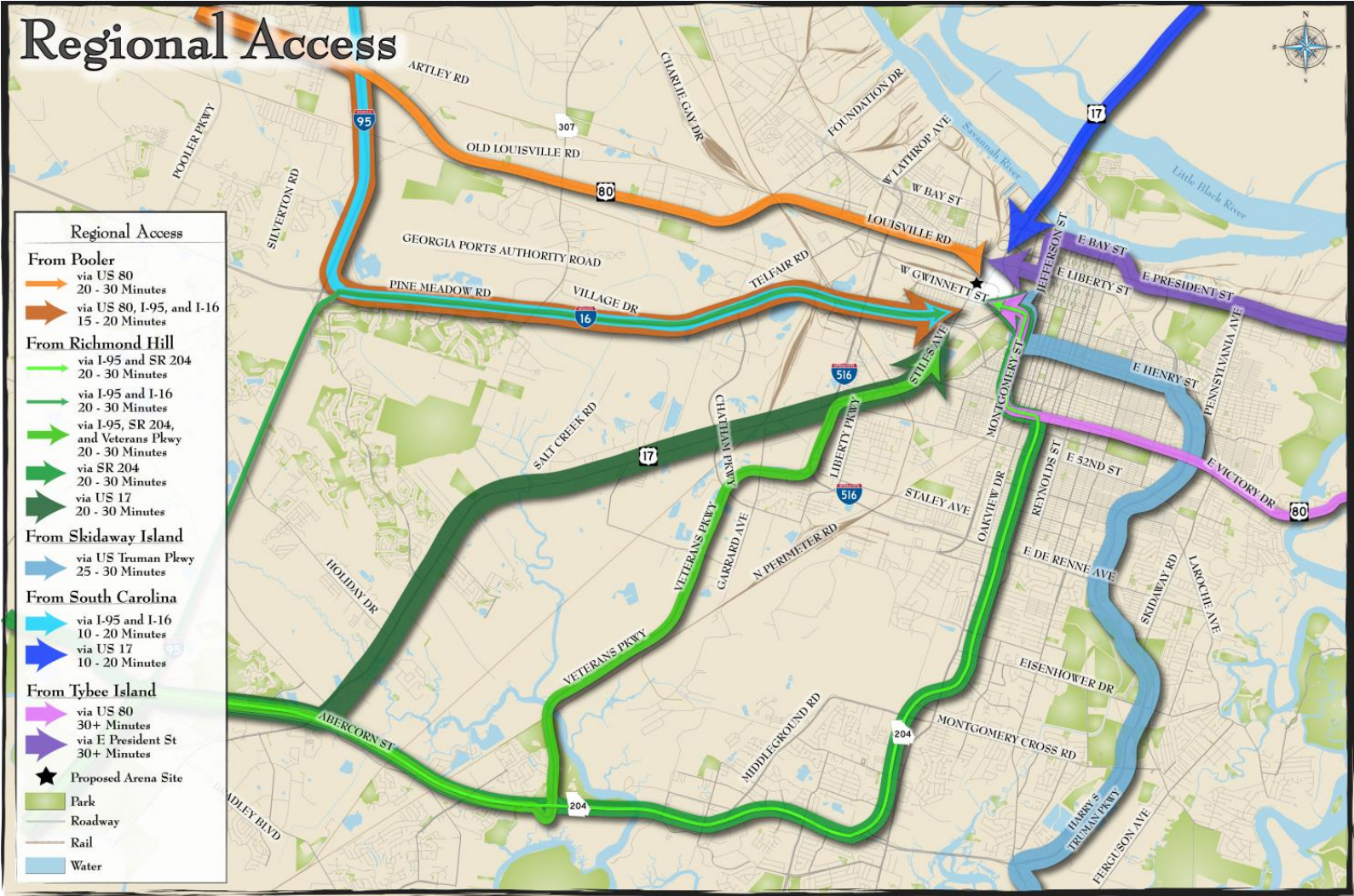


Figure 2.3: Level of Service along Regional Routes, 2040, and Proposed Improvements



Source: Regional travel demand model

### 2.3 Event Traffic Management Policies

The 2014 traffic study conducted for the arena site indicates that the parking planned for the arena site will address 60 percent of the parking needed for a sold out event. Event access for the other 40 percent of patrons should be provided through alternative modes, and possibly an additional parking site elsewhere in the district. The subcommittee's focus on transit, bicycle and pedestrian connections between the central downtown area and the Arena area was intended to make it more attractive for Arena patrons to utilize the ample parking supply downtown, which would more than make up for the parking deficit in the parking areas adjacent to the Arena. Additional parking is discussed further under Section 6.

The planned parking associated with the arena is currently sited on Gwinnett Street on either side of Stiles Avenue. Gwinnett Street will need improvements to carry the vehicle volumes that will utilize that facility to access the planned parking, as well as the off ramps at I-16 onto Gwinnett Street. According to the traffic study, traffic will be heavy enough from I-16 to the arena site via Gwinnett Street to support not just the widening of Gwinnett Street to four lanes but a triple left turn from I-16. Such a left turn configuration would not be compatible with a complete street roadway section and would be an undesirable outcome of too much traffic on one facility.

Whether or not the projects recommended in the traffic study are feasible or desirable, they reflect the capacity issues projected to occur along Gwinnett Street before and after events. This demand, however, can also be met to some degree with a stakeholder-vetted event traffic strategy. Such a strategy would include measures like the following:

**Additional/alternative travel routes:** In general, drivers will tend toward the most direct route to their traffic goal. However, as much as possible, distributing traffic over the entire supporting traffic network is the best way to reduce congestion on the most heavily-loaded roads. This re-routing can be done with the use of pre-event publicity (such as website use) or dynamic message boards.

As indicated in the September 2014 study, approximately 80% of event traffic is projected to access the arena site via the I-16 at the Gwinnett Street interchange. This bottleneck could be partially mitigated by exploring alternative travel routes, such as the I-516 at Gwinnett Street interchange, the I-16 Louisville interchange and the recommended extension of Cohen Street.

#### **Special lane configurations (via traffic cones) at critical intersections during peak times:**

A strategic plan may incorporate temporary capacity improvements, such as restricting a left turn at a critical intersection, the use of a shoulder as a travel lane or reversing the flow of traffic lanes to get additional ingress/egress capacity. These types of plans would be developed in advance. Plans include a layout of for placement of traffic cones and temporary signage at affected intersections as well as a schedule to transition the roadway through setup and breakdown of the traffic flow modification plan.

A site-specific traffic control plan for the arena would identify areas where temporary restrictions on lanes, or changes of flow direction, would be helpful for controlling event traffic. One potential problem location, according to the September 2014 study, is the single entrance point on Gwinnett Street, which is projected to have 1,739 entering right-turning vehicles during the event traffic. This heavy flow may require multiple lanes during event traffic to keep queues to a reasonable level, if the entrance point at that location can be made to accommodate multiple entry lanes.

**Contra flow lanes:** An advantage of implementing access road contraflow operation concerns the capability of handling two or more conflicting movements from a feeder intersection with proper channelization by temporarily converting the roadway to one-way flow. To use contra flow lanes effectively, the design of parking area access points should ensure accommodation of vehicles in all travel lanes. The possibility of contra flow lanes on Gwinnett Street should be explored if sufficient traffic cannot be re-routed elsewhere or parked off-site.

**Internal parking lot operations:** Transportation strategies can be applied to load and unload parking lots for event traffic in the most logical fashion. For some locations, this strategy includes phased opening and closing of various parking facilities. For most arenas with a parking lot structure, a circulation flow plan can reduce the internal circulation and congestion for internal parking lot operations. Parking decks are more limited in how their internal operations can be modified because of the strictures of the internal structure, but modifications for improved flow should still be investigated.

If possible, the parking area design should be such that there is no overlap for the pedestrian access route and parking area access point. Additionally, parking attendants should be trained to be aware of pedestrian traffic as well as vehicular traffic, to keep pedestrian safety equally in mind.

**Parking ingress/egress strategies:** Parking ingress/egress strategies include exploring the possibility of exits that can be used as entrances (and vice versa) for peak volume traffic. Other management plans include applying right-turn circulation plans and managing the order of lot fill-up through parking attendants.

The ingress/egress of the proposed parking deck and parking lots should be designed with the greatest flexibility for reversible operation possible, to allow for the most potential flow changes. Pedestrian crossings of parking area access points should also be reviewed during the design phase. Pedestrian activity will crest at the same time as demand for access and egress to parking area, so the pedestrian and automobile routes should be kept separate if possible.

**Signage (static message signs, variable message signs, GDOT CMS during large events):** Signage covers a wide range of usage. It includes internal markings within the parking area intended to speed driver identification of their vehicle location. It also includes guide signs, which direct traffic to the recommended major ingress/egress routes to major freeways and arterials. Missed turns result in both driver frustration and additional congestion, which negatively impacts the street network and the driver experience, so clear signage will support all other elements of the event strategy.

**Signal timing modifications:** Signal timing modifications are made to maximize capacity for unusual traffic patterns experienced during event traffic. In order to fine-tune these plans over time, traffic counts are periodically ordered during a typical event so signal timing plans and/or adjustment can be made for future events. The creation and maintenance of event signal timing plans are ongoing, iterative processes that are meant to support the effects of other transportation strategies. This element would be recommended for intersections impacted by event traffic that are not expected to be modified for altered traffic flow (other than restricted turn movements). The implementation of advanced traffic management systems and an expanded traffic management center would provide an important system for managing traffic during events.

**Police direction of traffic:** Police direction could be a productive part of the overall transportation strategy for Savannah, depending on other items selected for the overall approach. Event traffic often uses police direction for traffic control in the immediate area of the event by putting the traffic signals into flash operations and having the officer direct the traffic operations. Depending on the overall transportation strategy selected, this can be effective if the officer is trained for handling vehicle progression with heavy event traffic. However, there are several strategies (such as modifying traffic signal timing) where concurrent use of both that strategy element and police direction of traffic can be counterproductive. The overall transportation strategy plan should be cohesive with all elements working together to the same goal.

**Additional website information:** Travel information for these various transportation strategies can be disseminated to the public through a website associated with the event. The information can include such items as suggested travel routes (both vehicular and pedestrian), transit availability, off-site parking information, local neighborhoods with parking restrictions, and other relevant data. Making travel information available to the public prior to the event would be recommended for Savannah.

### 3 Transit

Transit trips to the proposed arena site are one technique for meeting event travel demand without overloading the local street network. Transit can help make connections for patrons from the downtown Savannah area, especially tourist traffic that may be attending the event as part of their vacation. There is also the potential for a park-and-ride off-site parking location with transit service to the arena. By moving a significant portion of the traffic demand to another area, this transportation strategy can also help reduce the local transportation impact and will also address the current projected shortfall in available parking.

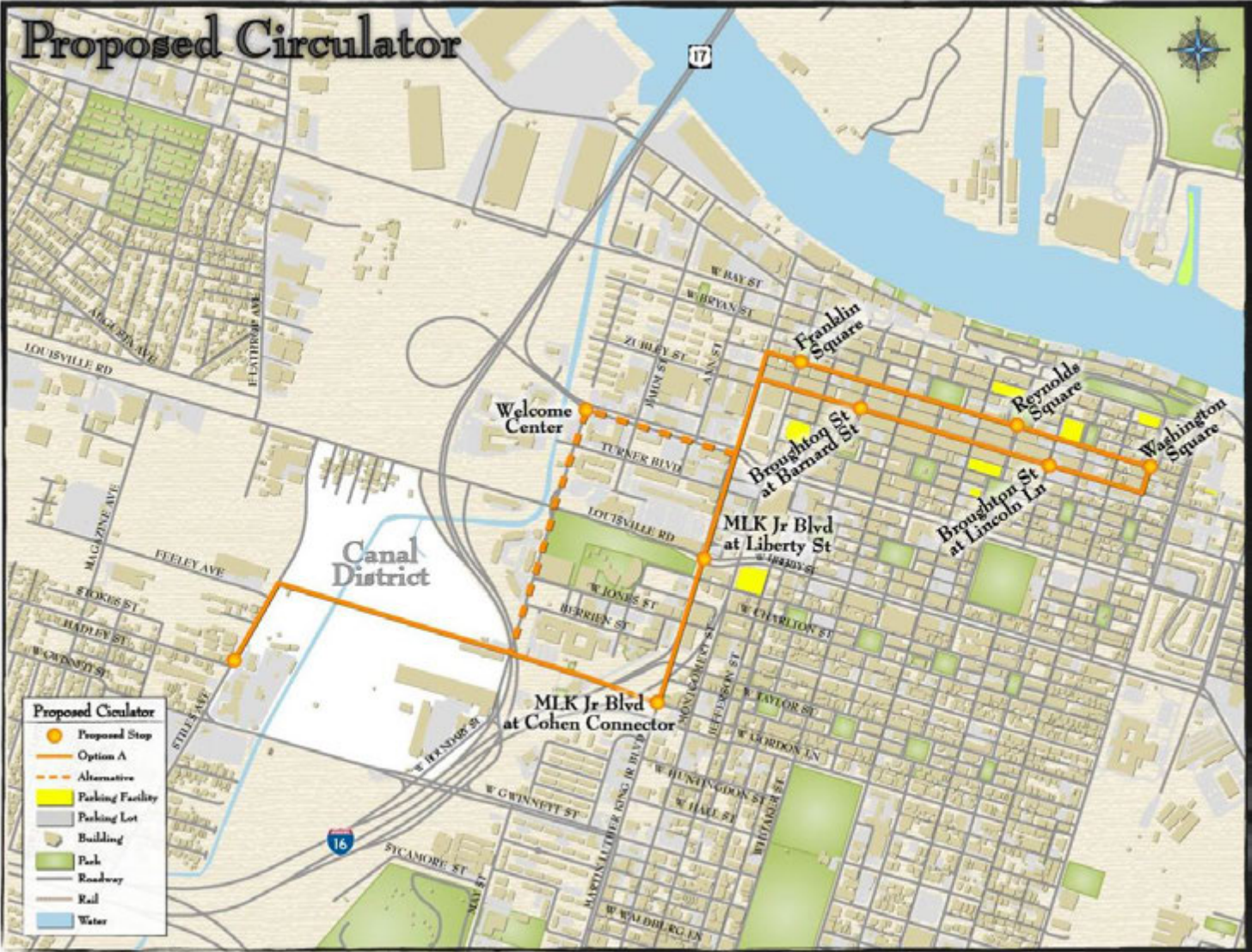
The trackless trolley or bus circulator proposed in **Figure 3.1** would create a convenient connection between Savannah's successful downtown to the proposed arena site. This arrangement would take advantage of the parking already available in the city's center. Under a business-supported model, trolleys or buses would even transport downtown patrons to the event, perhaps as part of a dinner package.

There would need to be a more substantial investment in transit service, however, for it to sufficiently address the need for alternative-mode access to the arena. Buses would need to operate at five-minute headways along this route for two hours before and after each event. This rough estimate is based on the information presented in the traffic memorandum, which states that there are approximately 2,275 parking spaces planned for the arena site. If each of the parked vehicles carried an average of 3 people, they would deliver a total 6,825 event-goers to the 11,500 seat arena. The remaining event goers, up to 4,675 of them, would need to be dropped off at the arena site, or take transit, bicycle, or walk to the event. Running 40 full buses (each with 55 people aboard) to the arena from downtown pre- and post-event would provide rides for 2,200 individuals. From that perspective, the business-supported model would likely provide an accessory use in a scenario in which more parking was provided in the arena district itself.

Under non-event conditions, a circulator trolley is proposed to provide a transit connection between the arena district and downtown. The proposed service would utilize three buses or trackless trolleys to run the proposed route at 12 minute headways. Nonevent service could run on a modified route that would avoid the arena by turning right on Boundary Street north to the Welcome Center and then continuing the loop.



Figure 3.1: Proposed Circulator Route



Source: Jacobs

## 4 Bicycle and Pedestrian Access

The City is planning to construct a Heritage Trail that would traverse the district alongside the canal. This improvement would cut trip time by these modes and create a vital and inviting bicycle and pedestrian link to the arena site, support a variety of uses in the district, and reduce the need to provide parking. The trail is also essential to creating pedestrian access along the Oglethorpe Avenue and Louisville Street character corridors discussed in Section 5.

### 4.1 Pedestrian Access and Proposed Facilities

Under current conditions, the walk to the arena site is approximately 30 minutes from Bay Street and MLK, as seen in **Figure 4.1**. With the proposed Heritage Trail, that walk would take half the time.

Greater pedestrian access to the arena and the greater district could be created with the extension of Cohen Street as a complete street, as depicted in **Figure 4.2**. If the Heritage Trail is constructed, Cohen Street could terminate either at Stiles Avenue to provide access to all vehicle types through the district – and provide additional connectivity between west and central Savannah. The new street could also terminate to the east of the canal, and if this is the case, it could be restricted to service to pedestrians, bicycles, and trolleys and buses during events. The Heritage Trail could provide a connection to the arena from a drop off location, with a separate point of entry for those who require ADA-compliant facilities.

### 4.2 Bicycle Access and Proposed Facilities

The Heritage Trail would be the primary bike-share corridor given the location of existing bike-share stations. The Cohen Street extension is intended to handle bicycle and pedestrian traffic as well. The installation of a new bike share station at the arena would be critical to bicycle circulation during events and at other times. There may be a need for an additional station at Forsyth Park as well. Travel times for bikes are much faster than for walking, and would help incentivize use of modes other than personal vehicles. There would need to be enough, safe bicycle parking at the arena for event-goers to choose this mode. There would also need to be sufficient room and separation between bicyclists and pedestrians along the Heritage Trail for all users to feel comfortable along the journey.

### 4.3 Walkable Character Districts

Pedestrians have concerns that are not shared by drivers and their passengers. They are more sensitive to the weather, topography, and the nature of their surroundings. So pedestrian facilities need to be inviting, provide comfort, and be perceived as safe. Pedestrians accessing the arena site need to know they can safely make the walk to the arena and back. The underpass options presented in section 6 show one means of creating a welcoming and safe atmosphere for pedestrians and bicyclists alike.

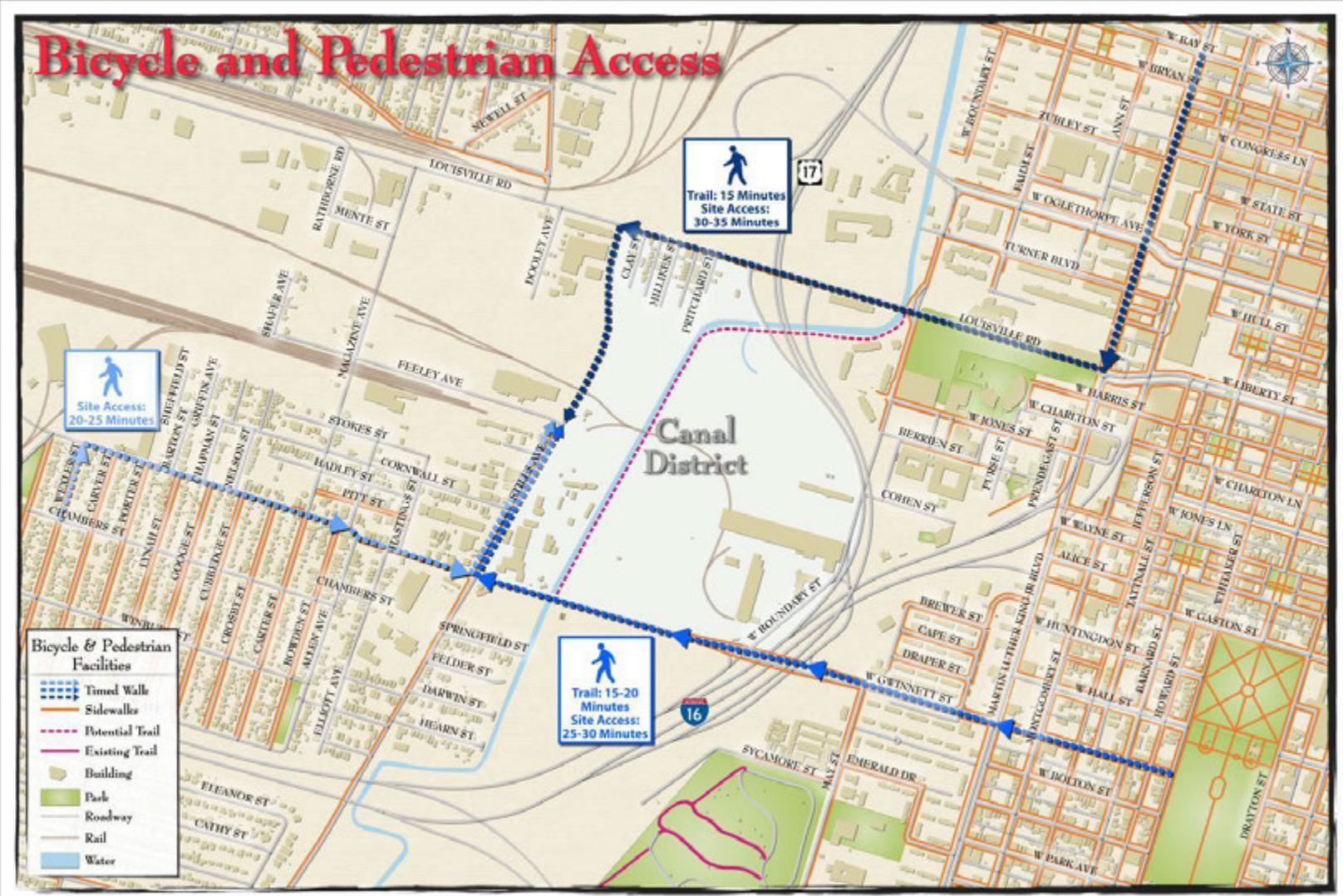
It may be helpful to conceive of the pedestrian journey to the arena site as passing through several overlapping walkable character districts (**Figure 4.3**):

- The **Arena District** is comprised of the area immediately surrounding the proposed arena.
- The **Carver Heights District** is based around the residential community to the west of Stiles Avenue.
- The **Park District** contains the parks proposed in preliminary arena site plans.
- The **SCAD District** is home to SCAD housing.
- The **Transit District** is based around the location of the CAT Intermodal Terminal.
- The **Kayton-Frazier District** encompasses the Herbert Kayton and Sim F. Frazier homes.
- The **Forsyth Park District** includes Forsyth Park and the established neighborhoods to its immediate west.

## Canal District Mobility and Transportation Subcommittee Report

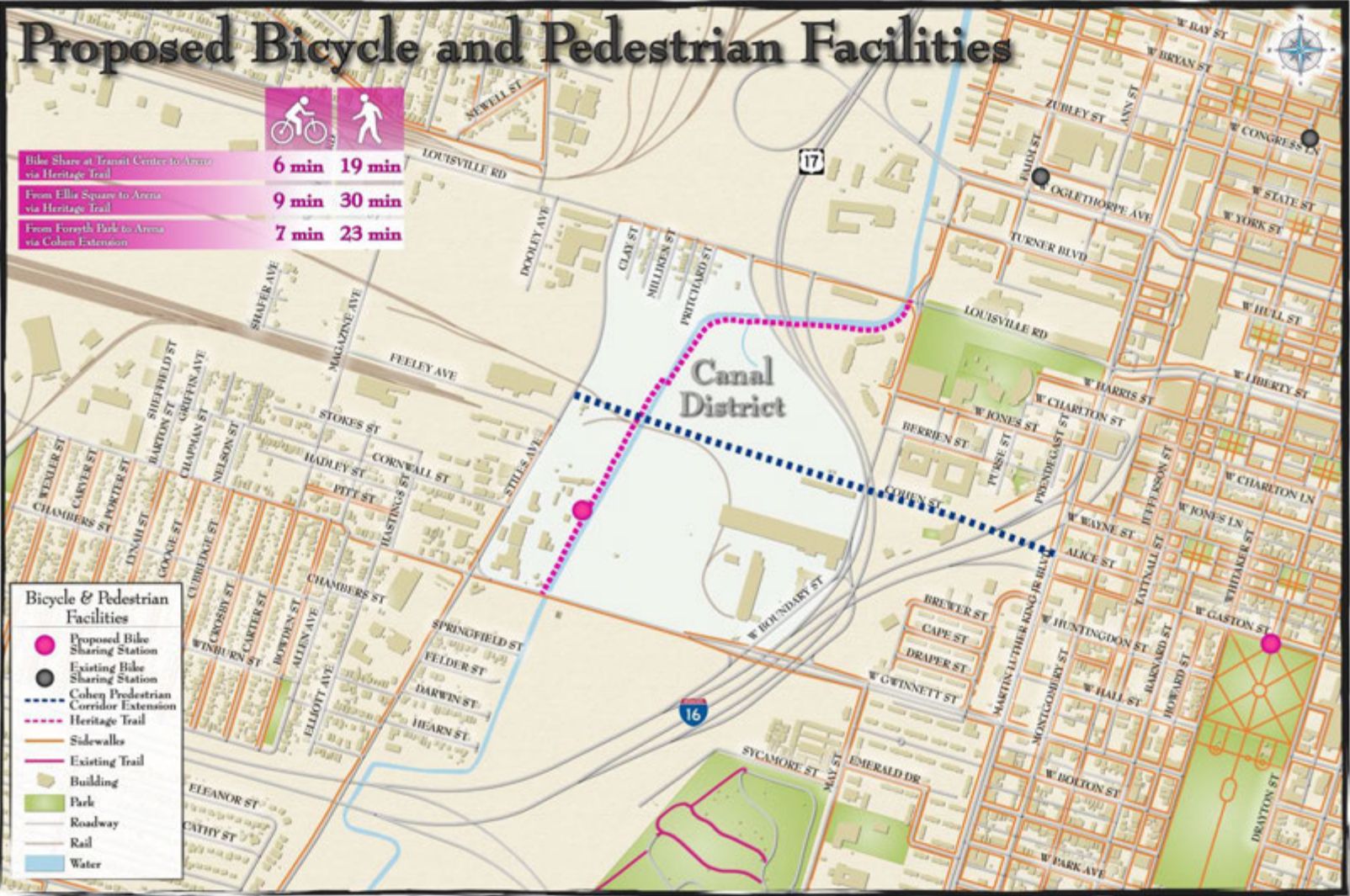
Each of these districts has a one-quarter mile radius. Planners generally assume that people are comfortable walking about a quarter mile between locations. People within any one of these walkable districts should feel comfortable walking within it, as well as along to the next district, to which it should seamlessly connect with sidewalks, a trail or other facilities. People within a district should feel as if they are in a place, with its own character and feel. For superlative pedestrian connectivity to the arena, the City should prioritize bicycle and pedestrian projects in the Non-Motorized Transportation Plan that are located in these districts.

Figure 4.1: Existing Bicycle and Pedestrian Access and Pedestrian Trip Times



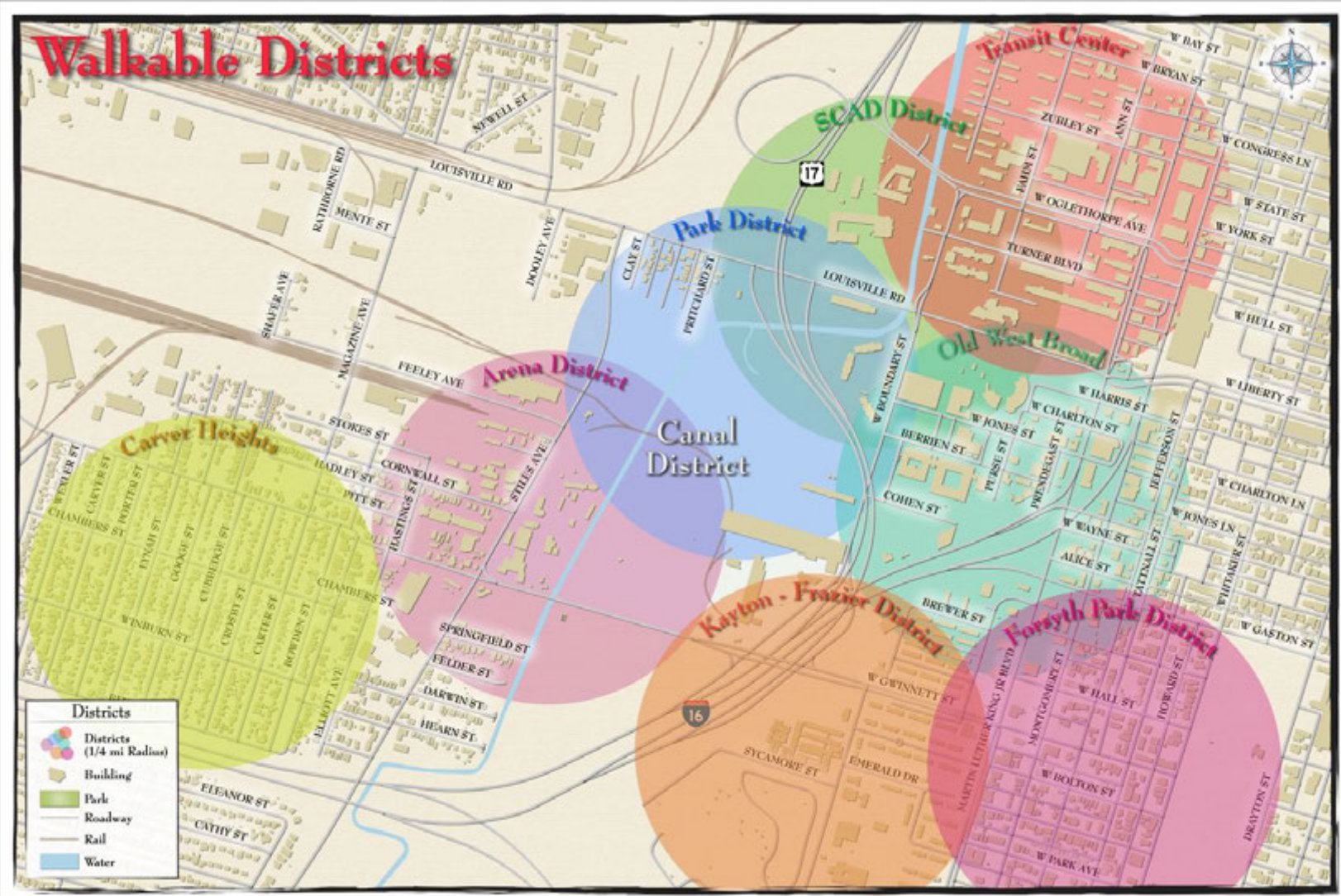
Source: Google Maps

Figure 4.2: Proposed Bicycle and Pedestrian Facilities for Arena Access



Source: Google Maps

Figure 4.3: Walkable Character Districts



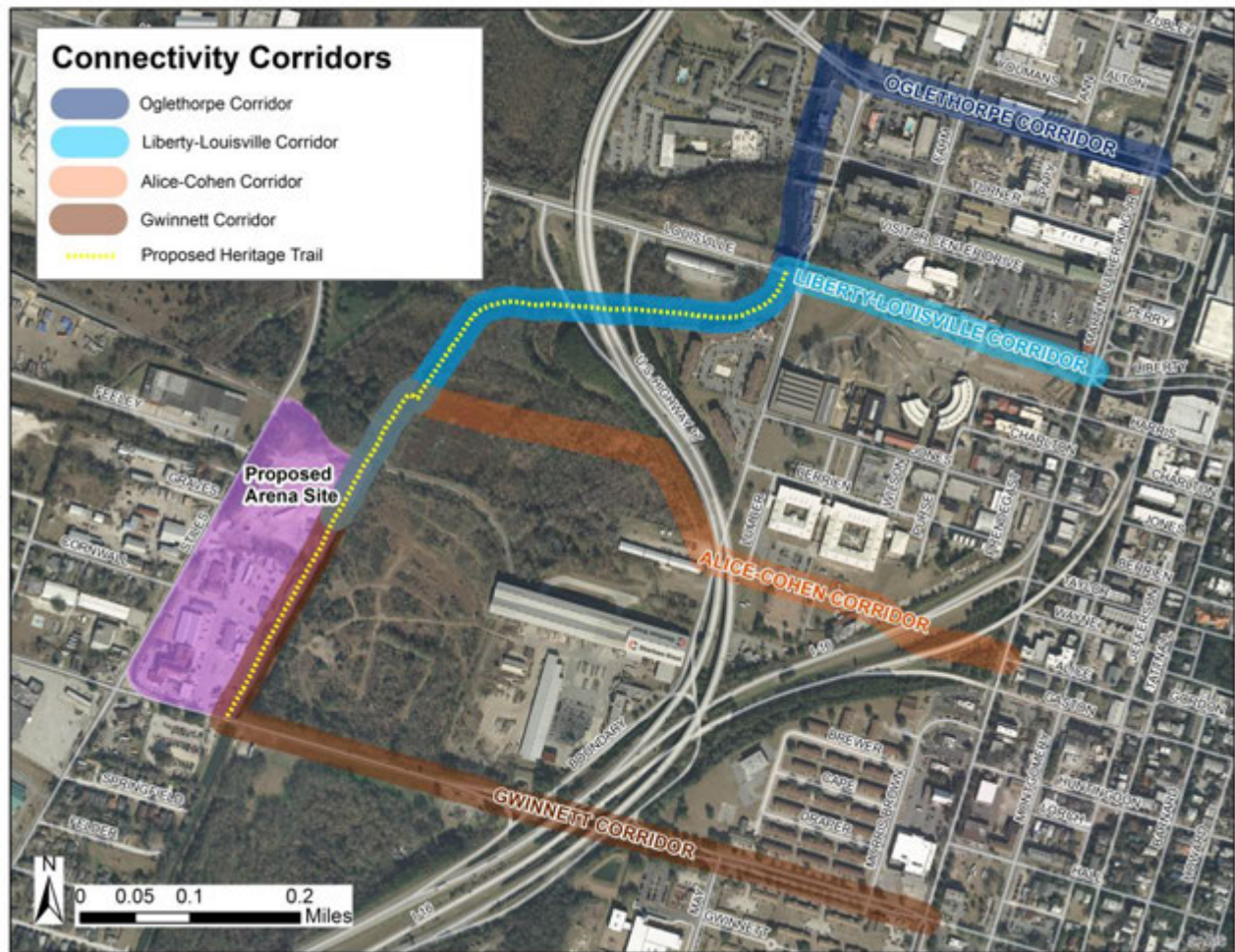
Source: Jacobs

## 5 Corridor Connectivity

The Mobility and Transportation Subcommittee identified four corridors that would provide crucial connections to the arena and Canal District (**Figure 5.1**). This section addresses the issues and opportunities of creating a corridor of character along each of the following alignments:

- Oglethorpe Avenue Corridor
- Louisville Street-Liberty Street Corridor
- Alice Street -Cohen Street Corridor
- Gwinnett Corridor

**Figure 5.1: Connectivity Corridors**



Source: Mobility and Transportation Subcommittee

### 5.1 Oglethorpe Avenue Corridor

The Oglethorpe Avenue Corridor begins at Martin Luther King, Jr., Boulevard in the east, continues west along Oglethorpe Avenue to either the Heritage Trail at the canal or to Boundary Street. It then follows one of those facilities south to Louisville Street, from where it would follow the Heritage Trail to the arena site. In terms of the walkable districts concept presented in Figure 4.3, this corridor connects the Transit Center District to the Arena District through the SCAD and Park Districts. Issues and opportunities associated with this corridor, called out in the map in **Figure 5.2**, include:

Issues:

- Boundary Street and the Heritage Trail both connect to Oglethorpe Avenue between the I-16/US 17 interchange ramps and the nearest traffic light at Fahm Street. This location currently has high volumes of high-speed traffic. The I-16 ramp removal study recommends the construction of a new northbound off-ramp and southbound on-ramp to this interchange, as described in the Interchange Modification Report (IMR). Those improvements would place even more traffic in this uncontrolled segment of the roadway, further negatively impacting pedestrian safety.
- Boundary Street serves pedestrian and bicycle traffic but lacks facilities for them. Improvements are impractical as Boundary Street is constrained by the historic viaducts under which it passes.

Opportunities:

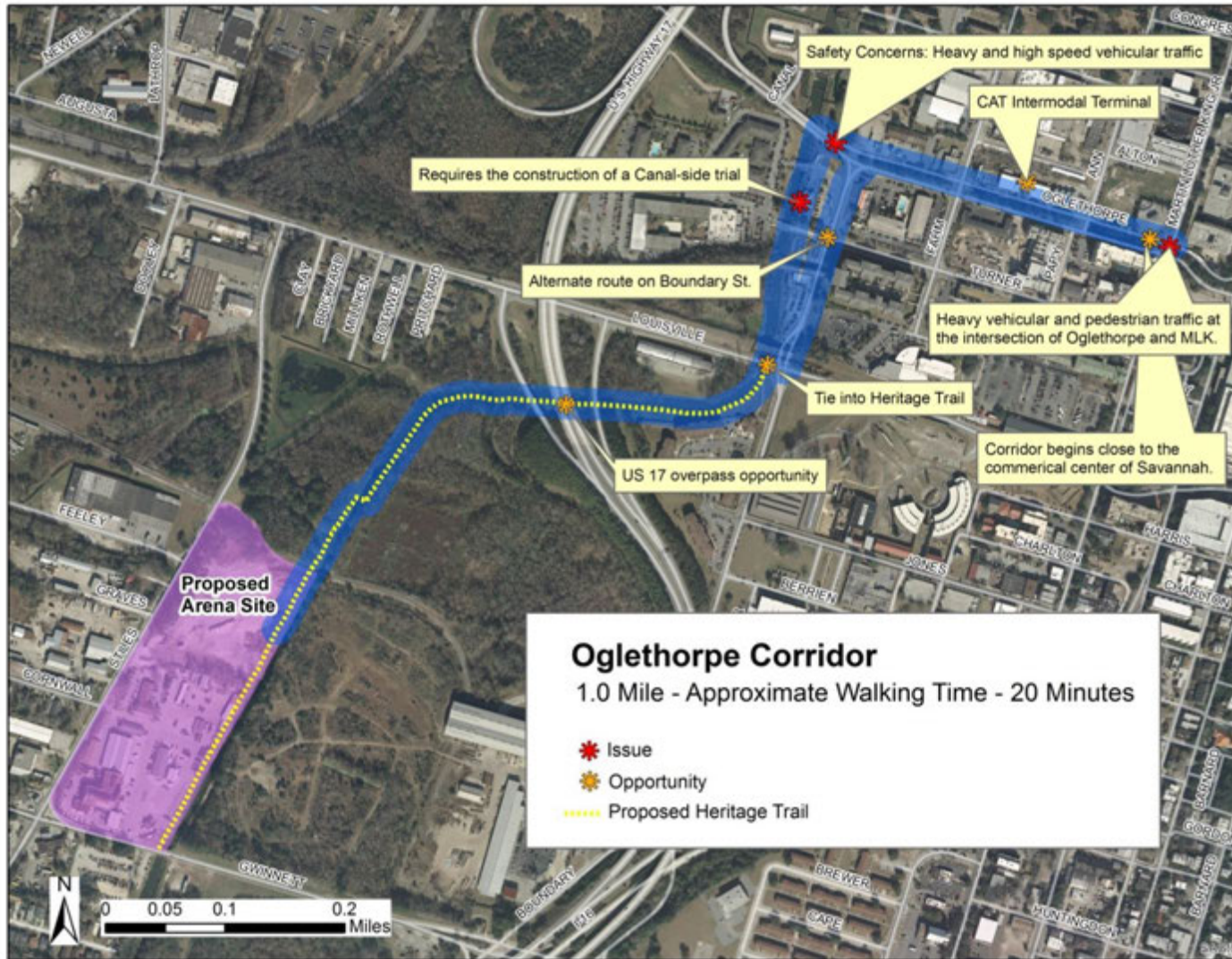
- As the northernmost corridor, Oglethorpe Avenue is the closest connection for tourists staying in hotels on and around Bay Street.
- Creation of a pedestrian gateway where the Heritage Trail passes under I-16/US 17 infrastructure and improved signage and wayfinding.



**Oglethorpe Avenue Corridor**  
Upper Left, trolleys on Oglethorpe Ave.  
Lower left, bicyclists on Boundary St.  
Right, pedestrians near Oglethorpe ramps.



Figure 5.2: Oglethorpe to Boundary or Canal Corridor



Source: Mobility and Transportation Subcommittee

## 5.2 Liberty Street/Louisville Road Corridor

The Liberty Street/Louisville Road begins at Martin Luther King, Jr., Boulevard, and continues west along Louisville Road to Boundary Street, where it turns south to follow the Heritage Trail to the arena site. This corridor would connect from the Old West Broad District to the Arena District through the Park District.

Issues and opportunities associated with this corridor, called out in the map in **Figure 5.3**, include:

Issues:

- Improvements to Louisville Street corridor are severely constrained by the presence of historic resources along either side of the facility. The constructability of the recommended walking paths away from the roadway is unknown at this time.

Opportunities:

- The same resources that constrain improvements make for an interesting walk and a lovely overall environment. The corridor has views of Revolutionary War earthworks and monument, the Georgia State Railroad Museum, historic viaducts, and historic buildings.
- Potential for reuse of the historic rail viaduct as a walking path away from traffic on Louisville Street.
- Potential for a walking path away from Louisville Street along the railroad museum property.
- Corridor terminates in the east at the Civic Center.
- Creation of a pedestrian gateway where the Heritage Trail passes under I-16/US 17 infrastructure.

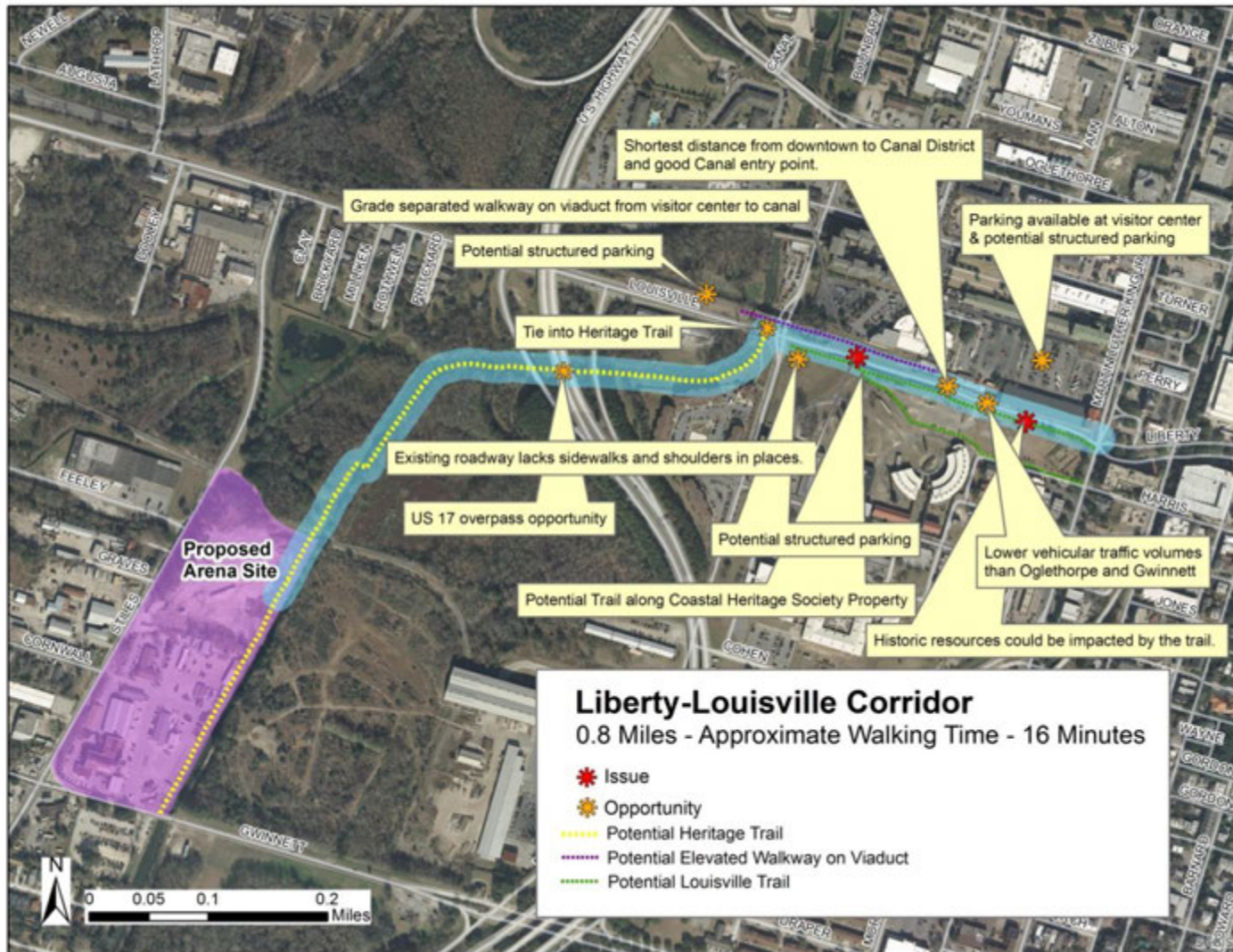


### Liberty Street Corridor

Upper Left, traffic on Louisville Rd.  
Lower left, transit near Louisville bridge.  
Right, existing canal conditions.



Figure 5.3: Liberty-Louisville Corridor



Source: Mobility and Transportation Subcommittee

### 5.3 Cohen Street Corridor

The Cohen Street Corridor is partly hypothetical at this moment. A connected east-west Cohen Street corridor would be created when the I-16 flyover ramps are removed and replaced with a local street network that emphasizes east-west connectivity. Under the local street network plans advanced by the I-16 IMR, Cohen Street would be extended east to connect to Alice Street at Martin Luther King, Jr., Boulevard. Westward extension of Cohen Street could be accomplished with or without ramp removal. While the ramps are in place, Cohen Street could be extended westward to create an additional east-west connection to the arena and Canal District from Boundary Street on the other side of the I-16 structure. However, without ramp removal, the corridor would be a less appealing and less useful option.

Under a ramp removal scenario, the Cohen Street Corridor would have its eastern terminus at Martin Luther King, Jr., Boulevard, and Alice Street in the east. From there, it would traverse along Cohen Street to the west, pass under the I-16/US 17 structure to Boundary Street, and continue west to the Heritage Trail. It would then follow the Heritage Trail south to the arena site. This corridor would connect from the Old West Broad District to the Arena District through the Park District. Issues and opportunities associated with this corridor, called out in the map in **Figure 5.4**, include:

Issues:

- Removal of the I-16 flyover ramps is ten or more years away. The need for connectivity to the arena site may be more pressing than this schedule can accommodate.
- The creative Coast owns the Creators’ Foundry property west of Boundary at the existing western terminus of Cohen Street. Impacts to this property may result from an extension of this street.

Opportunities:

- Pedestrian and bicycle facilities can be added to the design for the new segment of Cohen Street that would contribute to the overall look, feel, and brand of the Canal District.



**Cohen Street Corridor**

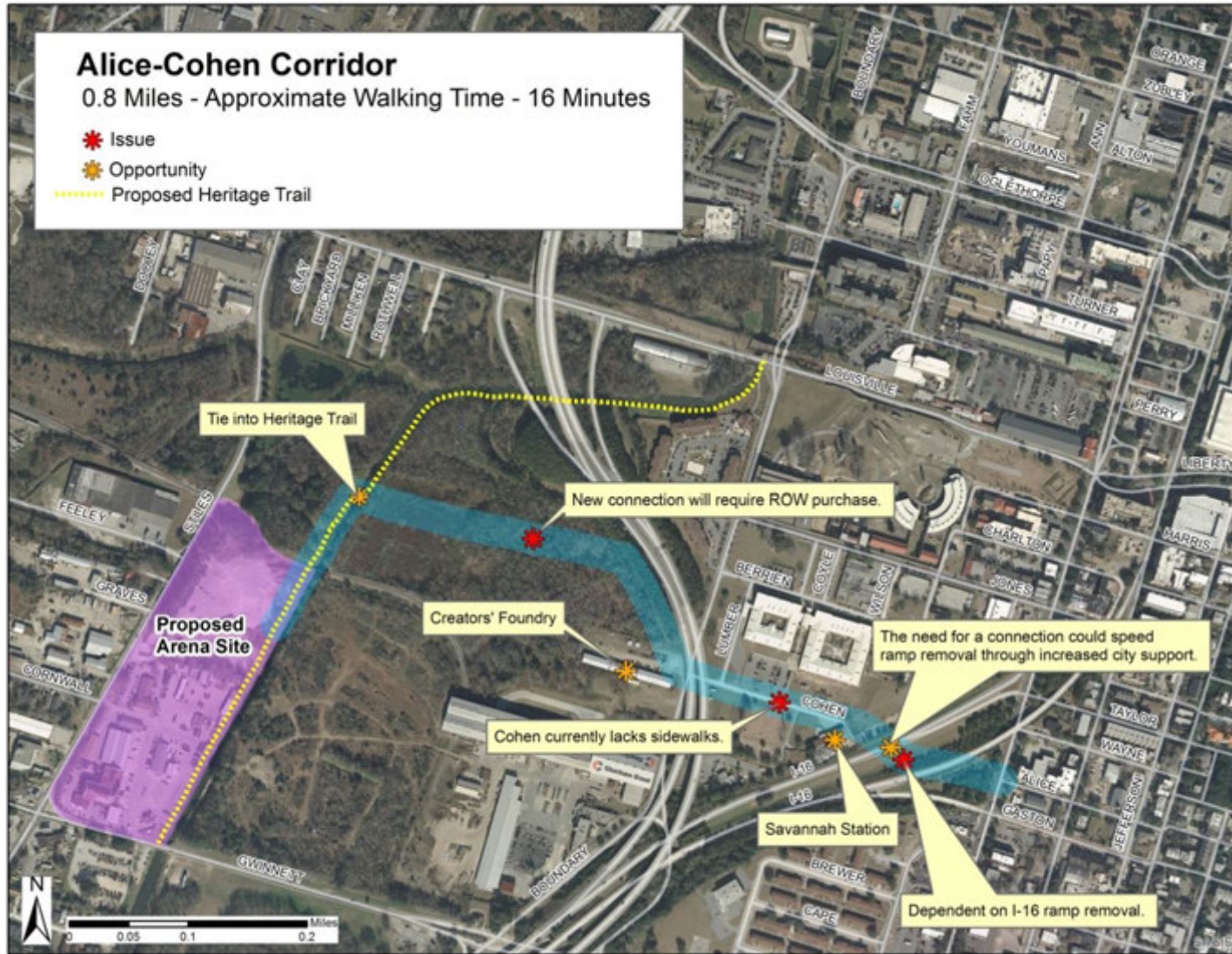
Upper left, parking at site of proposed Cohen St extension.

Lower left, Cohen St near I-16.

Right, near Cohen St corridor.



Figure 5.4: Cohen Street (With Proposed Extension)



Source: Mobility and Transportation Subcommittee

#### 5.4 Gwinnett Street Corridor

The Gwinnett Street Corridor follows Gwinnett Street from Martin Luther King, Jr., Boulevard in the west to the Heritage Trail in the east. It then follows the Heritage Trail north to the arena site. This corridor would connect from the Forsyth Park District and Kayton-Frazier District to the Arena District.

Issues and opportunities associated with this corridor, called out in the map in **Figure 5.5**, include:

Issues:

- Gwinnett Street is projected to carry the largest volumes of traffic to the arena during events, according to the traffic study prepared for the arena site.
- Gwinnett Street is the furthest south of all the corridors. It is unlikely to be the most convenient option for tourists staying in hotels on and around Bay Street.

Opportunities:

- Existing infrastructure in place for pedestrian traffic –does not rely on construction of a planned project to create a connection.
- As part of its proposed widening, Gwinnett Street could be reconstructed to include pedestrian and bicycle facilities as a complete street.
- Creation of a gateway for travelers of all modes at the I-16 underpass.
- Linking to established neighborhoods west of Forsyth Park would allow for local foot traffic to connect with and utilize the Canal District.



#### Gwinnett Street Corridor

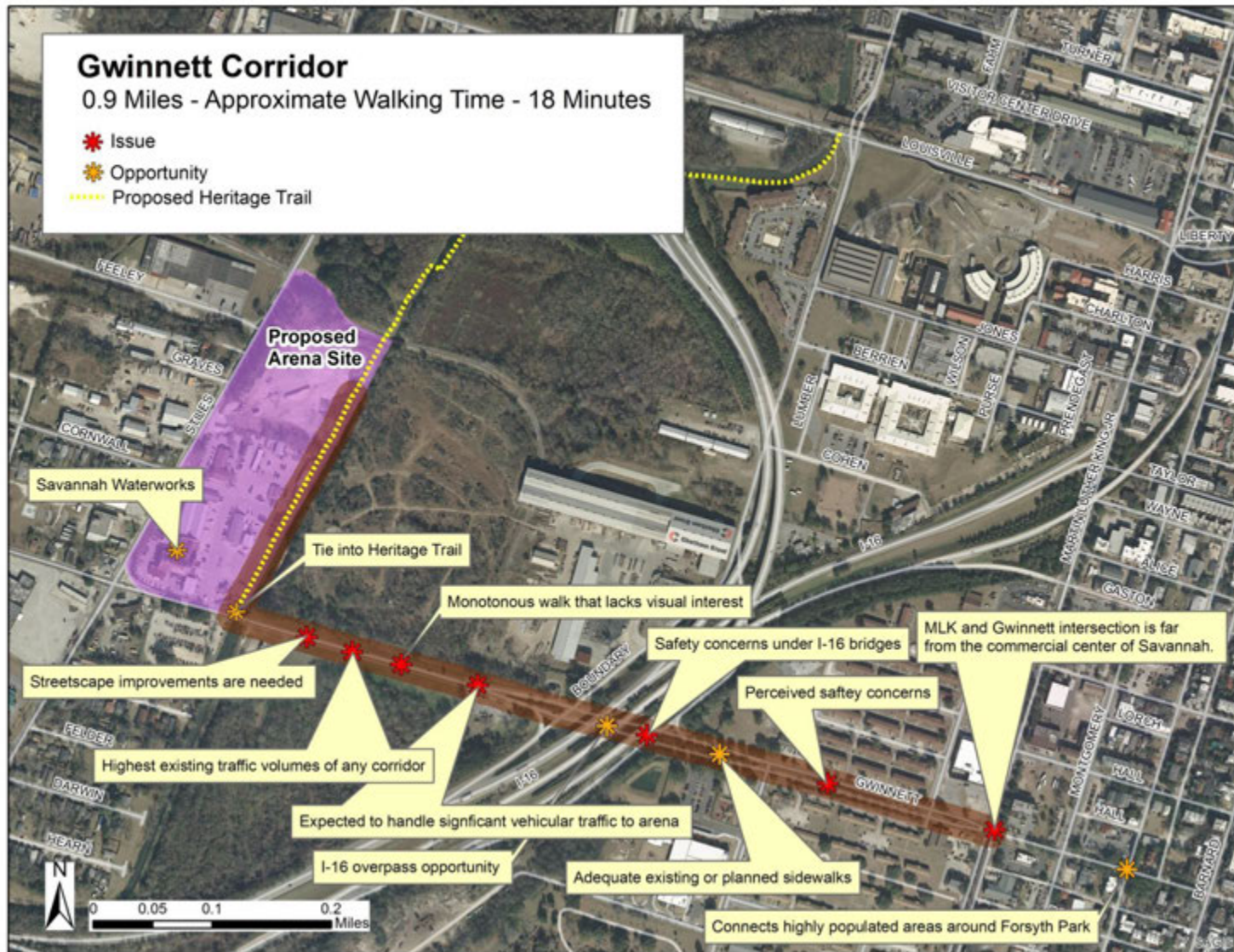
Upper left, Gwinnett Street approaching Stiles Ave.

Lower left, bicyclists on Gwinnett St.

Right, view of overpass along Gwinnett St.



Figure 5.5: Gwinnett Street Corridor



## 6 Land Use Plan

The Canal District’s character rests on the design of a couple of key elements, the arena and the Heritage Trail. There is also the opportunity to create a welcoming gateway to the district along the Heritage Trail or along Gwinnett Street using the existing I-16/US 17 infrastructure. This section presents the spectrum of design possibilities for those elements.

### 6.1 Canal Paths

Paths along canals, like the Heritage Trail, are used across the country to provide people with recreation in rural areas or in their own neighborhoods and cities. The manner in which these paths are constructed impacts their use and their function within the larger environment.

#### 6.1.1 Rustic and Rural



#### Rustic and Rural Canal Paths

- Upper right, Hennepin Canal Trail.
- Upper left, Erie Canalway trail.
- Lower left, Chesapeake and Ohio Canal Trail.
- Lower right, typical greenbelt trail.

Rustic, rural paths, often set along former towpaths, are closest in nature to the type of semi-developed path currently found along the alignment of the Heritage Trail. These options are ecologically sensitive, blend into their surroundings, are inexpensive, and provide a “back to nature” feel.

#### 6.1.2 Paved and Urban

In suburban and urban areas, hard surfaces allow for all-weather recreation. These paths offer an enjoyable view of a river or canal in the midst of a more developed area, and are inviting to runners, walkers, bicyclists, and families looking

to spend some time outdoors near home.



## Canal District Mobility and Transportation Subcommittee Report



**Paved and Urban Canal Paths**  
Upper right, Boise Greenbelt Park.  
Upper left, Brockport, NY trail.  
Lower left, Canal trail, PA.  
Lower right, Erie Canalway trail

### 6.1.3 *Developed*

In a few cases, canal paths provide the underpinning for a whole district of developed uses. San Antonio's River Walk and Bricktown in Oklahoma City are a couple examples of this type of redevelopment district. Sidewalks in these areas are used for walking and dining, and the role of recreation is diminished.



**Developed Canal Paths**  
Left and right, RiverWalk San Antonio, TX.

## 6.2 Pedestrian Underpasses as Gateways

People travelling to the arena site on foot along with the Heritage Trail or via Gwinnett Street or Cohen Street will travel under the I-16/US 17 structure. The treatment of this underpass has the potential to make this transition feel safe and provide a gateway to the district. Design options include unlit and lit versions.

### 6.2.1 Unlit Underpasses

Unlit underpasses suit recreational paths, providing a means of traversing under other infrastructure.



#### Unlit Underpasses

Upper, typical unlit underpass.

Lower, underpass at University of Colorado, Boulder.

## Canal District Mobility and Transportation Subcommittee Report



### **Unlit Underpasses**

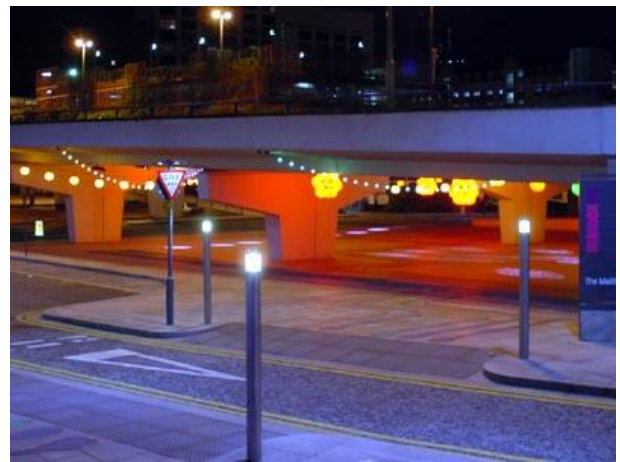
Upper, Telford, UK pedestrian underpass.

Lower, Willis Ave underpass, New York City.



### 6.2.2 Lit Underpasses

Lit underpasses are more expensive, but they also create a safer place while lending a sense of drama to old infrastructure.



#### Lit Underpasses

Upper left, lit underpass Hoboken, NJ.

Lower left, Starry Night Underpass, South Boston.

Upper right, typical lit underpass rendering.

Middle right, lit underpass, Birmingham, UK.

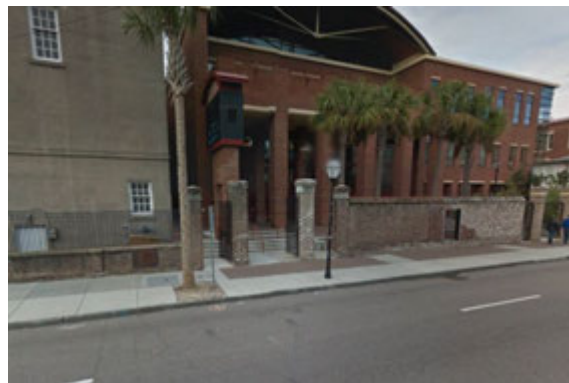
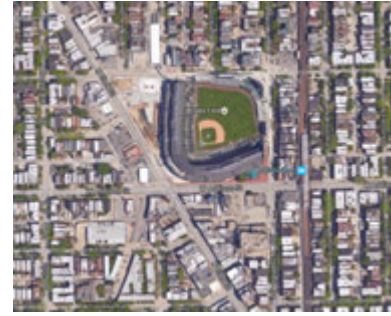
Lower right, Cumberland underpass, Scotland.

### 6.3 Arena Districts

Arenas, on their own, are not guaranteed to add value to an area, become a destination, or recoup the costs of public investment needed to establish them. Instead, the creation of a district rooted in an arena is dependent on the interplay of land uses it offers.

Iconic stadiums like Wrigley Field in Chicago and Fenway Park in Boston address the sidewalk, are located in neighborhood settings with small blocks, and are accessible by a variety of modes.

**Stadium Districts**  
Upper, Wrigley Field, Chicago.  
Lower, TD Arena, Charleston, SC.



These characteristics are shared by successful arenas in smaller locales as well. The TD Arena in Charleston, South Carolina, seats 5,100 and blends into other street-front development.

## Canal District Mobility and Transportation Subcommittee Report

Columbus, Ohio, offers an inspirational example of district-making. The Arena District there sits on 95 acres, 22 of which were brownfield and the former site of the old Ohio State Penitentiary.

Today, the 18,500 to 20,000 seat Nationwide Arena underpins the Arena District, which is also home to a 10,000-spectator capacity ball park, indoor outdoor concert pavilion, 11-auditorium theater, parks, retail, dining, office and residential.

### **Stadium Districts**

Columbus, OH Nationwide Arena District.



#### 6.4 Potential Land Uses in Savannah's Canal District

The arena, on its own, would lack the emotional and economic power of a well-thought-out district that results from planning and place-making. The renderings presented in this section consider the arena in terms of its setting, a series of coordinated land uses, which includes uses that complement the hustle and bustle of the arena, as well as those that serve as a buffer between the arena and the existing community to the west. The proposed district would take a scalable approach to design, which would allow the size of development to ramp up or down from one area to the next, depending on the location within the district and the intended use. In this manner, the district could house community-oriented commercial, like drugstores, grocery, and dry cleaners facing west and, facing east, arena-oriented commercial, including restaurants, even class-A office space with a view of the downtown (**Figure 6.1**).

The district as proposed would be tied together by a consistent look and feel. That design aesthetic would be based on focal points designed to draw in visitors' attention. The 122-year old Waterworks building would be incorporated into the site plan, and elements of its design would be repeated in the architecture of the district's buildings and signage. The building could be reused and converted into a gourmet food hall to serve as a centerpiece of the district. The corner of Gwinnett Street and Stiles Avenue, as seen in **Figure 6.2**, reflects this overall character of the district, and would function as the southern gateway to the district and the primary gateways for visitors coming by automobile. Thoughtful design and detailed execution will make the district welcoming to visitors during events and other times alike.

Savannah Waterworks Building



The district would also feel like an extension of Savannah due to its underpinning of small blocks. Small blocks, the result of a local grid street network would be constructed in the district to support its walk- and bike-ability as well as a variety of reusable building developments. On-street parking should be provided on local roadways in the district to make non-event access to these land uses convenient and desirable.

In addition to the land uses shown in this drawing, additional parking may be needed to support the arena and the greater canal district. An additional parking deck, if constructed, should be accessed via Louisville Street to the north of the area or the proposed Cohen Street Extension to its east. These locations would incentivize roadway access to the arena during events from these alternative routes and avoid placing additional demand on Gwinnett Street. Additional parking, if it is strategically placed, would contribute to a vibrant district. Placing a parking deck a few minutes' walk away from the arena would get people out and walking on the district's local street network, instead of just using the parking deck and leaving without ever seeing the rest of what the district has to offer.

## 6.5 Arena District Concept Layout

Given the conditions and opportunities investigated throughout this report, a Savannah Arena District Concept Layout can be prepared. This concept includes a rendering of the arena, a district land use concept plan, a proposed street framework, and a parks and trails layout. These are unconstrained concepts that rely solely on information gathered for this report and best practices in arena district design. **Figure 6.1** presents the concept and all associated figures.

**Figure 6.2** shows a rendering of the proposed arena. This design incorporates the existing historic waterworks building located at the site, repurposing it as a gourmet food hall and market. This development would serve as a local and regional attraction even during non-operating times for the larger arena facility. This type of adaptive reuse promotes use of the Arena District for a variety of recreational and business purposes that expand its role as a regional event center. The rendering also displays basic concepts of potential adjacent uses, including mixed use residential and retail developments with short setbacks and a focus on interface with the street.

**Figure 6.3** displays a proposed street framework. The district is designed to make use of existing transportation assets whenever possible and to integrate into the existing roadway network. Therefore, the existing roadways at Stiles Avenue, Gwinnett Street, and Louisville Road serve as the primary corridors. A new roadway connection is proposed from existing Cohen Street in downtown Savannah to Feeley Avenue. This connection serves to enhance connectivity and open the district to denser, urban development patterns. The Cohen Street extension is intended to serve low speed traffic, shuttle buses, pedestrians, and bicyclists, while Gwinnett and Louisville handle higher volumes of vehicular traffic.

**Figure 6.4** displays an aerial image of the Arena District as it exists today. Current city-owned parcels are indicated to show the core of the proposed redevelopment area. Much of the city-owned land is vacant or home to storage and parking areas for municipal vehicles and equipment.

**Figure 6.5** displays walking districts in the proposed development area. These walking districts are centered on primary local activity centers such as the proposed arena, the proposed park area, and Forsyth Park. Each district is  $\frac{1}{4}$  mile in radius, with an estimated walking time of five minutes or less from the center of each district to any other point it contains. These walking districts help to display the close proximity of walkable activity centers proposed by the Arena concept.

**Figure 6.6** displays the local context to the proposed Arena District. It indicates local activity centers such as Forsyth Park and the Georgia Railroad Museum. The District's proximity to these locations is one of its greatest assets, allowing individuals familiar with Savannah's existing hotspots and structure to easily become accommodated to the new Arena neighborhood.

**Figure 6.7** displays the park and trail concept for the Arena District. Parks and recreational areas are planned for the areas along the Springfield Canal north of the arena site. Additional playing fields are planned along Louisville Road. The primary trail connection for the district is created by the Heritage Trail, a major trail and greenway with significant amenities that extends from Downtown Savannah along the Canal to the arena site. This trail provides critical pedestrian and bicycle access to the Arena District.

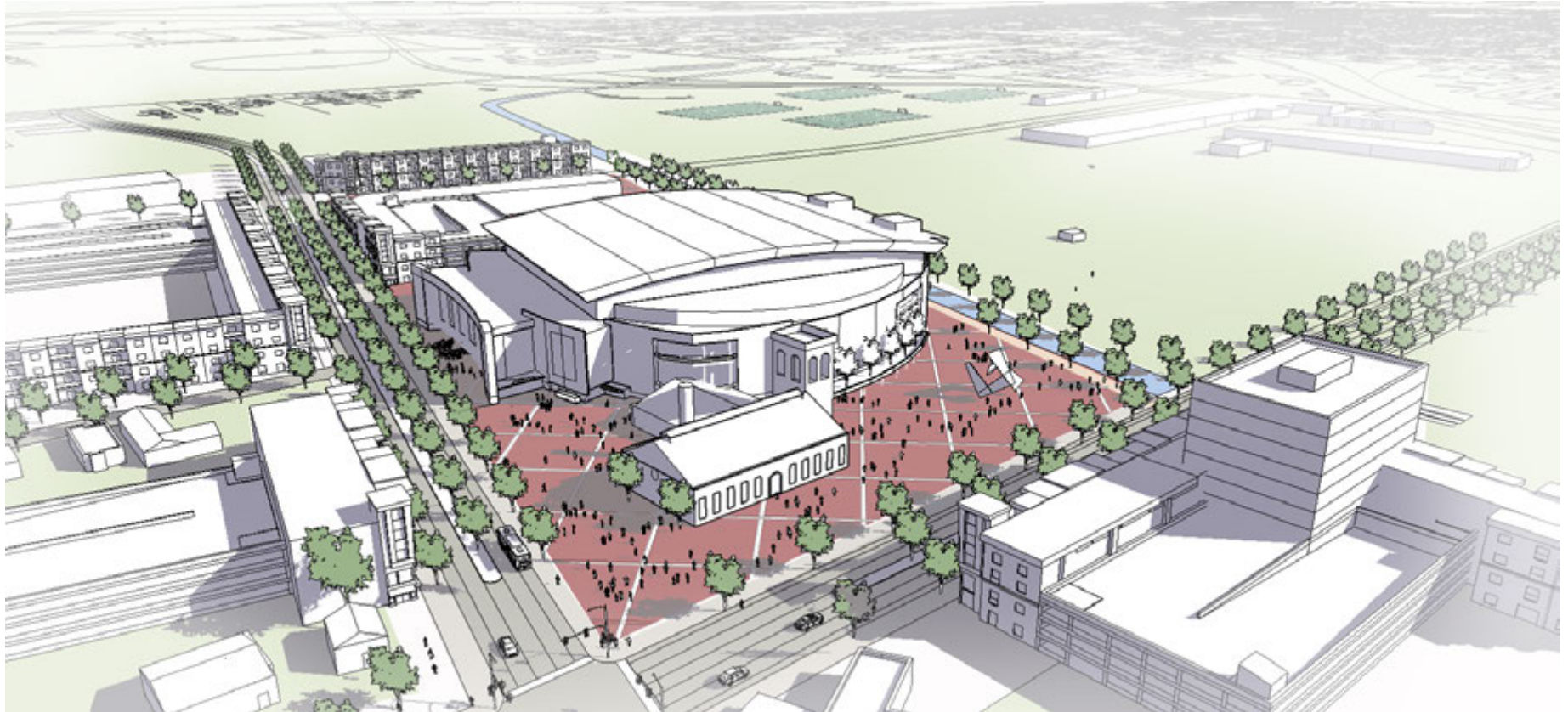
**Figure 6.8** displays a land use concept plan for the Arena District. In order to grow as a successful event and recreational district, the Savannah Arena district will require mixed and varied land uses. These include mixed use residential and commercial developments with street-front retail, walkable office spaces, parks, and multi-family housing. This mix of uses is intended to capitalize on the walkable, livable vision for the District.



Figure 6.1: Arena-Area Layout Concept



**Figure 6.2: Rendering of the Potential Arena**



**Figure 6.3: Arena Street Framework**



Figure 6.4: Arena District Aerial

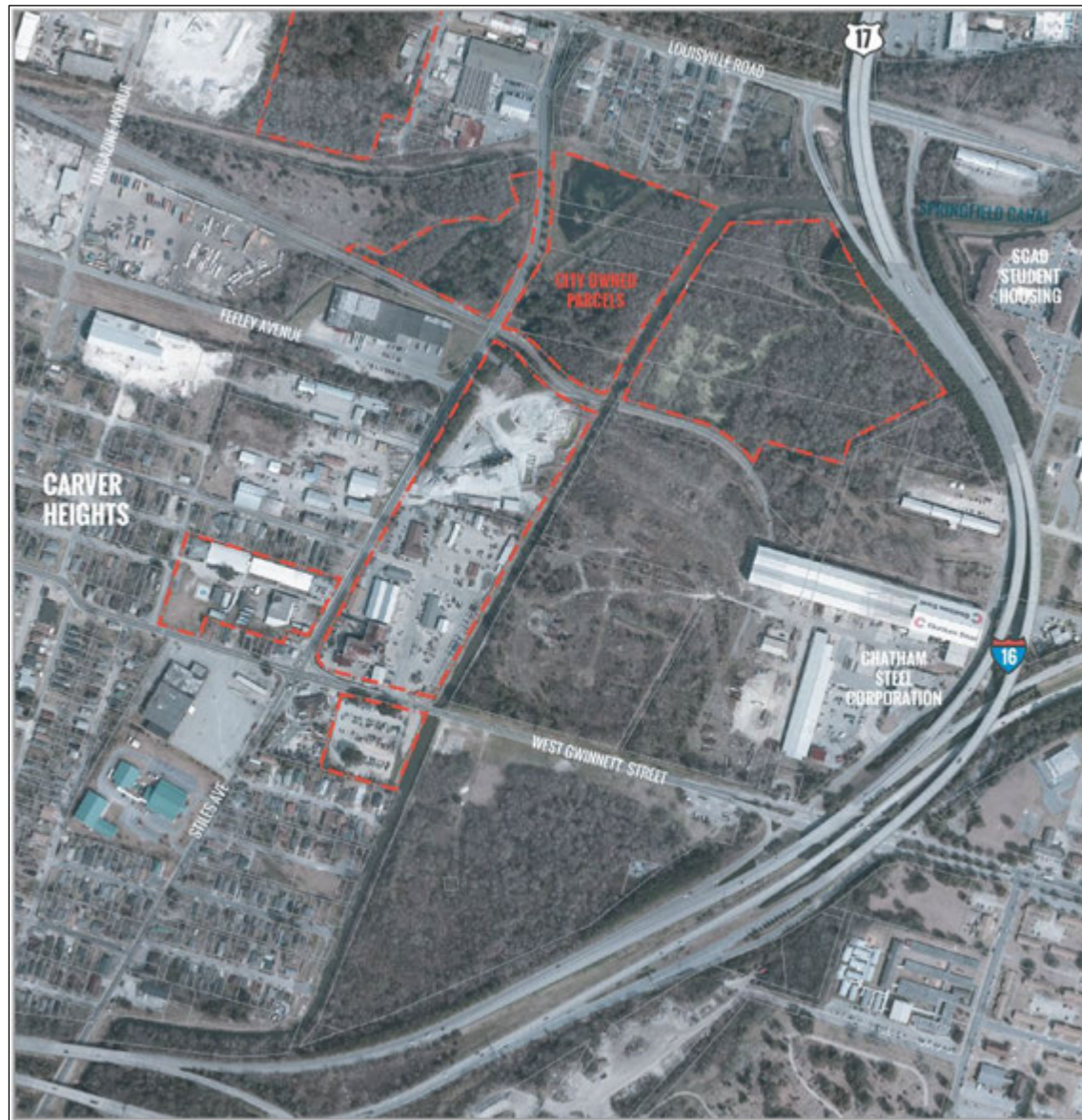


Figure 6.5: Arena Walking Districts



Figure 6.6: Arena Context

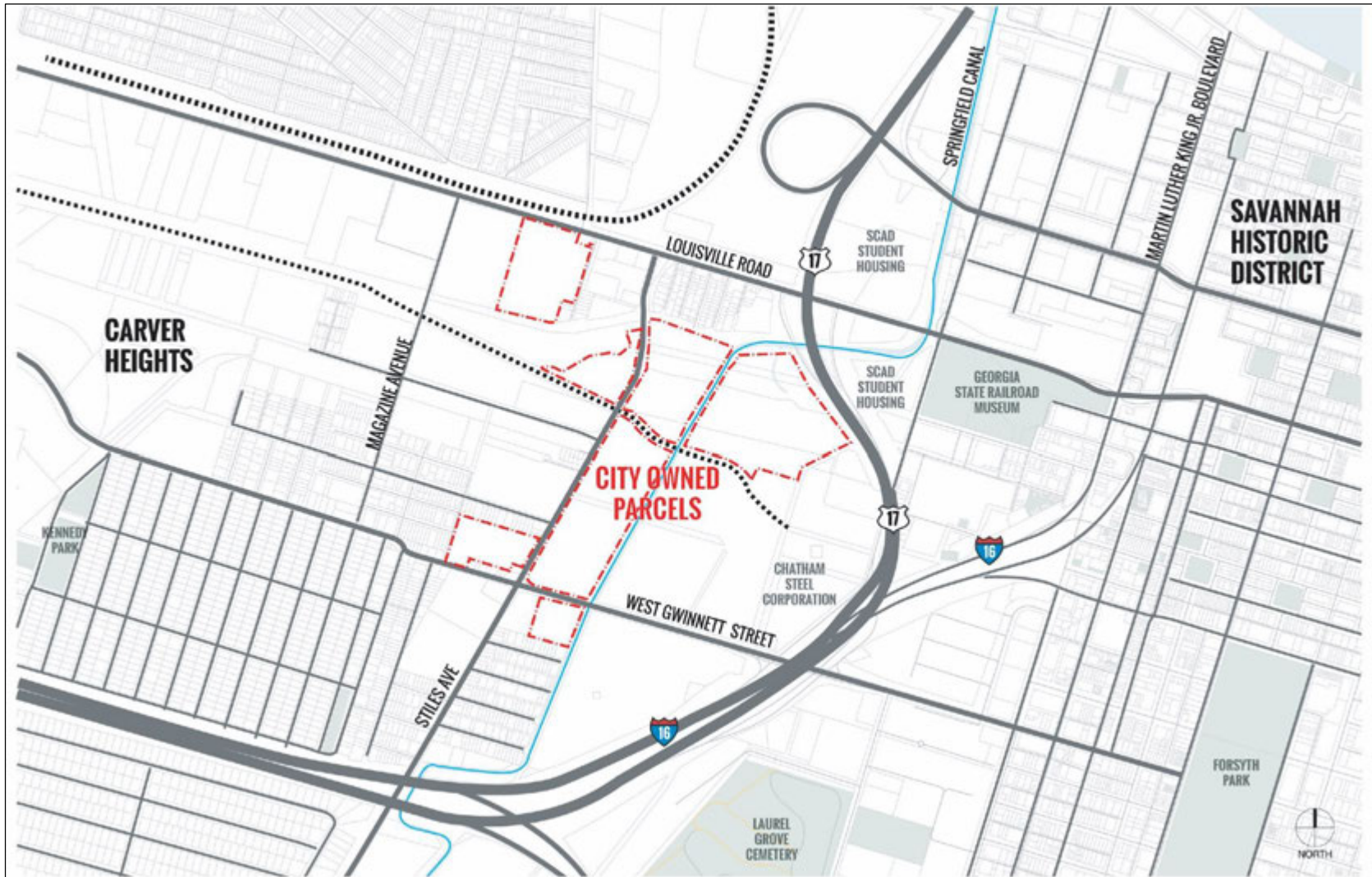


Figure 6.7: Arena Parks and Trail

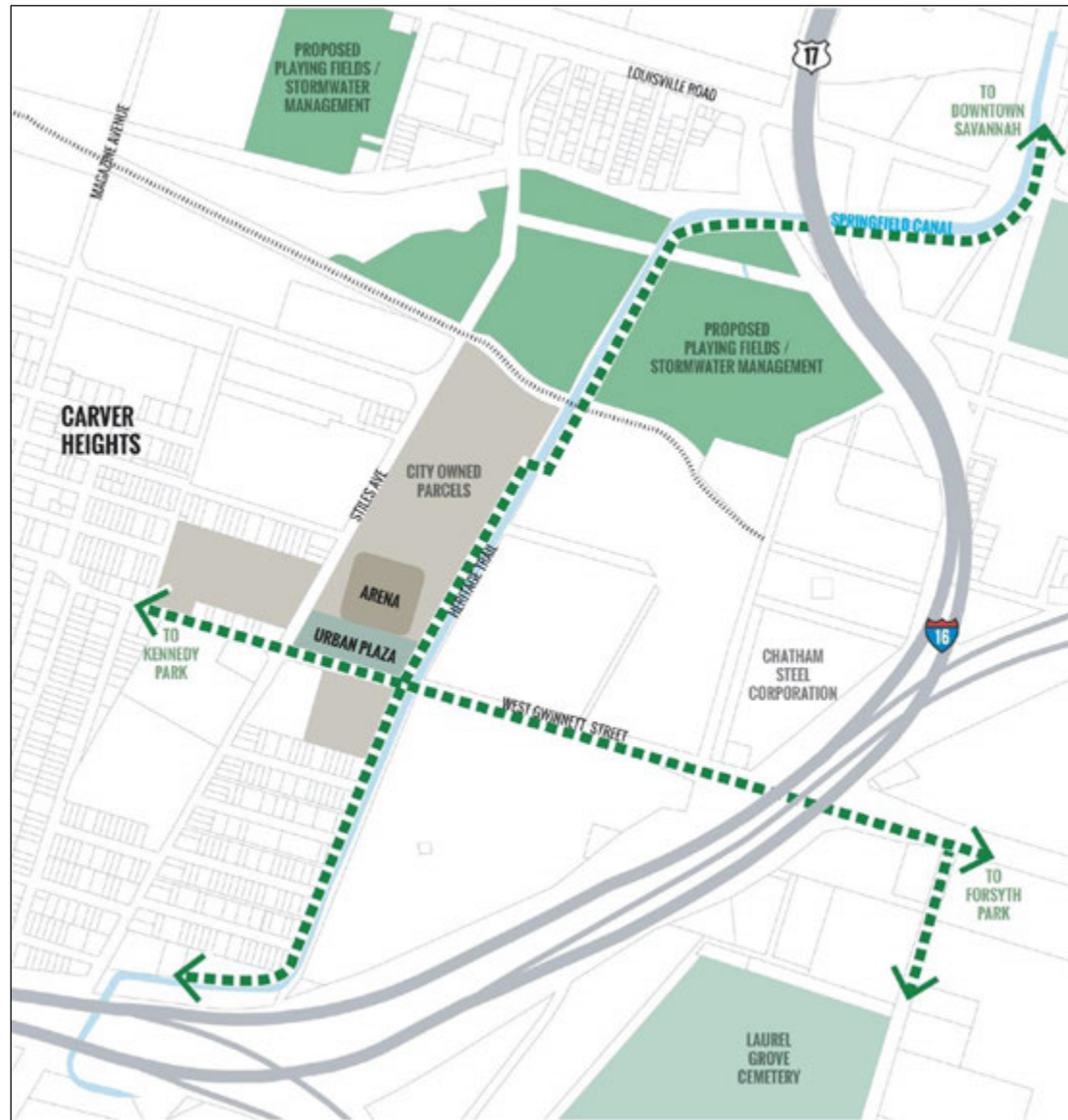
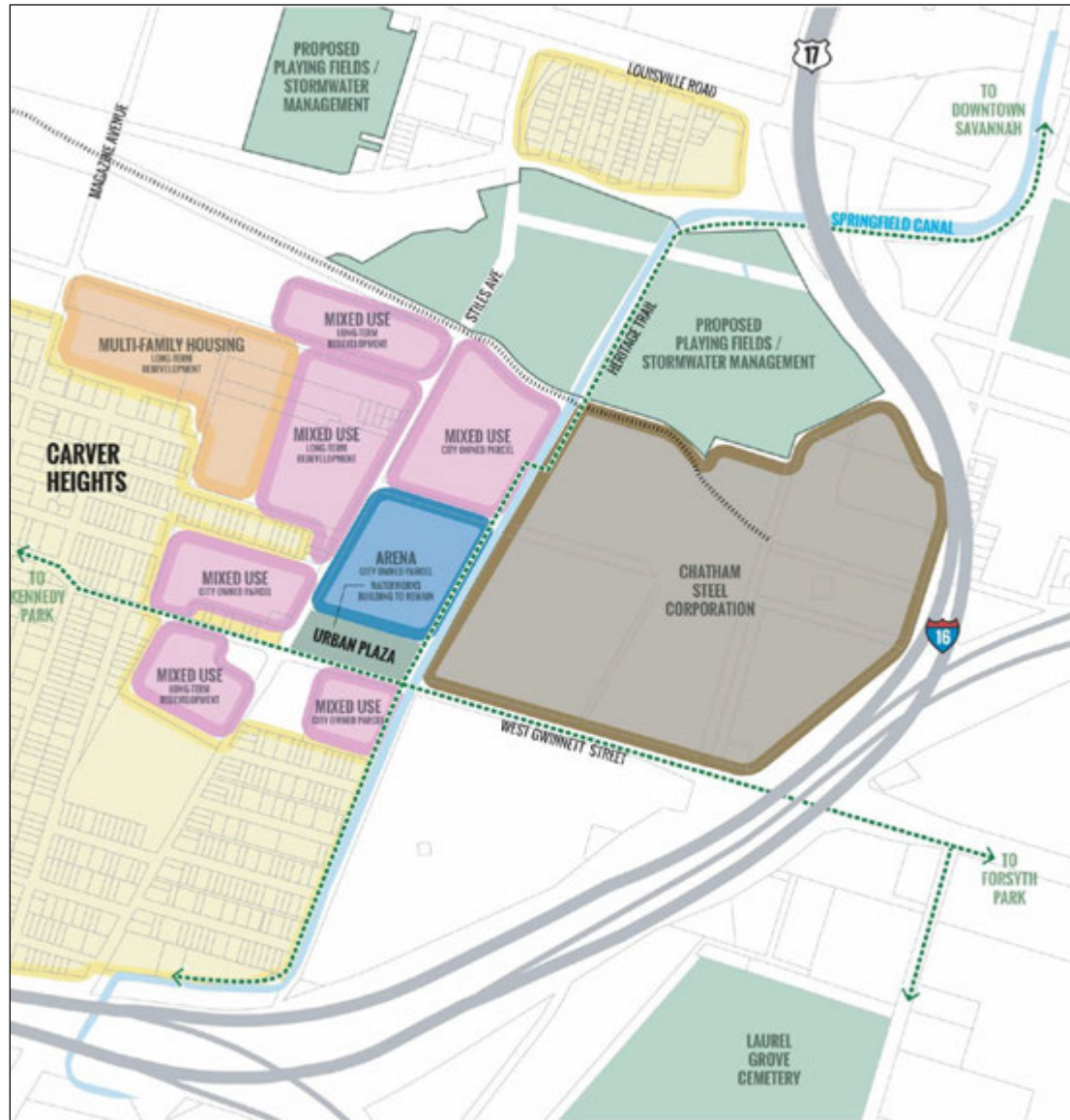


Figure 6.8: Arena Land Use Concept Plan





## 7 Summary

The Mobility and Transportation Subcommittee focused on a few target areas for needed improvements to support the arena site development. The following target areas were reviewed and key recommendations and suggestions are applied to each:

- Roadway access
  - Implement “Complete Street” strategies per the City of Savannah Complete Street Policy
  - Widen Gwinnett Street to a four lane complete street west of I-16 and additional left turn storage from I-16 off-ramps (design currently underway)
  - Widen Stiles Avenue to a four lane complete street
  - Extend Cohen Street to the west
  - Develop an event Maintenance of Traffic plan
  - Support removal of the I-16 terminal ramps
- Transit access
  - Coordinate the development of event specific routes with Chatham Area Transit
  - Coordinate future development plans with CAT to determine modifications to regular transit operations to the district
- Bicycle and pedestrian access
  - Support implementation of the Heritage Trail
  - Integrate recommendations of the Non-Motorized Transportation Plan into the implementation of Canal District projects
  - Link walkable sub-districts
- Character corridors
  - Create a context sensitive character along key corridors to create a sense of place within and to the Canal District
  - Develop character corridors as complete streets that are inviting and attract pedestrian and bicycle activity
  - The character corridor recommendations are along:
    - Oglethorpe Avenue
    - Liberty Avenue-Louisville Road
    - Alice Street – Cohen Street
    - Gwinnett Street
- Land use
  - Establish the Stiles Avenue and Gwinnett Street intersection and associated corridors as the nodal intersection of the arena activities
  - Enhance land use features through context sensitive design
  - Create appealing space that invites people from all modes
  - Support other developments to establish and 18-hour a day 7-day a week activity center
  - Consider attaching the existing Waterworks Building to the Arena to create a gourmet food hall (attracting visitors outside of events)