

# MIDTOWN LOOP ALIGNMENT STUDY



## ACKNOWLEDGEMENTS

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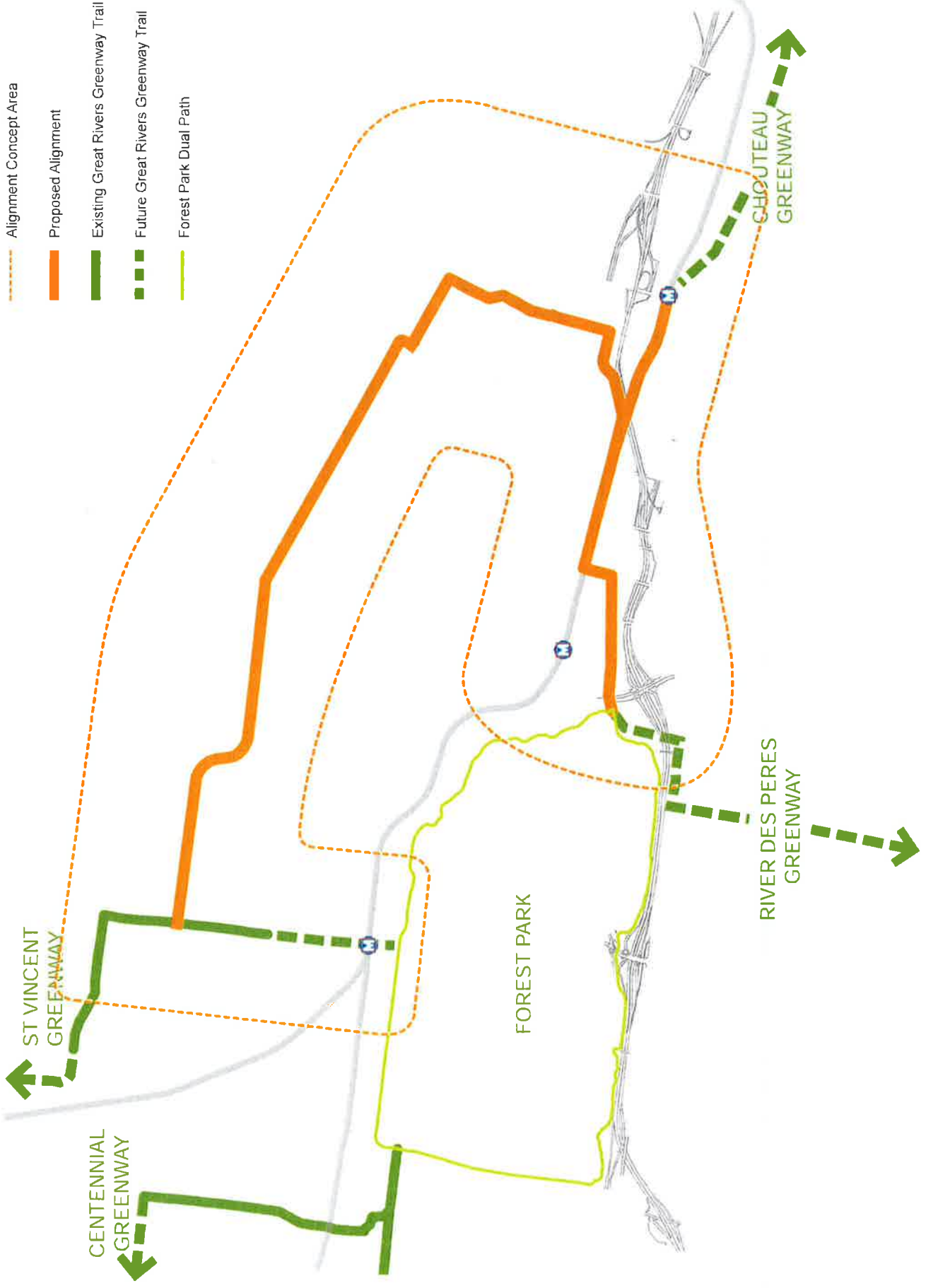
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GREAT RIVERS GREENWAY DISTRICT



# SECTION 1

## EXECUTIVE SUMMARY

The Midtown Loop Alignment Study is a feasibility study and conceptual trail alignment for a new greenway and off-street trail facility between Forest Park, the Cortex district, BJC/Washington University School of Medicine, Saint Louis University and Grand center. The project connects two existing greenways and two greenways under development with Forest Park and major commercial, institutional and residential nodes within the City of St. Louis. This study is led by The Great Rivers Greenway District (GRG), the public organization leading the development of a region-wide system of interconnected greenways, parks and trails, known as the River Ring. The timing of this study leverages the momentum of active planning projects and engaged stakeholders in the Cortex Innovation Community and the Grand Center Arts District.

Recently, the Cortex District Open Space and Streetscape Planning Project and the Grand Center Great Streets Master Plan established public realm guidelines integrating bicycle and pedestrian facilities along key street corridors. The Midtown Loop study looked to establish the "missing link" between the Grand Center and Cortex trail alignments. With a north and an east point of connection to Forest Park, a "Midtown Loop" can be created. The location of this trail is uniquely positioned to provide safe, off-street access to a wide array of existing bicycle routes, public parks, schools, neighborhoods, places of employment and public transit. At about 8 miles around, the Midtown Loop Trail can be a family and tourism friendly route

that connects to key St. Louis cultural, entertainment and recreation destinations from Forest Park.

### Greenway Context & Hodiament Right of Way

At Forest Park, the Midtown Loop connects to Centennial, St. Vincent and River des Peres Greenways. Combined with the dual path in Forest Park (a bicycle and pedestrian path system), the Midtown Loop makes critical linkages between greenways in the River Ring system. Finding off-street routes through a dense urban framework can be difficult, but the proposed alignment incorporates the Hodiament right of way, a former streetcar and bus right of way. This right of way is approximately 3.5 miles long and runs from St. Vincent Greenway to Grand Center. It has many advantages for development as a trail due to the corridor size, east-west orientation and sole agency ownership. For the purposes of the Midtown Loop Alignment study, the Hodiament right of way was considered to be an established section of the alignment. However, Great Rivers Greenway has plans to initiate a subsequent planning study with a comprehensive public engagement process to focus on the viability of this corridor as a greenway trail.

### Existing Conditions Analysis

This study considers the urban context from Forest Park and Skinker Boulevard on the west, Jefferson Avenue on the east, Natural Bridge Avenue on the north and Park Avenue on the south. A more detailed "alignment concept area" was established to narrow the focus of the alignment options and

provide a context for analysis to be performed. Geographic Information Systems (GIS), stakeholder meetings, photo documentation, on-site observation and biking were all used to study and validate the potential alignment options for the Midtown Loop Trail. The study focused the on and drew conclusions about three areas of inquiry:

- 1) *Community and Cultural Considerations* – An inventory of population data, parks, schools and cultural resources within the study area were used to understand the potential trail users, destinations and connections. The study showed that existing population densities have a trend toward stability, and that the greenway trail location is well positioned to provide access to and from established neighborhoods, business districts and recreation opportunities.



Alignment Concept Area

2) *Economic Development Considerations* - The Midtown Loop Trail is well positioned for economic development opportunities due to the presence of many of St. Louis' academic, medical, arts and entertainment institutions including Cortex, Barnes Jewish Medical Campus, Washington University Medical School, Grand Center, VA Medical Center and Saint Louis University. Key business districts can also be linked by the greenway trail. As a whole, these destinations represent significant economic drivers for St. Louis and the region as well as concentrations of visitors, employees, students and even patients that are potential trail users. The Midtown Loop Trail can bridge the gaps between strong institutional and commercial nodes and provide a corridor for connections to emergent economic development districts.

3) *Transportation Considerations* - The Midtown Loop Trail is also well positioned to connect to public transit stations, existing bus routes, new light rail options under consideration, and on-street bike lanes. With four adjacent MetroLink stations and many points of connection to the Gateway Bike Plan Bike St. Louis routes, the Midtown Loop Trail can be part of a multi-modal transportation system in Midtown. The existing street hierarchy was studied to suggest intersections for further study, and vehicular speeds within alignments and crossings.

**Route Alignment Recommendations**

*Route Options*

Many alignment options could be considered within the existing street network and rights of way to provide connections to a high concentration of desirable destinations. Three routes were identified that best meet the routing criteria established in study and provide connectivity to Forest Park and the Hodiament right of way. The preferred route was ultimately selected because it provided the most direct, off-street alignment with the longest motor vehicle-free sections.

*Preferred Route*

The preferred route leverages the MetroLink and Hodiament rights of way and reinforces the planning recommendations of the Cortex and Grand Center master plans. Even though this route has the most diverse set of property owners, almost half of the route's property is controlled by Bi-State/Metro, the regional transit agency. The preferred route offers the best opportunities to connect to the rich array of assets, resources and future improvements within the Midtown area while supports GRG's mission and goals.

*Great River Greenway District's Goals:*  
**CONNECTING COMMUNITIES AND NEIGHBORHOODS**  
**PRESERVING AND CONNECTING PEOPLE TO NATURE**  
**IMPROVING ECONOMIC VITALITY**  
**IMPROVING TRANSPORTATION CHOICES**  
**PROMOTING GOOD HEALTH**

From the eastern trailhead at Forest Park, through the Cortex streetscape on Clayton Road and within a shared rail/trail in the MetroLink right of way, the preferred route provides access to recreation, employment, healthcare and commerce. A direct connection to the Grand MetroLink station, and two other stations, creates multi-modal transportation hubs that maximize the city's transit infrastructure. The preferred route provides connections to neighborhoods, places of learning and the Grand Center arts/entertainment district with a cross-campus connection through Saint Louis University and greenway trail on Spring Avenue in Grand Center. Alignment along the Hodiament right of way provides neighborhood access to resources, healthy benefits and safe routes within and beyond the community. Critical linkages between the Gateway Bike Plan, Bike St. Louis and other greenways in the River Ring are made with the Midtown Loop Trail.



Preferred Route Map

*Trail Precedents*

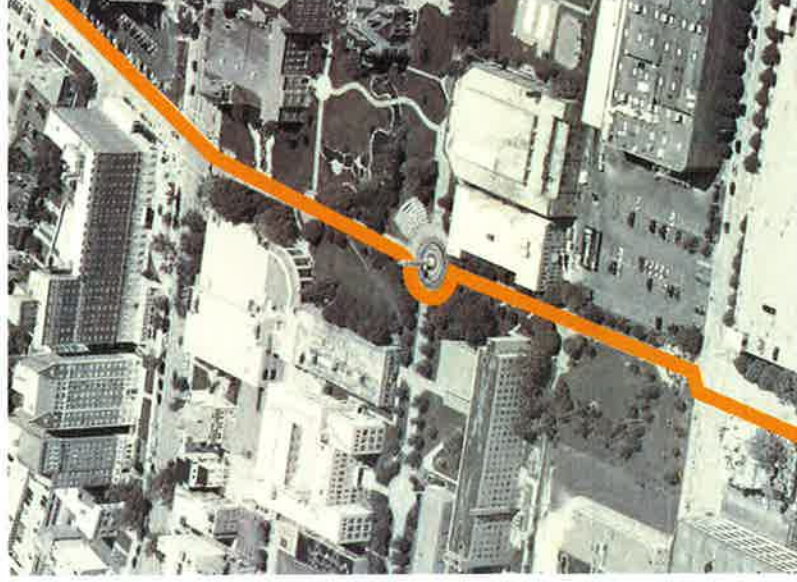
Three typical trail types are recommended for the Midtown Loop Trail that promote best practices and fit within the available right of way. Shared and separated bicycle and pedestrian trail types that have been implemented in the St. Louis region are recommended. They serve as precedents for the study. However, the final design of each section of the trail will be customized to respond to the actual site conditions and stakeholder interests along the alignment.

A significant portion of the Midtown Loop Trail is planned to be within MetroLink's right of way at Cortex. The study looked at two precedents for bike and pedestrian facilities adjacent to heavy and light railways. In Minneapolis, Minnesota, the Blue Line (formerly the Hiawatha Line) Light Rail Trail is a 12 mile trail owned by Metro Transit. The trail and safe at-grade crossings were integrated into the right of way during planning and construction. In Fayetteville, Arkansas, the Frisco Trail is a 1.3 mile trail immediately adjacent to an active railroad corridor used by the Arkansas & Missouri Railroad for both freight and excursion passenger trips. For these types of shared rights of way, the study looks at how maintenance access for MetroLink can also be provided by the paved trail. With proper setbacks and trail/rail separation, a safe and symbiotic relationship can be created between the Midtown Loop Trail and the MetroLink light rail.



*Minneapolis Rails with Trails Precedents*

The preferred route crosses through Saint Louis University on its north-south campus path at Spring Avenue and on axis with the central clock tower and fountain. Recently, Great Rivers Greenway District has been involved in the implementation cross-campus trails at University of Missouri St. Louis, Washington University and St. Charles Community College. These three examples are precedents for the Midtown Loop project. Each of these trails is unique and reflects the goals, operational policies, campus culture and aesthetic preferences of each institution. With the approval of Saint Louis University, policy signage and wayfinding markers are all that is needed to integrate the Midtown Loop Trail into the existing campus landscape.



*Possible Cross Campus Connection*

**Implementation**

The implementation of the trail will involve detailed alignment, intersection, signalization and signage/marketing design. The design will be guided by the National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide. Intersections are of particular importance and will require signal and crosswalk upgrades to integrate safe bicycle and pedestrian signalization. Intersections are highly visible in the community and are opportunities to express the unique character of each district or neighborhood.

The Midtown Loop Alignment study provides the framework for access, connection and promotion of Midtown's business districts, parks, schools, neighborhoods and cultural destinations. The next steps to implementation include completion of a detailed greenway study and comprehensive public engagement process for the entire preferred route. The full study will engage broad participation from neighborhoods, institutions, businesses and city officials. A dialog about the Hodiament right of way its neighborhood context and viability as a greenway trail will likely be a focus of future projects.



*Midtown Loop Trail Opportunities Over Vandeventer*





# SECTION 2

## INTRODUCTION

The Midtown Loop Trail feasibility study was undertaken when a critical mass of redevelopment initiatives became active in the Midtown area of St. Louis. When mapped, the formation of a "Midtown Loop" trail, anchored at Forest Park was beginning to take shape if it was not for critical missing links between these redevelopment areas. This study offers a chance to capitalize on this redevelopment planning momentum and investigate the potential alignments with Great Rivers Greenway District's River Ring network of greenways and trails. By linking these redevelopment areas to the eastern edge of Forest Park and connecting the existing trail at Ruth Porter Park to the northern edge of Forest Park at DeBaliviere, this trail has the potential to create safe, off-street connections to public parks, schools, cultural amenities, emergent business development districts and public transit. All told, the redevelopment projects that are being discussed publicly represent a redevelopment potential of over 300 acres of the City of St. Louis. Known projects include:

**1) Cortex District Open Space and Streetscape Planning Project** – a public realm and green infrastructure improvement project within the 200 acre Cortex district. This project has the potential to use a portion of the MetroLink right of way for a new station between Boyle and Sarah streets and for a combined bicycle and pedestrian trail through the district.

**2) Grand Center Great Streets Project** – a project through East-West Gateway Council of Governments that involves the application of the City of St. Louis Great Streets Initiative in the Grand Center community for a 60 acre study area and over 2.5 miles of street right of way. In addition to public realm improvements, the project includes recommendations for an off-street bicycle and pedestrian path on Spring Avenue from Lindell Avenue (at Saint Louis University) to Delmar Boulevard/Enright Street (at the VA Medical Center), and connection to the Hodiarnont right of way at Enright.

**3) Grand Center Art Walk** – the Art Walk in Grand Center connects many of the visual and performing arts institutions along Washington Avenue including the Sheldon Concert Hall, Pulitzer Foundation for the Arts and the Contemporary Art Museum in St. Louis. It is seen as an expression of and a platform for the arts. At its southern end, the Art Walk starts at the Saint Louis University Museum of Art (SLUMA) and continues north to Olive Boulevard. At Spring, it will join with the Midtown Loop Trail.

**4) VA Medical Center/John Cochran Division** – a comprehensive \$44 million dollar master planning effort has been completed for a medical campus north of Delmar, between Grand and Spring. This project will add 260,000 sf of new patient care space, renovate 130,000 sf of existing patient space, and add a 1,000-car parking structure.

VA representatives are interested in providing connections to pedestrian amenities for their long-term patients and for staff and visitors.

**5) Gateway Bike Plan Implementation** - the City of St. Louis and Great Rivers Greenway District are working to implement the recommendations of the Gateway Bike Plan. This plan provides direction for on-street bicycle facilities within streets that are designated as a collector or higher. New or improved on-street bike facilities are proposed on Lindell, Grand, Vandeventer, Clayton, Boyle and Taylor within the Midtown Loop study area.











**6) Barnes Jewish Hospital Campus Redevelopment** - in the west end of this study area, BJC Health care is planning to spend more than a billion dollars over the next decade on the renovation of its main medical campus. BJC is the region's largest employer with more than 24,000 employees. In addition to construction of major new health care buildings, the plan includes integration of public realm improvements across its campus with a focus on the pedestrian experience.

This report explores the feasibility of creating an off-street bicycle and pedestrian trail loop that would provide connections between Midtown destinations and leverage public and private investment under way in the area. It explores alternative trail routes and documents the surrounding context and opportunities offered by this potential trail.



GREENWAY CONTEXT MAP

## 2.1 THE GREENWAY CONTEXT

-  Alignment Concept Area
-  Concept Area Connection to River Ring
-  Existing Great Rivers Greenway Trail
-  Future Great Rivers Greenway Trail
-  Forest Park Dual Path
-  On Street Bike Route
-  Future On Street Bike Route
-  Connections to Greenways
-  Planned Greenway
-  Park

### Great Rivers Greenway

The Great Rivers Greenway District (GRG) was established in November 2000 by the successful passage of the Clean Water, Safe Parks and Community Trails Initiative (Proposition C) in St. Louis City, St. Louis County and St. Charles County, Missouri. The mission of the Great Rivers Greenway District is to make the St. Louis region a better place to live by developing an interconnected system of trails, greenways and parks. The Great Rivers Greenway District receives additional funding for St. Louis City and County through Proposition P, passed in April of 2013.

### Building the River Ring

GRG is leading the development of a region-wide system of interconnected greenways, parks and trails, known as the River Ring. The River Ring will connect an area of 1,216 square miles that includes St. Louis City, St. Louis and St. Charles Counties. The framework plan, *Building the River Ring*, has guided development of the network since 2004. This plan emphasizes high-impact investments through land acquisition, greenway facility construction, and promotion of sustained investment in greenway development throughout the region. The Midtown Loop has the potential to make critical linkages between greenways in the River Ring system: Centennial, St. Vincent, and River des Peres Greenways as well as the future Chouteau Lake and Greenway.

### Chouteau Lake and Greenway

In 2007, GRG completed a planning study for the Chouteau Greenway. This greenway will link the Mississippi riverfront in downtown St. Louis to Forest Park. It will also branch off to the south and connect to the Missouri Botanical Garden and Tower Grove Park. Primarily this route is located within the freight rail yards owned by the Union

Pacific Railway, south of Interstate 64. It has the potential to have direct connections to the Grand MetroLink light rail station, Saint Louis University and Cortex. The master plan calls for the riverfront to be connected to 160 acres of new public open space including a system of lakes and trails. This will also include approximately 3.5 miles of street-related improvements. To date, the complexities of ownership and usage have slowed the establishment of this route.

### St. Vincent Greenway

GRG completed studies and the construction of several sections of the St. Vincent Greenway. In 2012, the 1.3 mile trail in Ruth Porter Park was completed. It extends from the south at Delmar and DeBaliviere to Skinker and Etzel on the north. This greenway is envisioned to link North County near the University of the Missouri-St. Louis campus to Forest Park when complete. In addition, the proposed Loop Trolley will run along DeBaliviere and Delmar in University City to Forest Park. This greenway will be constructed as part of the Trolley project from Delmar to Forest Park.

### Hodiamont Right of Way

Finding off-street routes through a dense urban framework can be difficult but the proposed alignment incorporates the Hodiamont right of way, a former streetcar and bus right of way. It is approximately 3.5 miles long and runs from St. Vincent Greenway to Grand Center. It has many advantages for the trail due to the corridor size, east-west orientation and sole agency ownership. For the purposes of the Midtown Loop Trail study, the Hodiamont right of way was considered to be an established section of the alignment. However, GRG has plans to initiate a subsequent planning study with a comprehensive public engagement process to focus on its viability as a greenway trail.



### 2.2 PROJECT PURPOSE

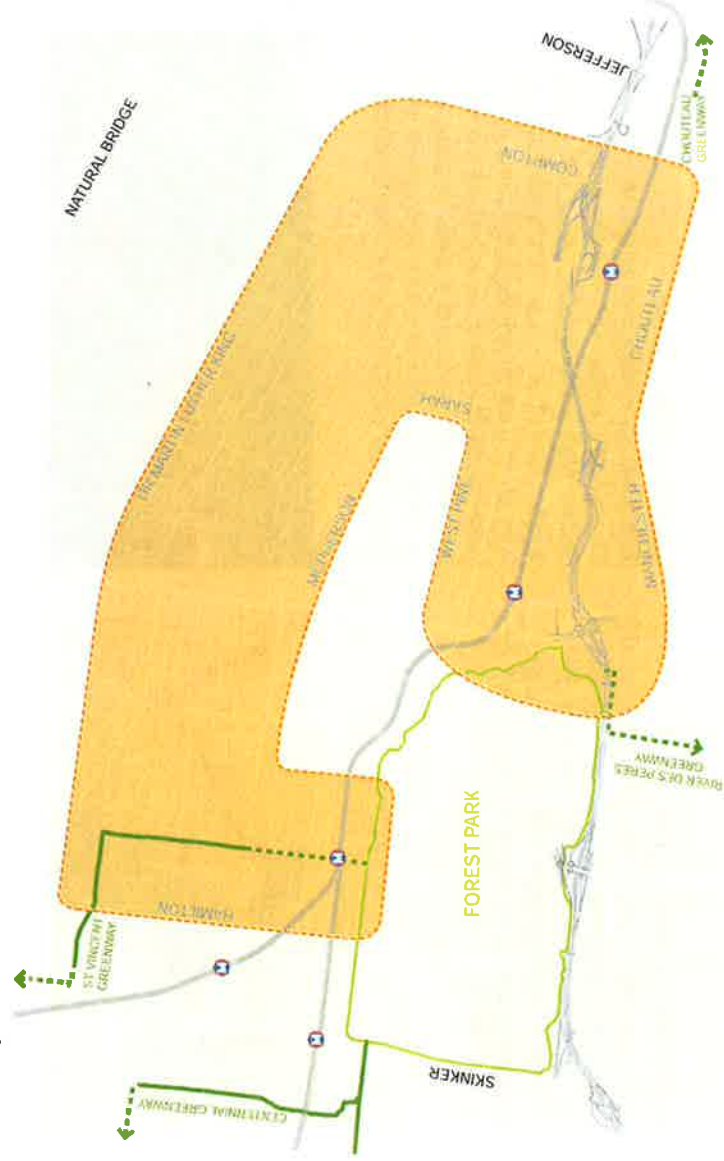
The purpose of this project is to analyze and develop a conceptual trail alignment for an off-street greenway trail in the heart of Midtown in St. Louis. The development of route alternatives focuses on linking Forest Park to BJC/Washington University School of Medicine, the Cortex district, Saint Louis University, Grand Center and the Hodlhamont Right of Way. Planning for the Midtown Loop Trail has been considered within the River Ring Master Plan context which promotes the advancement of the St. Vincent and the Chouteau Greenways. The project purpose also includes connecting these two existing greenways, two greenways under development and major commercial, institutional and residential nodes within the City of St. Louis.



### 2.3 PROJECT STUDY AREA

The study considers the urban context from Skinker Boulevard on the west, Jefferson Avenue on the east, Natural Bridge Avenue on the north and Park Avenue on the south.

A more detailed "alignment concept area" was established to focus the alignment options and provide a context for analysis to be performed and for relationships to be studied. The existing conditions analysis, trail routing alternatives and recommendations are presented within the context of the alignment concept area.



Study Area and Alignment Concept Area Boundaries

## 2.4 PROJECT METHODOLOGY

Detailed existing conditions documentation and analysis was completed to study potential routing options for the Midtown Loop Trail. These methods of inquiry were used to establish general information about the project study area, test alignments options and evaluate alignment recommendations within the context of the existing urban condition. The data presented in Section 3, Existing Conditions Analysis illustrates and describes a compilation of these data points.

The methods use to obtain the data include the following:

### Geographic Information Systems (GIS)

GIS provides mapping and data for geographic and spatial elements such as demographics, physical structures, bus stops, land use and other layers of information. This tool allowed the team to use and document a consistent level of information for desired aspects of the study area.

### Stakeholder meetings

The consultant team met with active stakeholders for each of the planning initiative areas - BJC/Cortex, Metro, Saint Louis University, Grand Center and the City of St. Louis. This project benefited from up-to-date information about the projects in the areas of interest. Conceptual routes were reviewed with each stakeholder creating a rich dialog about opportunities and constraints. These meetings are documented in the Appendix.



**On-site observation**

The team visited sites within the study area to understand the on-site conditions of alternative routes that could be considered. There is no substitution for personal observation of a site. This is how human-comfort qualities such as physical safety, security, noise and the general “look and feel” can be effectively evaluated.



**On-bicycle observation**

To best understand the implications of alignment decisions, the team tested the various routes via bicycle to gauge the viability of each route. In addition, this helped the design team to better understand the areas where safety would be of particular concern; potential connections to the proposed route; and the overall condition of the existing bicycle infrastructure in the area.



**Photo documentation**

The study area was documented with photographs to create a visual record of potential routes. As routing alternatives developed, detailed aspects of the physical conditions could be scrutinized back at the office. These photos are used to illustrate the viability of the final route later in this report.







# SECTION 3

## EXISTING CONDITIONS ANALYSIS

Geographic Information Systems (GIS), stakeholder meetings, photo documentation, on-site observation and on-bicycle observation were all used to study and validate the potential alignment options for the Midtown Loop Trail. The outcomes of this existing conditions analysis has been organized by three areas of consideration in order to draw conclusions about the feasibility of this project. These include:

### **Community and Cultural Considerations**

An inventory of population data, parks, schools and cultural resources within the study area were used to understand the potential trail users, destinations and connections. The study showed that existing population densities have stabilized and that the greenway trail location is well positioned to provide access to and from established neighborhoods, business districts and recreation opportunities.

### **Economic Development Considerations**

The Midtown Loop Trail is well positioned for economic development opportunity due to the presence of many of St. Louis' academic, medical, arts and entertainment institutions. In addition, key business districts such as the The Grove, The Garden District, Skinker DeBaliviere, Central West End, Midtown, Locust and West Pine/Laclede can also be linked by the greenway trail. As a whole, these destinations represent significant economic drivers for St. Louis and the region as well as concentrations of visitors, employees, students and even patients that are potential trail users. The Midtown Loop Trail can bridge the gaps between strong institutional and commercial nodes and provide a corridor for connections to emergent economic development districts.

### **Transportation Considerations**

The Midtown Loop Trail is also well positioned to connect to public transit stations, existing bus routes, new light rail options under consideration, and on-street bike lanes. With four adjacent MetroLink stations and many points of connection to the Gateway Bike Plan Bike St. Louis routes, the Midtown Loop Trail can be part of a multi-modal transportation system in Midtown. The existing street hierarchy was studied to suggest intersections for further study, and vehicular speeds within alignments and crossings.

GREAT RIVERS GREENWAY DISTRICT



Cortex District Headquarters



Fountain Park and Neighborhood



Gaslight Square



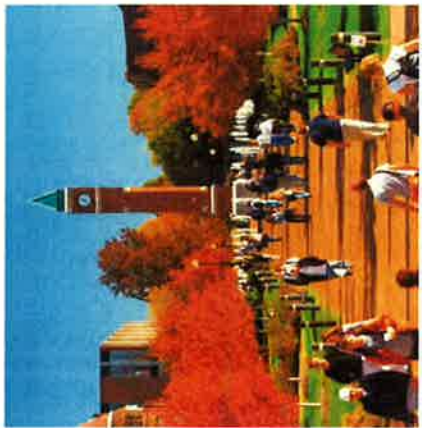
Grand Center



North Sarah Street



Washington University Danforth Campus



Saint Louis University



St. Vincent Greenway at Ruth Porter Park



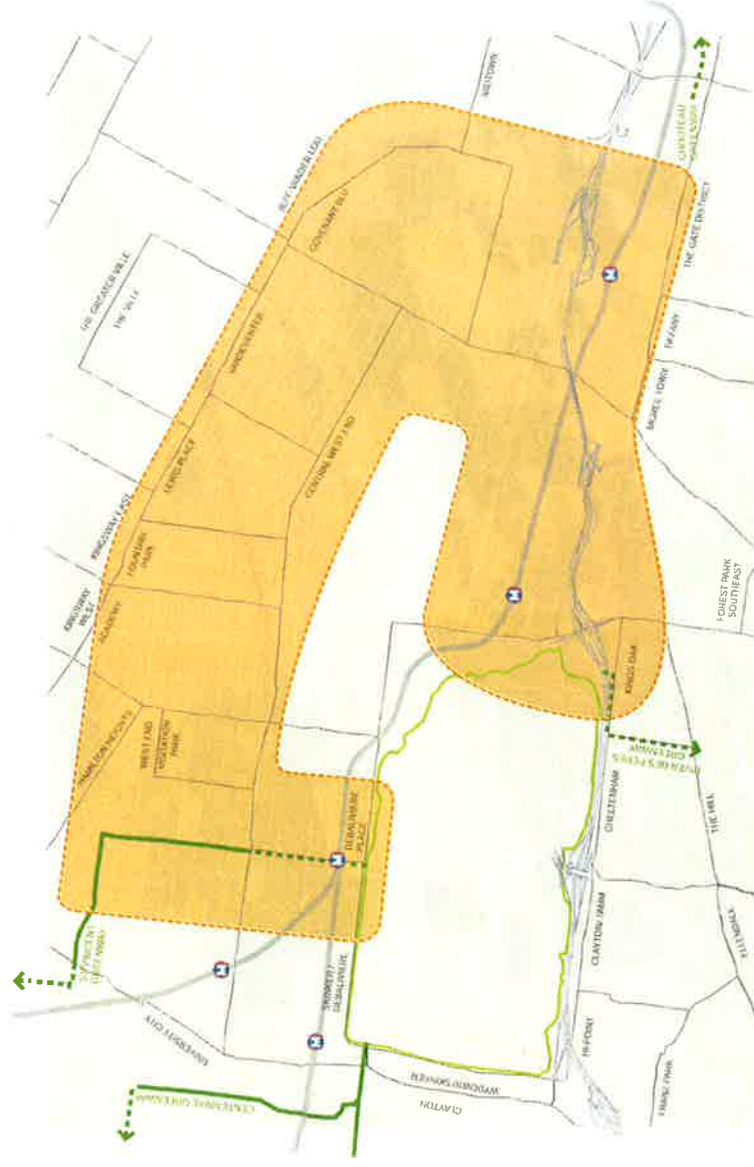
Summer High School

### 3.1 COMMUNITY AND CULTURAL CONSIDERATIONS

The following section discusses the demographic and physical characteristics of the communities and neighborhoods within and surrounding the study area. This section looks at population density and makeup; the proximity of historic districts, parks and schools; and the inventory of cultural resources within the study area to understand the potential users, destinations and connections to the Midtown Loop Trail.

The dashed yellow line and tan shaded area represents the "alignment concept area." This area illustrates an approximate 20 minute walk and is considered the catchment area for trail users. It also represents an area where neighborhoods, businesses and institutions will be influenced by or will influence the final route of the Midtown Loop Trail.

There are over 20 St. Louis neighborhoods adjacent to the potential trail alignment. Currently, pedestrian and bicycle connections from neighborhoods to the north of the study area such as Fountain Park, The Ville, Wells-Goodfellow and Hamilton Heights, to recreation opportunities are limited. Likewise, connections to these neighborhoods from the central core have not been established. This study investigated the linkages that could be made to these neighborhoods and business districts in order to select the best alignment possible.



*Neighborhoods and Alignment Concept Area*



### POPULATION DENSITY IN THE ALIGNMENT CONCEPT AREA



Alignment Concept Area

Existing Great Rivers Greenway Trail

Future Great Rivers Greenway Trail

Forest Park Dual Path

Existing MetroLink Station

0 Residents / Sq. Mi.

1-1,000 Residents / Sq. Mi.

1,001-2,000 Residents / Sq. Mi.

2,001-5,000 Residents / Sq. Mi.

5,001-10,000 Residents / Sq. Mi.

10,001-20,000 Residents / Sq. Mi.

Greater Than 20,000 Residents / Sq. Mi.

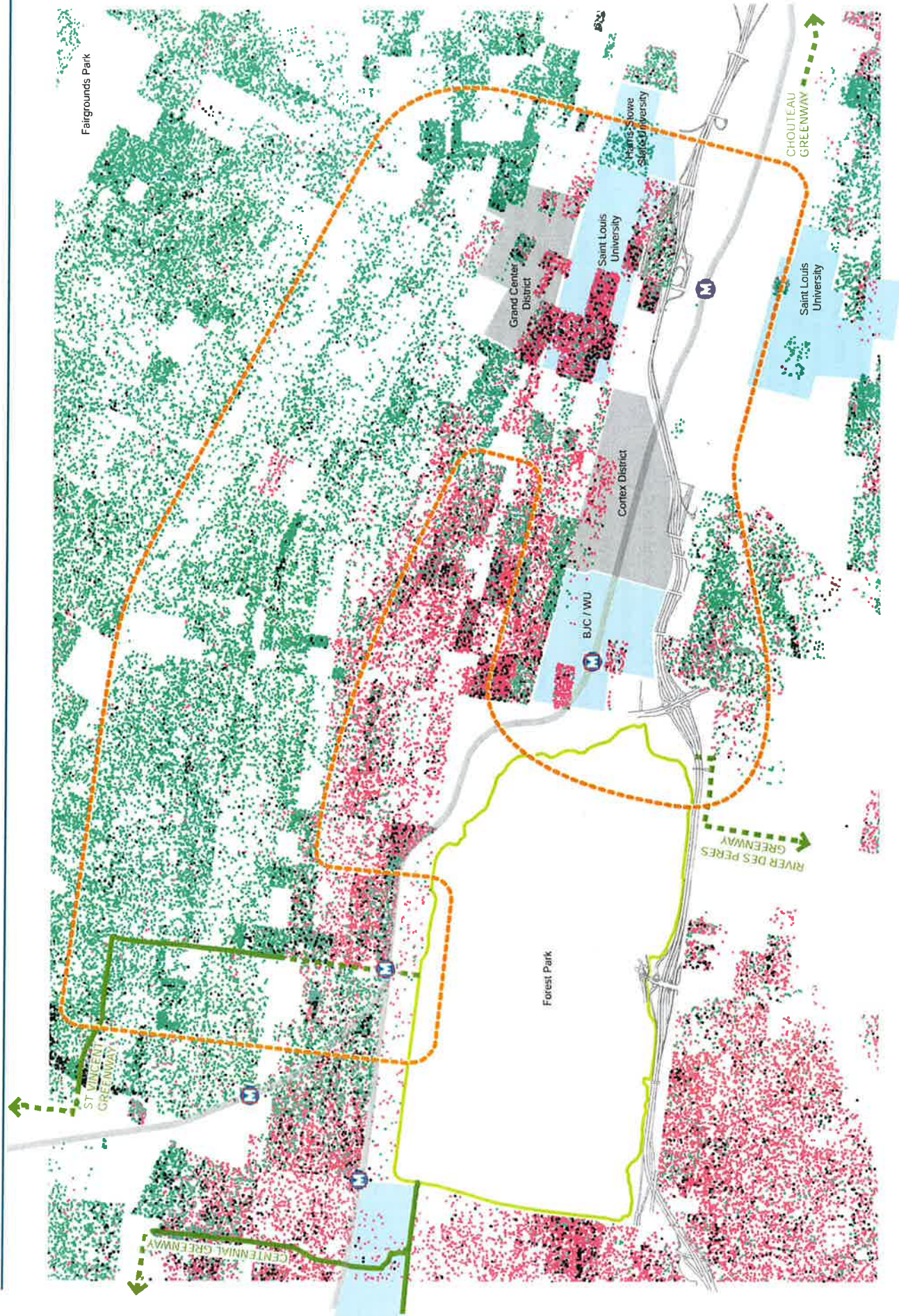
The population density map was generated using Geographic Information Systems (GIS). In this map, grey tones illustrate the relative density of the residential population using a range of residents per square mile. White areas indicate no residents whereas the darkness of the grey tone indicates increasing densities. As a frame of reference, The average population density for the St. Louis City is approximately 6,412 people per square mile. The Shaw Neighborhood has a population density of over 11,200 people per square mile and the Central West End has a density of 8,300 people per square mile. In contrast, the density of the study area is approximately 5,192 people per square mile.

In addition to the permanent population, the area's universities create large student residential populations within the study area when including 7,500 students at Saint Louis University and 1,600 students at Harris-Stowe State University. The population density around these campus areas increases to 7,922 people per square mile when the student population is included. This is well above the city average.

The population of the City of St. Louis peaked in the 1950s and has since declined in each of the following decades. Census data shows that between 1990 and 2000 the population declined nearly 20 percent. Between 2000 and 2010 this decrease slowed to 8 percent. In fact, during this period some neighborhoods showed the first increase in population since the 1950s. However, the communities in the study area have a trend towards stabilization with a 3.6% decrease in population since 2000.

Compilation of the data for the study area shows that residential populations in the study area are most prevalent on the north with isolated dense populations around the central Highway 64 corridor. There are a total of 23,401 households within the study area. This represents 13% of all households in the City of St. Louis. A majority of these household structures are occupied at a rate of 78% just under the city's rate of 80% occupied. A majority of the residential households that make up this data are found along the Hodiamont Right of Way.

Ongoing development of residential and mixed use properties is likely to strengthen a trend toward residential population stabilization.



POPULATION BY ETHNICITY

### POPULATION BY ETHNICITY IN THE ALIGNMENT CONCEPT AREA

In the City of St. Louis, the white population has declined by nearly 31%, while the African American population decreased by only 16% since 1990. This suggests a significant shift in the demographics of the city.

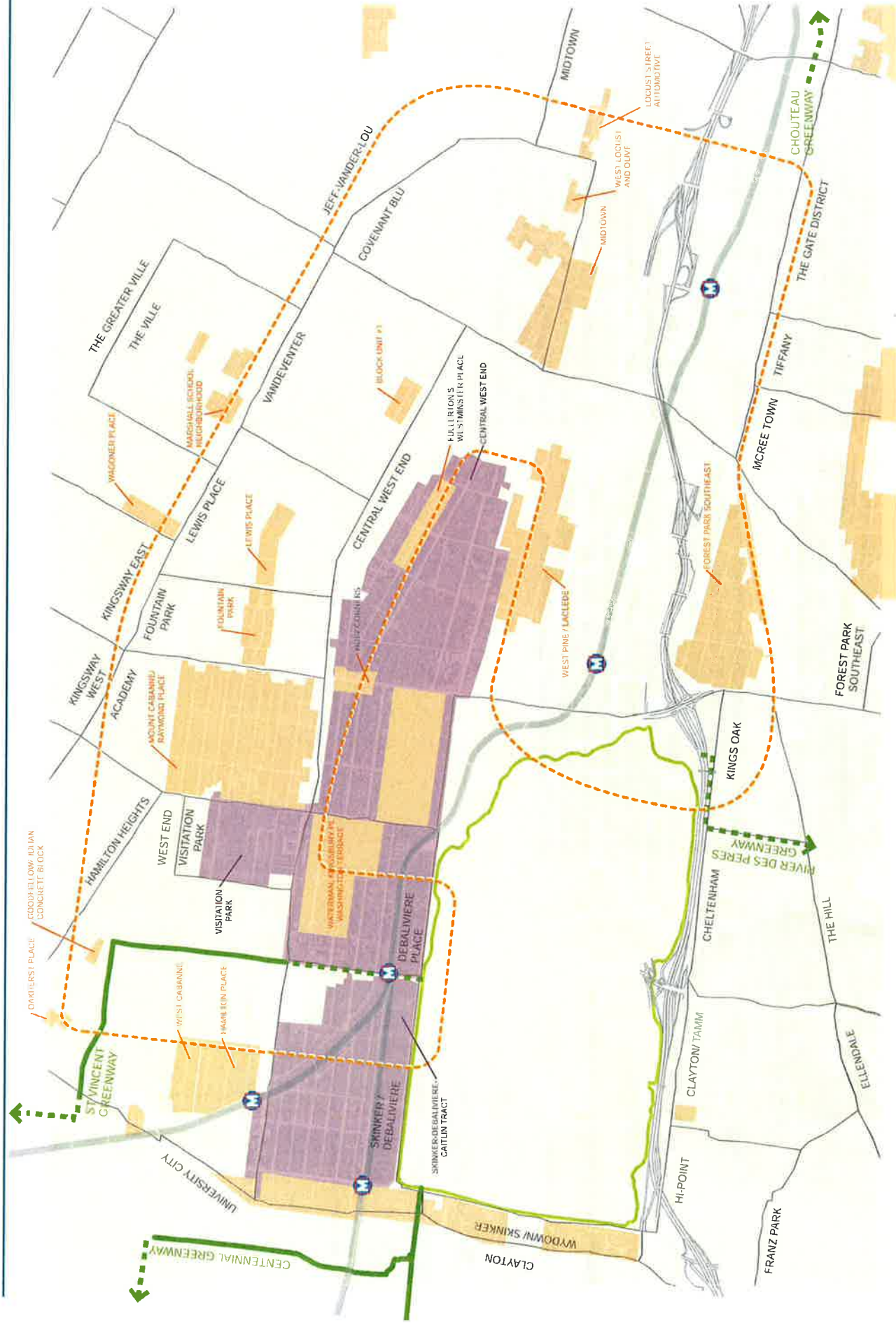
However, in the study area, this trend is largely reversed. Since 1990 there has been an influx of white residents in the study area, with an 8 percent increase overall. African American residents declined by nearly 40 percent over the same period. This suggests a demographic shift opposite of that of the city. In addition, populations of people of other ethnicity increased significantly since 1990, by nearly 250 percent, but still remain only about 10 percent of the total population of the area.

The City of St. Louis has had a long history with racial division. Colloquially, Delmar Boulevard is seen as the divide between black and white populations in St. Louis. Though the data for the study area would suggest a demographic shift, graphically one can see from the map that the distribution remains consistent with this perception.

While African-American communities in St. Louis have been historically underserved by civic amenities, The Midtown Loop Trail will give communities in and around the study area greater access to recreational facilities and provide safer pedestrian and bicycle connections to a significant geographic area of the city. Therefore, The Midtown Loop Trail has the potential to be a physical and symbolic link across this racial divide, providing a unifying civic asset to residents and visitors.



- Alignment Concept Area
- Existing Great Rivers Greenway Trail
- Future Great Rivers Greenway Trail
- Forest Park Dual Path
- Existing MetroLink Station
- University / Medical Institution
- Business / Arts Districts
- 1 Dot = 2 Residents (African-American)
- 1 Dot = 2 Residents (Caucasian)
- 1 Dot = 2 Residents (Hispanic / Other)







- Alignment Concept Area
- Existing Great Rivers Greenway Trail
- Future Great Rivers Greenway Trail
- Forest Park Dual Path
- Existing MetroLink Station
- Neighborhood Boundary
- National Historic District
- City Historic District

### NEIGHBORHOODS AND HISTORIC DISTRICTS

The Midtown Loop Trail study area encompasses over 5 aldermanic wards and 23 distinct neighborhoods. In addition, there are 20 national historic districts and 3 City of St. Louis historic districts within or near the study area such as Midtown, Westminster Place and West Pine-Laclede.

It is significant to note that a majority of the potential residential neighborhood connections are along the Hodiarnout right of way. However, the potential connections between Grand Center, Saint Louis University, Cortex and BJC will create safe bike/pedestrian resources for these centers of research, medicine, business, education and the arts.

It is a goal of this study to provide opportunities to link communities and strengthen neighborhood identity. The realization of the Midtown Loop Trail will seek to respect the historic context of each neighborhood as well as the goals of each neighborhood organization within the planning and design of a trail.



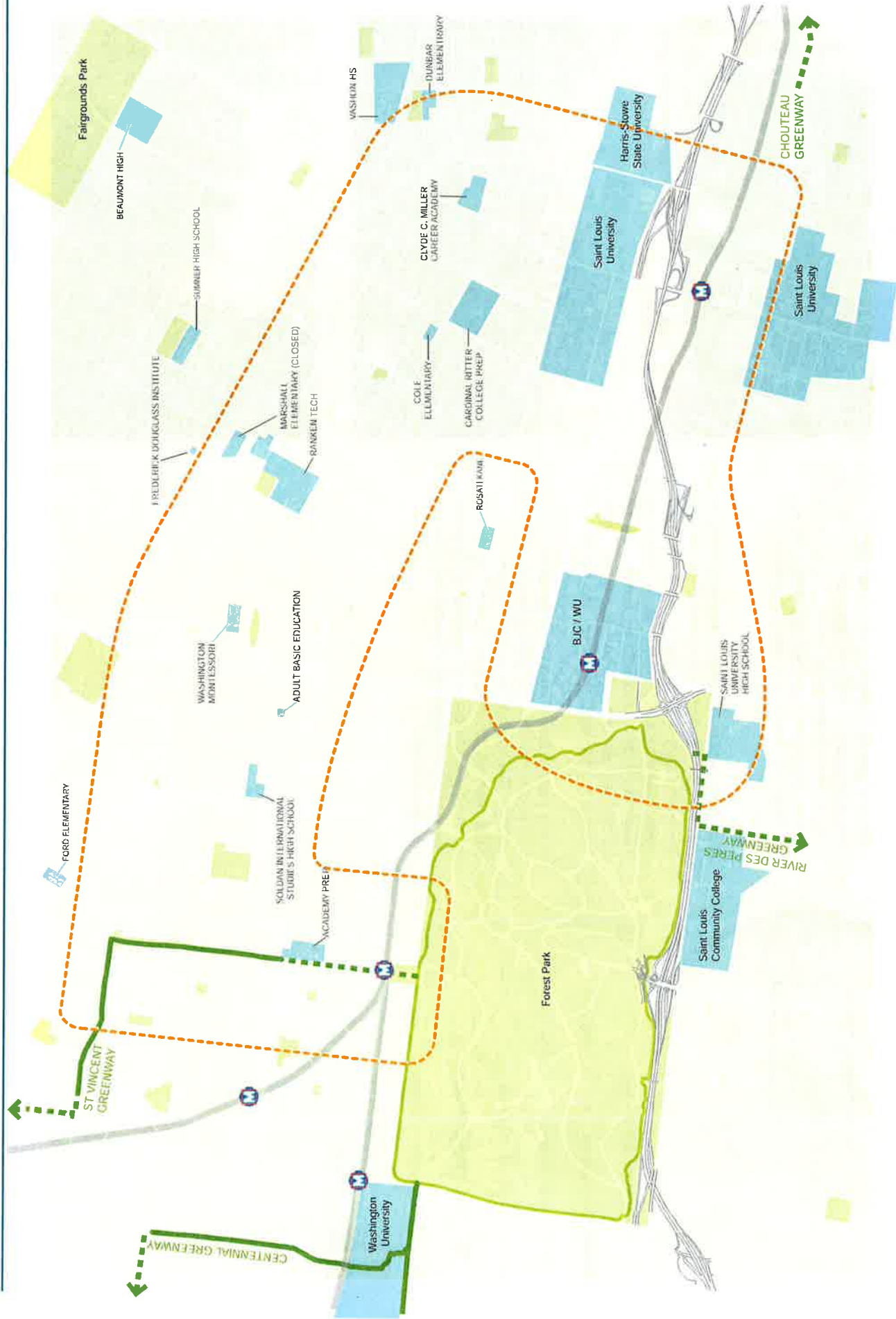
Fountain Park Neighborhood National Historic District



DeBaliviere Place National Historic District



Visitation Park National Historic District



## PARKS AND SCHOOLS

There are 17 parks within the study area of the project including Forest Park. Neighborhood parks include: Hudlin Park, Father Maurice J Nutt Park, Fountain Park, Ivory Perry Park and Porter Park to name a few.

Forest Park, at over 1,371 acres, is one of the largest urban parks in the country and has more than 12 million visitors a year. It is also the hub for four greenways in the River Ring system. The Midtown Loop Trail would connect these greenways to Forest Park and provide off-street bike and pedestrian access to the park for a significant residential population. The trail alignment presents an opportunity to create connections between 8 additional neighborhood parks within the study area and ultimately back to Forest Park.

Institutions of higher learning in the study area include Saint Louis University, Harris-Stowe State University, Washington University Medical School, Goldfarb School of Nursing, and St. Louis College of Pharmacy. These institutions would likely provide a significant number of potential trail users in the area. This is a population that would be well served by an off-street bike and pedestrian facility to provide greater connectivity to residential areas, parks, recreation amenities and MetroLink transit stations. Saint Louis University is actively studying long term plans for greater bicycle connectivity, even planning for the implementation of a campus bike-share program for use by University students, faculty and staff.

In addition, there are 7 active public, private or charter schools within the study area. Proximity to off-street bike/pedestrian facilities is critical to creating a safe environment for children to get to and from school.

The 2005 National Safe Routes to School program seeks to improve safety on walking and bicycling routes to school and to encourage children and families to travel between home and school using these alternative modes of transportation. Safe Routes to School programs operate in all 50 states and in the District of Columbia. Nearly \$1.15 billion has been allocated to this program since 2012.

Much of the Midtown Loop could be implemented in conjunction with the "Safe Route to School" (SRTS) due to its location with respect to neighborhoods and K-12 schools.



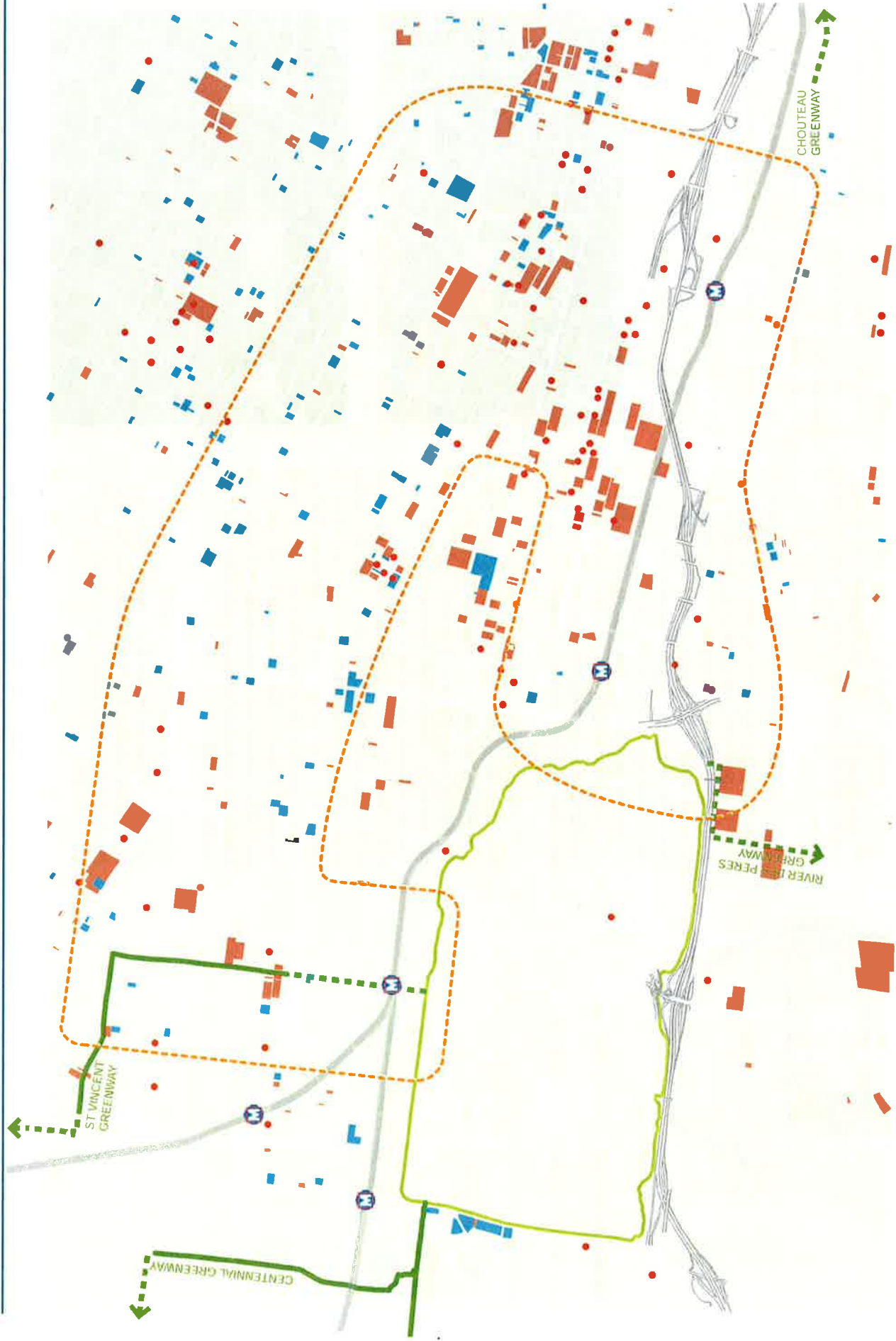
- Alignment Concept Area
- Existing Great Rivers Greenway Trail
- Future Great Rivers Greenway Trail
- Forest Park Dual Path
- Existing MetroLink Station
- Parks
- Public and Private Schools



Washington Montessori Elementary School



Ivory Perry Park





- Alignment Concept Area
- Existing Great Rivers Greenway Trail
- Future Great Rivers Greenway Trail
- Forest Park Dual Path
- Existing MetroLink Station
- Churches
- Libraries / Community Centers / Neighborhood Resources / Cultural Amenities
- Historic Sites

**CULTURAL RESOURCES**

Cultural resources that have been mapped include: churches, visual arts/museums, performing arts, community centers, cultural organizations, libraries, recreation centers, labor organizations, community service organizations, and historic sites. There are a large number of popular cultural destinations, particularly within Forest Park and Grand Center. The map of the cultural resources in the community demonstrates the potential to link many of St. Louis' key cultural assets directly to the trail or by a spur from the trail. The potential location of the Midtown Loop Trail is uniquely positioned within the River Ring context to optimize these connections.

In addition, there are over 93 churches in the study area. It is significant to note that this arrangement of cultural institutions and community anchors represents personal commitment and investment in the community, which will likely translate into support of the Midtown Loop Trail. In addition, this activity creates a sense of public presence and increased safety for trail users.

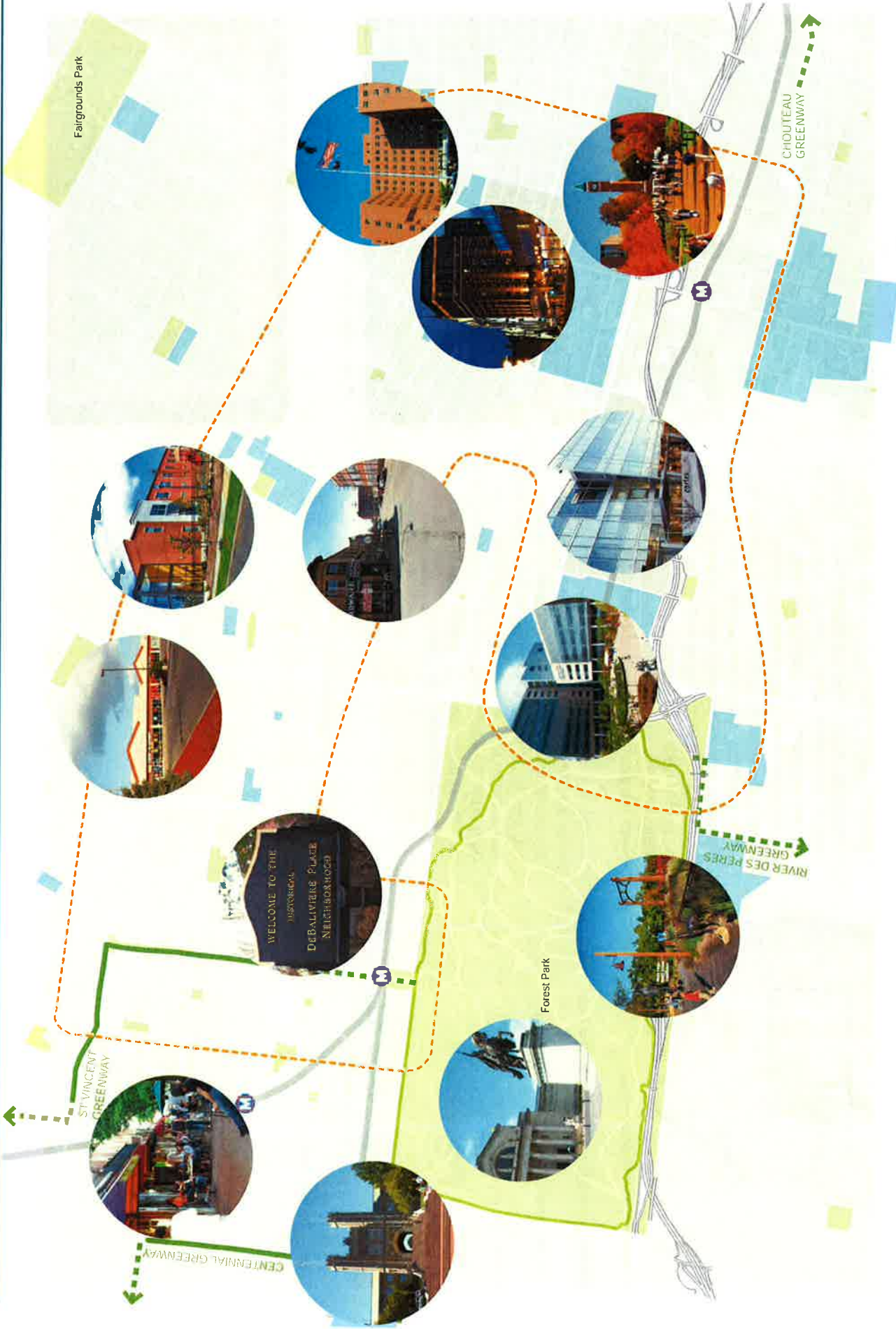


Dr. Martin Luther King statue - Fountain Park



Shelley House historic marker- The Greater Ville Neighborhood

GREAT RIVERS GREENWAY DISTRICT



ECONOMIC DEVELOPMENT DRIVERS

### 3.2 ECONOMIC DEVELOPMENT CONSIDERATIONS

#### **Institutional Drivers**

The study area is well positioned for economic development opportunity due to the presence of many of St. Louis' academic, medical, arts and entertainment institutions. As a whole, these institutions represent significant economic drivers for St. Louis and the region. The Midtown Loop Trail is seen as the opportunity to bridge the gaps between these strong institutional nodes and provide a corridor around which new economic investment can concentrate.

#### **Healthcare Institutions**

Just east of Forest Park, the Midtown Loop Trail will be proximate to BJC Medical Campus, Washington University Medical School, Goldfarb College of Nursing, Central Institute for the Deaf and the new Shriners Hospital. In addition, BJC/ Washington University Medical Campus is in an active phase of campus redevelopment and investment in the public realm.

#### **Cortex Innovation Community**

Further east, the Cortex district is increasingly attracting technology and research companies into the area, while working towards mixed-use development. Planning of the district anticipates the need for off-street bicycle/pedestrian facilities and considers the inclusion of the Midtown Loop Trail an important component for creating an environment to attract business and talent.

#### **Universities**

In addition to Washington University Medical School, the campuses of Saint Louis University and Harris-Stowe State University are well positioned for connection to the Midtown Loop Trail. These two institutions have over 9,700 undergraduate students combined, many of whom live within the study area or may commute via public transit or bicycle. These populations also represent significant economic drivers in the area.

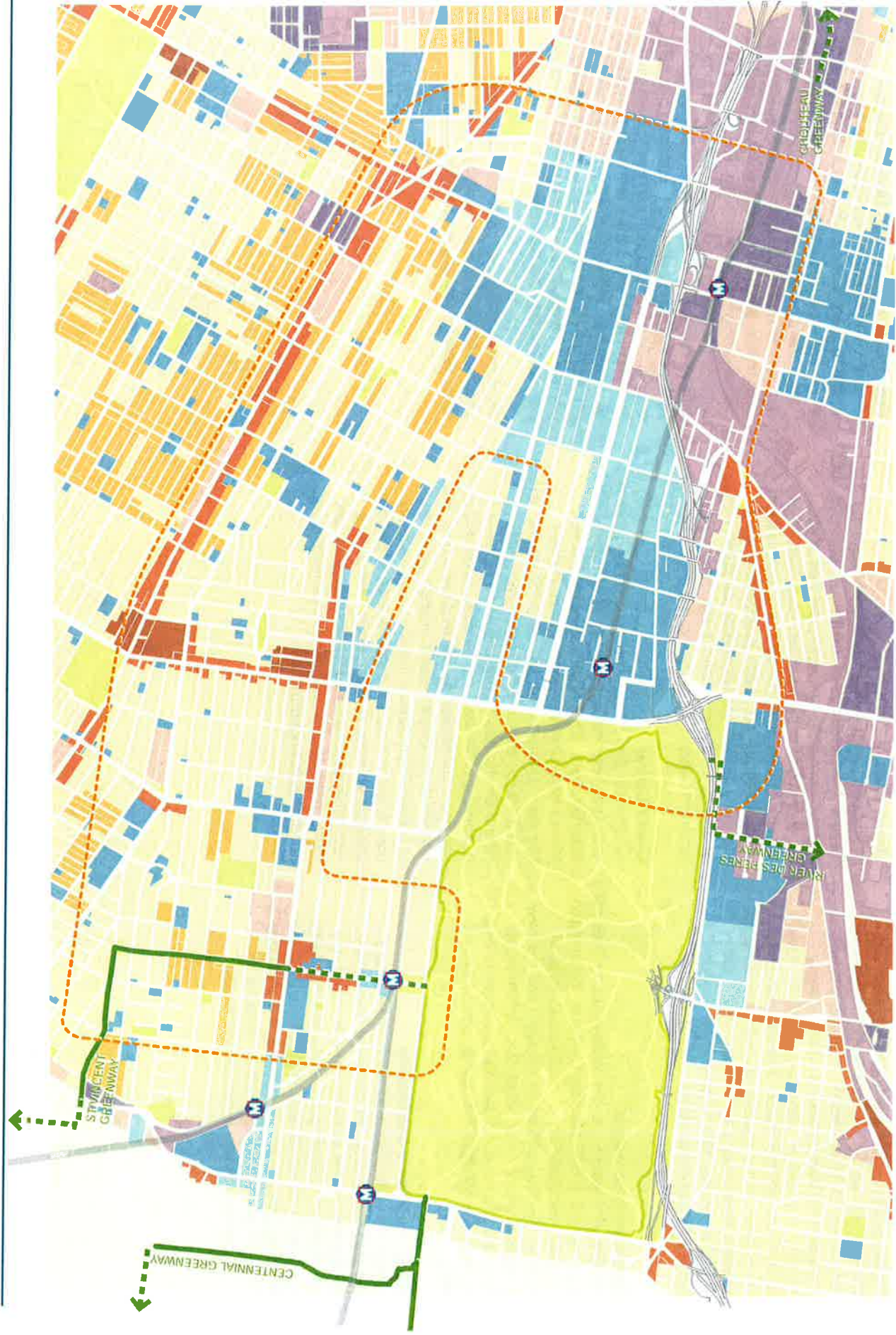
#### **Grand Center**

Adjacent to Saint Louis University, Grand Center is a major regional destination for arts and entertainment. It is home to the Fox Theater, Powell Hall, Sheldon Concert Hall, Pulitzer Museum, Contemporary Museum St. Louis, and fine art galleries such as Bruno David Gallery. Grand Center has the potential to become a regional and Midwest tourist destination and an important connection for the Midtown Loop. The Grand Center Great Streets project, under the St. Louis Great Streets Initiative, was recently completed in June 2013 and is anticipating the integration of the Midtown Loop Trail with its recommendations for wider sidewalks, slower traffic, mixed use development and multi-modal transportation opportunities.

#### **Veterans Administration Medical Center**

St. Louis VA Medical Center/John Cochran Division is also located on the north end of Grand Center and in close proximity to the potential Midtown Loop route as well as the Hodiadmont right-of-way. By the end of 2013, the VA will reveal their multi-million dollar campus redevelopment master plan and begin implementation. This project will create new patient care space. Conversations with VA representatives indicate that they are very interested in pedestrian amenities that their visitors, patients and staff can use for recreation and to get to Grand Center restaurants and other destinations. For the disabled and those with limited mobility, an off-street pedestrian facility offers a safe and accessible route to destinations beyond the hospital campus.

All of these institutions represent important concentrations of visitors, employees, students and even patients that are potential trail users.





## St. Louis City Strategic Land Use Plan



The St. Louis City Strategic Land Use Plan makes recommendations to guide future development within the city. Implemented in 2005, this plan replaces the very outdated 1947 strategic plan that guided city development for nearly 60 years. The plan has two primary purposes: guide new investment in the city and provide stability and opportunities for current investments and residents.

The city's strategic land use plan describes residential, commercial, mixed use, industrial, institutional and green space land uses in five main categories:

**Preservation** - existing land uses that are planned to remain in the future

**Development** - anticipated changes to land use based on planning aspirations and strategic land use strategies

**Opportunity Area** - under utilized areas of the city where development opportunity is likely and desired.

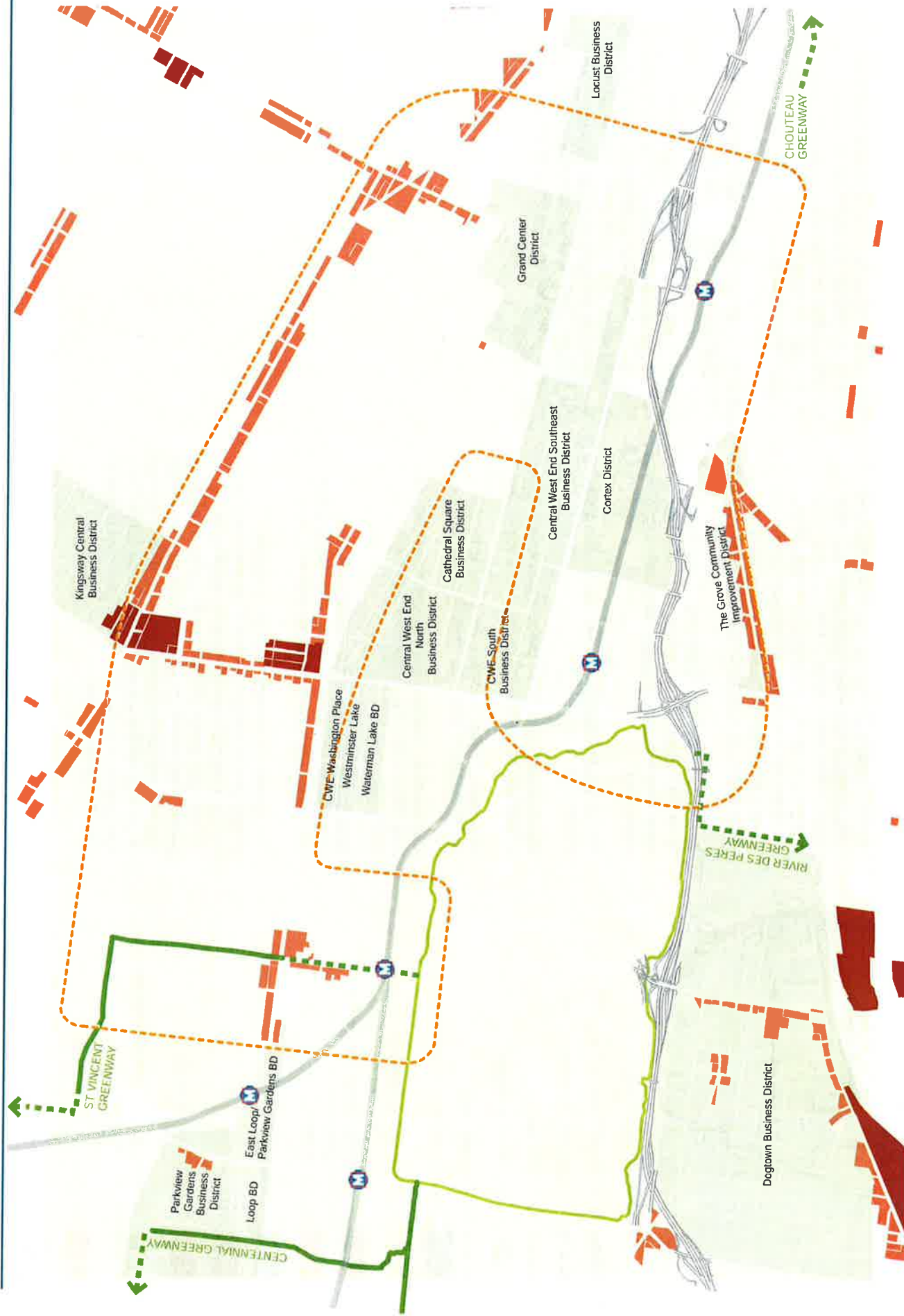
**Commercial** - neighborhood and regional commercial area that are attractive to businesses and well positioned.

**Specialty Mixed Use** - areas where businesses, residents, arts and entertainment uses coexist together (e.g. Downtown, Grand Center, Central West End)

The alignment concept area encompasses neighborhood preservation and development on the north section with integrated neighborhood commercial and an existing regional commercial center. There is a concentration of specialty mixed use and institutional preservation and development at the bend in the concept area. To the south, the land use is dominated by institutional and business/ industrial preservation.

The strategic land use plan anticipates the BJC and Cortex district reinvestment and increased density. In addition, the plan has recommendations for other higher density redevelopment including mixed-use and multi-family development within the alignment concept area.

Community amenities such as greenway trails are significant drivers of increased economic development and reinvestment in neighborhoods. Public investment of this type strengthens community ties and identity, and can be the first steps in neighborhood revitalization. With the increase in density and mixed use development suggested by the city's strategic land use plan, the Midtown Loop Trail will become increasingly important for creating bike and pedestrian connectivity.



**BUSINESS DISTRICTS AND ECONOMIC DEVELOPMENT AREAS**

## BUSINESS DISTRICTS AND ECONOMIC DEVELOPMENT AREAS

The business districts of the Midtown area are some of St. Louis' most popular and vibrant.









Recent Transit Oriented Development (TOD) proposals in the East Loop and DeBaliviere Place neighborhoods have the potential to increase residential density, mass transit ridership, and economic vibrancy around the Delmar and Forest Park MetroLink Stations. These proposals leverage the use of mass transit and are likely to benefit from an integrated off-street pedestrian/bicycle facility that could contribute to the multi-modal transportation network.

Existing retail developments such as the Robert's Village on North Kingshighway are also likely to benefit from access to this off-street bicycle/pedestrian facility. By extension, there may be residents in adjacent neighborhoods who would have greater access to these retail outlets through a safe, off-street trail.

Connecting residential neighborhoods to emergent retail districts through pedestrian/bicycle facilities is an important aspect of this concept alignment. In addition to established retail and entertainment districts within the project area, emergent economic development districts such as Sarah and Laclede, North Sarah, Gaslight Square, MLK Drive, Locust Business District and The Grove will likely benefit from increased multi-modal transportation opportunities provided by the Midtown Loop.

Bicycle and pedestrian connections to business center will not only make it easier and safer for trail users to reach these destinations, and they will contribute to the economic growth potential for local businesses.



-  Alignment Concept Area
-  Existing Great Rivers Greenway Trail
-  Future Great Rivers Greenway Trail
-  Forest Park Dual Path
-  Existing MetroLink Station
-  Business Districts
-  Neighborhood Commercial Areas
-  Regional Commercial Area



Central West End Business District



The Grove Neighborhood Business District



Roberts Shopping Village in the Kingshighway Business District

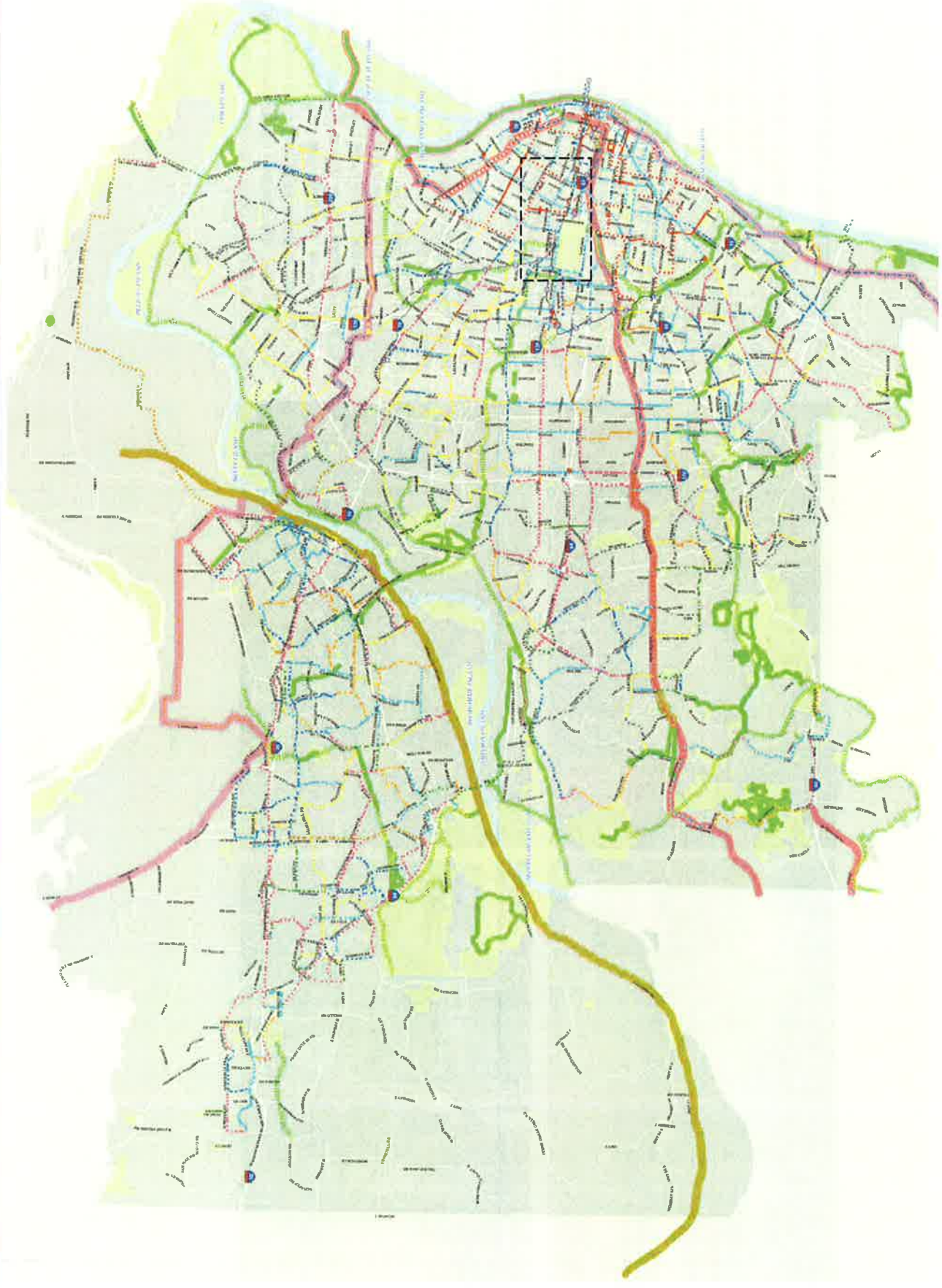


### 3.3 TRANSPORTATION CONSIDERATIONS

Dedicated pedestrian/bicycle facilities within the City of St. Louis are important public health, economic, environmental and social amenities. With the goal of developing an off-street bicycle and pedestrian trail, the vehicular transportation network was studied to understand where public street and light rail rights of way could accommodate these types of trails. Implementation of the Gateway Bike Plan and Bike St. Louis on-street bike lanes is on-going. This study looked at how the Midtown Loop can tie into this network and create off-street linkages between these on-street routes.

The Midtown Loop Trail is also well positioned to connect to public transit. With four adjacent MetroLink stations, this trail can be part of a multi-modal transportation system in Midtown and beyond. The environmental benefits of this trail network go beyond recreation and the establishment of open space. As part of a multi-modal network, the Midtown Loop can promote non-motorized transportation use there by reducing fossil fuel use, emissions and roadway wear and tear, in addition to personal health benefits.





**Recommended On-Street Facility**

- Bike Lane
- Bike Boulevard
- Buffered Bike Lane or Cycle Track
- Climbing Lane
- Paved Shoulder
- Shared Lane Markings
- Share The Road
- Shared Use Path
- Wide Outside Lane
- Needs Further Analysis

**Bike St. Louis Network**

- Dedicated Bike Lane
- Shared Traffic Lane
- Rivers
- Parks
- MetroLink Tracks
- MetroLink Stations
- Metro Transit Centers
- Downtown Bike Station
- Quadrants

**Multi-State On-Street Routes**

- Mississippi River Trail
- Route 66

**Off-Street Facilities**

- Completed Multi- Use Trail
- Proposed Multi- Use Trail
- Katy Trail

**THE GATEWAY BIKE PLAN**

The Gateway Bike Plan is a result of a collaborative effort between the Great Rivers Greenway District, Missouri Department of Transportation, East-West Gateway Council of Governments, Metro, numerous municipalities, St. Louis and St. Charles counties, City of St. Louis and Trailnet. It is a regional bike plan that provides a long-term, 20 year vision for providing a connected system of on-street bicycle routes between communities, transit, greenways and trails. Its goal is to accommodate and encourage bicycling as a viable transportation mode. The plan seeks to create a 1,000 mile bicycle network within St. Louis County, City of St. Louis, and the urbanized communities of St. Charles County.

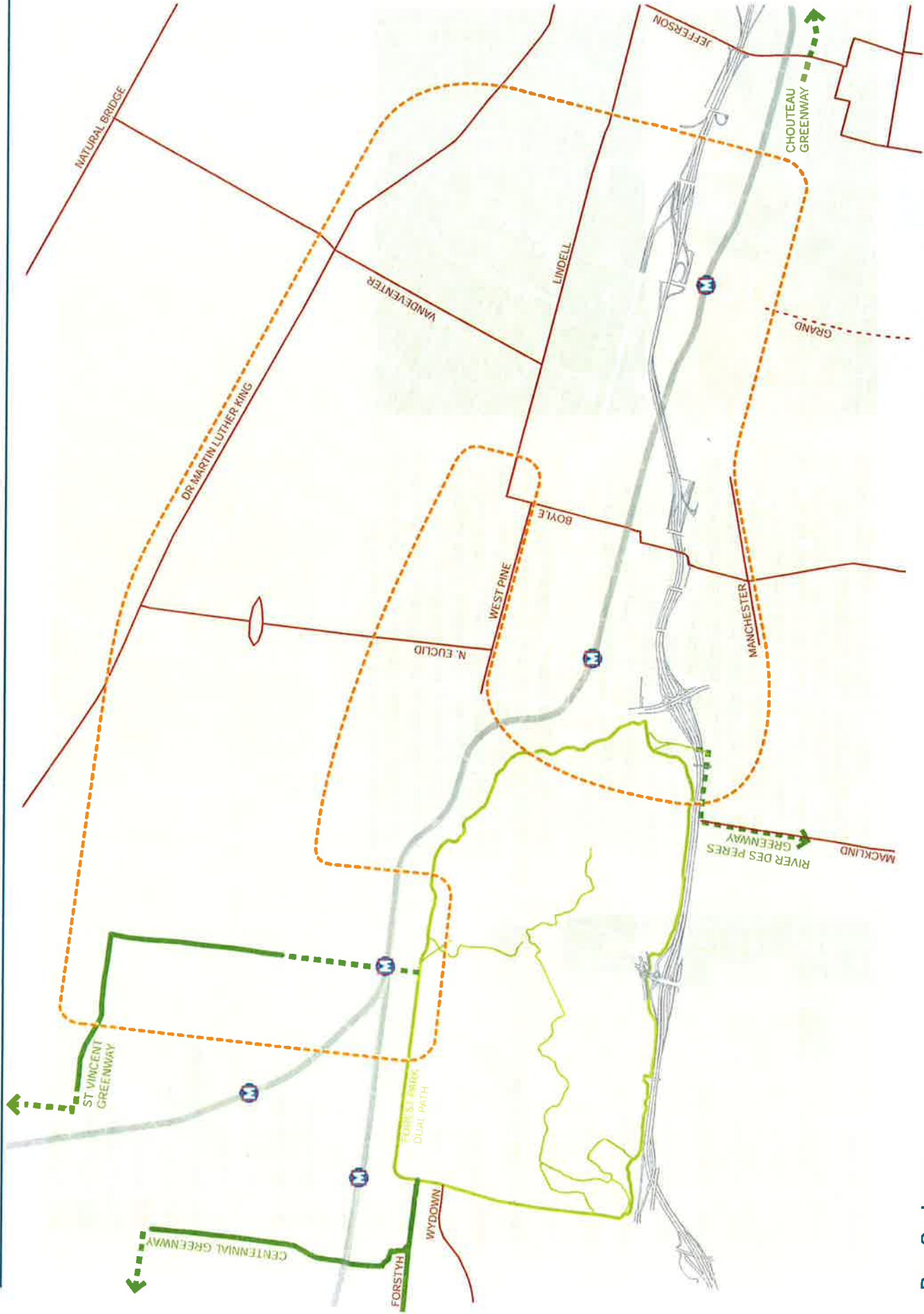
The Gateway Bike Plan provides the regional context for the bike network that is being implemented for St. Louis and establishes priorities for the implementation of on-street bike routes for a regional network. Greenways provide important, primarily off-street links to this system. The Midtown Loop will be an integral hub in the heart of this network, providing connections to both on and off-street routes that extend into the region.



McKinley Bridge Bike Trail










Grant's Trail







-  Alignment Concept Area
-  Existing Great Rivers Greenway Trail
-  Future Great Rivers Greenway Trail
-  Forest Park Dual Path
-  On Street Bike Route
-  Future On Street Bike Route
-  MetroLink Station

## Bike St. Louis

Bike St. Louis is guided by the Gateway Bike Plan for the implementation of on-street bike routes within the City of St. Louis. It is an outgrowth of a partnership between the City of St. Louis and the Great Rivers Greenway District. The first 20 miles of continuous on-street bicycle routes were opened in the spring of 2005. In 2008, Phase II of Bike St. Louis added 50 more miles of on-street routes in St. Louis. These routes also provide on-street connections to the North Riverfront Trail and the McKinley Bridge Bikeway along the Mississippi River in North St. Louis, in addition to the River des Peres Greenway and Christy Greenway in South St. Louis.

Phase II also extended bike routes beyond the city limits into Clayton and Maplewood. Implementation of the Bike St. Louis Phase III Improvement Plan is currently underway. This plan identifies gaps in connectivity and existing routes requiring improvement.

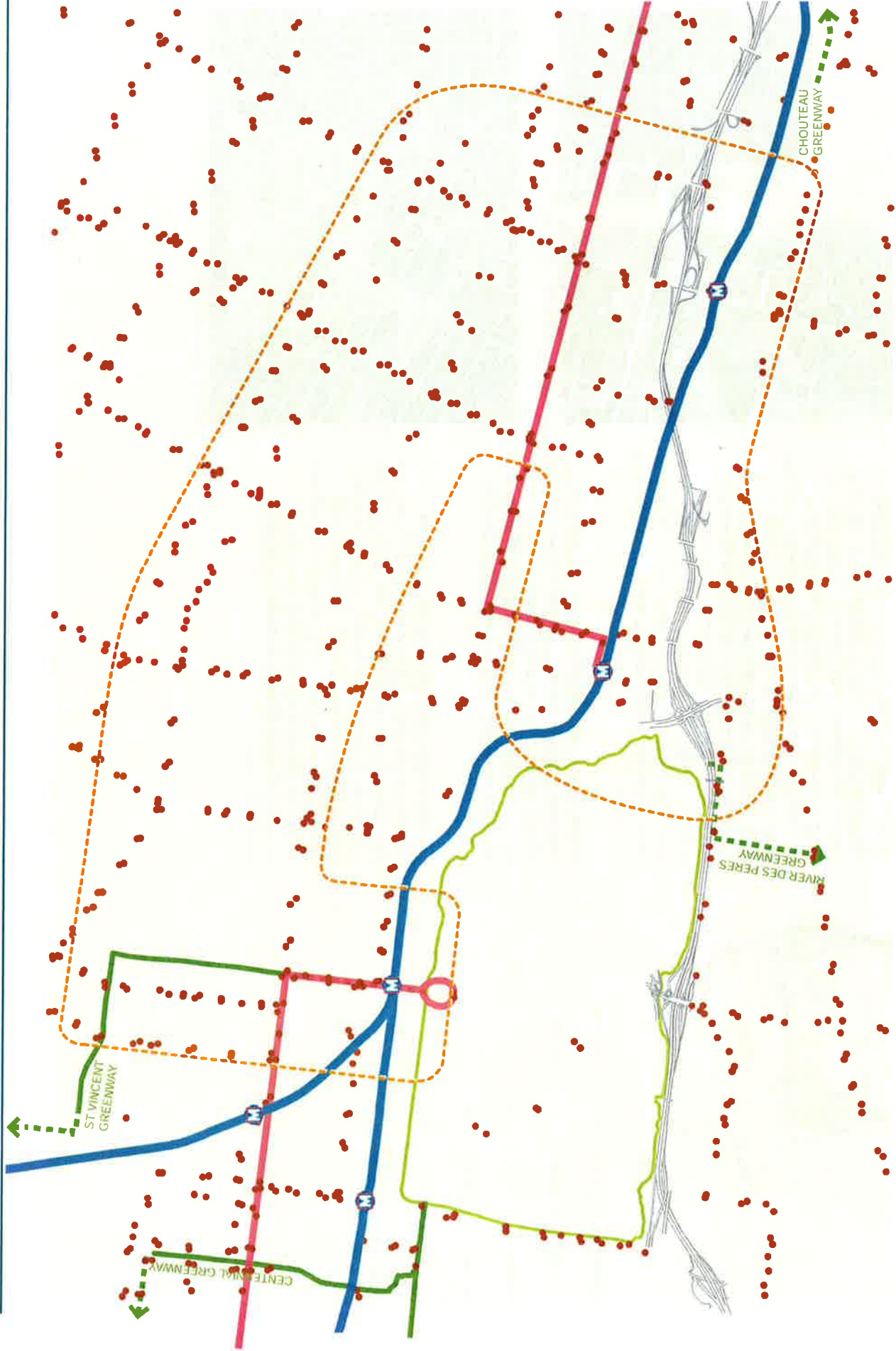
Both the existing and planned Bike St. Louis networks were studied to examine opportunities for connectivity to on-street bike routes for the Midtown Loop Trail. To date, implemented greenway trails have tended to be far from established Bike St. Louis routes. However, the location of the Midtown Loop Trail provides opportunities to connect to a multitude of established on-street routes in the heart of the city.



A Bike St. Louis Route Sign near Busch Stadium



Bike St. Louis Lane Marking





**MASS TRANSIT**

To better understand the relationship between the existing mass transit network and the potential Midtown Loop Trail alignment, MetroLink stations and MetroBus stops have been identified. These connections have been studied to inform alignment options that might encourage ridership and multi-modal transit.

**MetroLink**

The MetroLink alignment is primarily east-west in this area of the study with direct access to downtown. The Midtown Loop Trail has the potential to link to three of these existing stations:

- 1) Forest Park/DeBaliviere
- 2) Central West End
- 3) Grand

In August 2012, Metro documented 1.5 million total boardings system-wide, with an average of 54,000 commuters boarding each week day. The Central West End MetroLink Station is the city's busiest station with over 6,000 boardings on an average weekday. The Forest Park/DeBaliviere Station is the city's second busiest station with 4,200 daily boardings. The Grand Station has around 2,700 boardings per day. A ridership study for the Cortex district is underway and may identify opportunities for an additional MetroLink station between the Central West End and Grand stations. A potential route for the Midtown Loop Trail may be along discontinued or abandoned portions of the railroad right of way north of the MetroLink tracks through the Cortex District.

**MetroBus**

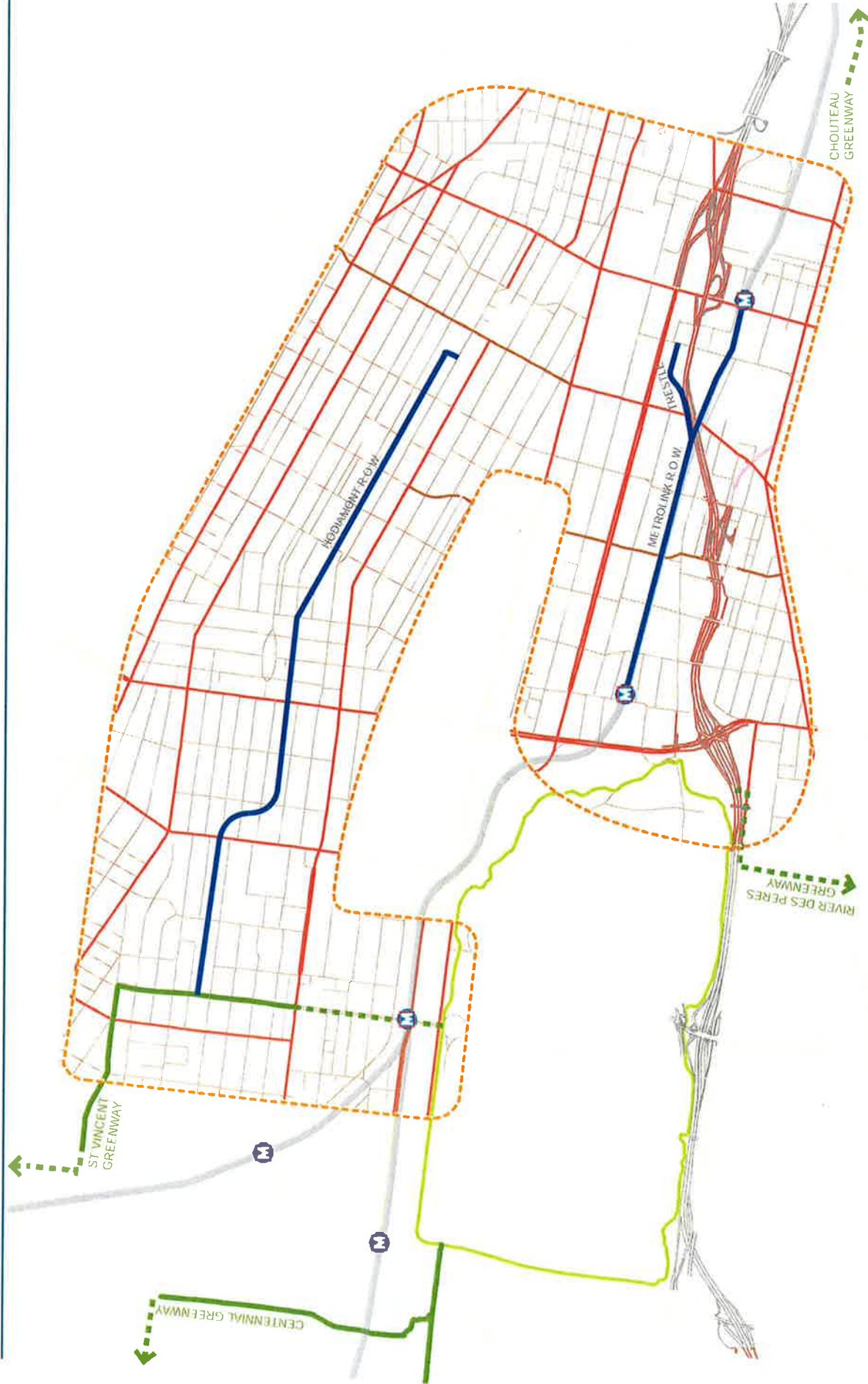
Bus service in the northern areas of the alignment concept area is comprehensive. Bus stops are located on all the major streets and are numerous. Metro is currently in the process of consolidating

bus stops in an effort to streamline service. South of Interstate 64, service is mostly concentrated along the Chouteau corridor. The Midtown Loop Trail can connect to the #70 bus on Grand Boulevard which is the busiest in the MetroBus system with an average of 181,000 riders per day. This bus crosses the entire city in a north and south direction providing access to MetroLink stations, jobs and neighborhoods.

**St. Louis Streetcar**

There are two locations where the Midtown Loop Trail could connect to potential streetcar routes. A streetcar loop is planned for the DeBaliviere and Delmar corridors and would connect Forest Park to University City. A second loop is being studied along Lindell Boulevard. It would connect Downtown to Grand Center, Saint Louis University and the Central West End. Both routes can have direct connections to the Midtown Loop Trail.

The three MetroLink stations in the study area and the intersection of Grand and Lindell are natural multi-modal hubs for transit access providing light rail, bus, streetcar and greenway access. The Midtown Loop Trail is well positioned to provide safe, off-street bike and pedestrian access to existing and proposed public transit. This trail will also help to reinforce multi-modal connections on the south sides of the study area from The Grove, Forest Park Southeast, and South Grand.



STREET HIERARCHY IN CONCEPT AREA

## STREETS AND CYCLIST COMFORT

Bicyclists and bike commuters are being seen more and more frequently in the City of St. Louis. Studies have shown that an increase in the number of cyclists increases cyclist's safety because drivers become more aware of their presence. However, a primary deterrent to attracting new riders in the city is the presence of vehicular traffic. Though significant effort has been made to establish bike routes and bike lanes, developing off-street pedestrian/bicycle facilities may expand and diversify use.

Prior to 2012, the Guide for the Development of Bicycle Facilities from American Association of State Highway and Transportation Officials published in 1999 had been used to classify cyclists within a planning context. Today, a new reference defines a common language about bicyclist comfort and skill. According to a white paper published by the Portland Bureau of Transportation, cyclists can be categorized in four groups as described below:

### 1) Strong and Fearless

These are advanced or experienced riders that are generally using their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with motor vehicle traffic and on any type of road condition.

### 2) Enthusied and Confident

These are confident riders that are comfortable sharing the roadway with automotive traffic, but they prefer to do so operating on their own facilities. They are attracted to streets that have been redesigned to make them work well for bicycling. They appreciate bicycle lanes and bicycle boulevards and may be using their bicycles for transportation purposes, e.g. to get to the store or to visit friends.



- Alignment Concept Area
- Existing Great Rivers Greenway Trail
- Future Great Rivers Greenway Trail
- Forest Park Dual Path
- MetroLink Station
- Limited Access Highway
- State Highway
- Secondary Road
- Local Road
- Available Non-Vehicular Routes

### 3) Interested but Concerned

These are people that are curious about bicycling having heard messages about being a "bicycle-friendly" city and about the need for people to lead more active lives. They like riding a bicycle, remembering back to their youth, or to the ride they took on vacation. However, they are afraid to ride and don't regularly ride bicycles. They would ride if they felt safer on the roadways; if cars were slower and less frequent; and if there were more quiet streets with few cars and paths without any cars at all.

### 4) No Way No How

This is a group of people that are currently not interested in bicycling at all, for reasons of geography, inability, or lack of interest.

The Midtown Loop Trail is focused on providing an off-street facility that would cater to the comfort needs and abilities of the "Interested but Concerned Group" with the goal of winning over individuals in the "No Way No How" group to the merits of bicycling. This safe and separated loop trail would potentially provide access for bicyclists of all types.

While this is a very important goal for the Midtown Loop, analysis of the principal intersections and major streets in the area is vital to its success. A significant finding of this analysis is the presence of two long stretches of Metro right of way in the Hodiarnont area and in the Cortex area that could make up nearly 50% of the overall loop. These segments would be free of vehicular traffic, with the exception of intersection crossings, and could best attract even the most novice of riders.

Source: [www.portlandoregon.gov/transportation/article/158497](http://www.portlandoregon.gov/transportation/article/158497)

