



STRATFORD  
GOODFELLOW  
UNION  
KINGSHIGHWAY  
NEWSTEAD  
FAIR  
GRAND  
PARNELL  
ST. LOUIS  
BIDDLE  
DELMAR  
WASHINGTON  
OLIVE  
CLARK  
MMTZ  
TRUMAN  
PARK  
RUSSELL  
GRAIVOIS  
ARSENAL  
CHEROKEE  
KEOKUK  
BROADWAY  
DATES  
LOUGHBOROUGH

# Transit Oriented Development Study

For the PROPOSED NORTHSIDE-SOUTHSIDE ALIGNMENT

prepared by H3 Studio

For the City of St. Louis & the St. Louis Development Corporation  
Final Report

July 2013

# Acknowledgements

## CLIENT GROUP

### The City of Saint Louis - Northside-Southside Alignment

Honorable Francis G. Slay	Mayor
Catherine Werner	Director of Sustainability
Don Roe	Director of Planning
	Planning & Urban Design Agency
Connie Tomasula	Urban Designer
	Planning & Urban Design Agency

### St. Louis Development Corporation

Otis Williams	Executive Director
Amy Lampe	Major Project Specialist

## TECHNICAL ADVISORY COMMITTEE

Todd Antoine	Director for Planning Great Rivers Greenway
Patrick Brown	Special Assistant to Mayor Slay
Stephen Gregali	Special Assistant to Mayor Slay
John Kohler	Planning & Program Manager Board of Public Service
Paul Hubbman	Senior Manager of Corridor and Long Range Planning East-West Gateway Council of Governments
Mark Phillips	Long-Range Planner Bi-State Development Agency/Metro Transit
Dale Ruthsatz	Director of Commercial Development St. Louis Development Corporation
Joe Thele	Neighborhood Development Executive Neighborhood Stabilization Office

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## PLANNING TEAM

### H3 Studio

*Lead Consultant*

John Hoal, Ph.D., AICP	Principal-In-Charge
Timothy Breihan, AIA	Major Project Manager
Laura L. Lyon, VP, CNU	Project Manager
Bryan Taylor Robinson, AICP, LEED AP	Sustainability Planner
Courtney Cushard, LEED AP	Project Manager
Angie Hristova	Urban Designer
Jonathan Stitelman	Urban Researcher
Christopher Liao	Urban Designer
Reed Miller	Technical Staff
Andrew Luy	Technical Staff

### Bernardin, Lochmueller & Associates

*Transportation Sub-Consultant*

Douglas Shatto, PE, PTOE	Transportation Services Manager
Christopher Beard, PE, PTOE	Project Engineer
Christopher Joannes	Traffic Planner
Ryan Bumb	Traffic Engineering Specialist
Robert Innis	Principal, Innis Consulting

### Development Strategies

*Economic Sub-Consultant*

Robert M. Lewis, AICP, CEcD	Principal
Larry Marks	Principal   Executive Vice President
Katie Medlin	Senior Analyst

### M3 Engineering Group

*Civil Engineering & Environmental Planning Sub-Consultant*

Marjorie L. Melton, P.E., LEED AP	Principal
Marc W. Eshelman, P.E.	Principal

### Vector Communications Corporation

*Public Outreach Sub-Consultant*

Laurna Godwin	Partner
Rachel Powers	Consultant

## Table of Contents

<b>0</b>	<b>Executive Summary</b>	<b>4</b>
<b>1</b>	<b>Introduction</b>	<b>34</b>
<b>2</b>	<b>Background</b>	<b>40</b>
<b>3</b>	<b>Transit Neighborhood Typology</b>	<b>46</b>
<b>4</b>	<b>Proposed Northside-Southside Alignment</b>	<b>66</b>
<b>5</b>	<b>Preferred Station: Cherokee</b>	<b>108</b>
<b>6</b>	<b>Preferred Station: Kingshighway</b>	<b>186</b>
<b>7</b>	<b>Appendix</b>	

### **1 Planning & Urban Design: H3 Studio**

- a. Proposed Northside-Southside Alignment: Station Typology Sheets
- b. Technical Advisory Committee Meetings:
  - TAC Meeting #1 Presentation: April 23, 2013
  - TAC Meeting #2: May 1, 2013
  - TAC Meeting #3: May 24, 2013
  - TAC Meeting #4: June 5, 2013
  - Summary of Public Outreach Presentation:  
Vector Communications, June 5, 2013
- c. Proposed Northside-Southside Alignment Exhibit Boards

### **2 Public Engagement: Vector Communications Report**

### **3 Economic: Development Strategies Report and Appendices**

### **4 Transportation: Bernardin, Lochmueller & Associates Report**

### **5 Civil, Sustainability & Environmental Planning: M3 Engineering Group**

### **6 Opinion of Probable Costs: M3 Engineering Group**

Project File Contents located at Planning and Urban Design Agency, City of St. Louis:

Proposed Northside-Southside Alignment Station Area Study and Profiles

Meeting Minutes of the Technical Advisory Committee Meetings (4): Vector Communications

In Project Files located East-West Gateway Council of Governments' website:

Electronic files of this report and corresponding appendix. These files will be available on their website in adherence to the criteria for funding under an award with the U.S. Department of Housing and Urban Development through East-West Gateway Council of Governments.





## 0 | Executive Summary



1912 MAP OF ST. LOUIS

## EXECUTIVE SUMMARY

### STUDY DEVELOPMENT, FUNDING, & ADMINISTRATION

This study is a joint effort by the East-West Gateway Council of Governments, the City of Saint Louis, and St. Louis Development Corporation (SLDC). The Study is funded with a portion of the \$4.7 million Sustainable Communities Regional Planning Grant from the U.S. Department of Housing and Urban Development (HUD) through the East-West Gateway Council of Governments. The aforementioned grant is funding additional sustainability planning efforts throughout the St. Louis Region.

The St. Louis Development Corporation (SLDC) is responsible for the project administration. Amy Lampe, Major Projects Specialist, is in charge as project coordinator. The Client Group team consists of Don Roe (City of Saint Louis Planning and Urban Design Agency), Connie Tomasula, project coordinator for the Northside-Southside Alignment portion of the study (City of Saint Louis Planning and Urban Design Agency), and Amy Lampe. The Project Team lead is H3 Studio, performing project direction, planning, and project management, with partners Bernardin, Lochmueller & Associates (BLA) with Innis Consulting; M3 Engineering Group; Development Strategies; and Vector Communications Corporation.

### PLANNING PROCESS

## STUDY OBJECTIVE:

*To assist the City of St. Louis, its neighborhoods, and developers with preparing for and taking advantage of transit investment along the proposed Northside-Southside Alignment.*

**To do this, a system for determining development potential and setting aspirational thresholds for future conditions at each station area has been developed. In applying this system at the Kingshighway and Cherokee Stations, each located along the Proposed Northside-Southside Alignment, the scale of future development potential is clearly demonstrated.**

This study took place over the course of three and half months and involved regular interface between the Client Group and the Project Team. In addition, the Project Team met with an assembled Technical Advisory Committee and conducted stakeholder outreach during the planning process. These efforts allowed the Project Team to collect a large amount of data whilst engaging institutional and governmental staff and community members. The public outreach initiatives have helped to build and enrich the study's recommendations for future efforts along the corridor.

### TECHNICAL ADVISORY COMMITTEE

The role of the Technical Advisory Committee (TAC) was to provide directed guidance to the Project Team and to review in-progress work, materials and initiatives, and work products. The TAC was comprised of representatives from key agencies and institutions involved in the study, including the City of St. Louis Mayor's Office, Planning and Urban Design Agency, Metro, East-West Gateway Council of Governments, Board of Public Service, Great Rivers Greenway District, St. Louis Development Corporation, and the Neighborhood Stabilization Team. Please refer to the Acknowledgements section for a complete list. The Project Team held four coordination and review meetings with the Client Group team throughout the course of the study for progress reports. In addition, the Client Group hosted four work sessions and review meetings with the Technical Advisory Committee with the Project Team throughout the course of the study for regular guidance.

## PUBLIC OUTREACH

The Northside-Southside Proposed Alignment for transit expansion is a long-term process that will continue over many years and in many phases. The City and its consultants have worked together with stakeholders and the community to develop the potential for the City and for the individual neighborhoods served along the corridor.

In May 2013, Vector Communications continued their outreach along the proposed alignment. They conducted stakeholder interviews with local leaders who represent various interests within the two preferred station areas: Cherokee and Kingshighway. These interviews offered key stakeholders the opportunity to envision their respective area's future as having a transit station along with added Transit Oriented Development. The discussions focused on benefits, challenges, opportunities, and future visions for development in the area. These face-to-face interactions not only facilitated meaningful dialogue, but also provided the interviewer an opportunity to update stakeholders on the plan since the last round of public outreach. The interview findings were presented to the TAC during the meetings to assist in guiding the process. The summaries and complete transcripts are located in the appendices.

## LIVABILITY IN THE REGION

### St. Louis as a Transit City

From its inception, St. Louis was planned with an urban morphology well suited for walkability with small blocks and tightly knit residential neighborhoods distributed evenly throughout the City. During a period of post-War decline, common to many other rust-belt cities at the time, the City began to empty, with many of its residents leaving for the newer, outer-ring suburbs. Over the past couple of centuries, the City's grid layout has shifted due to the introduction of boulevards, streetcar lines, and, later, highways; but, the City has remained a nexus of transit. For decades, the City's neighborhoods blossomed as traditional streetcar suburbs with many residents who commuted to jobs downtown but accommodated their everyday needs close to home. However, with many of its neighborhoods retaining their once strong urban character and structure, these neighborhoods are primed for a return to their former glory, all the while envisioning a vibrant future based on transit. Today, the City is ready to re-embrace Transit Oriented Development along its historic corridors to ensure connectivity of its residents to jobs, homes, shopping, and parks.

Encouraging the vision of an enriched and diverse culture, economy, and amenities and connecting these assets to the residents and visitors is paramount. This report explores the expansion of light rail service into St. Louis' more residential districts with the Proposed Northside-Southside Alignment, a central component of Metro's



HISTORICAL MAP OF ST. LOUIS



ST. LOUIS STREETCAR MAP



1966 KINGSHIGHWAY BUS TRANSIT

Well-executed TOD will allow our region to **improve mobility, create sustainable & livable communities,** and improve transportation options for the future. The overall effort aims **to create a vision and roadmap for how to encourage TOD** in the St. Louis region.

Moving Transit Forward: St. Louis Regional Long-Range Transit Plan (2010). Plans for this new alignment have evolved over the past 15 years, from a conceptual notion highlighted in the City's Major Transportation Investment Analysis (2000), to a specific alignment detailed in the Northside-Southside Study (2008).

This study builds upon the goals set forth in previous plans, while giving a strong framework for decision-making regarding Transit Oriented Development, which ,as defined by HUD, is compact, mixed-use development in close proximity to transit facilities. Transit Oriented Development promotes sustainable communities by providing people of all ages and incomes with improved access to transportation and housing choices and reduced transportation costs that reduce the negative impacts of automobile travel on the environment and the economy. This report aspires to meet these goals and study the Alignment at this higher level of detail, with a comprehensive analysis of each of the proposed stations, a set of Station Area Plans that describe detailed development programs, building form and distribution, street improvements, and environmental analysis for the proposed Cherokee and Kingshighway Stations. These two stations were selected because they embody a similar range of challenges and opportunities to the other station areas along the Alignment. In future studies of the other station areas, lessons from Kingshighway and Cherokee can be readily applied.

#### St. Louis as a Sustainable City

The Northside-Southside Proposed Alignment Study will use the St. Louis City Sustainability Plan as a future measure of success since the intent of this study matches the goals put forward by the Sustainability Plan. The initial analysis of the aspirations of the Station Area Plans for the Northside-Southside Proposed Alignment as compared to the St. Louis City Sustainability Plan demonstrates the ability to address 46 out of the 50 objectives in the following functional categories: Urban Character, Vitality & Ecology; Arts, Culture & Innovation; Empowerment, Diversity & Equity; Health, Well-Being & Safety; Infrastructure, Facilities & Transportation; Education, Training & Leadership; And Prosperity, Opportunity & Employment.

Transit Oriented Development occurs around rail transit stations within cities. It is inherently more sustainable than other types of single-use and auto-dependent development. Rail lines are perceived as a more permanent type of infrastructure than roads and highways , allowing for more a concentrated and compact development to occur, thus preserving valuable land and resources. Lessening our reliance on automobiles has enormous implications for our quality of life. By reducing carbon emissions, we improve air quality, and by decreasing our household transportation costs, we increase disposable income leaving more dollars available for savings and investment. More disposable income, better air quality, more efficient and productive land use, healthier lifestyles which include walking and bicycling, and diverse communities all contribute toward the betterment of life.

#### APPROACH: TRANSIT NEIGHBORHOOD TYPOLOGY

Where to start? The St. Louis TOD Framework Plan, commissioned by East-West Gateway and Metro, established a framework for smart growth around existing Metro stations. For the regional MetroLink network, the Framework Plan established station area typologies for the varied development and land use patterns which exist throughout the St. Louis region. The Framework Plan examined the potential for economic development around the 37 existing MetroLink Stations by looking at the regulatory environment and public and private financing options that are available for Transit Oriented Development.

What about aspirations for the City's future? Although The Framework Plan establishes much needed broad categories and subheadings for the region's existing stations, including the "Neighborhood Typology", it does not address the finer-grain of use, character and diversity of the 39 neighborhoods touched by the Proposed Northside-Southside Alignment within the City. To address this lack of particularity and ensure quality placemaking, the Project Team developed a new approach, the "Neighborhood Typology" was expanded and refined. Using the Alignment as a prototypical cross-section of the City, the Project Team developed an integrated analytical system of nine Transit Neighborhood Typologies by 1) using direct relationships of residents-to-workers and, 2) overlaying the Building Envelope Standards assigned to each typology through the use of a Form-Based District. This level of particularity produced a framework for desired scales of integrated future development and population change. The Proposed Northside-Southside Alignment's 28 station profiles (due to the Downtown stations' close proximity, the 28 stations were analyzed as 25 by the Planning and Urban Design Agency) were further categorized into Transit Neighborhood Typologies. After much discussion with the Client Group, the TAC, and stakeholders, two station areas were chosen for further study and detailed planning: Cherokee Station and Kingshighway Station.

## LIVABILITY PRINCIPLES

### STEPS FOR USING THE TRANSIT NEIGHBORHOOD TYPOLOGY SYSTEM

#### STEP 1: DETERMINE CURRENT STATION AREA TYPOLOGY

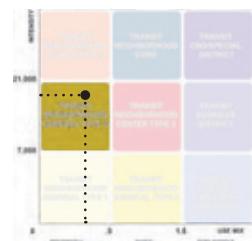
#### STEP 2: DETERMINE DESIRED TYPOLOGICAL SHIFT

#### STEP 3: DETERMINE DEVELOPMENT PROGRAM BASED ON DESIRED POPULATION INCREASE

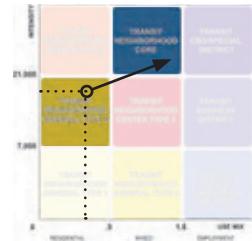
#### STEP 4: LOCATE OPPORTUNITY SITES TO FULFIL SHIFT

(See side-bar to right)

#### STEP 1:



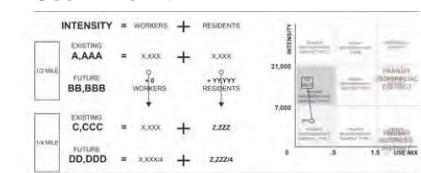
#### STEP 2:



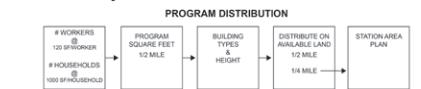
#### STFP 3:



#### Use Mix shift



#### Intensity shift



#### Program Distribution

#### STEP 4:



Development opportunity sites example



In order to correlate the aspirational vision and realistic needs of the residents and business-owners with the desires of the future generations and visitors of St. Louis, the Transit Oriented Development Study for the Proposed Stations along the Proposed Northside-Southside Alignment is closely aligned with the goals of the HUD-DOT-EPA Partnership for Sustainable Communities Livability Principles.

#### **Sustainable Communities Livability Principle 1:**

**Provide more transportation choices.** Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

#### **This study's recommendations to meet Principle 1:**

- Develop physical transit infrastructure to increase access to public transportation and provide reliable and economical transportation options to citizens of all income levels;
- Provide convenient transportation options for all citizens and reduce redundant transit infrastructure by linking bus, bicycle, and pedestrian access routes at inter-modal transfer stations along the Alignment;
- Reduce household transportation costs by offering a flexible range of public transport options;
- Increase walkability to retail, employment, and recreational needs by using street improvements to activate the streetscape at all hours of the day;
- Reduce the need for car ownership by creating enticing retail and entertainment options in new mixed-use development at the station area; and
- Improve air quality and manage stormwater by planting local species of street trees and vegetation in curb bumpouts, public parks, and green roofs.

#### **Sustainable Communities Livability Principle 2:**

**Promote equitable, affordable housing.** Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

#### **This study's recommendations to meet Principle 2:**

- Increase residential density adjacent to new station areas to provide the most efficient and reliable connection to public transportation;
- Renovate vacant buildings and redevelop vacant parcels with contextually scaled infill to provide residents at all income levels with well-built homes at rates below current day new-build costs.
- Attract and retain residents of all ethnicities, incomes, and ages with a variety

**St. Louis begins the 21st century with the opportunity to integrate, grow, and balance ambitions for economic prosperity, social equity, and environmental health within its communities and the region.**

of housing options;

- Reduce the need for daily car trips by developing necessary services in mixed-use complexes adjacent to the station area; and
- Allow for incentives for renovation, redevelopment, and retention of affordable market rate housing.

#### Sustainable Communities Livability Principle 3:

**Enhance economic competitiveness.** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.

#### This study's recommendations to meet Principle 3:

- Attract business and employment opportunities at the station area to provide a wide range of employment options for local residents;
- Develop new mixed-use buildings to accommodate an array of business types and sizes;
- Provide fast, easy connection to Downtown St. Louis, the primary regional employment center;
- Leverage existing infrastructure assets, such as proximity to the highway and historic greenways to assert identity and attract businesses
- Create employment and provide job-skills training for local residents during the redevelopment of vacant residential property;
- Respond to the requests of community leaders for increased necessary commercial and entertainment amenities for all members of the station area community;
- Consider Co-operative flex work space and continue to support business incubators; and
- Encourage Smart Technology and WiFi hotspots for mobility work force.

#### Sustainable Communities Livability Principle 4:

**Support existing communities.** Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.



POTENTIAL STREETSCAPE IMPROVEMENTS



DOWNTOWN RAIN GARDEN COLLECTS PAVED SURFACE RUNOFF



**TRANSIT STATION AREAS  
BECOME VENUE FOR PUBLIC ART**

**This study's recommendations to meet Principle 4:**

- Reduce market demand for urban sprawl by developing new Transit Oriented Development at the station areas;
- Minimize displacement of residents by focusing development on large underutilized parcels on main streets adjacent to the transit station;
- Increase new development into strong existing residential communities by addressing community needs and aspirations;
- Allow the existing communities will benefit from the influx of new services and employment while residents and workers in the new development will benefit from the existing character and quality of the surrounding neighborhoods;
- Take advantage of the mixed-use nature of transit oriented development transit oriented development will be mixed-use to make the station area attractive for new residents and workers while serving the densest population possible. These areas will attract transit ridership throughout the day as residents and workers commute to and from the station;
- Increase residential and employment population densities around the station make for a highly efficient transit network, one in which resources can be focused on serving the condensed population rather than on extending out to serve dispersed populations; and
- Integrate public art into streetscape improvements, making the new transit infrastructure aesthetically pleasing while functionally effective.

**Sustainable Communities Livability Principle 5:**

***Coordinate and leverage federal policies and investment.*** Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

**This study's recommendations to meet Principle 5:**

- Utilize Federal, State, and Local government funds for improvements to public streets, infrastructure, and historic buildings in pursuance of ecological and economic goals.
- Utilize Federal and Local funding options to finance public infrastructure, land acquisition, commercial property renovations, and street improvements;
- Utilize tax abatement to attract developers and individual property owners to develop and invest in local communities;

The transit improvements described in the Preferred Station Area Plans operate on the social, economic, and ecological platforms of the City's Sustainability Plan.

- Utilize local funding for water management and stormwater remediation practices to bring station areas into compliance with regional sustainability initiatives; and
- Identify development funding that is available from several local and Federal options at both Cherokee and Kingshighway Stations. These options will be used leverage monies for implementation at all scales.

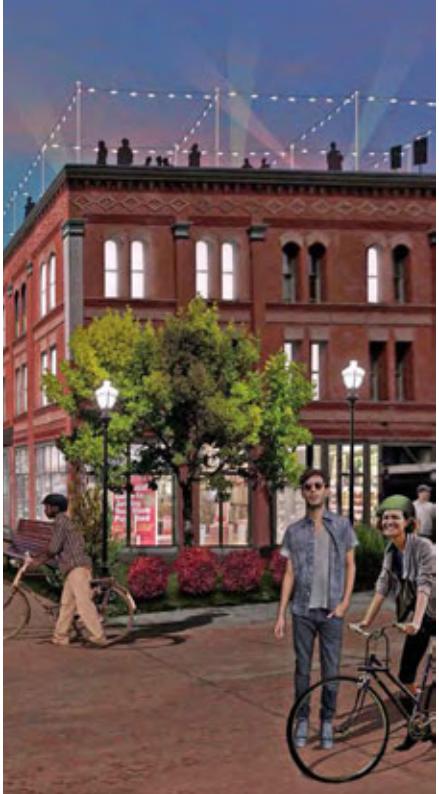
#### Sustainable Communities Livability Principle 6:

**Value communities and neighborhoods.** Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

#### This study's recommendations to meet Principle 6:

- Encourage civic engagement during all phases of the planning process to ensure infrastructure improvements which are reflective of community aspirations and needs;
- Increase greenscaped areas at all station areas to provide comfortable places for community members to meet, relax, and utilize;
- Utilize new walkable transit stations to connect adjacent neighborhoods;
- Implement a fine mix of historic buildings and new Transit Oriented Development;
- Establish district-wide goals for populations of workers and residents to help community leaders foster local character and guide future development;
- Create a cohesive, vibrant street environment reflective of the identity at the station area by encouraging public art and creative activity in streetscape improvements, public space, and businesses;
- Improve streets, increase pedestrian scale lighting, and increase the quality and extent of bicycle infrastructure to create a safe, walkable environment;
- Calibrate development program to support the character, history, and scale of the surrounding areas; and
- Establish a national model for sustainable, effective transit at every level of urban density and intensity.





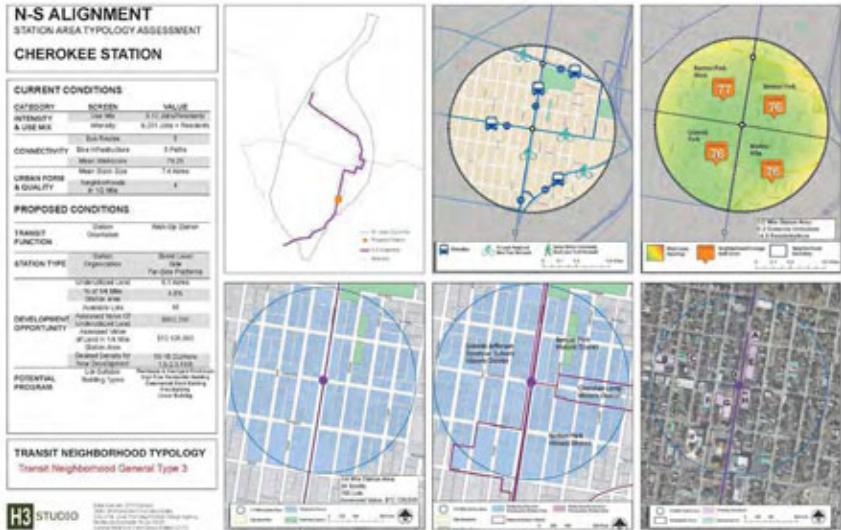
## PROPOSED STATION AREAS

St. Louis begins the 21st century with the opportunity to integrate, grow, and balance ambitions for economic prosperity, social equity, and environmental health within its communities and the region. The Proposed Northside-Southside Alignment is a transformative infrastructure improvement with the potential to increase density and economic activity within the City and the region, and will establish a model for similar developments nationally. After a thorough selection process, the Cherokee and Kingshighway Stations were chosen in particular for having key transit-supportive attributes: the capacity to be a catalyst for the entire corridor, and as valuable prototypes for discussion and advancement of transit in St. Louis for future generations.

The Proposed Northside-Southside Alignment will link 39 neighborhoods with a newly constructed light rail system, running within the boundaries of the City of St. Louis. The alignment is comprised of 28 stations, 22 of which lie outside of the Downtown area and fall into residential districts, while the remaining six have considerable overlap with the existing MetroLink system. Since the majority of stations fall in residential neighborhoods, the City and community leaders should look to this typological system, created to make distinctions among a range of residential and highly developed urban areas, in order to make well-reasoned decisions regarding the development program and building form at each station area.

At each station, the proposed Transit Oriented Developments surrounded by strong, complete residential neighborhoods will establish a model for accessibility, diversity, and prosperity within the City of St. Louis while highlighting key aspirations of the City's Sustainability Plan and Strategic Land Use Plan. The strategy at each station is to infill and stabilize the surrounding neighborhoods, implement planned transit infrastructure improvements, and support greater density development around the transit station. After documenting vacant parcels and buildings on each block within the one-half ( $\frac{1}{2}$ ) mile transit shed, each vacant building should be renovated, and each vacant parcel should be filled with the dominant residential building type for that block. Vacant commercial buildings will be renovated to provide ground level commercial space with the potential for office or residential space on upper levels. The construction of the station will bring about significant streetscape improvements to improve water infrastructure, pedestrian, bicycle, and bus networks, open space, and walkability. These infrastructure improvements, particularly along primary streets, will then be framed by new buildings with higher worker and residential densities than the surrounding area.

The transit improvements described in the Preferred Station Area Plans operate on the social, economic, and ecological platforms of the City's Sustainability Plan. The construction of the Alignment will reduce the demand for car ownership and the emission of greenhouse gases. Walkability will increase within the station area, as people are better connected to jobs, recreation, and services throughout the City.



## STATION AREA PROFILE FOR CHEROKEE

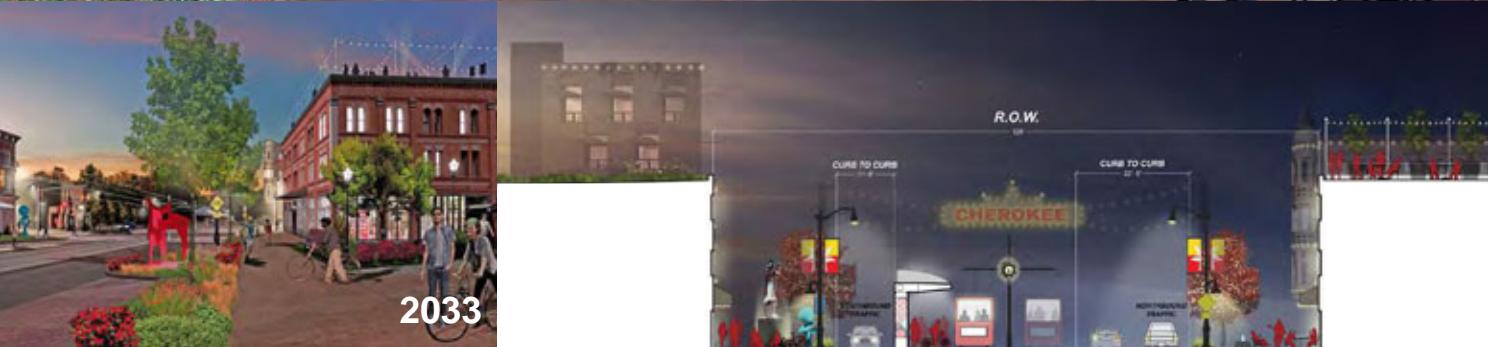


## STATION AREA PROFILE FOR KINGSHIGHWAY

The proposed transit stations provide people of all income levels equal access to amenities, business opportunities, transportation, and safe and healthy neighborhoods. The existing conditions of each station area are expressed in the images above.

Each of the two detailed station area plans, Cherokee and Kingshighway (in 5|0 and 6|0 of this report) lay the groundwork for a localized approach to Transit Oriented Development. Key measures in determining population increase and associated building program at these two station areas are explored in greater detail in the report. This type of development has been shown to have significant benefits to the local economy, environment, and overall quality of life.





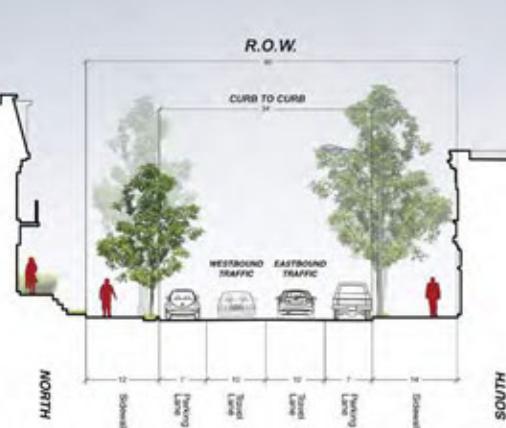
— JEFFERSON SOUTH OF CHEROKEE: PROPOSED STATION AREA



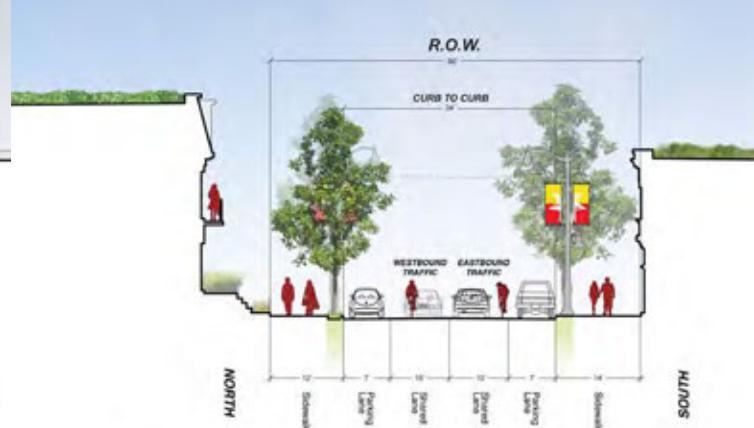
**CHEROKEE STREET: 2043**



**CHEROKEE**



CHEROKEE EAST OF JEFFERSON: EXISTING CONDITIONS

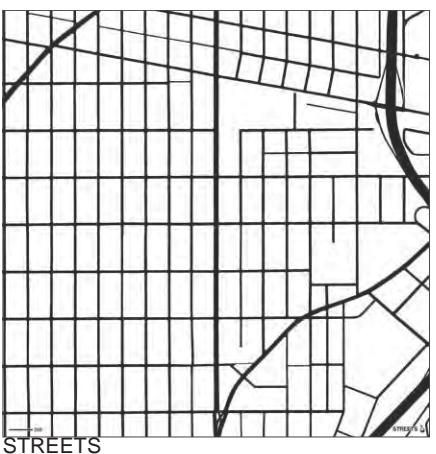


CHEROKEE EAST OF JEFFERSON: PREFERRED ALTERNATIVE



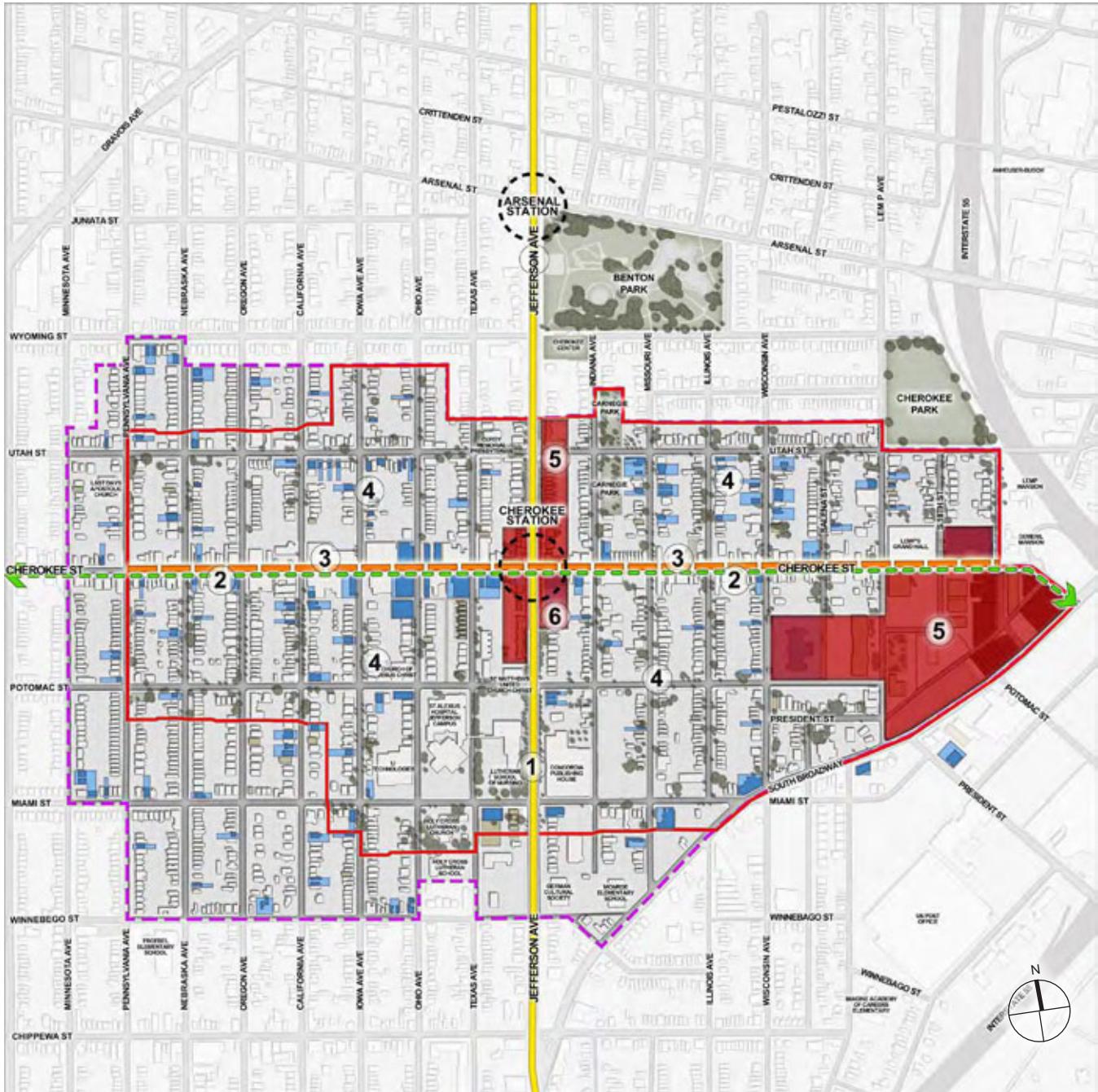
#### PREFERRED STATION: CHEROKEE

Cherokee Street currently displays the key attributes supportive of Transit Oriented Development in its use mix, intensity, urban form, connectivity, and parking. Additionally, several other highly desirable attributes are present within the proposed Cherokee Station area.



Cherokee Street and Jefferson Avenue each form the border for four historic neighborhoods, making the station a potential conduit between adjacent communities. Cherokee, as a center for entrepreneurship, creativity, and multi-cultural attractions within the City, is supportive of a wide range of commercial uses. The transit sheds were considered and modified according to these unique characteristics. The block grid at Cherokee is extremely uniform, with small, walkable blocks averaging 7.4 acres, making it ideal for accessing the light-rail right-of-way. It is also primarily residential and highly transit-supportive because of the low car ownership among households in the area.

The Cherokee Station area is moderately transit-supportive, with a primarily residential use mix and a combined worker and resident population just below 7,000. As proposed in the Preferred Station Area plan, population increase of both workers and residents within the one-half ( $\frac{1}{2}$ ) mile at the station area will maintain a use mix that is still primarily residential but with a population of over 7,000, the threshold for a highly transit-supportive area. Making space for all the new workers and residents will be achieved through renovation and redevelopment of vacant property, and new development of high-density Transit Oriented Development at the station area. Before the Alignment is constructed, neighborhoods surrounding the transit station are completed by renovating vacant buildings and filling vacant residential property. Together, these developments invite 580 new residents to the Cherokee Station area. This will increase the residential base of the station area and increase ridership once the transit line is constructed. The overall development strategy, at full capacity, and when taking into account all new and renovated property, will add 1,900 new residents and 1,600 new workers to an increasingly vibrant district.



## CHEROKEE DEVELOPMENT FRAMEWORK PLAN

### Connectivity

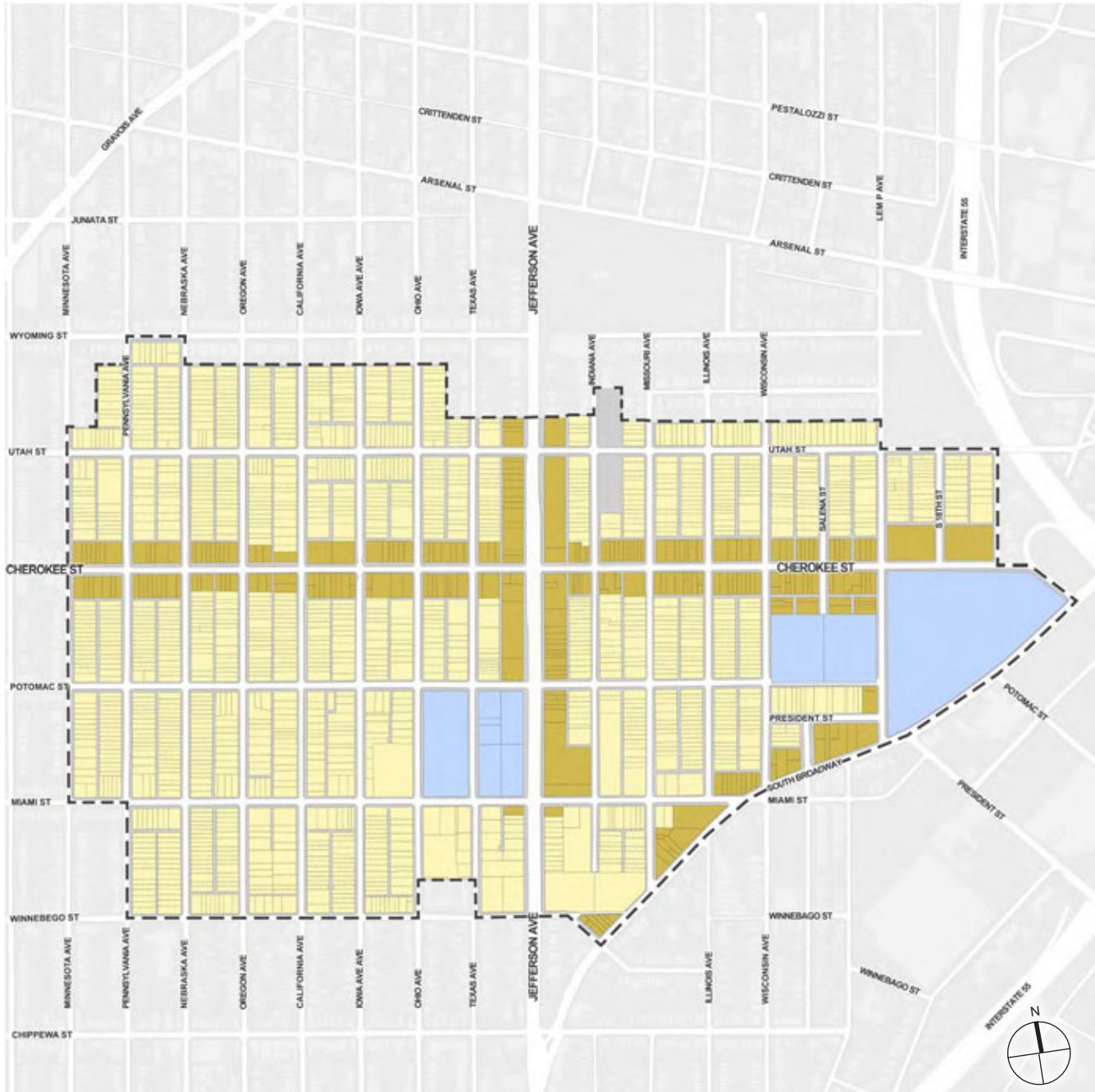
1. Road diet.
2. Extend bicycle path to Compton Avenue.
3. Street improvements increase walkability and link station area to Lemp Brewery.

### Development

4. Renovate and redevelop vacant land and buildings.
5. Provide 450,000 SF of office and 350 newly developed residential units at Lemp and Shepard School.
6. New TOD units, management, and operations.

### LEGEND

■	NORTH-SOUTH ALIGNMENT
■	1/4 MILE TRANSIT SHED
■	1/2 MILE TRANSIT SHED
■	REDEVELOPMENT PARCEL
■	INFILL PARCEL



#### REGULATING PLAN

LEGEND: BUILDING ENVELOPE STANDARDS

- TRANSIT NEIGHBORHOOD GENERAL TYPE 1
- TRANSIT NEIGHBORHOOD GENERAL TYPE 2
- TRANSIT CAMPUS TYPE

#### CHEROKEE STATION FORM-BASED DISTRICT

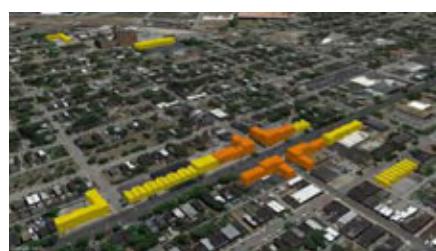
Three Building Envelope Standards apply within the Cherokee Station Form-Based District. Each building envelope standard regulates building placement, height, type, encroachments, use requirements, and parking requirements.

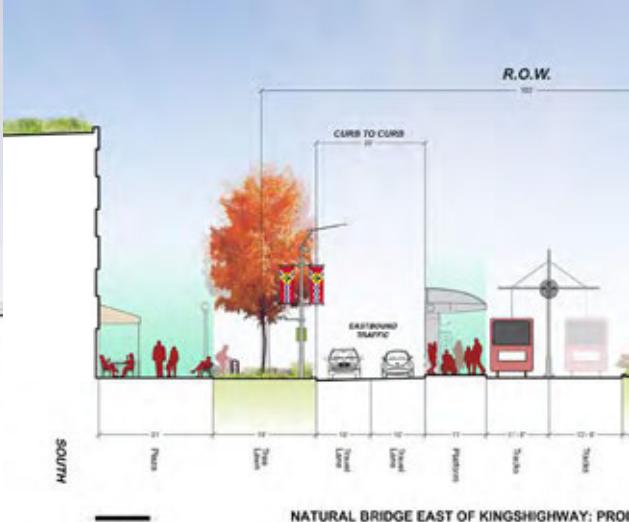
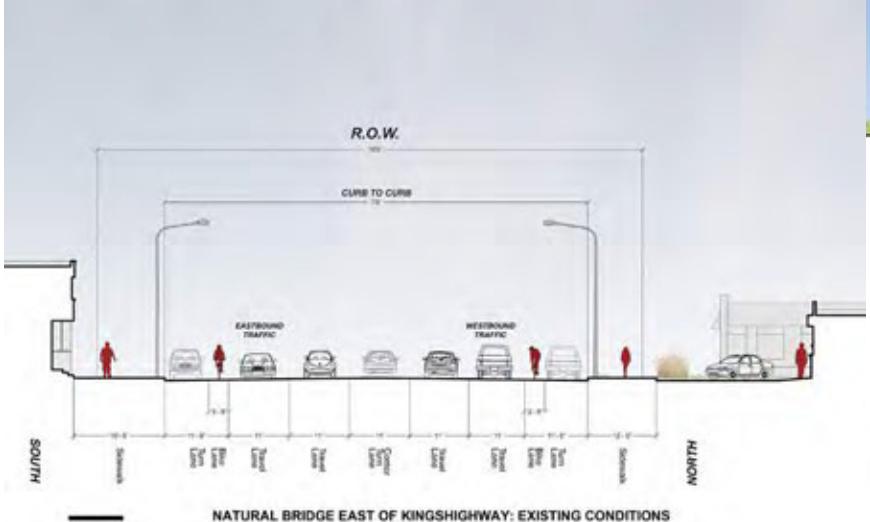
Each building envelope standard accommodates a particular range of density and experiential character.

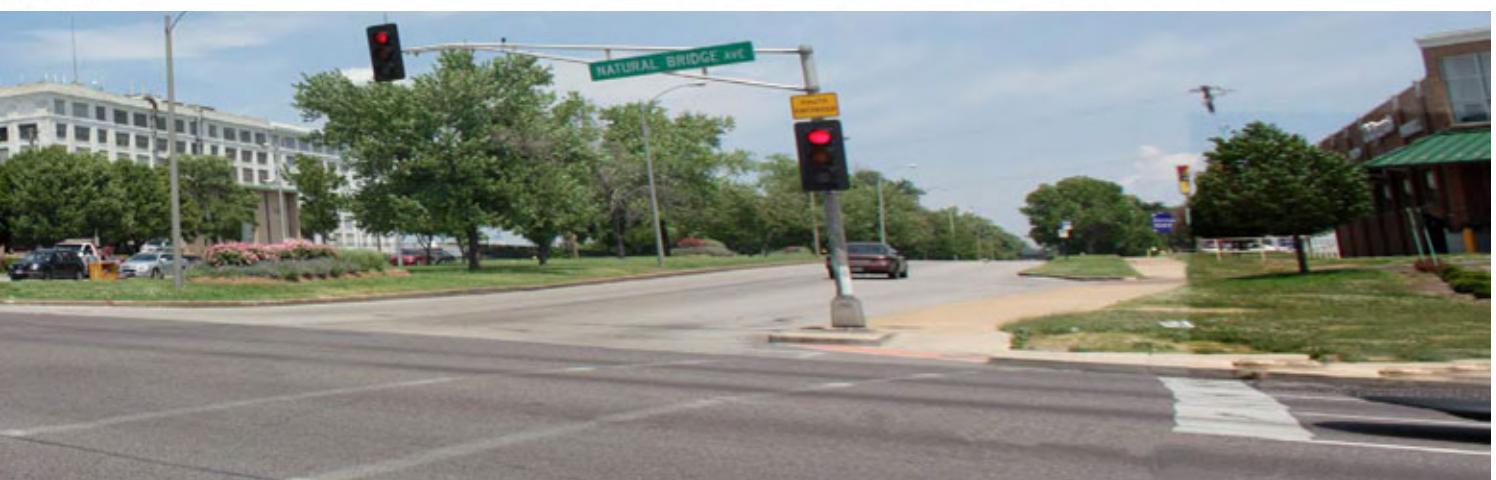
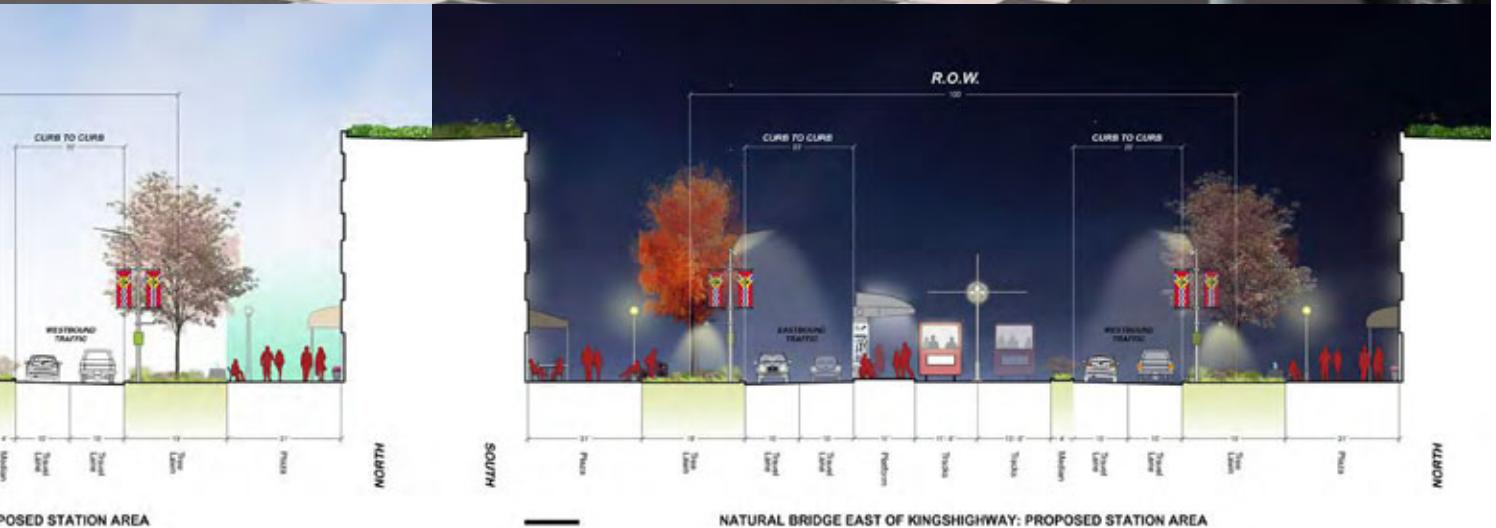


PREFERRED STATION AREA PLAN

- █ NEW RESIDENTIAL BUILDING
- █ RENOVATED RESIDENTIAL BUILDING
- █ NEW COMMERCIAL BUILDING
- █ RENOVATED COMMERCIAL BUILDING
- █ NEW MIXED-USE BUILDING
- █ RENOVATED MIXED-USE BUILDING







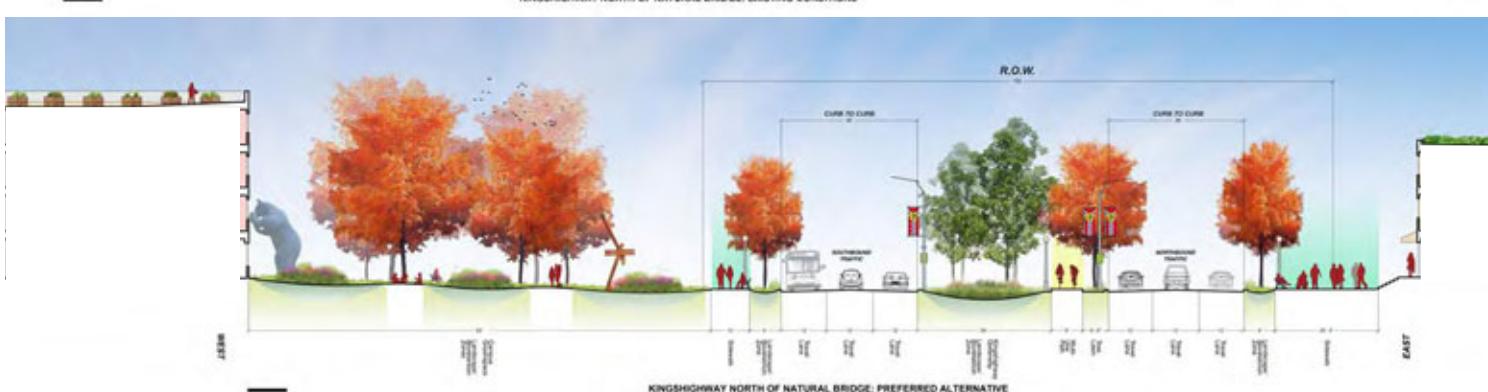
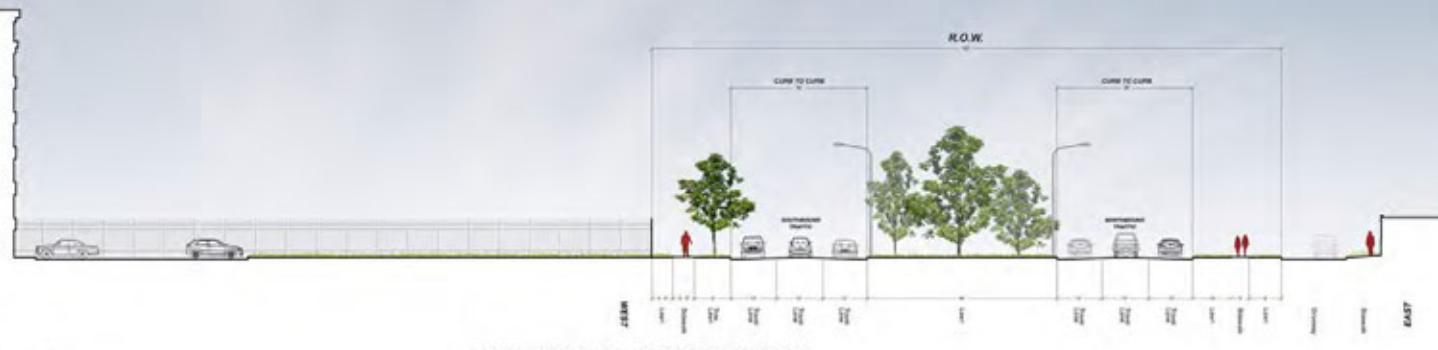


PHASED OVER 30 YEARS



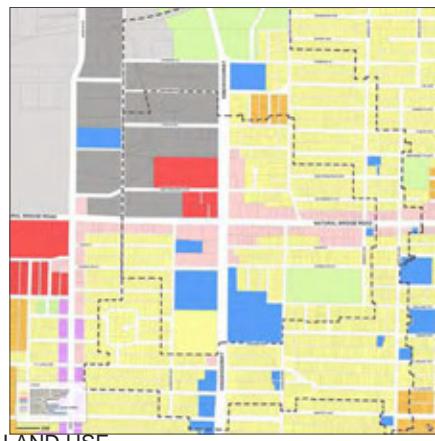
EXISTING CONDITIONS AT THE TRANSIT STATION SITE

# KINGSHIGHWAY

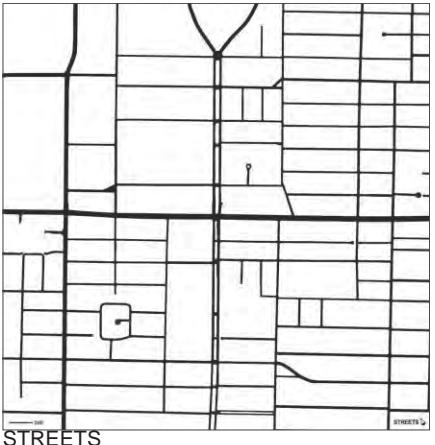




ZONING



LAND USE



STREETS

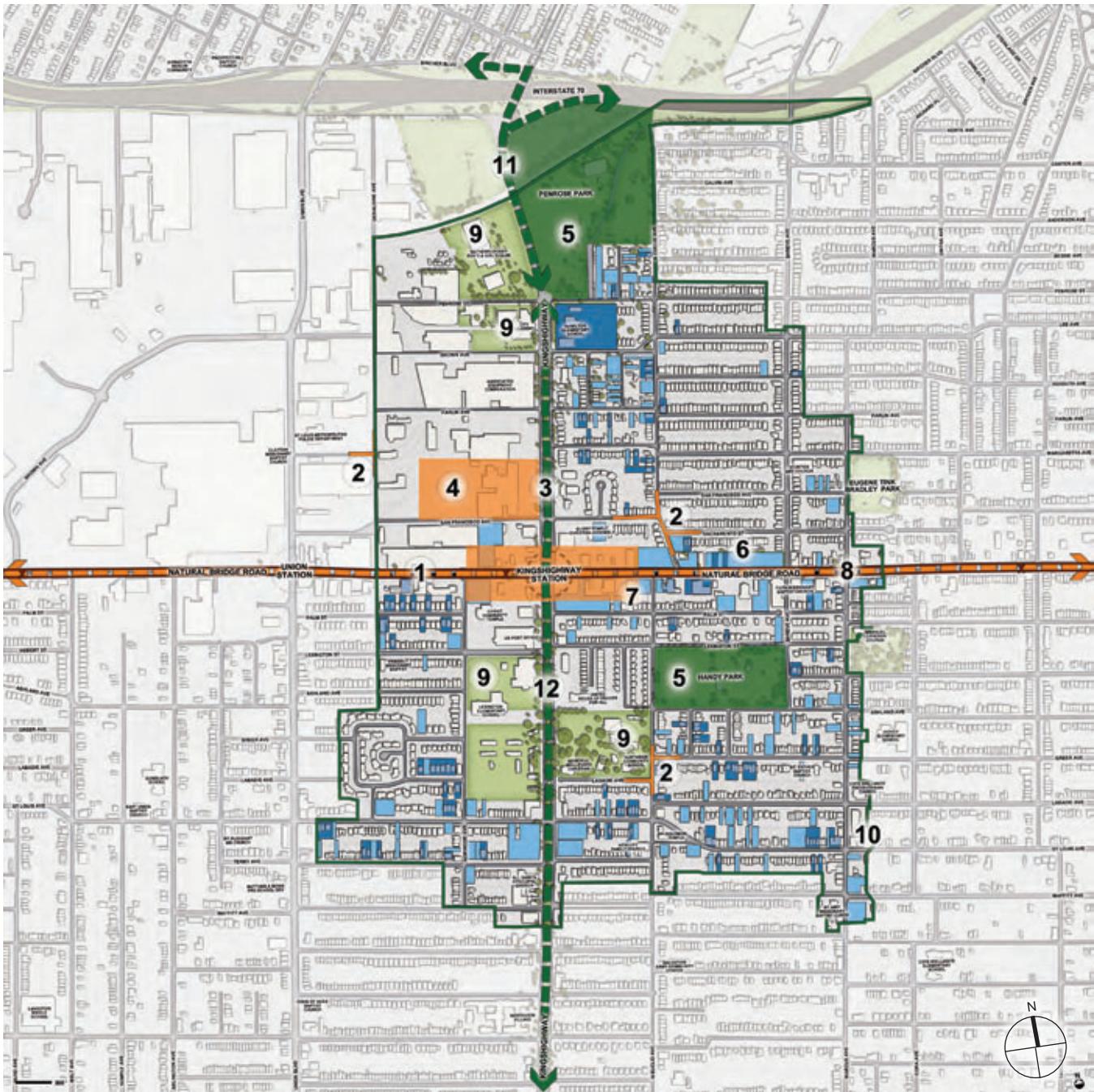


BUILDINGS

#### PREFERRED STATION: KINGSHIGHWAY

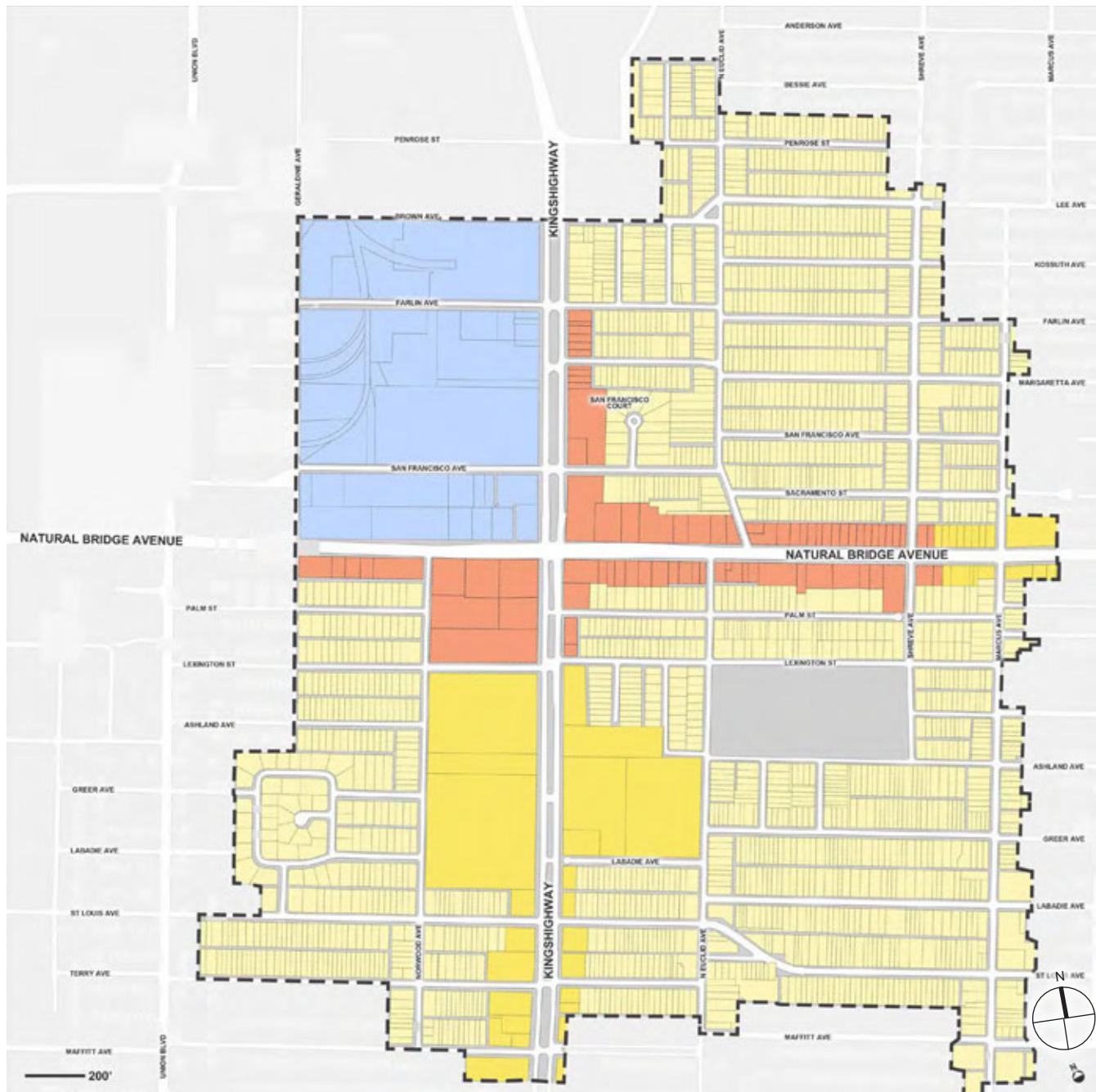
The proposed Kingshighway Station is located at the intersection of Natural Bridge Avenue and Kingshighway Boulevard in north St. Louis. The proposed Northside-Southside Alignment runs down the middle of Natural Bridge Avenue. This northern portion of Kingshighway Boulevard is an expansive historic greenway with a 30 to 50 foot wide grassy median that includes trees and once lush planters. Kingshighway is lined by religious institutions, residential buildings, and light industrial buildings. There are two city parks located within the station area, Penrose Park and Handy Park, as well as City Academy and Mathews-Dickey Boys & Girls Club. This northern edge at Interstate 70 beckons to be renewed as an economic gateway for the City. The transit shed was modified based on the area's neighborhoods, distribution of parks and future potential for development.

The Kingshighway Station is currently primarily residential in its use mix and has a combined worker and resident population below 7,000 meaning it is moderately supportive of a transit system. As proposed in the Preferred Station Area plan, population increase of both workers and residents within the one-half ( $\frac{1}{2}$ ) mile transit shed will create a use mix reflective of a more even proportion of residents and workers and an combined worker and resident population above 7,000, the threshold population for a highly transit-supportive area. Before the Alignment is constructed, the surrounding neighborhoods should be completed by renovating vacant buildings and filling vacant residential property. In addition, increasing the density with new developments adjacent to the transit station along Natural Bridge Avenue and extending north on Kingshighway Boulevard. Together, these developments would invite nearly 800 new residents to the Kingshighway Station area. This will increase the residential base of the station area and increase ridership once the transit line is constructed. The overall development strategy, at full capacity and taking into account all new and renovated property, will add 3,100 new residents and 6,700 new workers, elevating the Kingshighway Station area to a vibrant employment district situated amongst strong, complete residential neighborhoods.



### KINGSHIGHWAY CONSENSUS ISSUES MAP

1. Natural Bridge Avenue is unfriendly to bicycles and pedestrians.
2. Discontinuous street grid.
3. Historic greenway.
4. Large adjacent parcels.
5. Large, public parks.
6. Significant residential and commercial vacancy.
7. Available development sites occupied by low density, car-oriented program.
8. Natural Bridge Avenue is a significant barrier.
9. Well-established civic amenities within the station area (e.g. schools, churches, boys and girls club).
10. Area previously served by streetcar, so block pattern easily configured for public transit.
11. Easy access to highway.
12. Union Station.



#### REGULATING PLAN

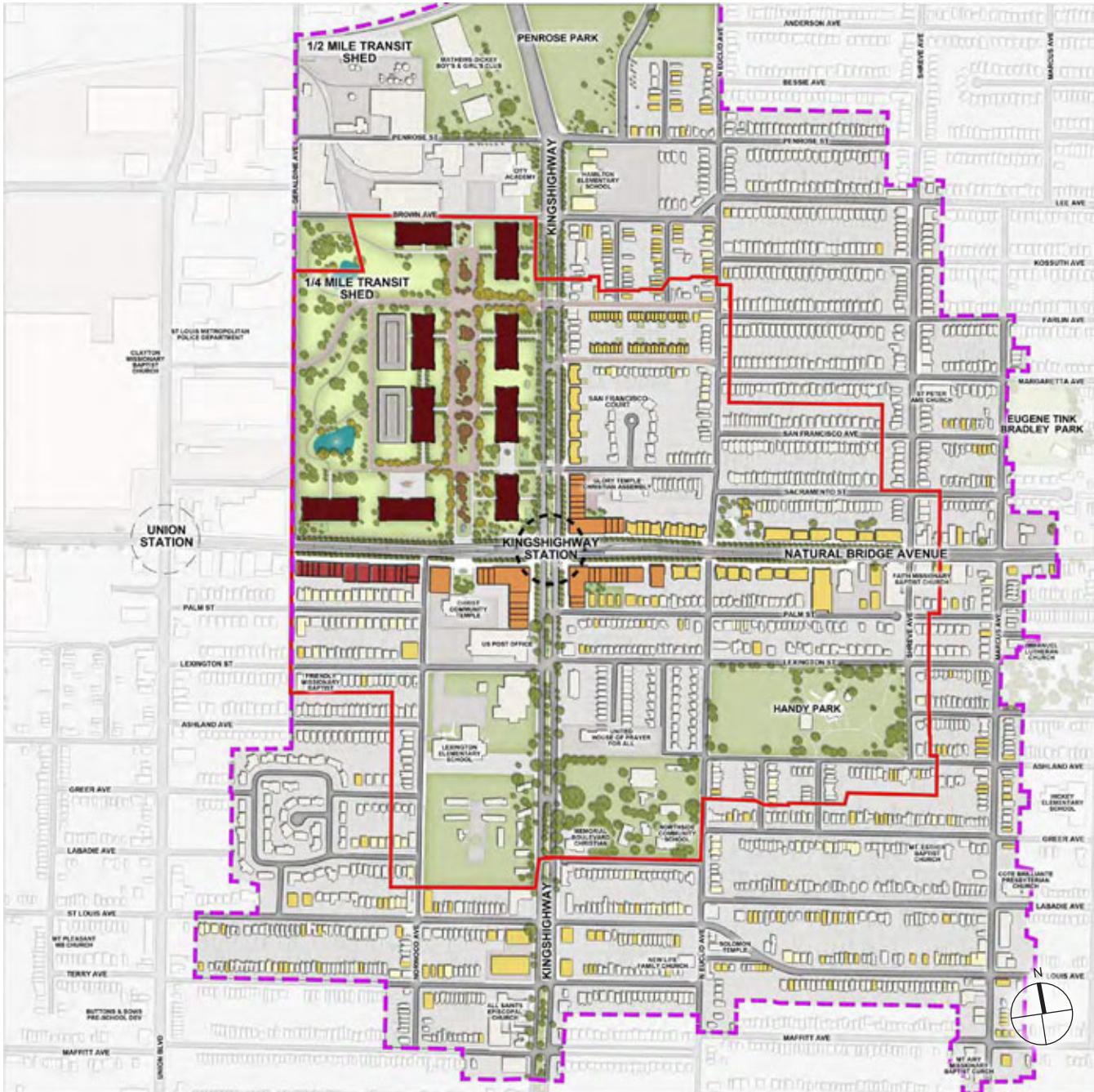
LEGEND: BUILDING ENVELOPE STANDARDS

- NEIGHBORHOOD GENERAL TYPE 1
- NEIGHBORHOOD GENERAL TYPE 2
- NEIGHBORHOOD CENTER TYPE 2
- NEIGHBORHOOD CAMPUS TYPE

#### KINGSHIGHWAY STATION FORM-BASED DISTRICT

Four Building Envelope Standards apply within the Kingshighway Station Form-Based District. Each building envelope standard regulates building placement, height, type, encroachments, use requirements, and parking requirements.

Each building envelope standard accommodates a particular range of density and experiential character.



## PREFERRED KINGSHIGHWAY PLAN

### LEGEND

- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING





## IMPLEMENTATION

Patterns of revitalized downtowns and areas in walkable and desirable places are drawing new populations back to urban centers. People of all economic scales are choosing to live closer to convenient transit, which increases demand for housing, creating development, creating jobs, and inviting residents to frequent local businesses. The local economy increases. It pulses at these nodes of transit at a higher, broader rate, becoming a destination for visitors, and more residents. The cycle expands with residents continuing to invest in their property, community, and social infrastructure. The character and identity of the area continue to grow and flourish, which transforms it into a destination for friends, family, and visitors, who in turn join in the economy of placemaking.

These relationships, in combination with successful implementation of capital improvement projects (streetscape and park development; transportation and accessibility improvements; and new walkable, compact development) and ongoing policy, programming, and partnership initiatives, frame proposed neighborhood improvements and recommendations through the lenses of environment, equity, and economics. This system supports and mutually leverages the relationships between people, place, economics, and transit are described in this report.

The recognition of time and phasing of development before and after the construction of the Alignment features heavily in the Preferred Station Area Plans which assert the completion of neighborhoods served by new transit as the first phase of development, in order to establish and ensure highly transit-supportive communities along the new transit line. It is highly recommended that the community remain part of the ongoing process. Throughout a long-term planning process, maintaining public interest can be a challenge; however, continued engagement is key to the success of any plan. The effort to keep the public engaged can: 1) maintain stakeholder's sense of ownership in the process and outcomes; 2) demonstrate the City's commitment to moving forward; and 3) inform, consult, and involve multiple invested stakeholders throughout each phase. Providing the foundation for all levels of development throughout the City will allow early implementation at all scales of ownership. Locating gap financing should be pursued to support the long-term success of the Station areas as TOD. It is critical that each financing package be carefully scrutinized—ideally by both City officials and the working group—to determine the best use of public or private funds for an individual project. A general framework for the use of public and private redevelopment tools is listed further in the report.

In conjunction with ensuring funding mechanisms, the implementation of the TOD areas must meet the City's goals for development/redevelopment. All Form-Based Districts within the City of St. Louis must be concurrent with the Strategic Land Use Plan (SLUP; PDA-155-04-CMP), established by the City of St. Louis on January 5,

2005. The purpose of that plan is to guide, at a very broad level, development and preservation throughout the area in a comprehensive manner. As the intent of the Station Area Planning Process is to establish a vision and development plan for the Preferred Station Areas, it will be necessary to make modifications to the Strategic Land Use Plan in order to ensure that it is concurrent with the Form-Based District. The Form-Based Districts offer a high market adaptability while assuring a better public realm for the community. In section 5|0 and 6|0 of the report are the recommended changes to the Strategic Land Use Plan detailed to make it concurrent with the Building Envelope Standards used within the proposed Form-Based Districts.







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## 1 | Introduction



## INTRODUCTION

### OVERVIEW

As outlined in Moving Transit Forward: St. Louis Regional Long-Range Transit Plan (adopted by Metro's Board of Commissioners in 2010), the Northside-Southside Alignment is one option in a preliminary set of options for transit service expansion within the St. Louis region. While the Northside-Southside Alignment has been studied extensively and planned through community input, it should be considered conceptual. This Alignment has been adopted by the City of St. Louis as the proposed light rail option within the City and is shown on the City's Strategic Land Use Plan. The next step in the process is an Environmental Impact Study; however, to date, no funds have been identified for this purpose. The Project Team studied, but not in depth, the entire alignment prior to preparing plans for two of the Proposed Stations along the Northside-Southside route: Cherokee Station and Kingshighway Station.

Transit Oriented Development (TOD) represents the creation of compact, walkable communities centered on a high-quality rail system, creating a sense of place and economic opportunities. Well-executed TOD will allow our region to improve mobility, create sustainable and livable communities and improve transportation options for the future. The overall effort aims to create a vision and roadmap for how to encourage TOD in the St. Louis region.

**Transit Oriented  
Development  
promotes sustainable  
communities by  
providing people  
of all ages and  
incomes with  
improved access to  
transportation.**

This study is one component of an overall TOD effort within the Regional Plan for Sustainable Development (RPSD) planning process and should complement TOD planning already completed or underway under the RPSD. Both the St. Louis Development Corporation (SLDC) and East-West Gateway Council of Governments (EWG) are contracting for Station Area Plans, which, together, will provide comprehensive plans for eight MetroLink station areas along the existing MetroLink route. EWG is working collaboratively with local municipalities, Metro, other partner agencies, and the private sector within the study area, to develop a master plan that will be used as the framework to encourage economic development around light rail stations.

This study is funded with a Sustainable Communities Regional Planning Grant (Grant) that was awarded to EWG from the U.S. Department of Housing and Urban Development (HUD). The goal of the Grant is to create a Regional Plan for Sustainable Development (RPSD), which is aimed at building the capacity of local and regional actors to implement sustainable practices by sharing knowledge, best practices, and resources, and to connect local and regional planning efforts. Ultimately, the implementation of the RPSD will create and protect sustainable, equitable, and livable communities within the St. Louis Region.



**EAST-WEST GATEWAY**  
Council of Governments



## STUDY OBJECTIVE

The purpose of the Transit Oriented Development Study of the Proposed Stations along Northside-Southside Alignment is to assist the City of St. Louis, its neighborhoods, and developers with preparing for and taking advantage of transit investment along the proposed Northside-Southside Corridor. To do this, a system for determining development potential and setting aspirational thresholds for future conditions at each station area has been developed. In applying this system at the Kingshighway and Cherokee Stations, both located along the Proposed Northside-Southside Alignment, we are better able to show the scale of future development potential.

## STUDY DEVELOPMENT & FUNDING

This study is a joint effort by the East-West Gateway Council of Governments, the City of Saint Louis, and St. Louis Development Corporation (SLDC). The Study is funded with a portion of the \$4.7 million Sustainable Communities Regional Planning Grant from the U.S. Department of Housing and Urban Development through the East-West Gateway Council of Governments. This grant is funding additional sustainability planning efforts throughout the St. Louis region. The Transit Oriented Development Study for the Proposed Stations Along Northside-Southside Alignment is closely aligned with six the goals of the HUD-DOT-EPA Partnership for Sustainable Communities Livability Principles which are: Provide More Transportation Choices; Promote Equitable, Affordable Housing; Enhance Economic Competitiveness; Support Existing Communities; Coordinate and Leverage Federal Policies and Investment; and Value Communities and Neighborhoods.

## PARTNERS & ADMINISTRATION

The St. Louis Development Corporation (SLDC) is responsible for the project administration. Amy Lampe, Major Projects Specialist, is in charge as project coordinator. The Client Group team consists of Don Roe (City of Saint Louis Planning and Urban Design Agency), Connie Tomasula (City of Saint Louis Planning and Urban Design Agency), and Amy Lampe. The Project Team lead is H3 Studio, performing project direction, planning, and project management, with partners Bernardin, Lochmueller & Associates (BLA) performing transit planning and ridership scenario modeling with Innis Consulting providing transit policy and operations recommendations; M3 Engineering Group performing civil and environmental planning and costing; Development Strategies providing the economic and development framework; and Vector Communications Corporation leading the public outreach and communication efforts.



CULTURAL ATTRACTIONS NEAR THE CHEROKEE STATION SITE

The public outreach initiatives have helped to enrich the recommendations of the study and have helped to build recommendations for the future efforts along the corridor.

## PLANNING PROCESS

This study took place over the course of three and one-half months and involved regular interface between the Client Group and the Project Team. In addition, the Project Team met with an assembled Technical Advisory Committee and conducted stakeholder outreach during the planning process. These efforts allowed the Project Team to collect a large amount of data whilst engaging institutional and governmental staff and community members. The public outreach initiatives have helped to enrich the recommendations of the study and have helped to build recommendations for the future efforts along the corridor.

### TECHNICAL ADVISORY COMMITTEE

The role of the Technical Advisory Committee (TAC) was to provide directed guidance to the Project Team and to review in-progress work, materials and initiatives, and work products. The TAC was comprised of representatives from key agencies and institutions involved in the study, including the City of St. Louis Mayor's Office, Planning and Urban Design Agency, Metro, East-West Gateway Council of Governments, Board of Public Service, Great Rivers Greenway District, St. Louis Development Corporation, and the Neighborhood Stabilization Team. Refer to the Acknowledgements section on page 2 for a complete list. The TAC was identified by the Client Group to serve as a representative cross-section of project partners and stakeholders for decision-making and feedback.

The Project Team held four coordination and review meetings with the Client Group team throughout the course of the study for regular guidance and review of materials and work products and to review in-progress work, materials, and initiatives. The Client Group hosted four work sessions and review meetings with the Technical Advisory Committee with the Project Team throughout the course of the study for regular guidance and review of progress, materials, and work products.

Technical Advisory Committee Coordination and Review Meetings:

- TAC Meeting #1 April 23, 2013
- TAC Meeting #2 May 1, 2013
- TAC Meeting #3 May 24, 2013
- TAC Meeting #4 June 5, 2013

### PUBLIC OUTREACH

In May 2013, Vector Communications conducted seven stakeholder interviews with local leaders who represent various interests within the two selected station areas: Cherokee and Kingshighway. These interviews offered key stakeholders the opportunity to envision their respective area's future as having a transit station along with added Transit Oriented Development. Stakeholders also provided ideas for evaluating the new developments.

All interviews were conducted in person at the interviewees' offices to make the meetings convenient and time efficient for the interviewee. On average, the interviews were 60 minutes in duration. The questions presented to the interviewees were developed to provoke thought about what can become of their areas. The discussions focused on benefits, challenges, opportunities, and future visions for development in the area. These face-to-face interactions not only facilitated meaningful dialogue, but also provided the interviewer an opportunity to update stakeholders on the plan since the last round of public outreach. Additionally, the interviewer reiterated the breadth and length of the project planning process. The interview findings have been summarized and complete transcripts are located in the appendix.

## LONG-TERM STAKEHOLDER ENGAGEMENT

The Northside-Southside MetroLink expansion is a long-term process that will occur over many years and in many phases. Thus far, the City and its consultants have worked together with stakeholders and the community to develop the potential for the City and for the individual neighborhoods impacted. Throughout a long-term planning process, maintaining public interest and engagement can be a challenge.

The effort to keep the public engaged can:

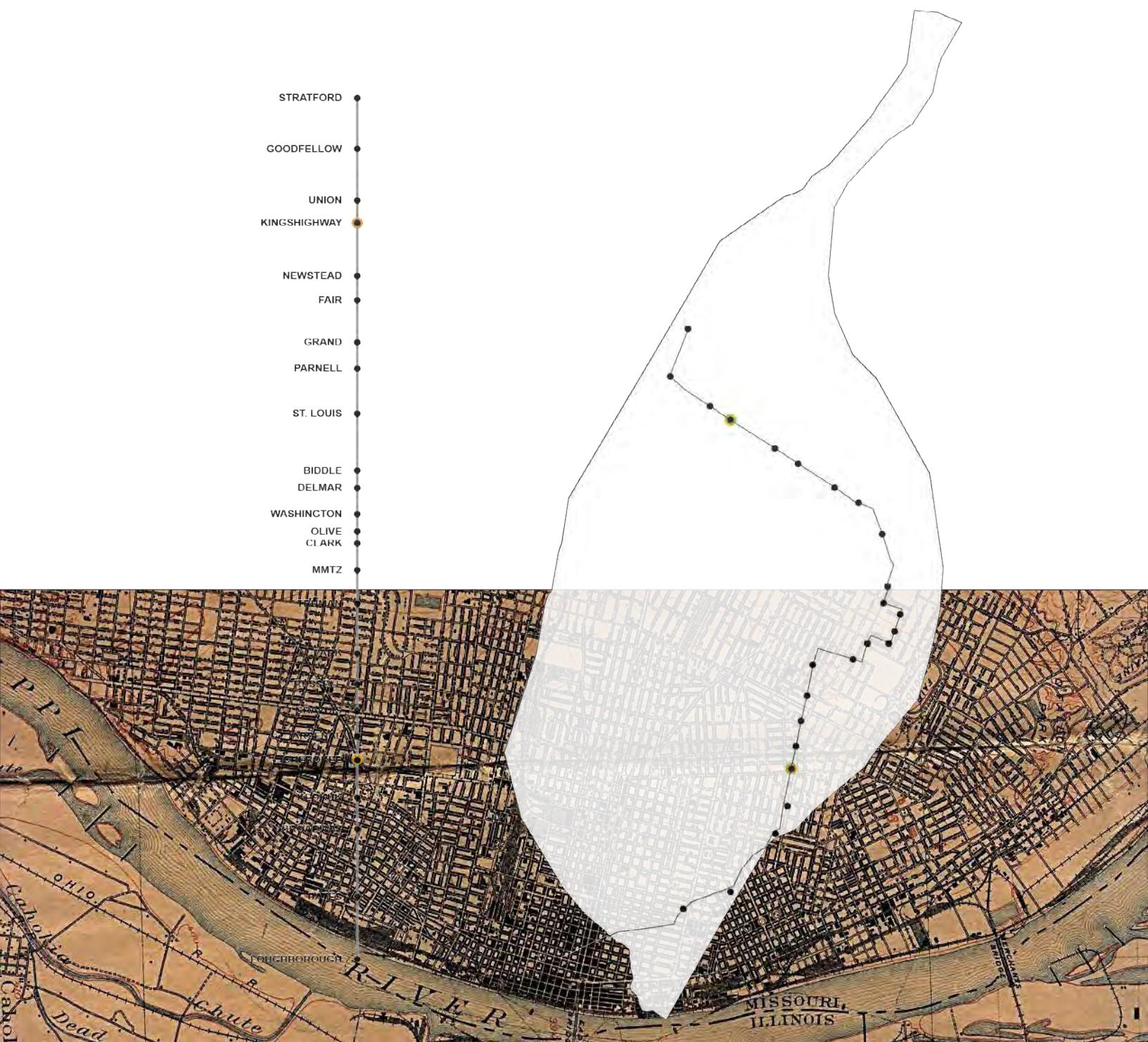
- Maintain stakeholder's sense of ownership in the process and outcomes;
- Demonstrate the City's commitment to moving forward; and
- Inform, consult, and involve multiple invested stakeholders throughout each phase

The following are recommended strategies to maintain phased engagement through a continued long-term planning process:

- Engage directly with impacted stakeholders (as needed): stakeholder meetings, open houses, community events;
- Build/utilize partnerships with stakeholders and invested groups and individuals;
- Attend community/organization meetings: i.e. wards, business associations, block units, advocacy organizations, etc.;
- Create a standing Northside-Southside Citizen's Advisory Committee;
- Share online: through Social Media, and the City website;
- Provide progress reports through: Website, mail and e-newsletter







## 2 | Background



IMAGE OF HISTORIC ST. LOUIS

**Total trackage  
in 1881 was  
119.6 miles; the  
companies owned  
2280 horses and  
mules and 496 cars,  
employed more than  
a thousand workers,  
and carried 19.6  
million passengers.**

**James Neal Primm,**

**Lion of the Valley**

## BACKGROUND

### ST. LOUIS AS A TRANSIT CITY

From its inception, St. Louis was planned with an urban morphology well suited for walkability, with small blocks and tightly knit residential neighborhoods distributed evenly throughout the City. For decades, the City's neighborhoods blossomed as traditional streetcar suburbs with many residents commuting to jobs located Downtown, but still able to accommodate their everyday needs close to home. During a period of post-War decline, common to many other rust-belt cities at the time, the City began to empty, with many of its residents leaving for the newer, outer-ring suburbs. Over the past couple of centuries, the City's grid layout has shifted due to the introduction of boulevards, streetcar lines, and later, highways; but, the City has remained a nexus of transit. However, as many of the neighborhoods along the Proposed Alignment retain a tight knit residential base, there is momentum within the City to foster new development and sustainable infrastructure to support these residential communities as they strive to grow and prosper. Today, the City is ready to re-embrace Transit Oriented Development to support connectivity of all residents to jobs, homes, shopping, and parks.

Once the country's fourth largest city, much of St. Louis' early development and intensity was tied to the various forms of early transit. According to St. Louis Local History Network, streetcars first made their appearance on the streets of St. Louis on July 4, 1859, on horse drawn streetcars which ran down Olive Street between Fourth and Tenth Streets. After overcoming some technical difficulties, the horse drawn streetcar on rails overtook the horse drawn omnibus (which was a large stage coach) with increased passenger capacity and a much smoother ride. By the early 20th century, the City had an extensive electric streetcar network, connecting the north, south, and western reaches of the City with Downtown. Lines were expanded to not only serve areas of the City of St. Louis but much of St. Louis County as well. In the early 1960's the decision was made to discontinue streetcar service and modernize transit by switching to buses. The last streetcar in St. Louis ceased operation in 1966. Less than a decade later, automobiles took to the forefront of local commutes with the opening of the new interstate highway system and because bus transportation never obtained the wide appeal that the old streetcars once entertained. In 1993, Metro began operating the region's first light rail system, MetroLink.

Encouraging the vision of an enriched and diverse culture, economy, and amenities and connecting these assets to the residents and visitors is paramount. This report explores the expansion of light rail service into St. Louis' more residential districts with the Proposed Northside-Southside Alignment, a central component of Metro's **Moving Transit Forward: St. Louis Regional Long-Range Transit Plan**. Plans for this new Alignment have evolved over the past 15 years, from a conceptual notion highlighted in the City's **Major Transportation Investment Analysis** (2000),

to a specific Alignment detailed in the **Northside-Southside Study** (2008). This report addresses the Alignment at a higher level of detail, with a comprehensive analysis of each of the proposed stations along the Alignment, a set of Station Area Plans that describe detailed development program, building form and distribution, street improvements, and environmental analysis for the proposed Cherokee and Kingshighway stations. These two stations were selected because they embody a similar range of challenges and opportunities to the other station areas along the Alignment. In future studies of the other station areas, lessons from Kingshighway and Cherokee can easily be applied.

#### **PLANNING INITIATIVES & STUDIES:**

##### **NORTHSIDE-SOUTHSIDE PROPOSED ALIGNMENT & CONCURRENT EFFORTS**

##### **MAJOR TRANSPORTATION INVESTMENT ANALYSIS (2000)**

The Northside-Southside Alignment emerged from a transit planning strategy begun in 1998, with an East-West Gateway funded Major Transit Investment Analysis (MTIA). Published in 2000, the MTIA explores improvements and additions to the multi-modal transportation systems which serve the Northside and Southside Study Areas. Several potential light rail alignments were detailed in the report, but it was not until a second study, also commissioned by East-West Gateway and published in 2008, that the Proposed Northside-Southside Alignment, as configured today, was established.

##### **NORTHSIDE-SOUTHSIDE STUDY (2008)**

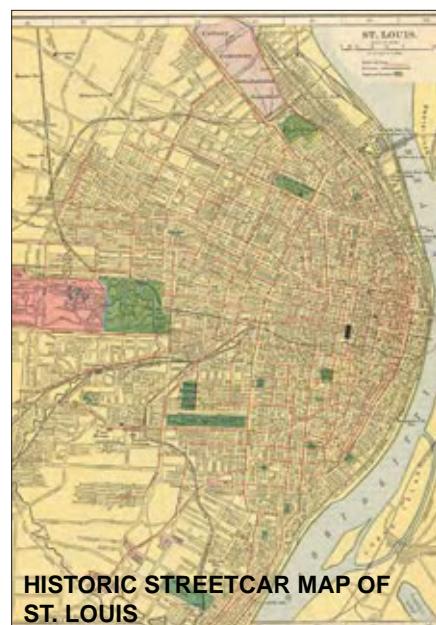
The Northside-Southside Study, which was approved by the EWG Board of Directors as a Locally Preferred Alternative for the Northside-Southside Corridor (exclusive to the City of St. Louis) in October 2007, was commissioned by East-West Gateway and published in 2008. It outlines two Alignment alternatives, including station locations, platform configurations, and a matrix detailing development prototypes including proposed future characteristics for each station area. This study provides a basis for projecting the future character of each proposed station.

##### **STREETCAR FEASIBILITY STUDY (2013)**

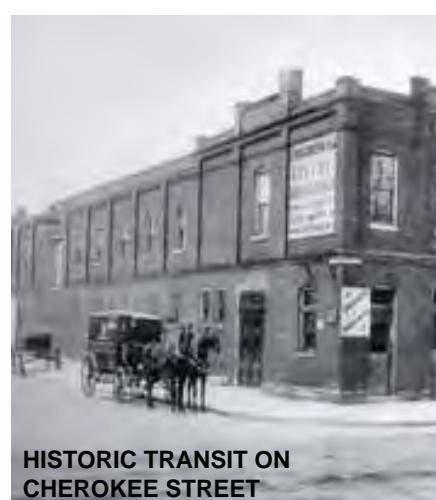
As part of a major expansion of rail transit in St. Louis, the Streetcar Feasibility Study describes a modern streetcar system connecting areas of Downtown, Midtown, Central West End, and North St. Louis. One line would loop on a single track, passing through the middle of Downtown and Kiener Plaza. West of 14th Street, the line would use two sets of tracks along Olive Street and Lindell Boulevard through Grand Center to Taylor Avenue and the Central West End MetroLink station. A second line



**HISTORIC STREETCAR  
IN ST. LOUIS**



**HISTORIC STREETCAR MAP OF  
ST. LOUIS**



**HISTORIC TRANSIT ON  
CHEROKEE STREET**

## **HUD-DOT-EPA Partnership for Sustainable Communities Livability Principles**

- **Provide more transportation choices;** Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health;
- **Promote equitable, affordable housing;** Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation;
- **Enhance economic competitiveness;** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets;
- **Support existing communities;** Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes;
- **Coordinate and leverage federal policies and investment;** Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy; and
- **Value communities and neighborhoods;** Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

would run between MetroLink's Civic Center station and St. Louis Avenue along 14th Street and North Florissant Avenue. Although slower than MetroLink trains, the streetcars' ten minute frequency of service and numerous stops would provide the connectivity needed to promote commercial and residential development.

## **ST. LOUIS TRANSIT ORIENTED DEVELOPMENT (TOD) FRAMEWORK PLAN (2013)**

Commissioned by East-West Gateway and Metro, the St. Louis TOD Framework Plan establishes a framework for smart growth around existing Metro stations. For the regional MetroLink network, the Framework Plan establishes station area typologies for the varied development and land use patterns which exist in the St. Louis Metropolitan area. The Framework Plan examines the potential for economic development around the 37 existing MetroLink Stations by looking at the regulatory environment and public and private financing options that are available for Transit Oriented Development.

## **ST. LOUIS AS A SUSTAINABLE CITY**

### **THE CITY OF ST. LOUIS SUSTAINABILITY PLAN (2013)**

The City of St. Louis spent nearly two years collaboratively developing the City's first sustainability plan. The process started in early 2011, with a robust public engagement effort that included Community Workshops and Technical Worksessions and culminated in a Draft Sustainability Plan for Public Review in October 2012. The city-wide plan includes hundreds of strategies to advance sustainability in the City and can be found at <http://www.stlouis-mo.gov/sustainability>.

During the sustainability planning process, the City learned from its stakeholders that they envision a "Sustainable City of St. Louis" as being vibrant, progressive, prosperous, integrated, diverse, and a leader; and that they see these characteristics being built upon the solid foundation of the City's neighborhoods, the rich architecture of its built environment, a better connection with natural resources, and the talent, innovation, and knowledge that emanate from outstanding local industry, cultural organizations, and higher educational institutions.

The Northside-Southside Proposed Alignment Study will use the St. Louis City Sustainability Plan as a future measure of success since the intent of this study matches the goals put forward by the Sustainability Plan. The initial analysis of the aspirations of the Station Area Plans for the Northside-Southside Proposed Alignment as compared to the St. Louis City Sustainability Plan demonstrates the

ability to address 46 out of the 50 objectives in the following functional categories:

- Urban Character,
- Vitality & Ecology;
- Arts, Culture & Innovation;
- Empowerment, Diversity & Equity;
- Health, Well-Being & Safety;
- Infrastructure, Facilities & Transportation;
- Education, Training & Leadership;
- And Prosperity, Opportunity & Employment.

St. Louis Sustainability Plan Community Survey Conclusions:

*"The survey respondents, who were primarily City of St. Louis residents, desire to have a safe City that provides the infrastructure for sustainable living. At a minimum, this includes an equitable recycling program, walking paths, bicycle lanes and expanded, convenient public transportation - especially MetroLink. Contrasting the qualitative or open-ended questions with the closed-ended rating question, it is evident that residents are most concerned with the quality of public education, followed by crime reduction and expanded police presence."*

Community Survey Question 1 – *What words or phrases would you use to describe the qualities, features and/or programs that make a "Sustainable" City?*

The ten most mentioned characteristics of a sustainable city were:

- Safe streets and neighborhoods (9%)
- Good public transit (9%)
- Equitable recycling and composting programs (8%)
- Strong public schools/good education (7.5%)
- Green surroundings (7.2%)
- Bike-friendly (7.2%)
- Walkable/Pedestrian-friendly (7.2%)
- Great parks (5.2%)
- Clean (5.2%)
- Livable wage jobs (5.1%)
- Diverse (4.6%)

## Triple Bottom Line Sustainability

**As we enter the 21st century, we have a timely opportunity to integrate, grow, and balance our ambitions for economic prosperity, social equity, and environmental health.**

**St. Louis already has an urban morphology suited for walkability, with small blocks and tightly knit residential neighborhoods distributed evenly throughout the city.**





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## 3 | Transit Neighborhood Typology



ST. LOUIS TOD FRAMEWORK  
PLAN

Transit Oriented Development is compact, mixed-use development in close proximity to transit facilities. Transit Oriented Development promotes sustainable communities by providing people of all ages and incomes with improved access to transportation, diverse housing choices, and reduced transportation costs.

## TRANSIT NEIGHBORHOOD TYPOLOGY

### OVERVIEW

The Transit Neighborhood Typology is a set of six typologies that refine the broad subheading of the “Neighborhood Typology” established in the St. Louis TOD Framework Plan prepared for East-West Gateway. Each of the six distinctive Transit Neighborhood Typologies sits within a specific threshold of intensity and use mix. When combined with the Building Envelope Standards assigned to each typology, a framework for desired scales of future development and population change at each station can be established.

### LONG TERM IMPACTS OF TRANSIT-ORIENTATED DEVELOPMENT

Transit Oriented Development often occurs in cities around rail transit. It is inherently more sustainable than other types of single-use and auto-dependent development. Rail lines are perceived as a more permanent type of infrastructure than roads and highways and in turn allow for more concentrated and compact development to occur, thus preserving valuable land and resources. Increasing access to rail-based transit lessens our reliance on automobiles and has enormous implications for our quality of life. By reducing carbon emissions, we improve air quality, and by decreasing our household transportation costs, we increase disposable income leaving more dollars available for savings and investment. More disposable income, better air quality, more efficient and productive land use, healthier lifestyles which include walking and bicycling, and diverse communities all contribute toward the betterment of life.

Transit Oriented Development has been shown to:

- Increase land and property values in the station area;
- Improve access to employment for all citizens of all income levels;
- Reduce car trips and greenhouse gas emissions;
- Reduce costs for infrastructure upkeep and construction;
- Increase walkability within the transit shed by bringing needed services to the station area;
- Create opportunities for affordable housing at the station area and within the transit shed;
- Assure developers, entrepreneurs, and residents that transit service will be sustained; and
- Create a unique feature within the city to attract residents, workers, and visitors.

The City of St. Louis has adopted a multi-faceted strategy: the triple-bottom-line approach to planning. This strategy acknowledges the three pillars of sustainability—environmental stewardship, improved social equity, and increased economic

development—as equal in their impact on allowing current generations to meet their needs while protecting the ability of future generations to do the same. Furthermore, it recognizes that when taken together, these three pillars can be leveraged to increase positive outcomes on multiple fronts. This is due to the fact that most sustainability initiatives that occur in the sphere of cities, regardless of their specific focus, require some degree of investment of city funds. If one of the effects of the initiatives is to increase property values or stimulate economic activity, the tax base may increase enough to fully offset the cost of the initiative or beyond. In addition, an increase in property value improves the investment of individual residents, makes the community more desirable, and may lead to an increase in other investments, both public and private. This has the effect of increasing social equity by improving each individual resident's "investment" in their community and its "return."

Triple-bottom-line success will be central to numerous, multi-faceted, sustainable projects and initiatives. This type of success can be illustrated with the development of public transit along with Transit Oriented Development. Through increased efficiency, mass transit lowers the per-capita carbon emissions when compared to transportation by car. This has a measurable impact on environmental sustainability. Proximity and access to public transit can also raise property values, which provides a positive economic impact to both the City (through an increased tax base) and individuals (through an increase in their real estate value). Regular use of public transit also reduces annual transportation costs to households, which increases individual real wealth. This increase in wealth can have a positive effect on both individual economic prosperity as well as social equity, because it enhances individual empowerment within a community. People will choose to live closer to convenient transit, which increases demand for housing, creating development, creating jobs, and inviting residents to frequent local businesses. The economy will increase its pulse at these transit nodes as residents continue to invest in their property, community, and social infrastructure. The character and identity of the area will continue to grow and flourish, transforming it into a destination for friends, family, and visitors, who in turn join in the economy of placemaking.

These relationships, in combination with successful implementation of capital improvement projects (streetscape and park development; transportation and accessibility improvements; and new walkable, compact development) and ongoing policy, programming, and partnership initiatives, frame proposed neighborhood improvements and recommendations through the lenses of environment, equity, and economics. This system to support and mutually leverage the relationships between people, place, economics, and transit is described in this report.

### **TOD can be attractive when it is part of a complete community**

*A complete community is opportunity-rich; all people have access to quality housing, education, employment opportunities, open space and recreation, retail, places of worship, healthcare, and transportation. This is to encompass the needs for households with children, which may be overlooked in areas around transit planning.- Center for Transit-Oriented Development*

### **COMPLETE COMMUNITIES ARE ATTRACTIVE TO FAMILIES WITH CHILDREN WHEN THEY OFFER:**

- A sense of community and "place" through investment in parks, libraries and community events;
- A neighborhood where kids can run and bicycle on streets through investment in streetscape and bicycle and pedestrian improvements;
- Transit-accessible schools which are integrated into the community, rather than separate from it;
- Access to regional amenities such as zoos and large parks;
- Convenient access to daily shopping such as groceries, clothing, or school supplies; and
- Access to regional employment opportunities via high-quality transit

### **THE BENEFITS OF COMPLETE COMMUNITIES FOR FAMILIES ARE BROAD AND INCLUDE:**

- Reduced spending on transportation by owning fewer cars and driving less;
- Reduced childhood obesity through increased physical activity;
- Reduced household stress through shorter commute times and more time for family activities; and
- Improved educational outcomes through access to stable housing and a range of supportive and enriching activities

## **FACTS FROM ST. LOUIS CITIZENS FOR MODERN TRANSIT:**

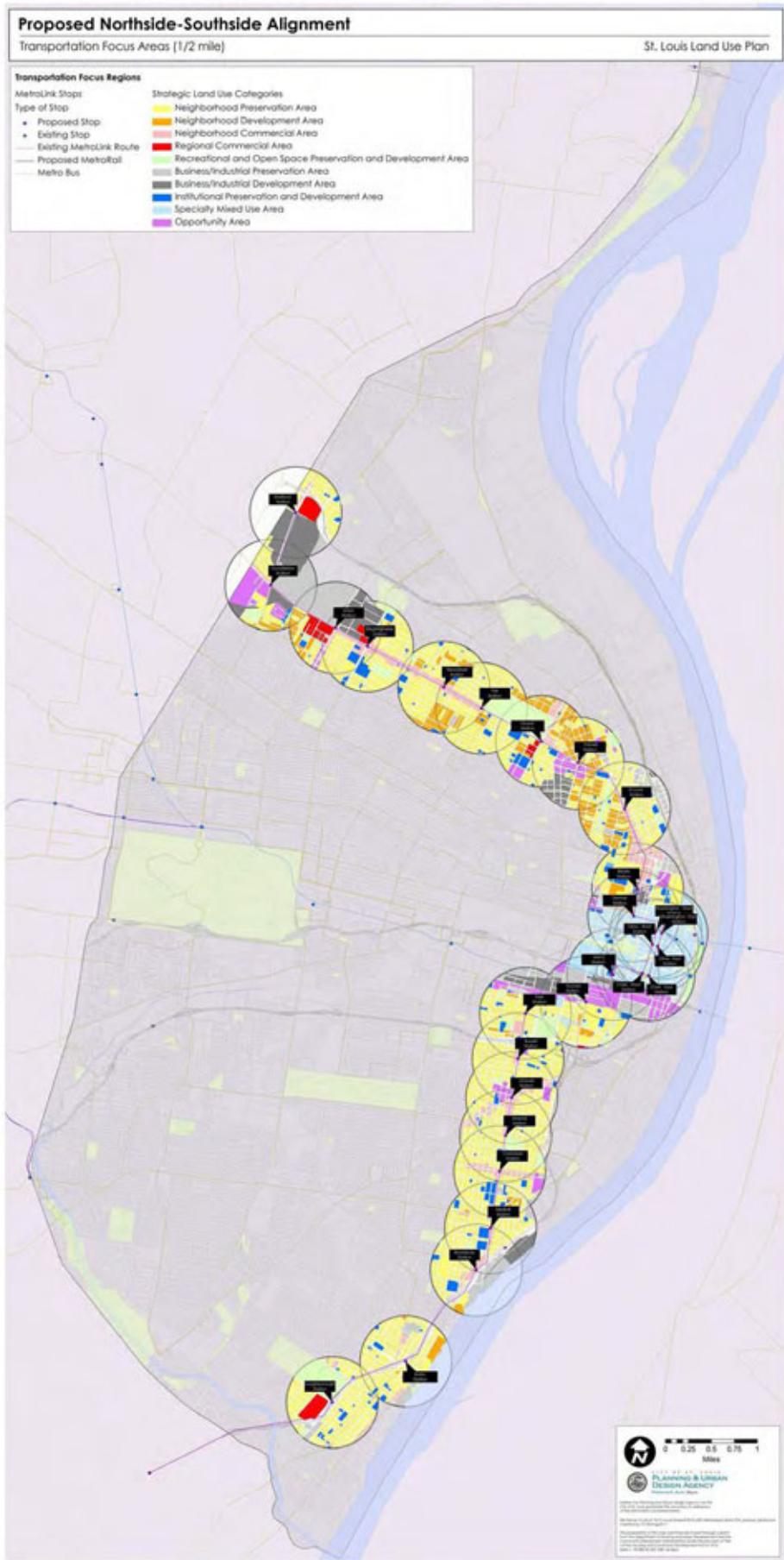
- Cultural activities help bring a sense of vibrancy to transit-centered communities, making them more intriguing destinations and livelier places to live. Examples include community promotion of the arts, festivals, concerts and farmer's markets.
- People use public transit in Missouri to get to jobs. Since the complete restoration of the service on November 29, 2010 in St. Louis since passage of Proposition A, 97% of all jobs in St. Louis City and St. Louis County can be reached by riding Metro transit according to Metro.
- Transit generates growth. To date, more than \$16 billion in new development has occurred within a ten minute walk of MetroLink, with additional development in the works for many of the station areas.
- St. Louis families spend 23.1% of their household budgets on transportation, making it the second largest household expenditure after housing (24.5%).
- Transit creates jobs during initial design, construction and post construction where new developments arise along the line.
- Transit Oriented Development can play a key role in getting the Missouri economy back on track and creating jobs.
- In St. Louis each day, more than 100,000 individuals board a Metrobus, train or van, amounting to 53 million riders a year.
- 10% of Metrobus and 7% of MetroLink riders are students traveling to school.

## **ST. LOUIS TOD FRAMEWORK PLAN NEIGHBORHOOD TYPOLOGY: TYPOLOGICAL SYSTEM CREATED FOR THE NORTHSIDE-SOUTHSIDE ALIGNMENT**

The 28 stations along the Proposed Northside-Southside Alignment connect 39 mostly residential neighborhoods within the City of St. Louis. Twenty of the 28 stations encompass local and national historic districts. Each of these distinct neighborhoods combines to form the residential base of the City. Investment in the Northside-Southside Alignment will bring new infrastructure, street improvements, jobs, and population growth to attract a wave of new, dense development within the historic residential neighborhoods of the City. The exception is the east and west couplets for Washington, Olive, and Clark in Downtown. For study purposes, in the Proposed Northside-Southside Alignment Station Area Study & Profiles, they were treated as one station due to the extreme overlap of their transit sheds. With this, a new station typology system has been established to categorize each station area along the Proposed Alignment.

The system used in this study of the Proposed Northside-Southside Alignment is a refinement of the typological system developed for the St. Louis TOD Framework Plan, which established five typologies by which to understand the general character and scale of the areas surrounding proposed and existing stations on the regional MetroLink system. By necessity, these typologies had to be quite broad in order to accept the station types of the regional transit network, which range from suburban areas to commuter hubs, to major regional destinations.

The Proposed Northside-Southside Alignment, however, is smaller than the regional MetroLink alignment and traverses a swath of the City composed primarily of residential neighborhoods, each with their own specific character, population density, connection to transit, and urban form. Attempts to classify the Proposed Northside-Southside Alignment using the typologies found in the St. Louis TOD Framework Plan reveal significant differences between the proposed stations. The most prevalent typology was found to be the "Neighborhood Typology," described as "Neighborhood stations include primarily residential areas that are well-connected to local transit as well as the regional transit network. Housing is usually mixed with local-serving retail. Commercial uses are limited to small businesses or some small-scale industry. Development is often oriented along a well-connected street grid that is served by a secondary transit network. Transit is often less of a focal point for activity here than in the urban center, suburban town center, or downtown. Because of the generality of the "Neighborhood Typology," it was found to apply to 90% of the stations along the Northside-Southside Alignment, making it impossible to discern difference between the stations servicing varied residential areas. In order



### PROPOSED NORTHSIDE-SOUTHSIDE ALIGNMENT

The Northside-Southside Study was completed in 2008. The proposed Northside-Southside Alignment connects 28 stations through 39 neighborhoods.



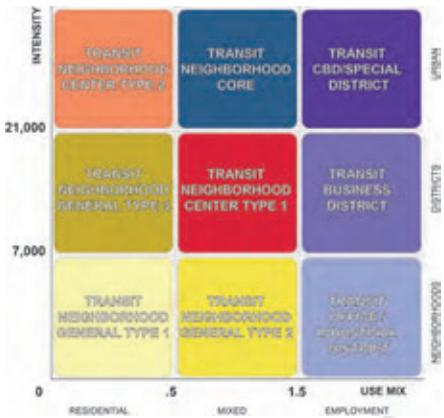
**PROPOSED ALIGNMENT:  
TRANSITIONING FROM  
TYPOLOGICAL STATION AREAS  
TO TRANSIT SHEDS**

to make well-reasoned planning decisions, a typological system capable of teasing out the unique qualities of these stations was developed. This system establishes a sound classification of the station areas as they exist, an aspirational logic for future population change, priorities for development, and a development program for each station area without straying too far from the original typologies defined in the St. Louis TOD Framework Plan.

The resulting Transit Neighborhood Typology system creates new sub-types within the “Neighborhood Typology,” which allow planners to assert varied development approaches among the 28 station areas on the Proposed Northside-Southside Alignment based on quantitative demographic thresholds. The system is based on a station area’s intensity, defined as worker population plus residential population, and use mix, defined as worker population divided by residential population and uses a station area’s values on those two criteria to assign it to one of nine typologies within the “Transit Neighborhood Typology.” Because the system is based on quantitative features of the station area, which in turn describe the scale and blend of uses at the station area, differences can now be distinguished between small, primarily residential neighborhoods, more densely populated mixed-use residential areas, and even the most robust urban environments in the region. When the Transit Neighborhood Typology is used to categorize each of stations along the Proposed Northside-Southside Alignment, a more fine-grained depiction of character emerges along the length of the transit network.

TOD REGIONAL FRAMEWORK PLAN	TRANSIT NEIGHBORHOOD TYPOLOGY
DOWNTOWN TYPOLOGY	CBD/SPECIAL DISTRICT Intensity: >21,000 Use Mix: 0.5 - 1.5
MAJOR URBAN CENTER TYPOLOGY	BUSINESS DISTRICT Intensity: >21,000 Use Mix: 0.5 - 1.5
NEIGHBORHOOD TYPOLOGY	OFFICE/INDUSTRIAL DISTRICT Intensity: >21,000 Use Mix: 0.5 - 1.5
	TRANSIT NEIGHBORHOOD CORE Intensity: 21,000 - 7,000 Use Mix: 0.5 - 1.5
	TRANSIT NEIGHBORHOOD CENTER TYPE 2 Intensity: >21,000 Use Mix: 0.0 - 0.5
	TRANSIT NEIGHBORHOOD CENTER TYPE 1 Intensity: 7,000 - 21,000 Use Mix: 0.5 - 1.5
	TRANSIT NEIGHBORHOOD GENERAL TYPE 3 Intensity: 7,000 - 21,000 Use Mix: 0.0 - 0.5
	TRANSIT NEIGHBORHOOD GENERAL TYPE 2 Intensity: <7,000 Use Mix: 0.5 - 1.5
	TRANSIT NEIGHBORHOOD GENERAL TYPE 1 Intensity: <7,000 Use Mix: 0.0 - 0.5
SUBURBAN TOWN CENTER TYPOLOGY	
CAMPUS/SPECIAL DISTRICT TYPOLOGY	

Transit Neighborhood Typologies relate to Use Mix and Intensity



NORTHSIDE SOUTHSIDE  
ALIGNMENT  
1 LINE  
25 STOPS  
9 TYPOLOGIES

- TRANSIT NEIGHBORHOOD CENTER TYPE 2 3
- TRANSIT NEIGHBORHOOD CORE 0
- TRANSIT CBD / SPECIAL DISTRICT 6
- TRANSIT NEIGHBORHOOD GENERAL TYPE 3 5
- TRANSIT NEIGHBORHOOD CENTER TYPE 1 3
- TRANSIT BUSINESS DISTRICT 2
- TRANSIT NEIGHBORHOOD GENERAL TYPE 1 2
- TRANSIT NEIGHBORHOOD GENERAL TYPE 2 3
- TRANSIT OFFICE / INDUSTRIAL DISTRICT 1

Transit Neighborhood Typologies applied to each station on the Proposed Alignment



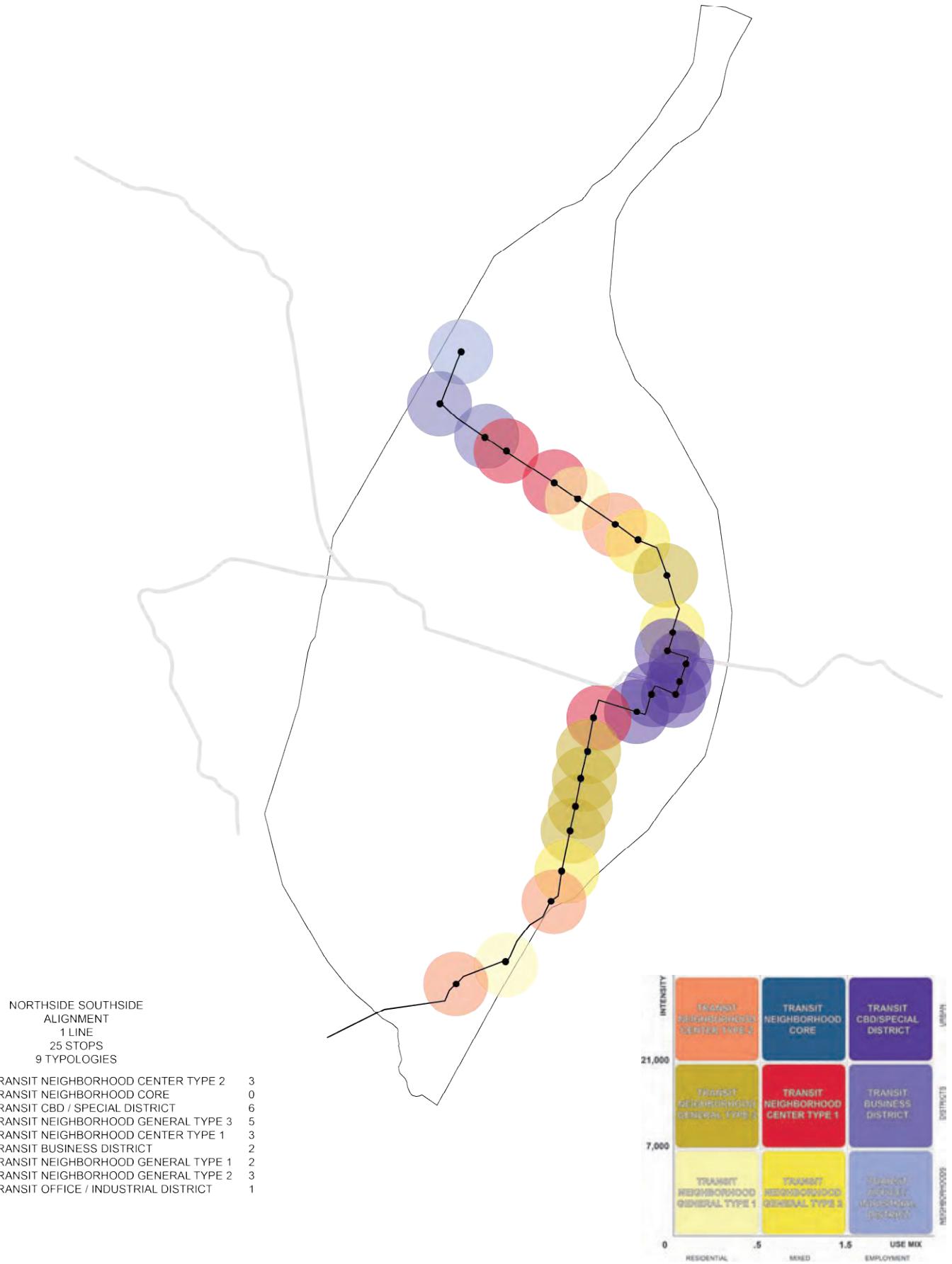
## PRECEDENTS

TOD planning methodologies, specifically the typological systems of selected U.S. cities with light rail transportation systems, were analyzed to assist in the development of the new Transit Neighborhood Typology system briefly described above. The analysis revealed a variety of relevant transit-supportive criteria used by transit systems throughout the nation. The most pertinent criteria were reviewed in relation to the Transit Neighborhood Typology system. The typological systems of Allegheny, Denver, Los Angeles, Phoenix, Portland, and Seattle were analyzed. While there are significant differences in the status, size, and development of each transportation system, it is clear that the nature of the city's typological system reflects the goals and standards of each city. While some of the precedents were informative, none of the systems were entirely applicable to the specific conditions of St. Louis.

## LESSONS LEARNED & APPLICATION

Transit typology systems that use spatial and demographic information are the most appropriate for designing Transit Oriented Development, which is responsive to local character and scale. The relative similarity of urban form, block size, land use, and building scale among stations, particularly those in residential neighborhoods on the Proposed Alignment, required the development of new categories/subtypes which accounted for demographic information as well as spatial information related to station use and to allow planners to make distinctions between proposed stations. The quantitative demographic information is required to determine the number of people served by transit and the mix of uses within the station area. Demographic figures are accompanied by a station-by-station account of localized conditions and issues related to connectivity, barriers to development, available land, and economic and educational demographics. The combination of a quantitative system, by which real differences could be discerned between small scale residential and high intensity urban conditions, and localized snapshots of each station area's conditions provided a clear path forward to catalog and analyze the 28 potential station areas along the Northside-Southside Alignment.

While no other city has a system that is totally applicable to the conditions present in St. Louis, some transit planning systems and goals were considered for a finer-grained station area analysis. Los Angeles establishes a similar method for determining station area differences based on demographic and spatial information. Seattle emphasizes urban quality & form which sets standards for improving the quality of life, walkability, access to green space, and activities for all ages. The TOD planning systems developed for Allegheny and Portland explore the notion of time as part of the typological system to prioritize development along planned and existing transit routes. The recognition of time and phasing of development before and after the construction of the Alignment features heavily in the Preferred Station Areas.



## PRECEDENTS TOD PLANNING SYSTEMS STUDIED

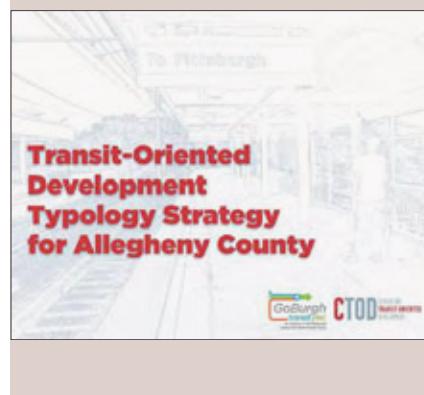
### St. Louis

The St. Louis TOD Framework Plan, by East-West Gateway establishes five broad typologies by which to understand the general character and scale of the areas surrounding proposed and existing stations on the regional MetroLink system. By necessity, these typologies had to be quite broad in order to accept the station types of the regional transit network, which range from suburban areas to commuter hubs, to major regional destinations. However, it provided a foundation for this study to further detail applicable transit typologies for the City of St. Louis.



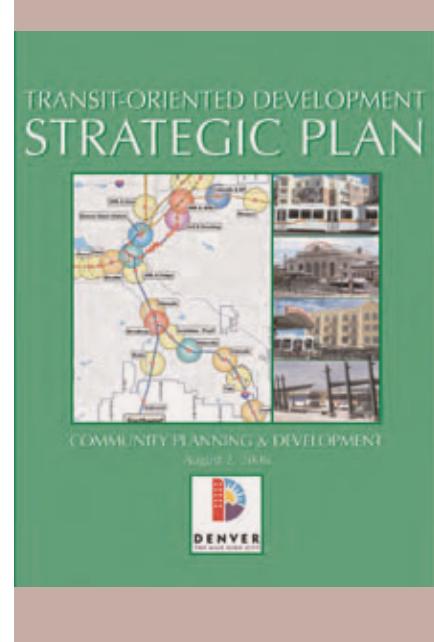
### Allegheny

Allegheny's Transit planning methodology, as described in Transit-Oriented Development Typology Strategy for Allegheny County (2013), establishes five typologies: Educate & Envision, Plan & Partner, Connect, Catalyze, and Infill & Enhance. The typologies most amenable to near term Transit Oriented Development are the Connect and Catalyze Typologies, because at each of these stations, small improvements to the streetscape, small high-density developments, and public outreach at each station would create highly transit-supportive station areas.



### Denver

Denver's Transit Oriented Development Strategic Plan (2006) outlines a typological system to classify all existing and proposed stations as one of seven typologies: Downtown, Major Urban Center, Urban Center, Urban Neighborhood, Commuter Town Center, Main Street, Campus/Special Event. Each typology has a specified land use, housing type, commercial/employment type, proposed building scale, and transit function.



## Portland

Portland's Transit Oriented Strategic Plan categorizes each station as one of three Place Types, Plan & Partner, Catalyze & Connect, and Infill & Enhance, according to the values of two criteria: Transit Orientation, a holistic assessment of transit-supportiveness, population density, quality of service, walkability, physical form of the urban environment, and mix of commercial and residential uses; and Market Strength, a three tiered, assessment based on the average commercial and real estate prices per square foot over the preceding decade.



Transit-Oriented Development Strategic Plan  
Metrolink TOD Program  
Prepared by Metro  
in partnership with N

## Seattle

Seattle Transit Communities (2010) establishes four Transit Oriented Development Typologies within the city, each rooted in a qualitative assessment of station area performance. The system's most important feature is its integration of urban form and quality into its assessment of the station areas. The system's weakness is its lack of quantitative criteria by which to assess the station, making it difficult to discern differences between two stations of the same typology.

## Seattle Transit Communities

Integrating Neighborhoods with Transit

A report from the Seattle Planning Commission



## Los Angeles

Los Angeles has developed a multi-faceted station area assessment system, as described in Creating Successful Transit Oriented Districts in Los Angeles (2010). In recent years, Los Angeles has been a national model for making serious steps towards reducing reliance on cars and fostering dense development with easy access to public transportation. To inform these decisions, the city has developed a multi-faceted approach to TOD planning at the alignment and station levels through the analysis of intensity and use mix at the station area level, in addition to taking into consideration physical features which support or hinder access to public transportation.

## Creating Successful Transit-Oriented Districts in Los Angeles:

A Citywide Toolkit for Achieving Regional Goals



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## TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Typologies are classifications that, based on demographic information, and in combination with associated Building Envelope Standards, establish criteria for a station area's transit-supportiveness and future development. The typological system builds on the St. Louis TOD Framework Plan which establishes the role of Transit Oriented Development within the City and identifies station area typologies and development potential at each of the 37 existing MetroLink Station Areas within the St. Louis Metropolitan Area. The existing MetroLink stations are classified according to a regional typological system that, because of the large area it must cover and the variety of land use patterns in the region, generalizes station areas into one of five broadly defined typologies. When the typological system of the Framework Plan is deployed at each station on the Proposed Northside-Southside Alignment, 90% of the stations fall into the same "Neighborhood Typology". Because of the similarities in use and scale of each of the proposed station areas along the Proposed Northside-Southside Alignment, the system for assigning station area typologies must attain a level of resolution capable of recognizing the nuanced distinctions among them. By contrast, when the Transit Neighborhood Typology is deployed along the Proposed Northside-Southside Alignment, six different station types emerge. This finer grain of resolution will help make more informed planning decisions based on the specificity of character and development potential at each station.

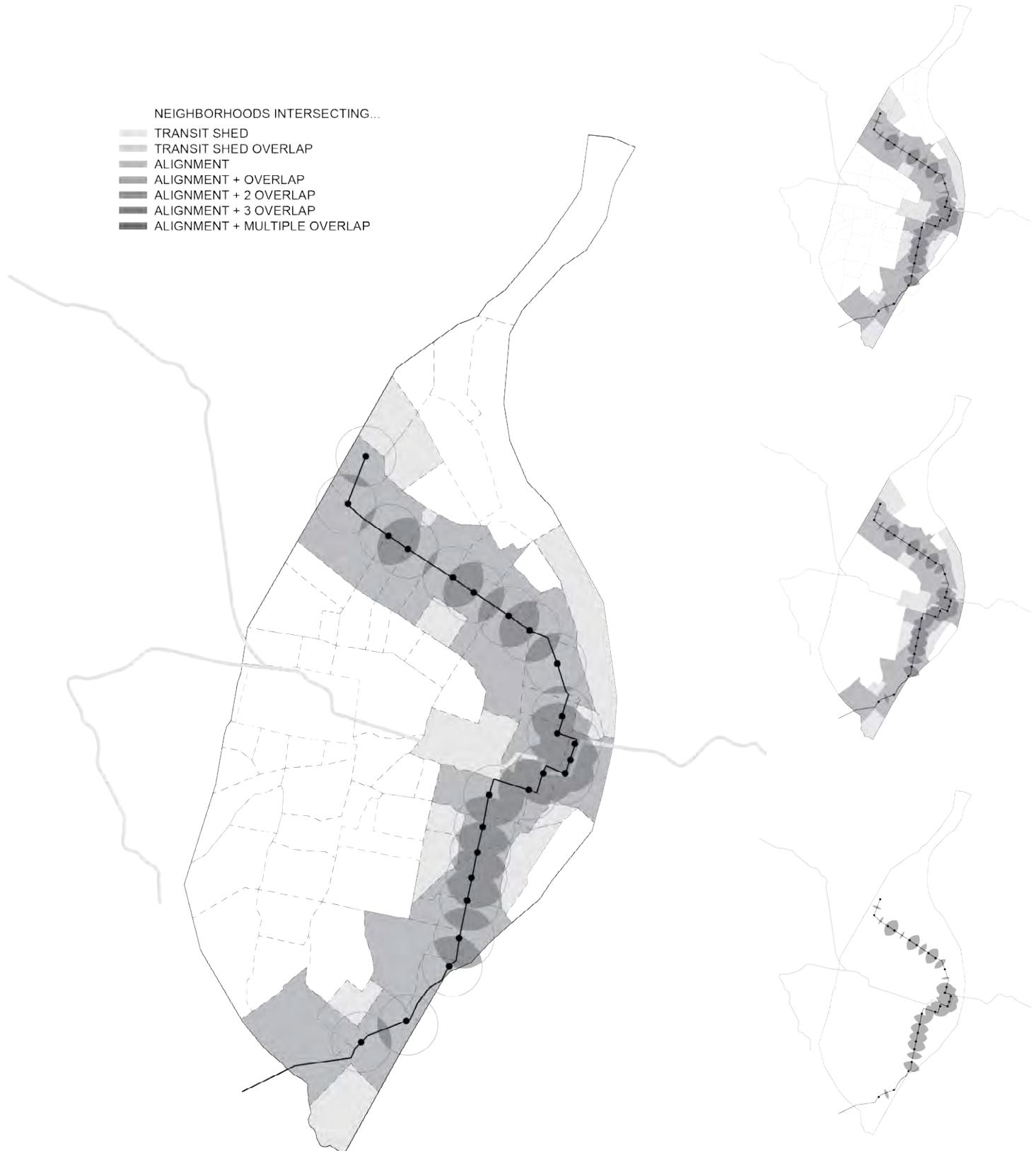


At each station, Transit Oriented Developments surrounded by strong, complete residential neighborhoods establish a model for accessibility, diversity, and prosperity within the City of St. Louis while highlighting key aspirations of the City's Sustainability Plan and Strategic Land Use Plan. The strategy at each station is to complete the surrounding neighborhoods, implement planned transit infrastructure improvements, and support greater density development around the transit station. After documenting vacant parcels and buildings on each block within the half ( $\frac{1}{2}$ ) mile transit shed, each vacant building should be renovated and each vacant parcel should be filled with the dominant residential building type for that block. Vacant commercial buildings will be renovated to provide ground level commercial space with the potential for office or residential space on upper levels. The construction of the station will bring about significant streetscape improvements to affect water infrastructure, pedestrian, bicycle and bus networks, open space, and walkability. These infrastructure improvements, particularly along primary streets, will then be framed by new buildings with higher worker and residential densities than the surrounding area.



NEIGHBORHOODS INTERSECTING...

- TRANSIT SHED
- TRANSIT SHED OVERLAP
- ALIGNMENT
- ALIGNMENT + OVERLAP
- ALIGNMENT + 2 OVERLAP
- ALIGNMENT + 3 OVERLAP
- ALIGNMENT + MULTIPLE OVERLAP



28 Neighborhoods Contact Alignment  
 11 Neighborhoods Contact Transit Sheds  


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 39 Total Influenced Neighborhoods



**LEMP BREWERY COMPLEX**

#### **SYSTEM TO DETERMINE DEVELOPMENT PROGRAM, BUILDING FORM, AND USE BASED ON FUTURE GOALS.**

Development program and future population are assigned by shifting a station's current Transit Neighborhood Typology to its proposed future Transit Neighborhood Typology. Using this system, each station is classified according to its current use mix and intensity and then cross-referenced against the aspirational Station Prototype established for that station in the Northside-Southside Study (2008) to determine the ratio of workers and residents required to meet population goals within the transit shed. Each Transit Neighborhood Typology has associated zoning recommendations by which to guide the physical form of future build-out. The most beneficial method to enhance the built environment would be to engage a form-based code district. This would allow for corresponding Building Envelope Standards to establish the suitable development program and building form to be used to meet the aspirations for a future population within the transit shed. One can then determine the required increase in workers and residents, along with the subsequent development required to house these additional people needed in order to shift the typology from its current state to its recommended future Transit Neighborhood Typology. This localized approach will make it easier for designers, planners, and developers to integrate Transit Oriented Development into the historic neighborhoods of St. Louis in the future.



**NEIGHBORHOOD GENERAL TYPE 3**



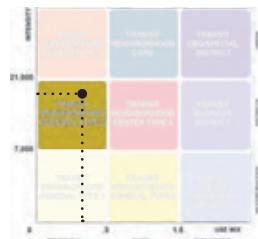
**NEIGHBORHOOD GENERAL TYPE 2**



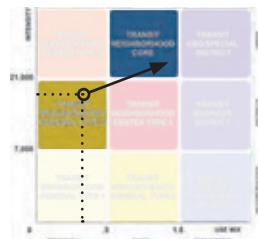
**NEIGHBORHOOD GENERAL TYPE 1**

## STEPS FOR USING THE TRANSIT NEIGHBORHOOD TYPOLOGY SYSTEM

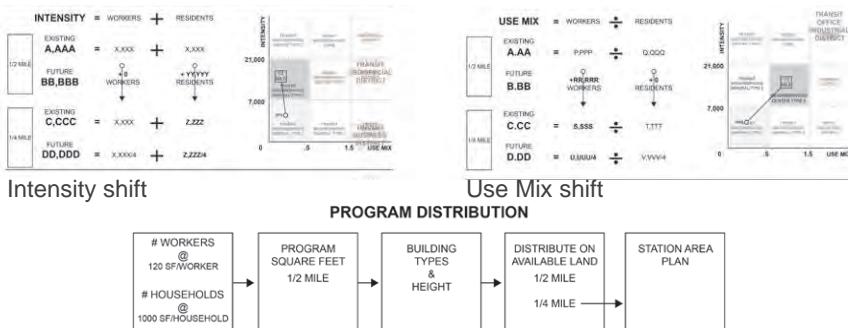
### STEP 1: DETERMINE CURRENT STATION AREA TYPOLOGY



### STEP 2: DETERMINE DESIRED TYPOLOGICAL SHIFT



### STEP 3: DETERMINE DEVELOPMENT PROGRAM BASED ON DESIRED POPULATION INCREASE



### STEP 4: LOCATE OPPORTUNITY SITES TO FULFIL SHIFT

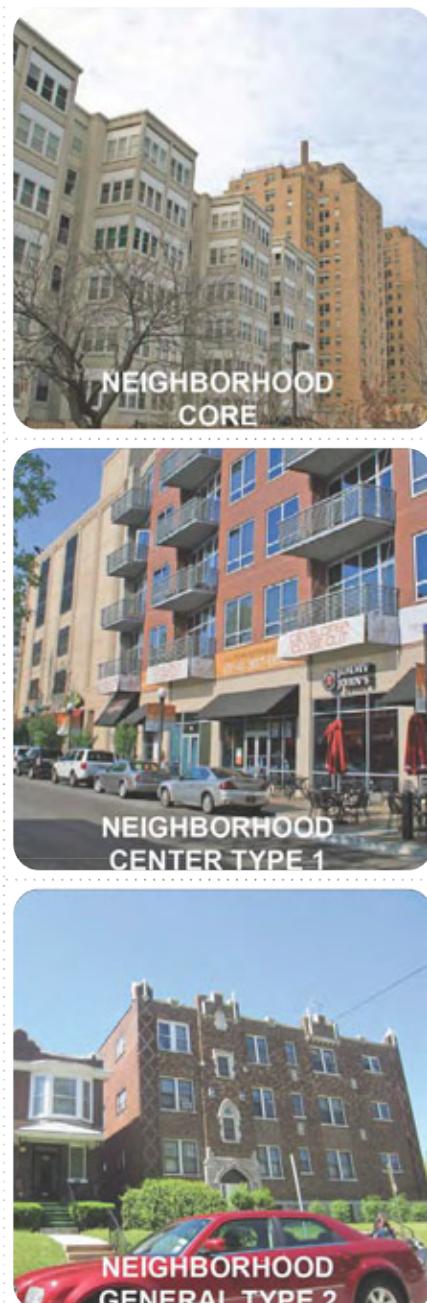


Development opportunity sites example

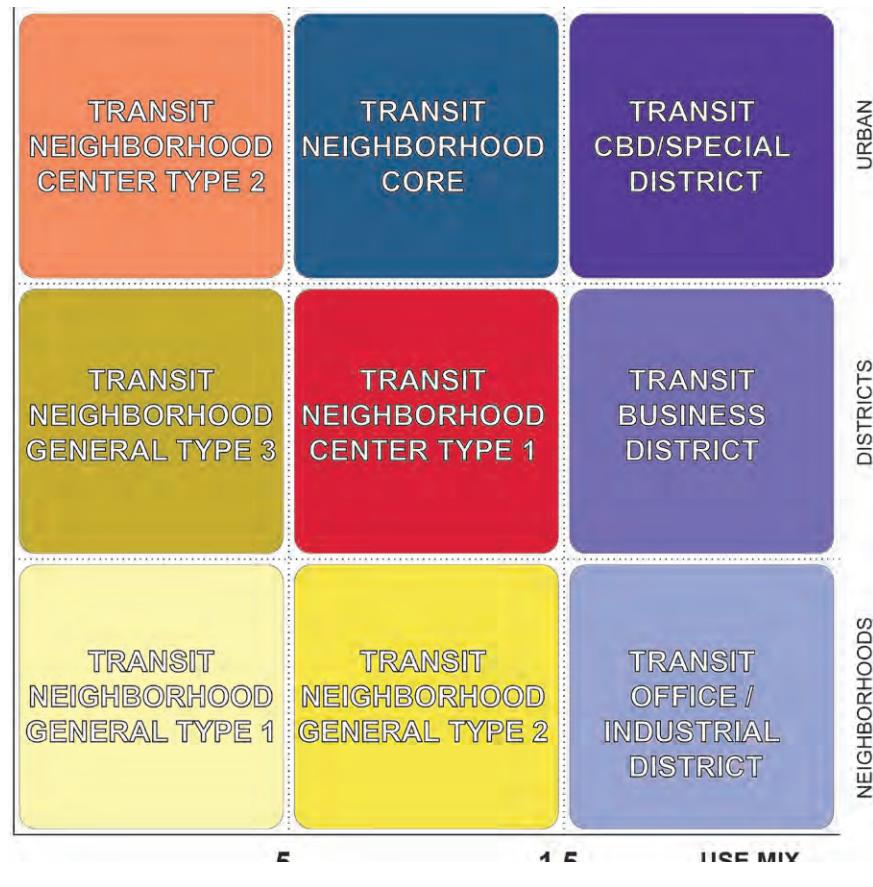
## TRANSIT NEIGHBORHOOD TYPOLOGY FRAMEWORK APPLIED

The following typologies describe transit-supportive development patterns. A single station may support multiple typologies; however, its aspirational typological characterization is based on the densest condition feasible at that particular station.

### Applied Building Envelope Standards



Each typology represents an important feature of the city and each is supportive of public transport. While the Transit Neighborhood Typological distinction describes the overall condition within the station area, the transit shed will also accept zoning regulations via multiple Building Envelope Standards, fundamental characteristics of a fine-grained, walkable area, capable of accommodating a diverse population and varied use.



### **Transit Neighborhood**

#### **General Type 1 (TNGeneral Type 1)**

Low to medium density residential areas clustered just behind the primary streets of the station area. These residential areas are the foundational residential districts within the city, organized in tightly knit and well-defined neighborhoods. They will deliver a solid ridership base for the proposed Alignment, support and desire the development spurred by new transportation initiatives, and gain density and market value as Transit Oriented Developments fill in around the station area.

Intensity value below 7,000 indicates lower density land use within the normal range of an urban neighborhood. Moderately supportive of transit.

Use mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood General Type 1 at most intense condition.

Zoning: Transit Neighborhood General Type 1 is zoned using Neighborhood General Type 1 Building Envelope Standards at its most intense condition.



### **Transit Neighborhood**

#### **General Type 2 (TNGeneral Type 2)**

Station areas of this typology are a blend of tightly knit low density residential areas with a concentration of mid- to high-rise residential buildings which support some commercial and office use along stretches of primary and secondary streets. These areas can benefit from the varied commercial and service industries attracted by Transit Oriented Development and hold the potential in the future support higher density residential communities.

Intensity value below 7,000 indicates lower density land use within the normal range of an urban neighborhood. Moderately supportive of transit.

Use mix between 0.5 and 1.5 indicates near equal mix of residential and employment use.

Building Envelope Standards of Neighborhood General Type 2 at most intense condition.

Zoning: Transit Neighborhood General Type 2 is zoned using Neighborhood General Type 2 Building Envelope Standards at its most intense condition.



### **Transit Neighborhood**

#### **General Type 3 (TNGeneral Type 3)**

Station areas of this typology is primarily residential, however because of the size of the population at these station areas, prominent consolidated commercial use may be present.

Intensity value between 7,000 and 21,000 indicates a highly transit-supportive station area.

Use mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood General Type 3 at most intense condition.

Zoning: Transit Neighborhood General Type 3 is zoned using Neighborhood General Type 3 Building Envelope Standards at its most intense condition though Neighborhood General Type 1, Neighborhood General Type 2, and Campus Type may also be applicable in some areas.



### **Transit Neighborhood**

#### **Center Type 1 (TNCenter Type 1)**

Station areas of this typology are evenly mixed between residential and employment use, with employment activity distributed throughout the ground and upper levels of buildings.

Intensity value between 7,000 and 21,000 indicates highly transit-supportive station area.

Use mix between 0.5 and 1.5 indicates nearly equal mix of resident and worker populations.

Building Envelope Standards of Neighborhood Center Type 1 at its most intense condition.

Zoning: Transit Neighborhood Center Type 1 can be zoned using a variety of Building Envelope Standards including Neighborhood Center Type 2, Neighborhood Center Type 1, Neighborhood General Type 3, Neighborhood General Type 2, Neighborhood General Type 1, and Campus Type 1.



### **Transit Neighborhood**

#### **Center Type 2 (TNCenter Type 2)**

Station areas of this typology are primarily residential use, however because of the very high population at these stations, significant retail options may be present.

Intensity value above 21,000 indicates station area supportive of the highest frequency transit options.

Use mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood Center Type 2 at most intense condition.

Zoning: Transit Neighborhood Center Type 2 can be zoned using a variety of Building Envelope Standards, including Neighborhood Center Type 2, Neighborhood Center Type 1, Neighborhood General Type 3, Neighborhood General Type 2, Neighborhood General Type 1, and Campus Type 1.



### **Transit Neighborhood**

#### **Core Type (TNCore)**

Station areas of this typology are highest population density areas with the most even mix of employment and residential use.

Intensity value above 21,000 indicates highly transit-supportive station area.

Use mix between 0.5 and 1.5 indicates nearly equal mix of resident and worker populations.

Building Envelope Standards of Neighborhood Core at its most intense condition.

Zoning: Transit Neighborhood Core can be zoned using a variety of Building Envelope Standards, including Neighborhood Core, Neighborhood Center Type 2, Neighborhood Center Type 1, Neighborhood General Type 3, Neighborhood General Type 2, Neighborhood General Type 1, and Campus Type 1.



### **Transit Office / Industrial District (T-Office/Industrial)**

Station areas of this typology are primarily employment use with little to no residential use present.

Intensity value below 7,000 indicates a moderately transit supportive population

Use mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for low density commercial, civic, institutional, industrial, and business uses.



### **Transit Business District (T-Business)**

Station areas of this typology are primarily employment use with little to no residential use present.

Intensity value between 7,000 and 21,000 indicates a highly transit supportive population

Use mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for medium to high density commercial, civic, institutional, industrial, and business uses.



### **Transit CBD/Special District (T-CBD/Special)**

Station areas of this typology are primarily employment or special use with little to no residential use.

Intensity above 21,000 indicates a population supportive of the highest frequency transit system.

Use mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for very high density commercial, civic, institutional, industrial, business, and special uses.







## 4 | Proposed Northside-Southside Alignment



## PROPOSED NORTHSIDE-SOUTHSIDE ALIGNMENT

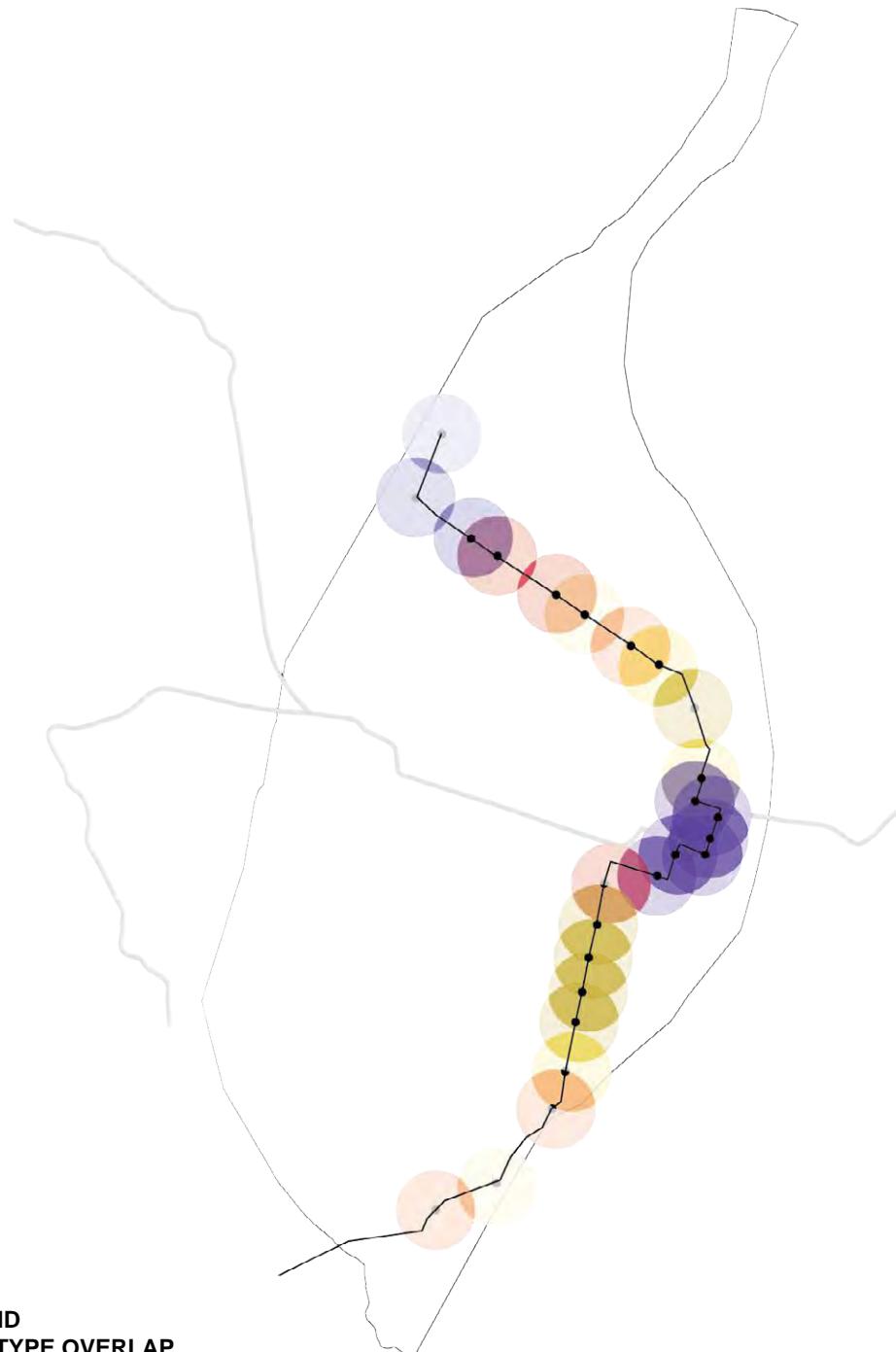
### OVERVIEW

The Proposed Northside-Southside Alignment will link 39 neighborhoods with a newly constructed light rail system, running within the boundaries of the City of St. Louis. The Alignment is comprised of 28 stations, 22 of which lie outside of the Downtown area in residential districts, while the remaining six have considerable overlap with the existing MetroLink system. Since the majority of stations fall in residential districts, it is imperative that development program and building form are determined by a typological system resolved to make distinctions between residential and highly developed urban areas.

### TRANSIT SHED OVERLAP

### NORTHSIDE-SOUTHSIDE PROPOSED ALIGNMENT AND APPLIED TYPOLOGY

The Proposed Northside-Southside Alignment is comprised of 28 stations, the majority of which lie in primarily residential districts within the boundaries of the City of St. Louis - from Interstate 70 & Goodfellow via Natural Bridge, through Downtown where it intersects with the existing MetroLink route, and south to Interstate 55 & Loughborough via Jefferson & Interstate 55. The Proposed Northside-Southside Alignment varies greatly from the existing St. Louis MetroLink Alignment which serves a variety of station areas, from the suburbs within Metropolitan St. Louis to the regionally significant Central Business District and Civic Centers seated in Downtown St. Louis, to Lambert International Airport. The Proposed Northside-Southside Alignment will be a major regional amenity, linking 39 St. Louis neighborhoods which fall within the combined transit sheds of each station. It will spur new jobs, recreational activities, development, and infrastructure initiatives at each station area within the City.



### TRANSIT SHED AND NEIGHBORHOOD TYPE OVERLAP

- NEIGHBORHOOD CENTER TYPE 2
- NEIGHBORHOOD CORE
- CBD / SPECIAL DISTRICT
- NEIGHBORHOOD GENERAL TYPE 3
- NEIGHBORHOOD CENTER TYPE 1
- BUSINESS DISTRICT
- NEIGHBORHOOD GENERAL TYPE 1
- NEIGHBORHOOD GENERAL TYPE 2
- OFFICE / INDUSTRIAL DISTRICT



EVENING COMMUNITY EVENT AT ST. LOUIS PLACE

## STATION AREA TYPOLOGY

The purpose in creating a set of typologies is to characterize the 28 stations along the Proposed Northside-Southside Alignment and then to identify two station areas for further study. Station selection was informed using the Transit Neighborhood Typologies. For each station along the proposed alignment, a catalog of key transit-supportive planning and urban design attributes has been developed as an aid in decision making. The eight attributes are: Current Intensity, Use Mix, Connectivity, Urban Quality & Form, Transit Function, Station Type, Development Opportunity, and Potential Program. Our study also establishes future Transit Neighborhood Typology distinction. Detailed descriptions of each of these measures are described below:

### INTENSITY

Intensity is the combined total of worker and resident populations within the transit shed and is used to establish three tiers of population thresholds, distinguished at 7,000 and 21,000. An intensity value below 7,000 generally describes a neighborhood which is moderately conducive to a public transport system. Intensity values between 7,000 and 21,000 connote an area which is highly transit-supportive and can support a high frequency transit network. Intensity values above 21,000 occur in high density urban environments which can support the highest frequency transit systems. Intensity gives an indication of the baseline number of fixed riders upon which to base ridership estimates. This criterion is enormously beneficial in drawing distinctions between station areas.

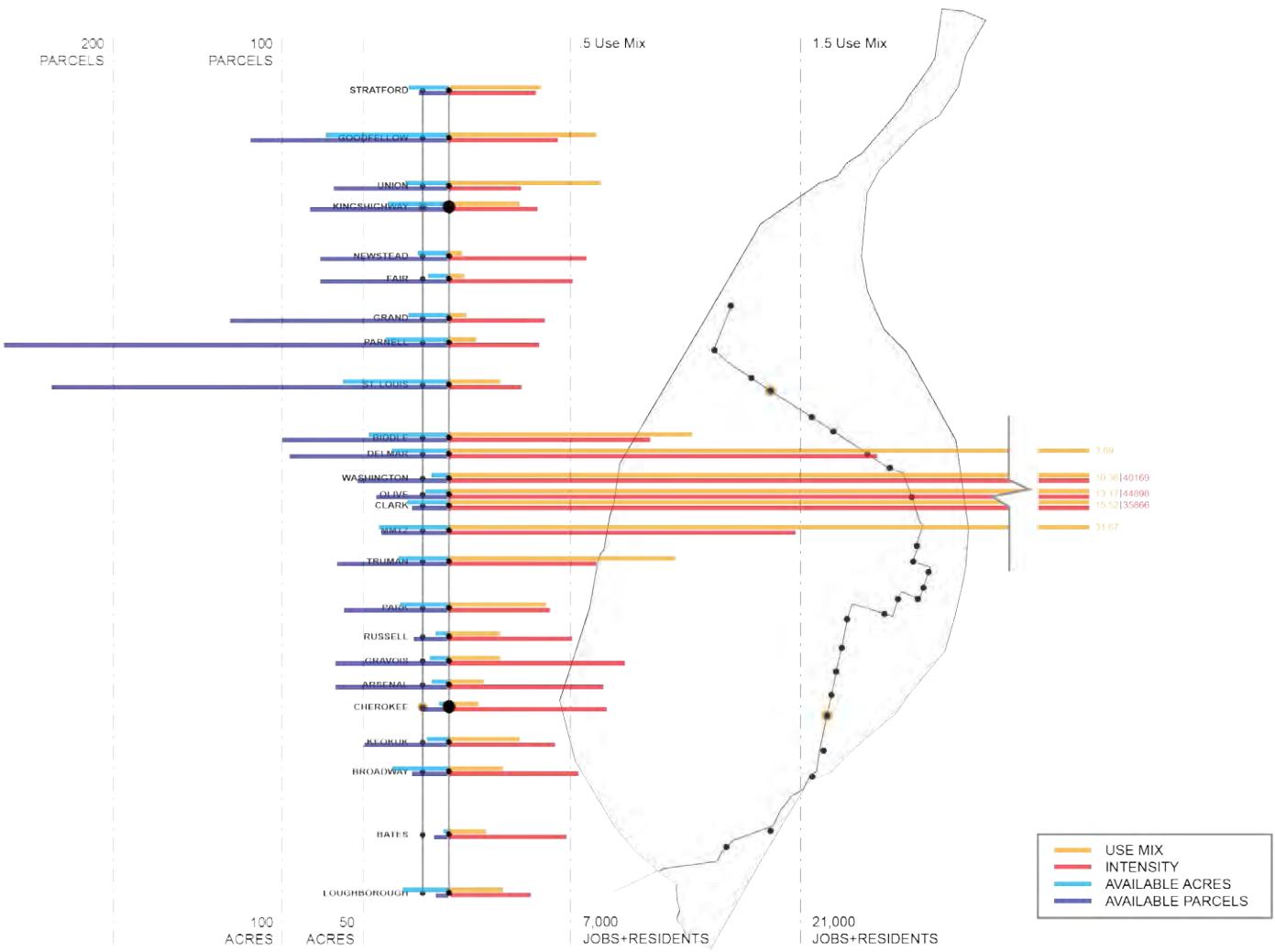
Station construction will bring about significant street-scape improvements to affect water infrastructure, pedestrian, bike and bus networks, open space, and walkability.

### USE MIX

Use mix is the ratio of workers to residents within the one-half ( $\frac{1}{2}$ ) mile transit shed and is divided into three amplitudes. Use mix below 0.5 means that the area is has primarily residential use. Between 0.5 and 1.5, the mix of residents and workers is fairly even, and above 1.5, the primary use tends towards employment. Use mix allows planners and designers to establish appropriate building form, type, and distribution based on the ratio of the station area intended for employment or residential use.

### CONNECTIVITY

Connectivity is the assessment of the quality and extent of multi-modal transportation networks in the station area. This measure catalogs the number of bus routes, dedicated bike routes, and the mean walkscore of the neighborhoods within the one-half ( $\frac{1}{2}$ ) mile station area. A catalog of connectivity allows planners to understand the extent to which new public transportation measures will build on existing infrastructure and positively affect multi-modal mobility for those who live and work in the station area.



### PROPOSED NORTHSIDE-SOUTHSIDE ALIGNMENT FUTURE TRANSIT NEIGHBORHOOD TYPOLOGY CLASSIFICATIONS

	NORTHSIDE	DOWNTOWN	SOUTHSIDE
STRATFORD STATION	TRANSIT OFFICE/INDUSTRIAL DISTRICT		
GOODFELLOW STATION	TRANSIT BUSINESS DISTRICT		
UNION STATION	TRANSIT BUSINESS DISTRICT		
KINGSMHIGHWAY STATION	TRANSIT NEIGHBORHOOD CENTER TYPE 1		
NEWSTEAD STATION	TRANSIT NEIGHBORHOOD CENTER TYPE 1		
FAIR STATION	TRANSIT NEIGHBORHOOD GENERAL TYPE 1		
GRAND STATION	TRANSIT NEIGHBORHOOD CENTER TYPE 2		
PARNELL STATION	TRANSIT NEIGHBORHOOD GENERAL TYPE 2		
ST. LOUIS STATION	TRANSIT NEIGHBORHOOD GENERAL TYPE 3		
BIDDLE STATION	TRANSIT NEIGHBORHOOD GENERAL TYPE 2		
DELMAR STATION			
WASHINGTON STATION		TRANSIT CBD/SPECIAL DISTRICT	
OLIVE STATION		TRANSIT CBD/SPECIAL DISTRICT	
CLARK STATION		TRANSIT CBD/SPECIAL DISTRICT	
MMTZ		TRANSIT CBD/SPECIAL DISTRICT	
TRUMAN STATION		TRANSIT CBD/SPECIAL DISTRICT	
PARK STATION			
RUSSELL STATION			TRANSIT NEIGHBORHOOD CENTER TYPE 1
GRAVOIS STATION			TRANSIT NEIGHBORHOOD GENERAL TYPE 3
ARSENAL STATION			TRANSIT NEIGHBORHOOD GENERAL TYPE 3
CHEROKEE STATION			TRANSIT NEIGHBORHOOD GENERAL TYPE 3
KEOKUK STATION			TRANSIT NEIGHBORHOOD GENERAL TYPE 2
BROADWAY STATION			TRANSIT NEIGHBORHOOD CENTER TYPE 2
BATES STATION			TRANSIT NEIGHBORHOOD GENERAL TYPE 1
LOUGHBOROUGH STATION			TRANSIT NEIGHBORHOOD CENTER TYPE 2



POTENTIAL DEVELOPMENT  
AROUND TRANSIT STATION

## URBAN QUALITY AND FORM

Urban quality and form highlights criteria that have been shown to positively affect public transportation use and impact. This measure catalogs mean block size and the number of neighborhoods within the one-half ( $\frac{1}{2}$ ) mile station area. While the City of St. Louis on the whole has historically been planned for walkability and public transit, some station areas are configured in a more transit-supportive way than others. Block size is a common measure that impacts walkability, variability of urban form, and gives measure to pedestrian experience around the station area.

## TRANSIT FUNCTION

Transit function describes how the station area will operate within the context of the whole alignment. As described in the Northside-Southside Study (2008), some stations will operate as commuter hubs, outfitted with ample Park-and-Ride space, while others will be inter-modal transfer facilities, bundled with bus and bike networks throughout the City. The majority of stations are walk-up stations which serve the adjacent neighborhoods and can be easily accessed by pedestrians and cyclists using the existing street infrastructure.

## STATION TYPE

Station type, established by The Northside-Southside Study (2008), assigns one of seven prototypes for the physical organization of the transit station according to the varied right-of-ways on which the Alignment runs. Each prototype has been designed to fit within the existing right-of-way at each proposed station area. The station organization may also be adjusted to conform to the transit function, as listed above.

## DEVELOPMENT OPPORTUNITY

Development opportunity catalogs the amount and value of vacant land in the one-quarter ( $\frac{1}{4}$ ) mile station area as well as the desired density for new developments, required to meet certain transit-supportive thresholds. This information was garnered from the Proposed Northside-Southside Alignment Station Area Study & Profiles (2013), and is a preliminary snapshot of potential sites and distribution of development at each station along the Alignment.

## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### KINGSHIGHWAY STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.29 Jobs/Residents
	Intensity	5,144 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	2 Paths
URBAN FORM & QUALITY	Mean Walkscore	50.5
	Mean Block Size	11.4 Acres
URBAN FORM & QUALITY	Neighborhoods In 1/2 Mile	4

##### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side Far-Side Platform
DEVELOPMENT OPPORTUNITY	Underutilized Land	36.3 Acres
	% of 1/4 Mile	29%
DEVELOPMENT OPPORTUNITY	Station area	
	Available Lots	82
DEVELOPMENT OPPORTUNITY	Assessed Value Of Underutilized Land	\$16,259,000
	Assessed Value of Land in 1/4 Mile	\$9,925,400
POTENTIAL PROGRAM	Station Area	
	Desired Density for New Development	10-18 DU/Acre .7-.1.5 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Duplex, Triplex, Fourplex Rowhouse & Courtyard Rowhouse Stacked Flats Courtyard Building High Rise Residential Building Flex Building Live/Work Units

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 1

## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### CHEROKEE STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.12 Jobs/Residents
	Intensity	9,201 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	5 Paths
URBAN FORM & QUALITY	Mean Walkscore	76.25
	Mean Block Size	7.4 Acres
URBAN FORM & QUALITY	Neighborhoods In 1/2 Mile	4

##### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side Far-Side Platforms
DEVELOPMENT OPPORTUNITY	Underutilized Land	6.1 Acres
	% of 1/4 Mile	4.8%
DEVELOPMENT OPPORTUNITY	Station area	
	Available Lots	16
DEVELOPMENT OPPORTUNITY	Assessed Value Of Underutilized Land	\$852,200
	Assessed Value of Land in 1/4 Mile	\$12,126,000
POTENTIAL PROGRAM	Station Area	
	Desired Density for New Development	10-18 DU/Acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Rowhouse & Courtyard Rowhouse High Rise Residential Building Commercial Block Building Flex Building Linear Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3

## POTENTIAL PROGRAM

Potential program for each Transit Neighborhood Typology is determined by applying the appropriate Building Envelope Standard to the station area necessary to provide space for the desired number of future workers and residents. Planners must test appropriate building types against the scale of available parcels.

## TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Typology categorizes each station based on its future values of intensity and use mix and is an extension of Station Area Prototypes listed for each station in the Northside-Southside Study (2008). The Transit Neighborhood Typological assignment indicates the most intense development thresholds possible in the station area; however, this does not preclude lower density Building Envelope Standards from being assigned in other parts of the transit shed. For the Northside-Southside Proposed Alignment, six typologies out of the nine described earlier in section 3 of this report. When each station along the proposed alignment is assigned its future type, one can clearly see the transformative potential the rail line will have on the communities served.



- NEIGHBORHOOD CENTER TYPE 2
- NEIGHBORHOOD CORE
- CBD / SPECIAL DISTRICT
- NEIGHBORHOOD GENERAL TYPE 3
- NEIGHBORHOOD CENTER TYPE 1
- BUSINESS DISTRICT
- NEIGHBORHOOD GENERAL TYPE 1
- NEIGHBORHOOD GENERAL TYPE 2
- OFFICE / INDUSTRIAL DISTRICT



OLD NORTH ST. LOUIS

## PROPOSED NORTHSIDE-SOUTHSIDE ALIGNMENT

### PROPOSED STATIONS AREAS

The Proposed Northside-Southside Alignment is a transformative infrastructure improvement to the City of St. Louis with the potential to increase density and economic activity and establish a model for similar developments nationally. After a thorough selection process, the Cherokee and Kingshighway Stations were chosen in particular for having key transit-supportive attributes, the capacity to be a catalyst for the entire corridor, and as valuable prototypes for discussion and advancement of transit in St. Louis.

Each of the two detailed station area plans in sections 5 and 6 of this report lay the groundwork for a localized approach to Transit Oriented Development, which is defined by HUD as compact, mixed-use development in close proximity to transit facilities. Transit Oriented Development promotes sustainable communities by providing people of all ages and incomes with improved access to transportation and housing choices, while reducing both transportation costs and the negative impacts of automobile travel on the environment and economy. This type of development has been shown to have significant benefits to the local economy, environment, and overall quality of life.

Key measures in determining population increase and associated building program at these two station areas are explored in greater detail below:

#### Transit Shed

One-quarter ( $\frac{1}{4}$ ) mile and one-half ( $\frac{1}{2}$ ) mile transit sheds have been defined at the Kingshighway and Cherokee Stations. The transit shed is a boundary that encompasses parcels within a five to ten minute walk radius from the station. The boundary is refined based on the overlap of adjacent station transit sheds, features that increase or hinder walkability, and proximity to regional employment centers. When necessary, the transit shed passes down alleys and behind parcels to encompass both sides of a street. The residential and worker populations of parcels within the transit shed are used to estimate potential ridership. The refined transit shed for each of the two selected stations gives a more accurate demographic area by which to calculate use mix and intensity. For the purposes of this study, the one-half ( $\frac{1}{2}$ ) mile transit shed establishes the form-based code district.



**CHEROKEE STATION TRANSIT SHED REFINEMENT**

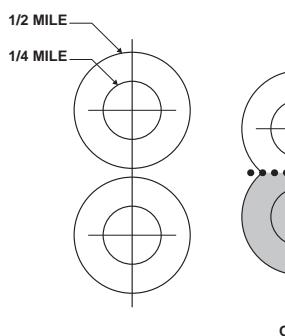


**LEGEND**

- ■ ■ NORTH-SOUTH ALIGNMENT
- ■ ■ 1/4 MILE TRANSIT SHED
- ■ ■ 1/2 MILE TRANSIT SHED
- - - 1/4 MILE WALK SHED
- - - 1/2 MILE WALK SHED

**KINGSHIGHWAY STATION TRANSIT SHED REFINEMENT**

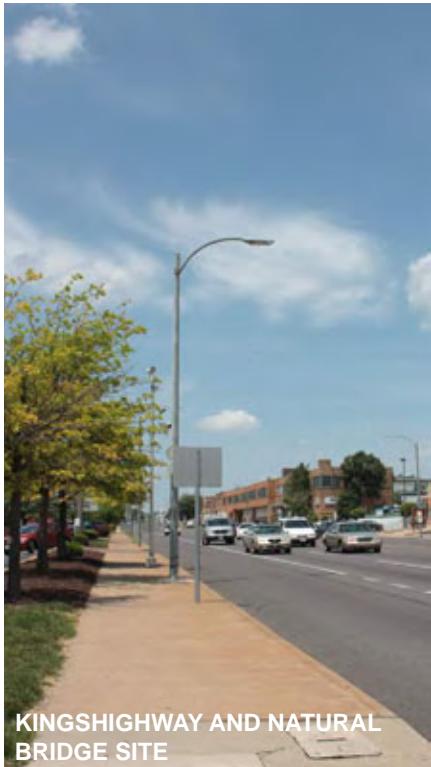
### TRANSIT SHED



**TOD ESSENTIAL ATTRIBUTES**

- Increased intensities of residents and employees
- Use Mix reflecting a fine grain, diverse blend of land-uses including retail, office, residential, and public space
- Urban Form and Quality
  - Physical features
  - Urban Design Quality
  - Individual Perception & Experience
  - Connectivity





KINGSHIGHWAY AND NATURAL BRIDGE SITE

**Due to changing demographics and housing preferences, the demand for compact housing near transit is likely to more than double by 2025.**

- "Hidden in Plain Sight:

Capturing the Demand for Housing Near Transit", Center for TOD

### Intensity

Intensity is a measure of the overall population of workers and residents in the station area. A station area's typological classification may be shifted by increasing intensity within the one-half ( $\frac{1}{2}$ ) mile transit shed. There are three distinct intensity thresholds: neighborhoods have sub-7,000 intensity, districts have intensity values between 7,000 and 21,000, and centers have intensity values above 21,000. Once a station area reaches a new threshold, new Building Envelope Standards may apply to match the scale of population.

### Use Mix

Use mix is a ratio of the number of workers to residents in the one-half ( $\frac{1}{2}$ ) mile transit shed. A station area's typological classification may be shifted by changing the mix of residents and/or workers within the one-half ( $\frac{1}{2}$ ) mile transit shed.

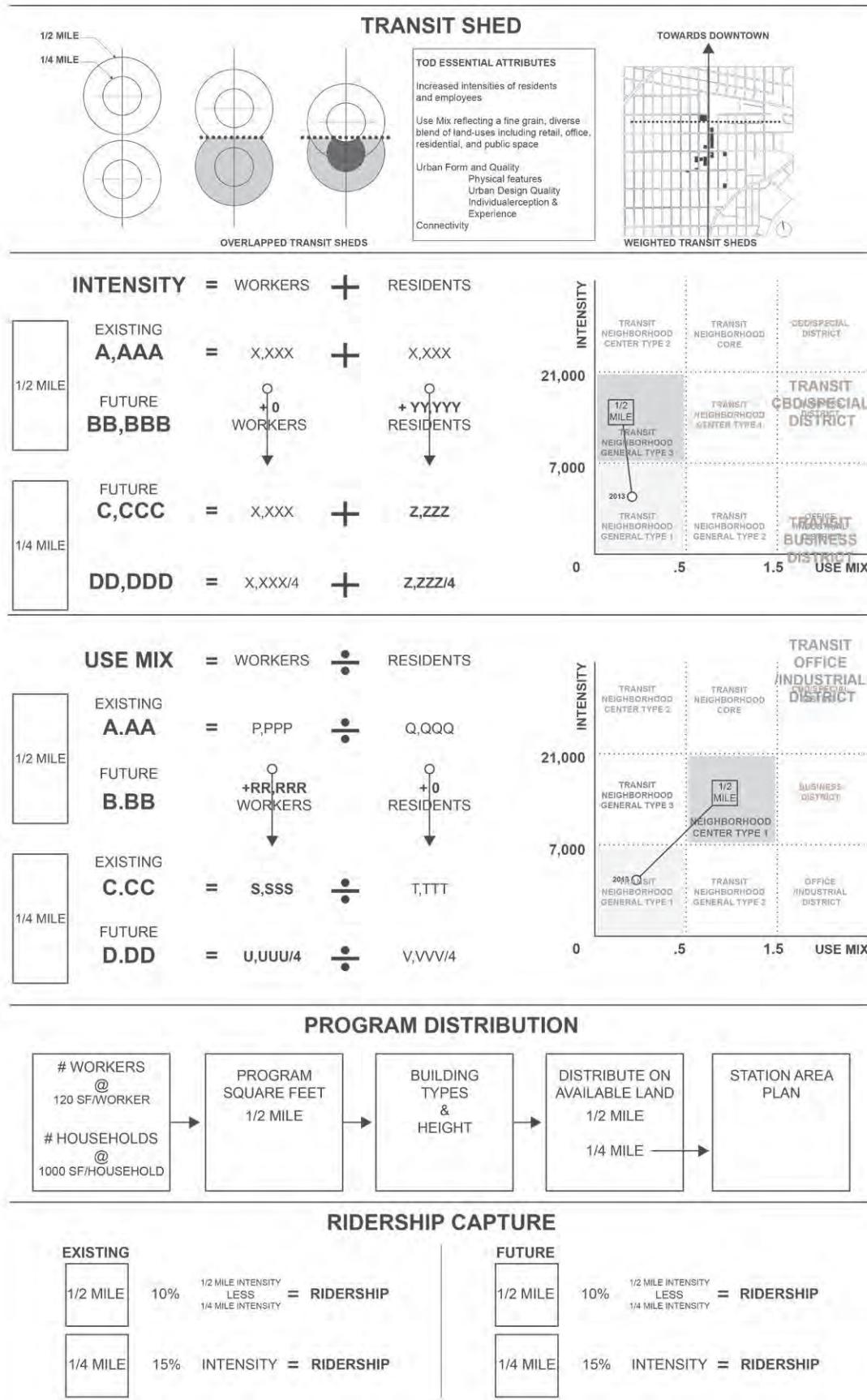
### Transit Shed Extents

The boundaries of the area and parcels served by transit are established as the one-quarter ( $\frac{1}{4}$ ) and one-half ( $\frac{1}{2}$ ) mile transit sheds, a refinement of the five and ten minute walk radii from the transit station. Parcels within the one-quarter ( $\frac{1}{4}$ ) mile transit shed, a five minute walk from a station, should be the focus of future increasing density development, as these have a higher capture rate than the surrounding areas.

The actual transit sheds for this study are augmented to account for adjacent stations along the proposed alignment, proximity of major destinations, and the anticipated attractiveness of the walking environment around the station. For example, on Cherokee, the one-quarter ( $\frac{1}{4}$ ) mile transit shed extends beyond the five minute walk radius to reflect the tremendous walkability of the Cherokee Station area and the absence of barriers (such as steep grades or highways) to pedestrian mobility along the corridor. Concurrently, the proximity of adjacent stations (Arsenal and Keokuk) limits the north-south transit shed.

The station area is particularly compact and contains an appreciable number of households with access to one or no vehicles. Capture rates for estimating transit users from the population and employment totals within the thresholds were developed with those characteristics in mind. A capture rate of 15% to 20% was deemed appropriate for the one-quarter ( $\frac{1}{4}$ ) mile transit shed and a rate of 10% to 15% was selected for areas beyond one-quarter ( $\frac{1}{4}$ ) mile up to one-half ( $\frac{1}{2}$ ) mile areas. This approach results in a ridership projection of 750 to 1,000 daily boardings based on existing land uses.

## TOD STATION PLANNING STRATEGY : PROGRAM METHODOLOGY



## Transit Neighborhood

### General Type 1 (TNGeneral Type 1)

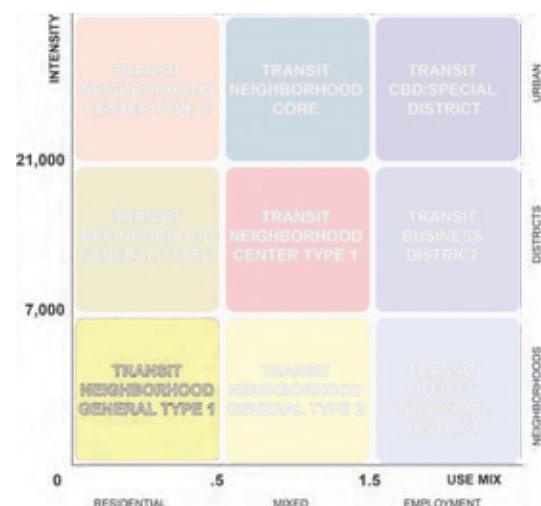
Station areas of this typology are low to medium density residential areas clustered just behind primary streets. These residential areas are the foundational residential districts within the city, organized in tightly knit and well defined neighborhoods. Station areas of this typology provide a solid ridership base for the proposed Alignment, support the development spurred by new transportation initiatives, and gain density and market value as Transit Oriented Developments fill in the station area.

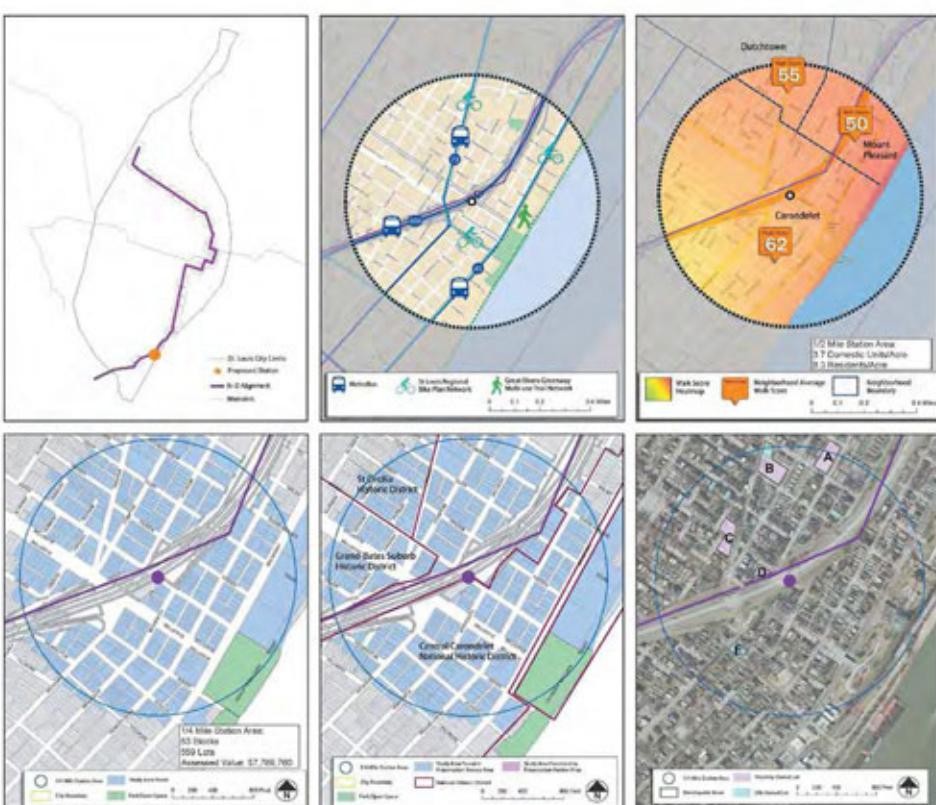
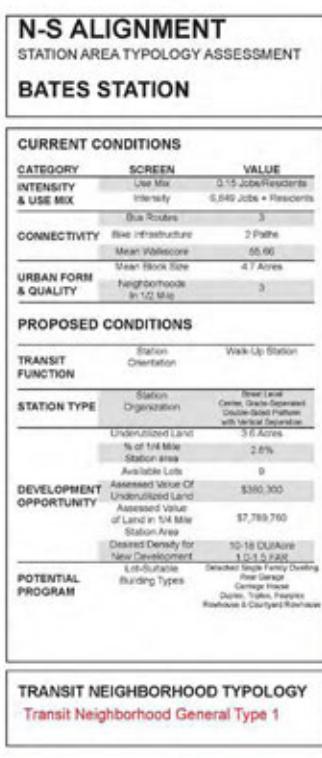
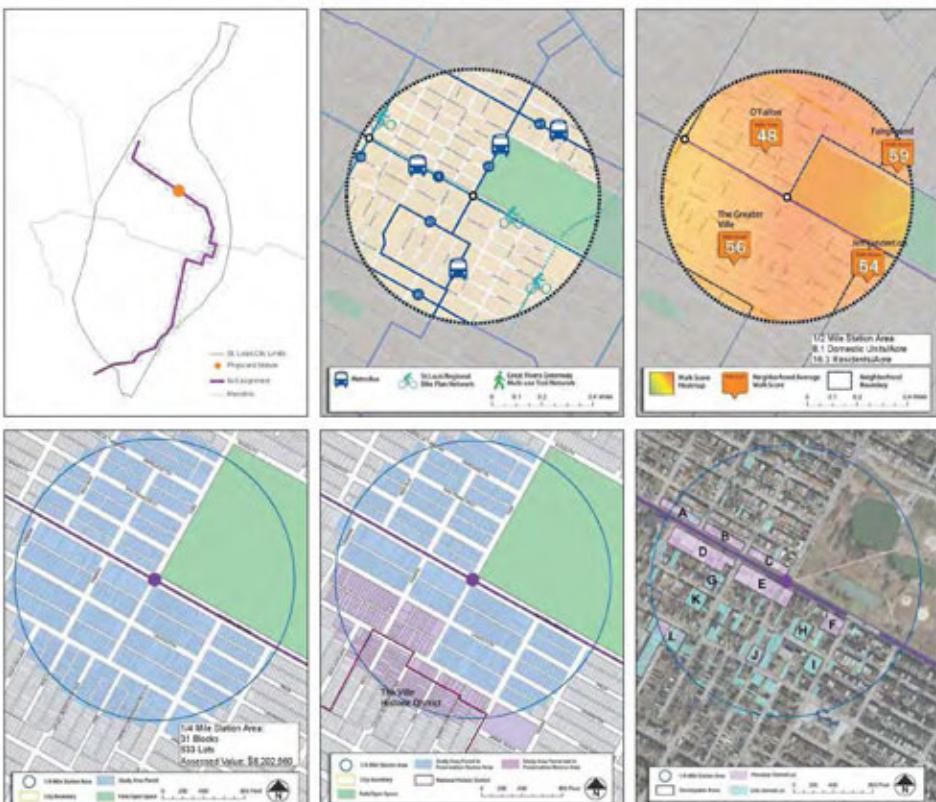
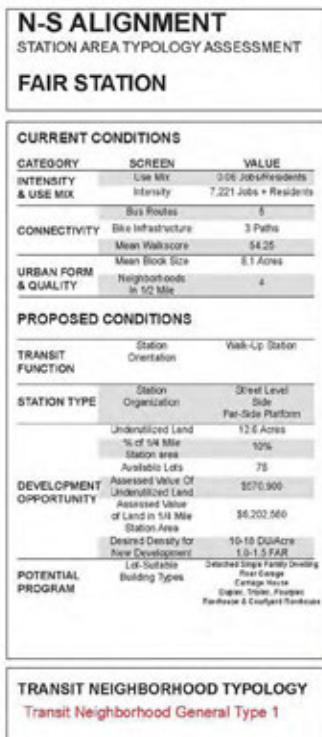
Intensity value below 7,000 indicates lower density land use within the normal range of an urban neighborhood. Moderately supportive of transit.

Use Mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood General Type 1 at most intense condition.

Zoning: Transit Neighborhood General Type 1 is zoned using Neighborhood General Type 1 building envelope standards at its most intense condition.





## Transit Neighborhood

### General Type 2 (TNGeneral Type 2)

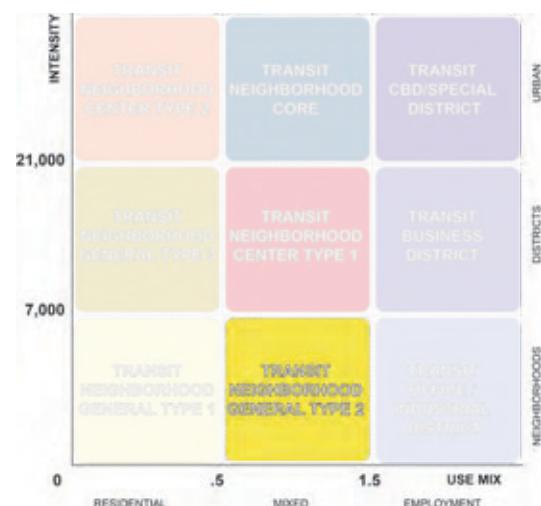
Station areas of this typology are a blend of tightly knit low density residential areas with a concentration of mid- to high-rise residential buildings that support some commercial and office use along stretches of primary and secondary streets. These areas can benefit from the varied commercial and service industries attracted by Transit Oriented Development and hold the potential in the future to support higher density residential communities.

Intensity value below 7,000 indicates lower density land use within the normal range of an urban neighborhood. Moderately supportive of transit.

Use Mix between 0.5 and 1.5 indicates near equal mix of residential and employment use.

Building Envelope Standards of Neighborhood General Type 2 at most intense condition.

Zoning: Transit Neighborhood General Type 2 is zoned using Neighborhood General Type 2 building envelope standards at its most intense condition.



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### PARNELL STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	11 Jobs/Residents
	Intensity	5,236 Jobs + Residents
CONNECTIVITY	Bus Routes	8
	Bike Infrastructure	3 Paths
	Mean Walkscore	55.5
URBAN FORM & QUALITY	Mean Block Size	37.5 Acres
	Neighborhoods in 1/2 Mile	4

##### PROPOSED CONDITIONS

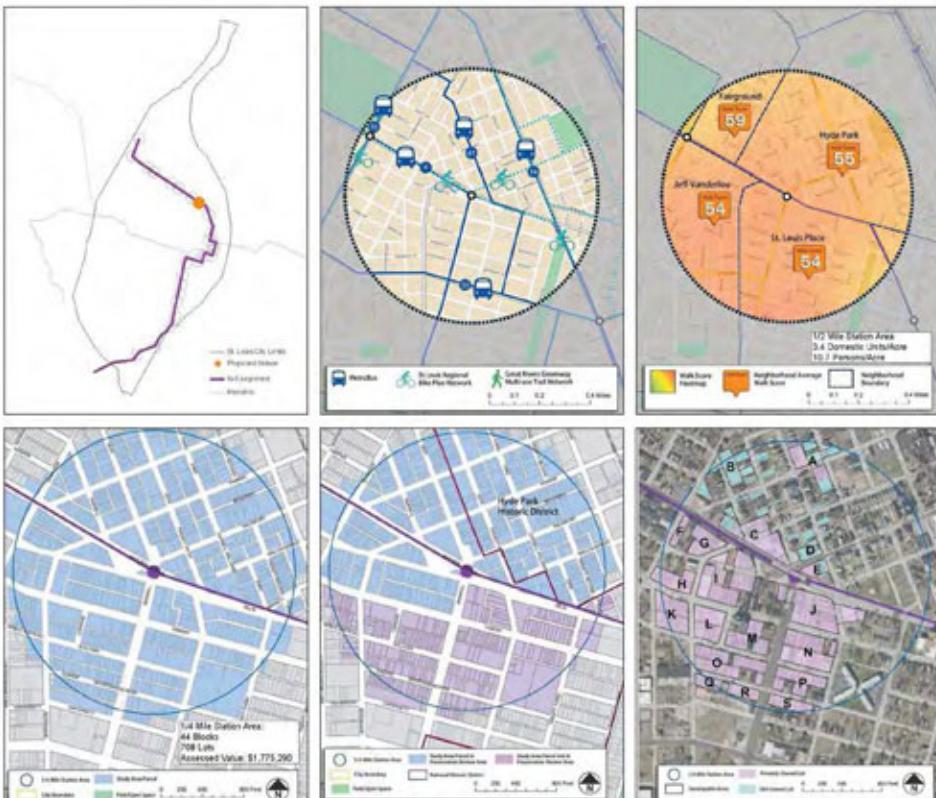
TRANSIT FUNCTION	Station Orientation	Walk-up station Local & express connections
STATION TYPE	Station Organization	Street Level Side-by-Side Platform Full Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land % of 1/2 Mile Station Area	37.5 Acres 30%
	Available Lots	262
	Assessed Value Of Undeveloped Land	\$606,600
	Assessed Value Of Land in 1/4 Mile Station Area	\$1,775,290
	Desired Density for New Development	10-18 DUS/Acre 1.0-1.5 FAR
POTENTIAL PROGRAM	Lot-Selectable Building Types	Capitol Square, Pappas, St. Louisian, Parkhouse, MarketPlace, Captain Building, High Rise Residential Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 2

H3 STUDIO

Data sources: 2010 Census, Data University Health Insurance Data, City of St. Louis Planning & Urban Design Agency, Neighborhood Score Index (2009), Central West End transit-based District (2012)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### BIDDLE STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	1,611 Jobs/Residents
	Intensity	11,771 Jobs + Residents
CONNECTIVITY	Bus Routes	8
	Bike Infrastructure	3 Paths
	Mean Walkscore	73
URBAN FORM & QUALITY	Mean Block Size	5.8 Acres
	Neighborhoods in 1/2 Mile	6

##### PROPOSED CONDITIONS

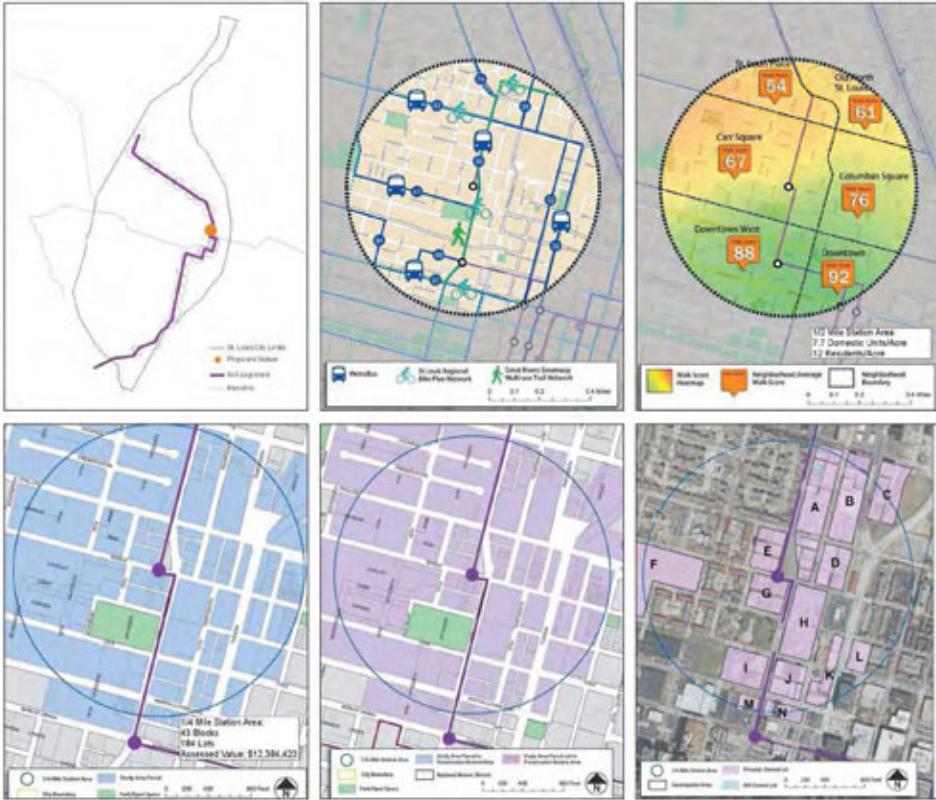
TRANSIT FUNCTION	Station Orientation	Walk-up Station
STATION TYPE	Station Organization	Street Level Side-by-Side Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land % of 1/2 Mile Station Area	47.4 Acres 37.8%
	Available Lots	58
	Assessed Value Of Undeveloped Land	\$3,091,500
	Assessed Value Of Land in 1/4 Mile Station Area	\$12,384,420
	Desired Density for New Development	10-18 DUS/Acre 1.0-1.5 FAR
POTENTIAL PROGRAM	Lot-Selectable Building Types	Detached Single Family Dwelling, Row House, Commercial Building, Captain, Triple-Play, Parkhouse, Pappas, MarketPlace

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 2

H3 STUDIO

Data sources: 2010 Census, Data University Health Insurance Data, City of St. Louis Planning & Urban Design Agency, Neighborhood Score Index (2009), Central West End transit-based District (2012)



# N-S ALIGNMENT

## STATION AREA TYPOLOGY ASSESSMENT

### KEOKUK STATION

#### CURRENT CONDITIONS

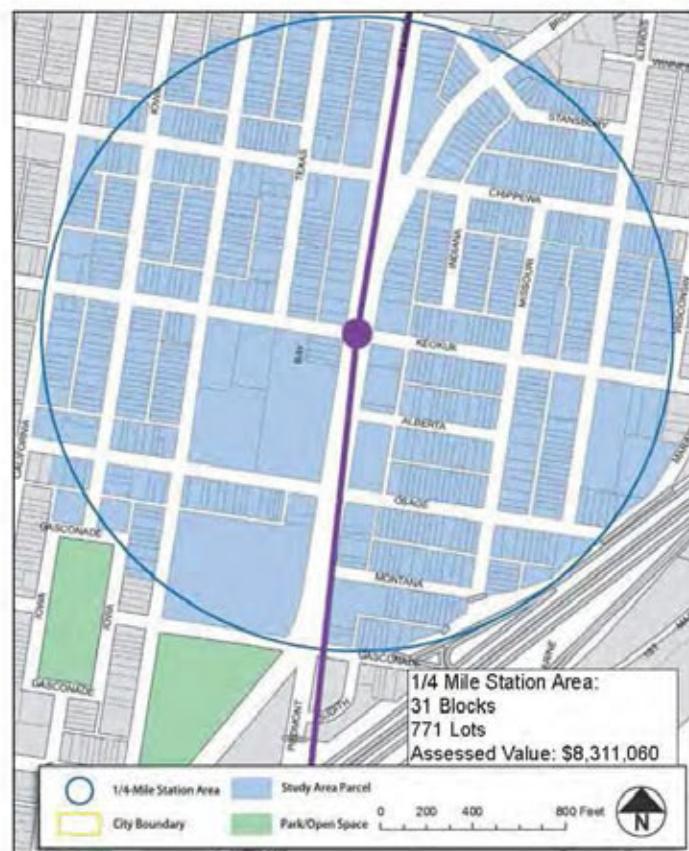
CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.29 Jobs/Residents
	Intensity	6,176 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	4 Paths
URBAN FORM & QUALITY	Mean Walkscore	64.25
	Mean Block Size	8.1 Acres
	Neighborhoods In 1/2 Mile	4

#### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
	Station Organization	Street Level Side Far-Side Platforms
STATION TYPE	Underutilized Land	13.3 Acres
	% of 1/4 Mile Station area	10.6%
DEVELOPMENT OPPORTUNITY	Available Lots	50
	Assessed Value Of Underutilized Land	\$2,017,100
POTENTIAL PROGRAM	Assessed Value of Land in 1/4 Mile Station Area	\$8,311,060
	Desired Density for New Development	10-18 DU/Acre 1.0-1.5 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Detached Single Family Dwelling Rear Garage Carriage House Duplex, Triplex, Fourplex Rowhouse & Courtyard Rowhouse

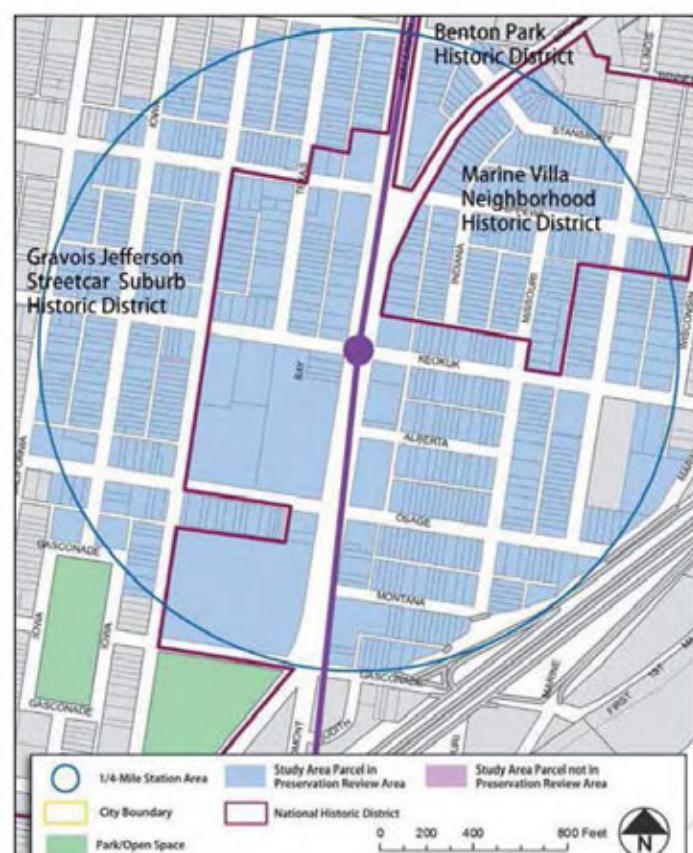
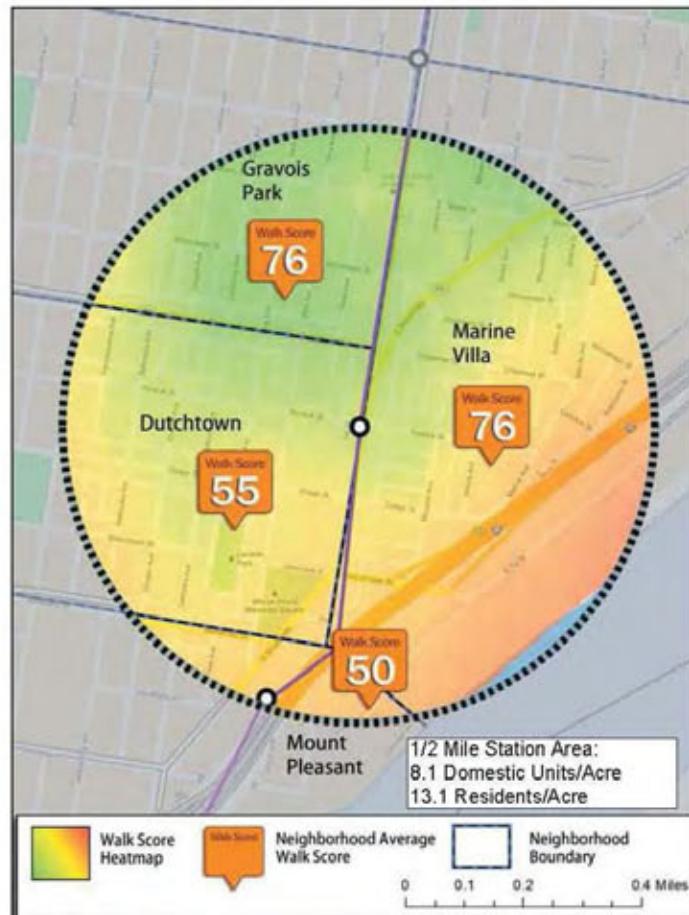
#### TRANSIT NEIGHBORHOOD TYPOLOGY

##### Transit Neighborhood General Type 2



**H3** STUDIO

Data sources: 2010 Census  
State Unemployment Insurance Data,  
City of St. Louis Planning & Urban Design Agency  
Northside-Southside Study (2008)  
Central West End Form Based District (2012)



## Transit Neighborhood

### General Type 3 (TNGeneral Type 3)

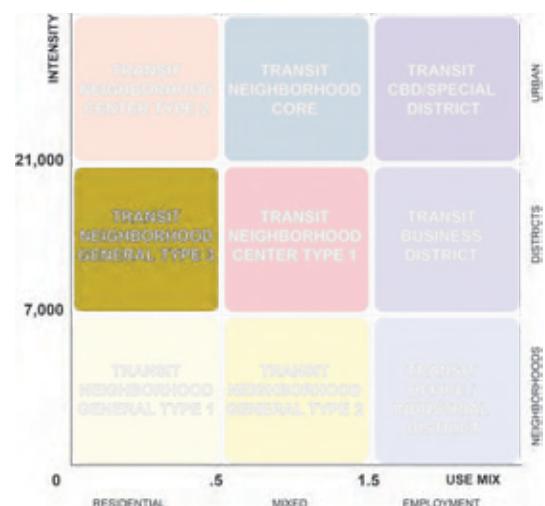
Station areas of this typology are primarily residential; however, due to population levels at these station areas, prominent consolidated commercial use may be present.

Intensity value between 7,000 and 21,000 indicates a highly transit-supportive station area.

Use Mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood General Type 3 at most intense condition.

Zoning: Transit Neighborhood General Type 3 is zoned using Neighborhood General Type 3 Building Envelope Standards at its most intense condition though Neighborhood General Type 1, Neighborhood General Type 2, and Campus Type may also be applicable in some areas.



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### ST. LOUIS STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Low Mix Intensity	0.21 Jobs/Residents
	Intensity	4,207 Jobs + Residents
CONNECTIVITY	Bus Routes	8
	Bike Infrastructure	3 Paths
	Mean Walkscore	58.5
	Mean Block Size	8.8 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	4

##### PROPOSED CONDITIONS

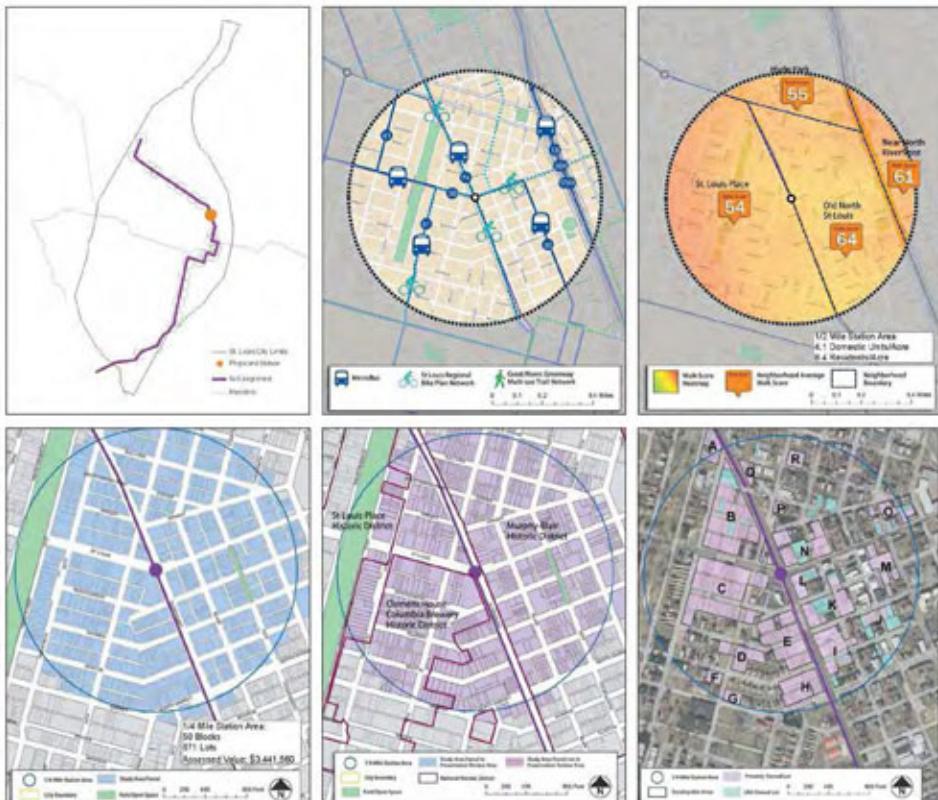
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
		St Louis City Lines Physical Model St Louis Regional Bike Plan Network Bikeway
STATION TYPE	Station Organization	Street Level Side Platform
		Undeveloped Land % of 1/4 Mile Station Area Available Lots
DEVELOPMENT OPPORTUNITY	Assessed Value Of Undeveloped Land Assessed Value Of Land in 1/4 Mile Station Area	63.7 Acres 50% 224 \$667,100 \$3,441,560
	Desired Density for New Development	10-15 DUS/acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot-Softable Building Types	Franchise & Courtship Functions High-Tech Research Building Commercial Building Fast Building Linear Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3

H3 STUDIO

Data sources: 2010 Census  
State University Health Insurance Data  
City of St. Louis Planning & Urban Design Agency  
National Land Cover Thematic 2006  
Central Illinois Land Use Data (2010)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### RUSSELL STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Low Mix Intensity	0.21 Jobs/Residents
	Intensity	7,169 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	5 Paths
	Mean Walkscore	67
	Mean Block Size	8.3 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	6

##### PROPOSED CONDITIONS

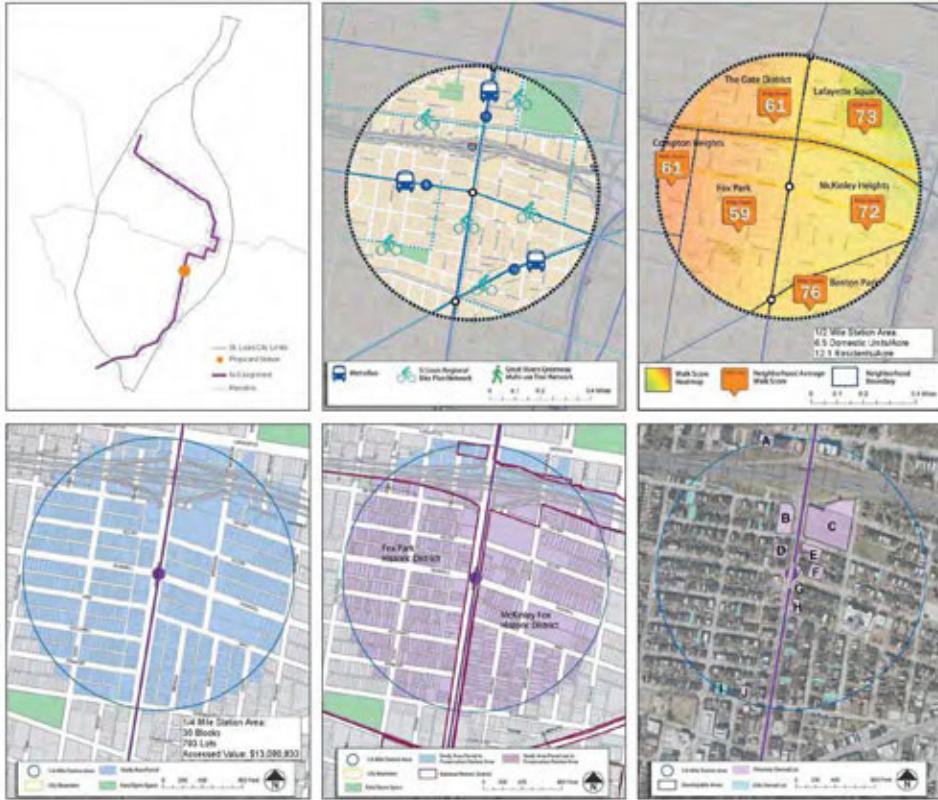
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
		St Louis City Lines Physical Model St Louis Regional Bike Plan Network Bikeway
STATION TYPE	Station Organization	Street Level Side Platform
		Undeveloped Land % of 1/4 Mile Station Area Available Lots
DEVELOPMENT OPPORTUNITY	Assessed Value Of Undeveloped Land Assessed Value Of Land in 1/4 Mile Station Area	0.2 Acres 6.6% 21 \$766,200 \$13,680,530
	Desired Density for New Development	10-15 DUS/acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot-Softable Building Types	Franchise & Courtship Functions High-Tech Research Building Commercial Building Fast Building Linear Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3

H3 STUDIO

Data sources: 2010 Census  
State University Health Insurance Data  
City of St. Louis Planning & Urban Design Agency  
National Land Cover Thematic 2006  
Central Illinois Land Use Data (2010)



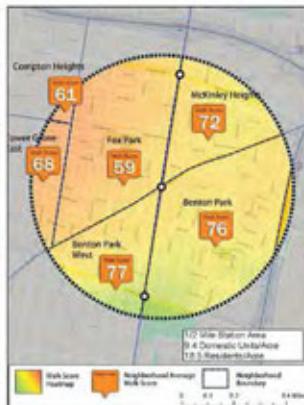
## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### GRAVOIS STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	User Mix Intensity	0.15 Jobs/Residents 10,273 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	5 Paths
	Mean Walkscore	88.83
URBAN FORM & QUALITY	Mean Block Size	8.0 Acres
	Neighborhood Density (in 1/2 Mile)	6



##### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side
		Far-Side Platforms
DEVELOPMENT OPPORTUNITY	Undeveloped Land	11.7 Acres
	% of 1/4 Mile	0.4%
	Station area	87
	Available Lots	
	Assessed Value Of Undeveloped Land	\$1,295,300
	Assessed Value Of Land in 1/4 Mile	
	Assessors' Land in 1/4 Mile	\$13,420,170
	Desired Density for New Development	10-18 DUA/acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot-Surface Building Types	Residential & Commercial Residential High-Rise Residential Building Commercial Building Res Building Gross Building



##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3

H3 STUDIO

Data source: 2010 Census  
Statewide Employment Income Data  
City of St. Louis Planning & Urban Design Agency  
Northside-Southside Study (2008)  
Centra View Data from Sasaki (2012)

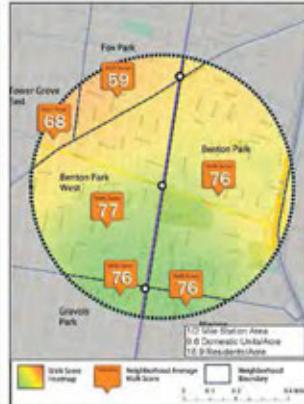
## N-S ALIGNMENT

STATION AREA TYPOLOGY ASSESSMENT

### ARSENAL STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix Intensity	0.1-4 Jobs/Residents 9,002 Jobs + Residents
CONNECTIVITY	Bus Routes	4
	Bike Infrastructure	4 Paths
	Mean Walkscore	72
URBAN FORM & QUALITY	Mean Block Size	0.1 Acres
	Neighborhoods in 1/2 Mile	6



#### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side
		Far-Side Platforms
DEVELOPMENT OPPORTUNITY	Undeveloped Land	10.4 Acres
	% of 1/4 Mile	8.8%
	Station area	87
	Available Lots	
	Assessed Value Of Undeveloped Land	\$1,504,000
	Assessed Value Of Land in 1/4 Mile	\$1,581,780
	Desired Density for New Development	10-18 DU/Acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot Surface Building Types	Residential (Multi-unit) High-rise Residential Building Commercial Office Building Res Building Gross Building



#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3

H3 STUDIO

Data Sources: 2010 Census  
St. Louis Neighborhood Inventory Data  
City of St. Louis Planning and Zoning Agency  
Northside-Southside Study (2008)  
Centric View Data Form (St. Louis Dept. of Planning)

# N-S ALIGNMENT

## STATION AREA TYPOLOGY ASSESSMENT

### CHEROKEE STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.12 Jobs/Residents
	Intensity	9,201 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	5 Paths
URBAN FORM & QUALITY	Mean Walkscore	76.25
	Mean Block Size	7.4 Acres
NEIGHBORHOODS	Neighborhoods In 1/2 Mile	4

#### PROPOSED CONDITIONS

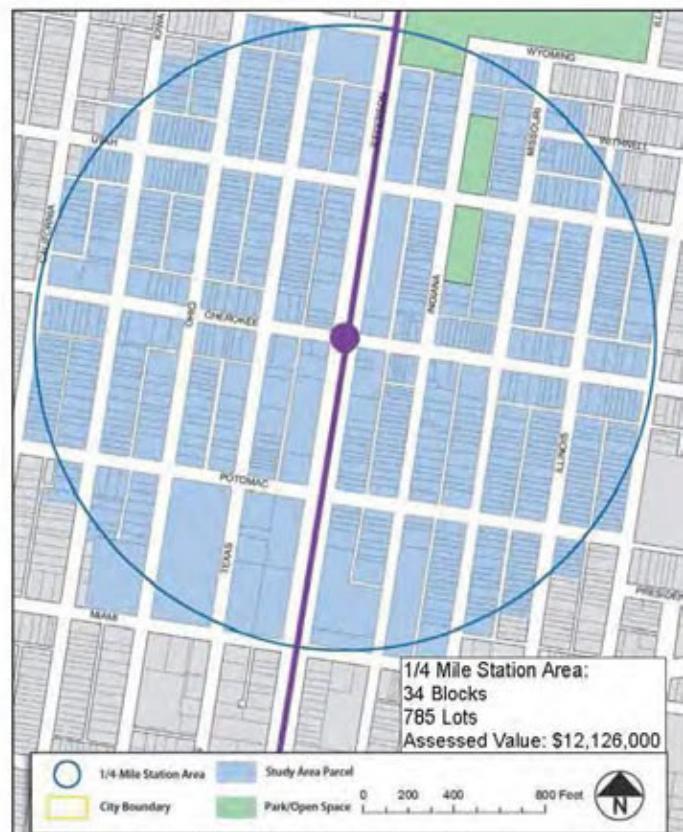
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side Far-Side Platforms
DEVELOPMENT OPPORTUNITY	Underutilized Land	6.1 Acres
	% of 1/4 Mile Station area	4.8%
POTENTIAL PROGRAM	Available Lots	16
	Assessed Value Of Underutilized Land	\$852,200
DEVELOPMENT OPPORTUNITY	Assessed Value of Land in 1/4 Mile Station Area	\$12,126,000
	Desired Density for New Development	10-18 DU/Acre 1.5-2.0 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Rowhouse & Courtyard Rowhouse High Rise Residential Building Commercial Block Building Flex Building Linear Building

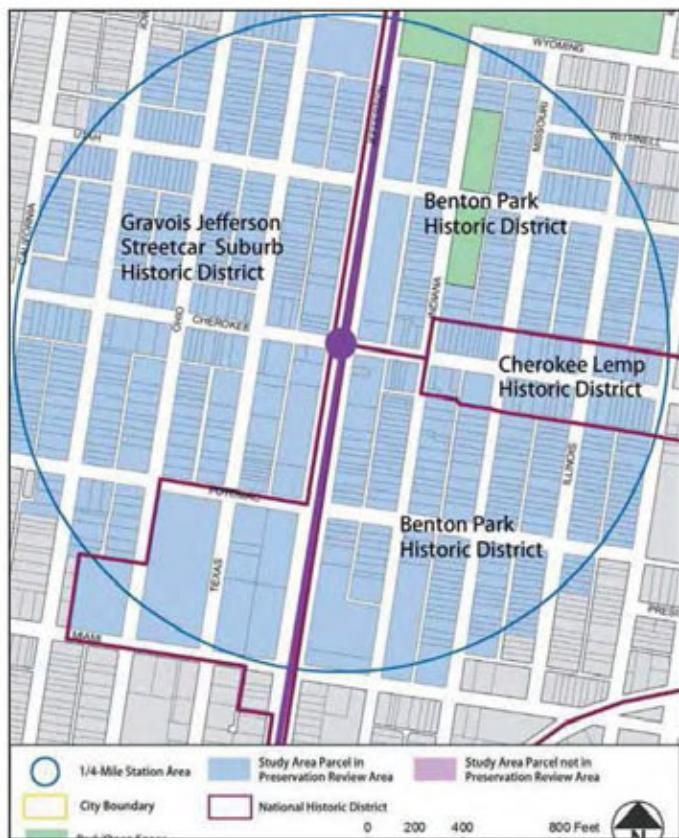
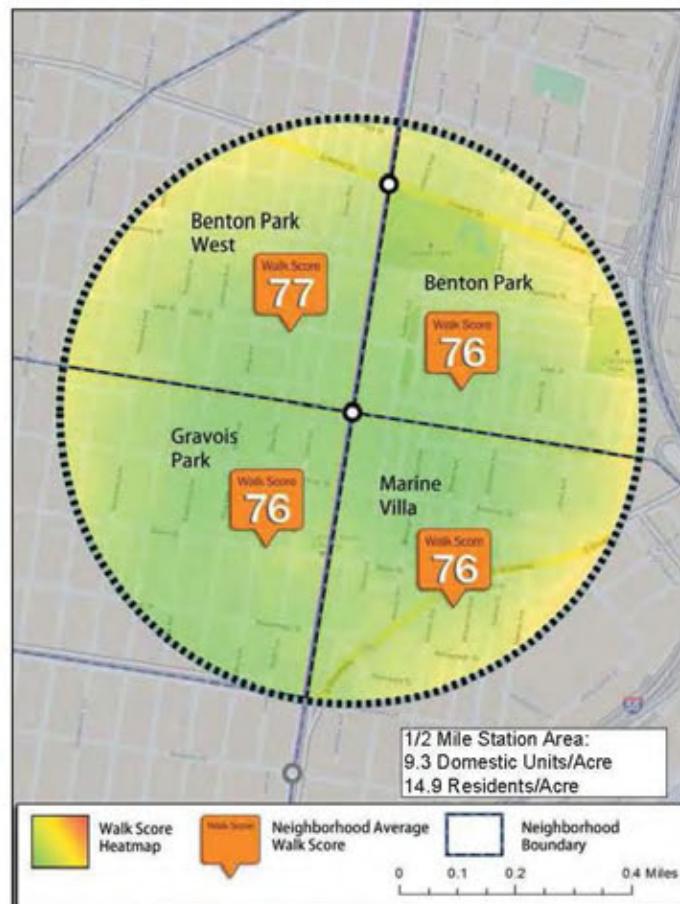
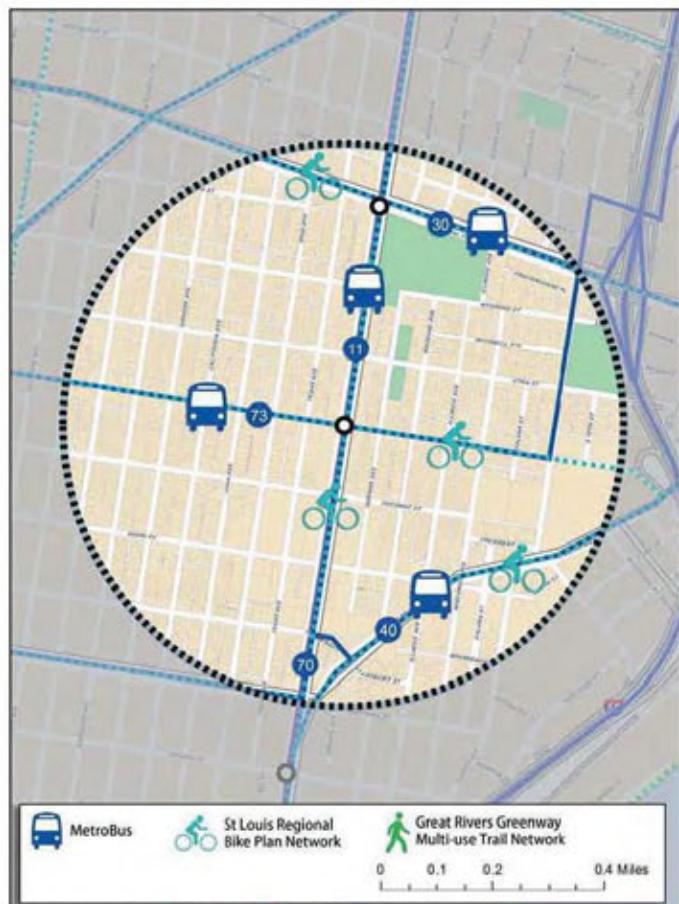
#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood General Type 3



Data sources: 2010 Census  
State Unemployment Insurance Data,  
City of St. Louis Planning & Urban Design Agency  
Northside-Southside Study (2008)  
Central West End Form Based District (2012)





## Transit Neighborhood

### Center Type 1 (TNCenter Type 1)

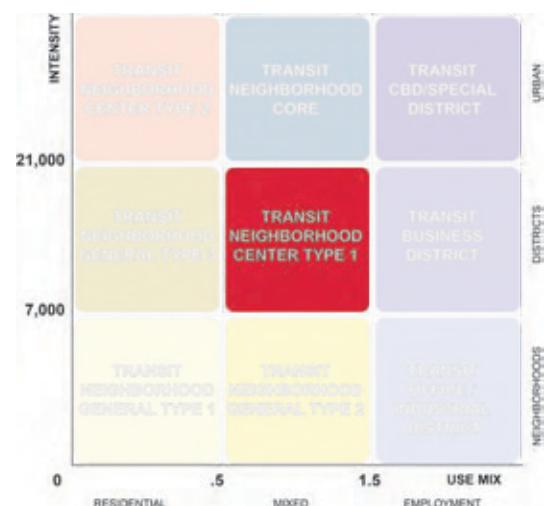
Station areas of this typology are evenly mixed between residential and employment use, with employment activity distributed throughout the ground and upper levels of buildings.

Intensity value between 7,000 and 21,000 indicates highly transit-supportive station area.

Use Mix between 0.5 and 1.5 indicates nearly equal mix of resident and worker populations.

Building Envelope Standards of Neighborhood Center Type 1 at its most intense condition.

Zoning: Transit Neighborhood Center Type 1 can be zoned using a variety of Building Envelope Standards including Neighborhood Center Type 2, Neighborhood Center Type 1, Neighborhood General Type 3, Neighborhood General Type 2, Neighborhood General Type 1, and Campus Type 1



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### NEWSTEAD STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Line Mix Intensity	0.05 Jobs/Residents
	Intensity	8,055 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	2 Paths
	Mean Walkscore	56.2
	Mean Block Size	7.1 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	3

##### PROPOSED CONDITIONS

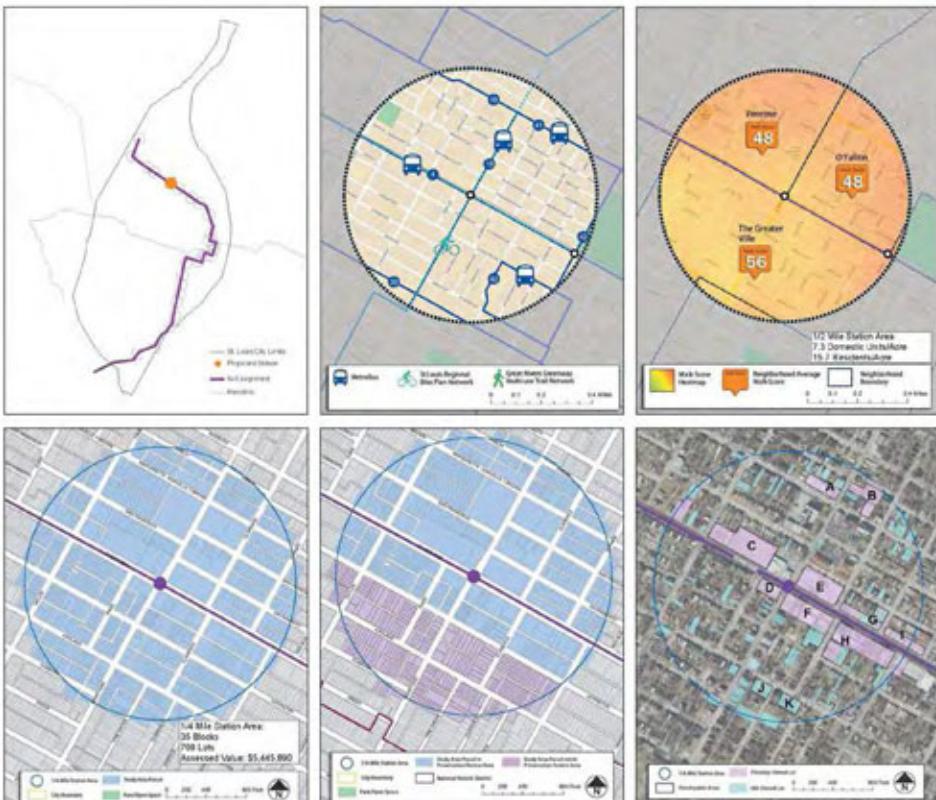
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
	Orientation	126 Park & Ride Spaces
STATION TYPE	Street Level Organization	Side Platform
		Existing
DEVELOPMENT OPPORTUNITY	Undeveloped Land	13.7 Acres
	% of 1/2 Mile Station Area	15%
	Available Lots	75
	Assessed Value Of Undeveloped Land	\$766,400
	Assessed Value Of Land in 1/2 Mile Station Area	\$5,445,860
	Desired Density for New Development	20-40 Dwellings per Acre
	Lot-Sellable Building Types	Pad-Building, Commercial Building, Low-Rise Office, Lower Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 1

H3 STUDIO

Data sources: 2010 Census, State University Headline Data, City of St. Louis Planning & Design Agency, Missouri Department of Transportation, Central West End transit-based District (2012)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### PARK STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Line Mix Intensity	0.46 Jobs/Residents
	Intensity	5,082 Jobs + Residents
CONNECTIVITY	Bus Routes	8
	Bike Infrastructure	3 Paths
	Mean Walkscore	73
	Mean Block Size	6.3 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	6

##### PROPOSED CONDITIONS

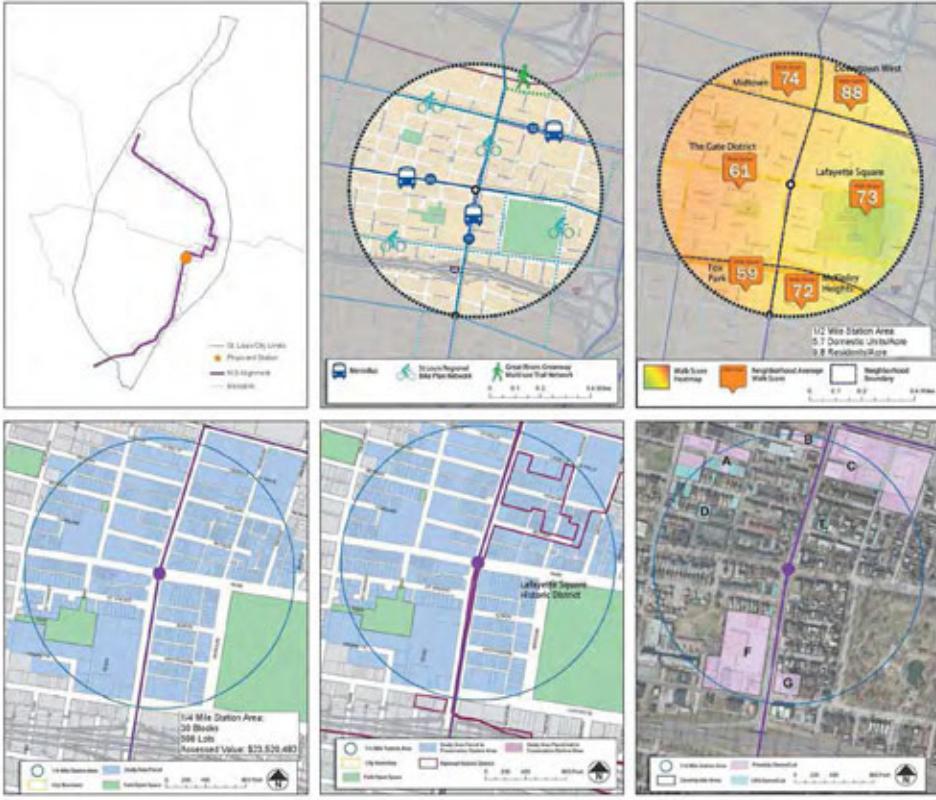
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
	Orientation	Existing
STATION TYPE	Street Level Organization	Double Side Platform
		Existing
DEVELOPMENT OPPORTUNITY	Undeveloped Land	29 Acres
	% of 1/2 Mile Station Area	23.2%
	Available Lots	62
	Assessed Value Of Undeveloped Land	\$3,649,600
	Assessed Value Of Land in 1/2 Mile Station Area	\$23,520,480
	Desired Density for New Development	20-40 Dwellings per Acre
	Lot-Sellable Building Types	Pad-Building, Commercial Building, Low-Rise Office, Lower Building

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 1

H3 STUDIO

Data sources: 2010 Census, State University Headline Data, City of St. Louis Planning & Design Agency, Missouri Department of Transportation, Central West End transit-based District (2012)



# N-S ALIGNMENT

## STATION AREA TYPOLOGY ASSESSMENT

### KINGSHIGHWAY STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.29 Jobs/Residents
	Intensity	5,144 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	2 Paths
URBAN FORM & QUALITY	Mean Walkscore	50.5
	Mean Block Size	11.4 Acres
& QUALITY	Neighborhoods In 1/2 Mile	4

#### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
	Organization	Street Level Side Far-Side Platform
STATION TYPE	Underutilized Land	36.3 Acres
	% of 1/4 Mile Station area	29%
DEVELOPMENT OPPORTUNITY	Available Lots	82
	Assessed Value Of Underutilized Land	\$16,259,000
POTENTIAL PROGRAM	Assessed Value of Land in 1/4 Mile Station Area	\$9,925,400
	Desired Density for New Development	10-18 DU/Acre 7-1.5 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Duplex, Triplex, Fourplex Rowhouse & Courtyard Rowhouse Stacked Flats Courtyard Building High Rise Residential Building Flex Building Live/Work Units

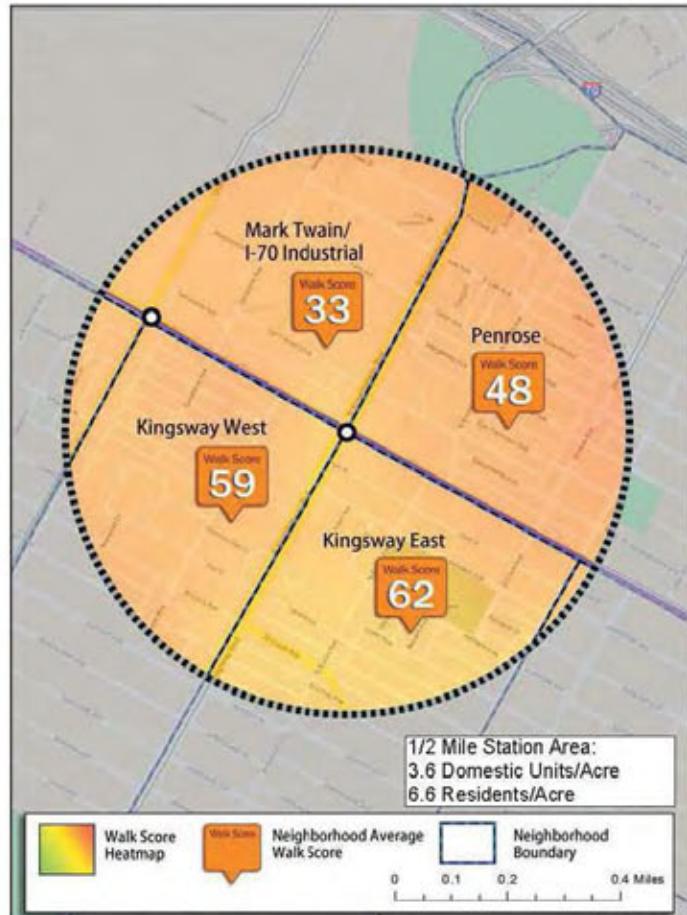
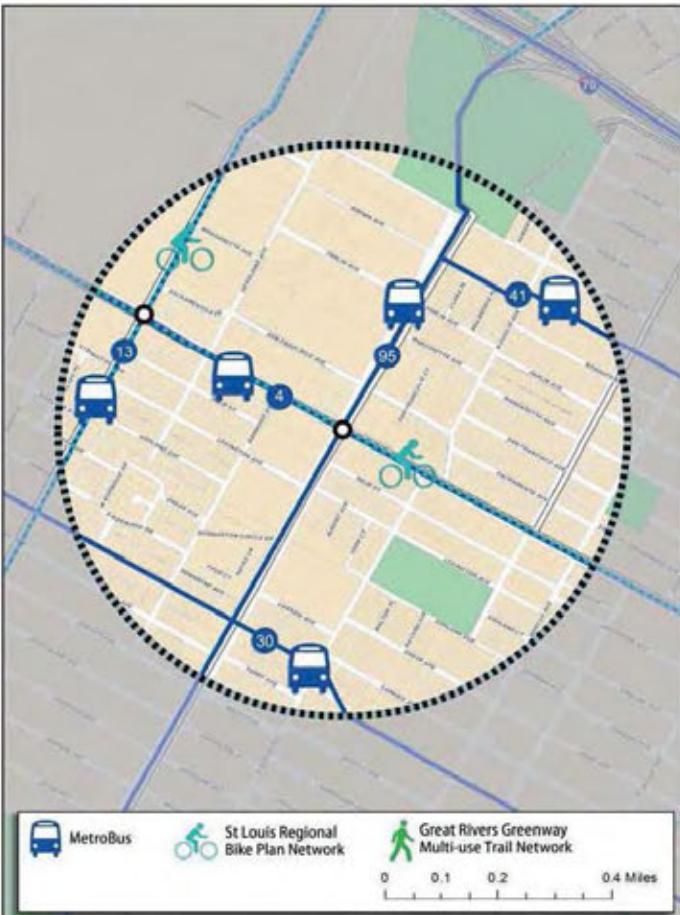
#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 1



Data sources: 2010 Census  
State Unemployment Insurance Data,  
City of St. Louis Planning & Urban Design Agency  
Northside-Southside Study (2008)  
Central West End Form Based District (2012)





## Transit Neighborhood

### Center Type 2 (TNCenter Type 2)

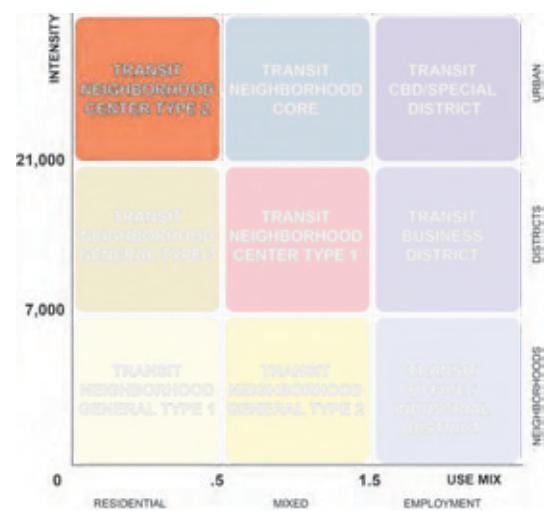
Station areas of this typology are primarily residential use; however, significant retail options may be present due to the high surrounding population.

Intensity value above 21,000 indicates station area supportive of the highest frequency transit options.

Use Mix below 0.5 indicates primarily residential use.

Building Envelope Standards of Neighborhood Center Type 2 at most intense condition.

Zoning: Transit Neighborhood Center Type 2 can be zoned using a variety of Building Envelope Standards, including Neighborhood Center Type 2, Neighborhood Center Type 1, Neighborhood General Type 3, Neighborhood General Type 2, Neighborhood General Type 1, and Campus Type 1



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### BROADWAY STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.22 Jobs/Residents
	Intensity	7,063 Jobs + Residents
CONNECTIVITY	Bus Routes	3
	Bike Infrastructure	2 Paths
	Mean Walkscore	60.3
URBAN FORM & QUALITY	Mean Block Size	0.8 Acres
	Neighborhoods in 1/2 Mile	3

##### PROPOSED CONDITIONS

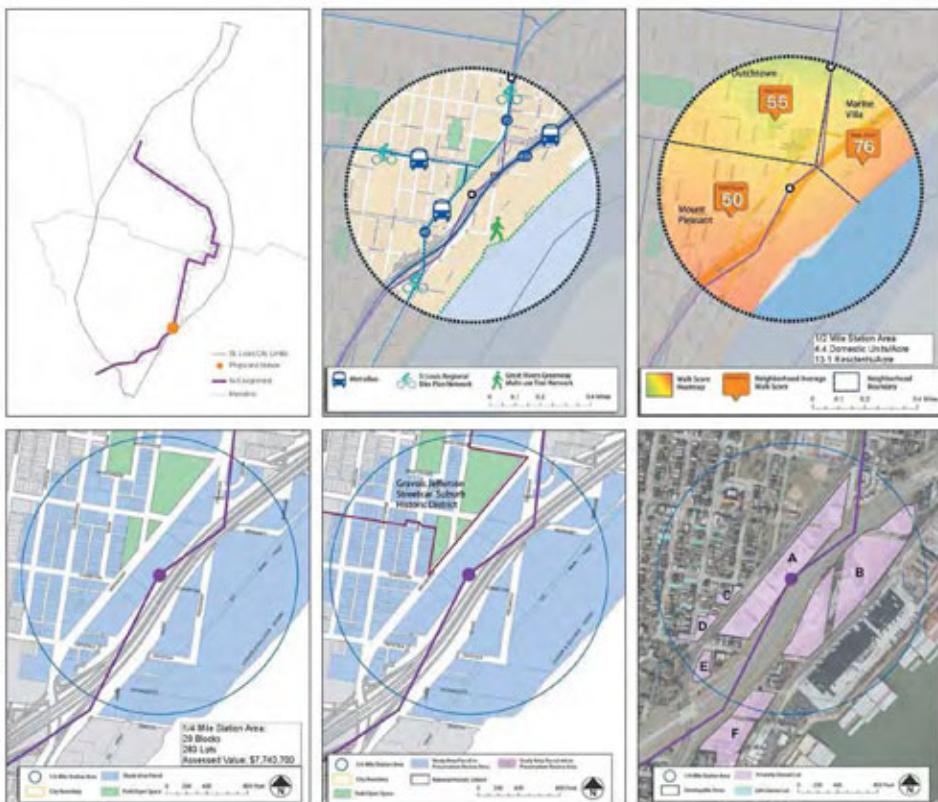
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Center
		Double-Sided Platforms
DEVELOPMENT OPPORTUNITY	Undeveloped Land	33.6 Acres
	% of 1/4 Mile Station Area	27%
	Available Lots	22
	Assessed Value Of Undeveloped Land	\$2,240,900
	Assessed Value Of Land in 1/4 Mile Station Area	\$7,740,700
	Desired Density for New Development	10-18 DU/DUOR
	Lot-Subtype Building Types	Duplex, Triplex, Fourplex, Residential & Commercial/Retail, Courtyard Building, High-Potential Residential Building, Low-Income Units

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 2

H3 STUDIO

Data source: 2010 Census  
State Demographic Resource Data  
City of St. Louis Planning & Urban Design Agency  
Planning & Economic Development Department  
Central West End Foundation (2013)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### LOUGHBOROUGH STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.22 Jobs/Residents
	Intensity	4,762 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	2 Paths
	Mean Walkscore	59.75
URBAN FORM & QUALITY	Mean Block Size	0.8 Acres
	Neighborhoods in 1/2 Mile	4

##### PROPOSED CONDITIONS

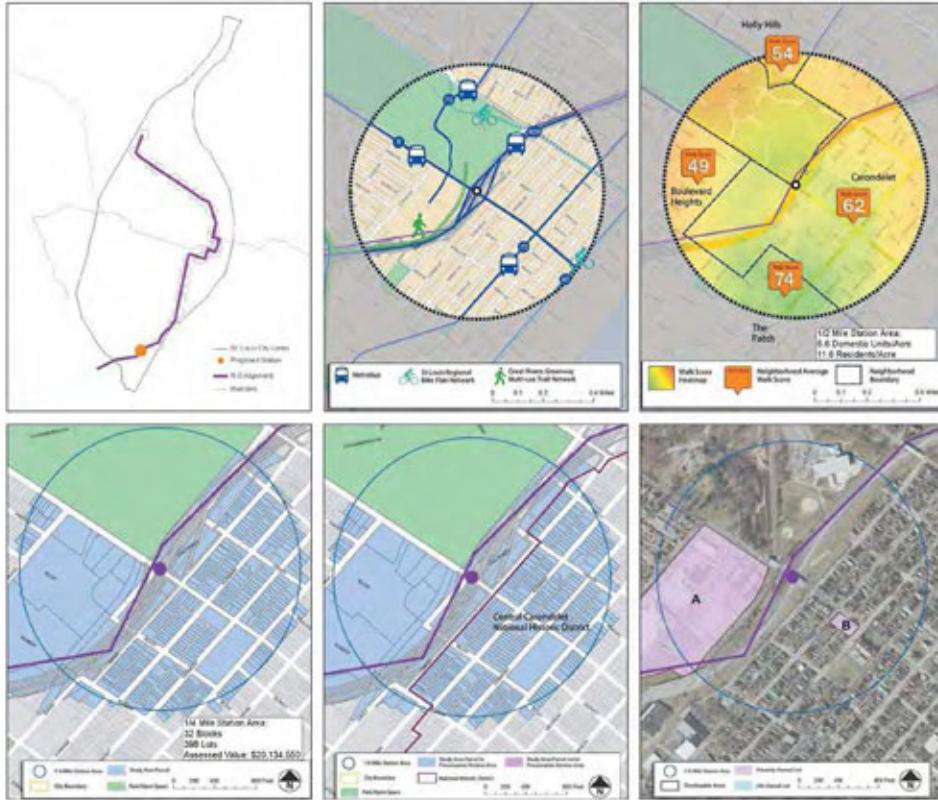
TRANSIT FUNCTION	Station Orientation	Rail-Up Station
STATION TYPE	Station Organization	Street Level Side Platform
		Far-Side Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land	27.4 Acres
	% of 1/4 Mile Station Area	22%
	Available Lots	8
	Assessed Value Of Undeveloped Land	\$5,770,900
	Assessed Value Of Land in 1/4 Mile Station Area	\$20,134,550
	Desired Density for New Development	10-18 DU/DUOR
	Lot-Subtype Building Types	Duplex, Triplex, Fourplex, Residential & Commercial/Retail, Courtyard Building, High-Potential Residential Building, Low-Income Units

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Neighborhood Center Type 2

H3 STUDIO

Data source: 2010 Census  
State Demographic Resource Data  
City of St. Louis Planning & Urban Design Agency  
Planning & Economic Development Department  
Central West End Foundation (2013)



# N-S ALIGNMENT

## STATION AREA TYPOLOGY ASSESSMENT

### GRAND STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	0.07 Jobs/Residents
	Intensity	5,574 Jobs + Residents
CONNECTIVITY	Bus Routes	5
	Bike Infrastructure	3 Paths
URBAN FORM & QUALITY	Mean Walkscore	54.25
	Mean Block Size	8.6 Acres
	Neighborhoods In 1/2 Mile	5

#### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station
	Station Organization	Street Level Side Far-Side Platform
STATION TYPE	Underutilized Land	24.3 Acres
	% of 1/4 Mile	19.6%
DEVELOPMENT OPPORTUNITY	Station area	
	Available Lots	129
DEVELOPMENT OPPORTUNITY	Assessed Value Of Underutilized Land	\$1,040,500
	Assessed Value of Land in 1/4 Mile	\$5,627,890
POTENTIAL PROGRAM	Station Area	
	Desired Density for New Development	10-18 DU/Acre 1.0-1.5 FAR
POTENTIAL PROGRAM	Lot-Suitable Building Types	Detached Single Family Dwelling Rear Garage Carriage House Duplex, Triplex, Fourplex Rowhouse & Courtyard Rowhouse

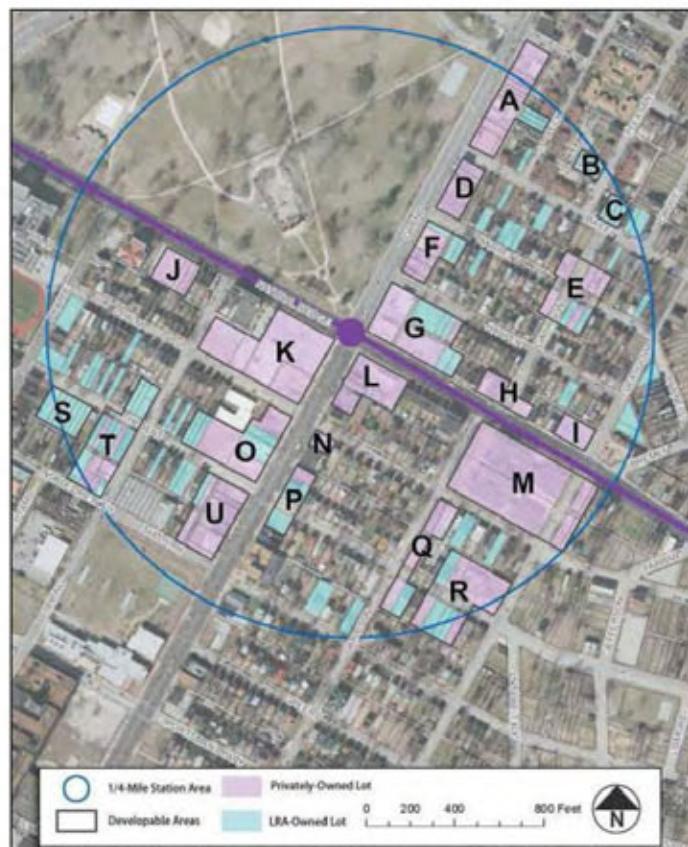
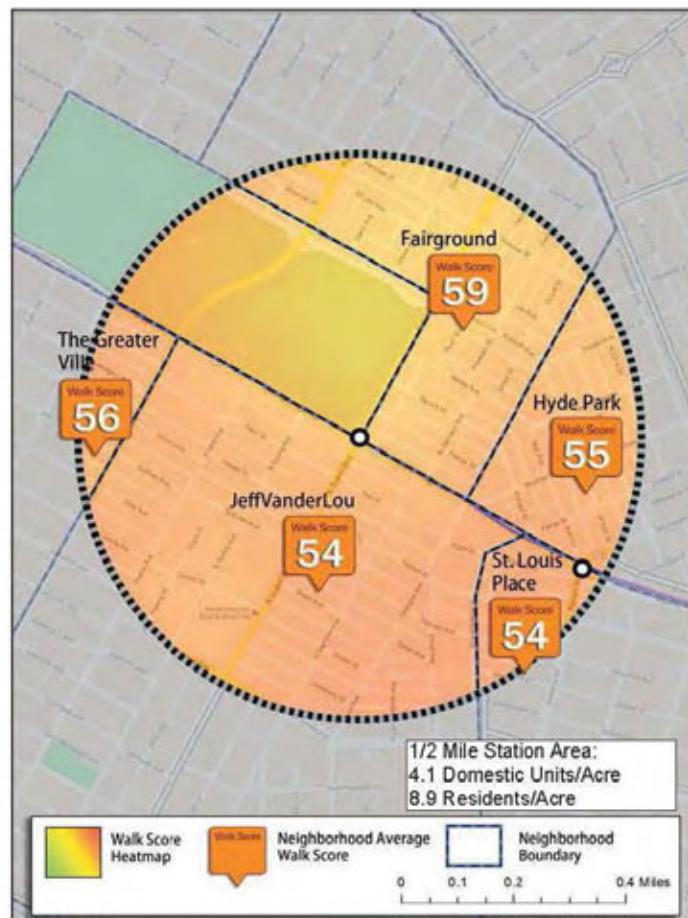
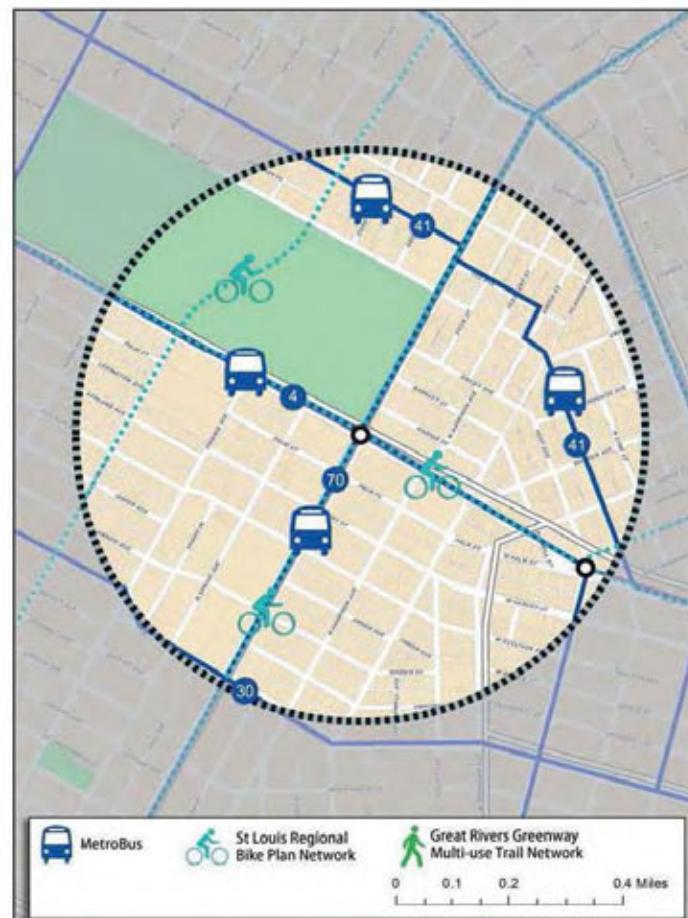
#### TRANSIT NEIGHBORHOOD TYPOLOGY

##### Transit Neighborhood Center Type 2



Data sources: 2010 Census  
 State Unemployment Insurance Data,  
 City of St. Louis Planning & Urban Design Agency  
 Northside-Southside Study (2008)  
 Central West End Form Based District (2012)





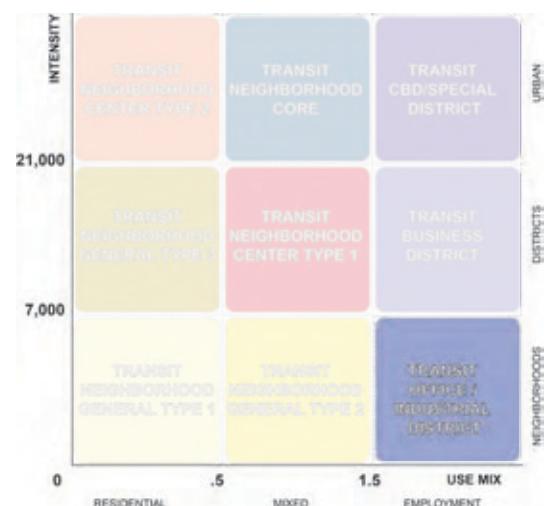
## Transit Office / Industrial District (T-Office/Industrial)

Station areas of this typology are primarily employment use with little to no residential use present.

Intensity value below 7,000 indicates a moderately transit supportive population

Use mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for low density commercial, civic, institutional, industrial, and business uses.



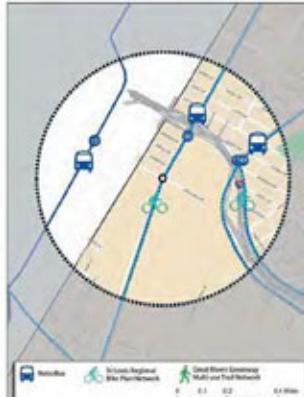
## N-S ALIGNMENT

STATION AREA TYPOLOGY ASSESSMENT

### STRATFORD STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix Intensity	38 jobs/Residents 5,002 Jobs + Residents
CONNECTIVITY	Bus Routes	3
Bike Infrastructure	2 Paths	
URBAN FORM & QUALITY	Mean Walkscore	37
	Mean Block Size	23.7 Acres
	Neighborhoods in 1/2 Mile	3



#### PROPOSED CONDITIONS

TRANSIT FUNCTION	Station Orientation	Walk-Up Station	Commuter Station	800 Park & Ride Spaces
STATION TYPE	Station Organization	Small Live Center	Large Live Center	Double Sided Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land % of 1/2 Mile Station area Available Lots Assessed Value Of Undeveloped Land	24 Acres 21.2% 13 \$406,400		
	of Land in 1/2 Mile Station Area	\$67,673,380		
POTENTIAL PROGRAM	Desired Density for New Development Lot-Suitable Building Types	Market Driven DU/acre Market Driven FAR		



#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit Office / Industrial District

H3 STUDIO

Data sources: 2010 Census, State Employment Household Data, City of TX, Local Parks & Open Space Design Agency, and the City of Dallas, 2008, Central Texas Urbanized Areas (2010)

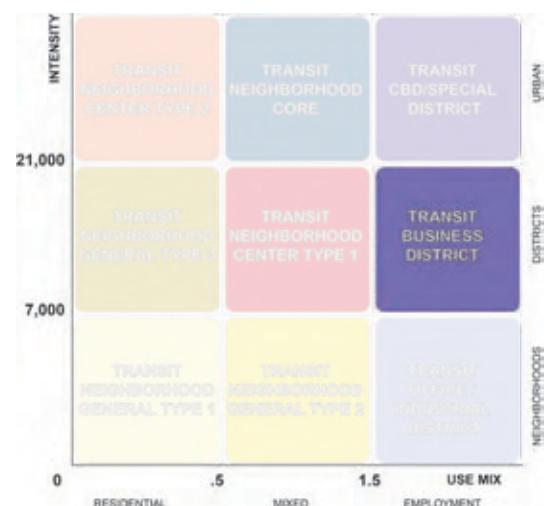
## Transit Business District (T-Business)

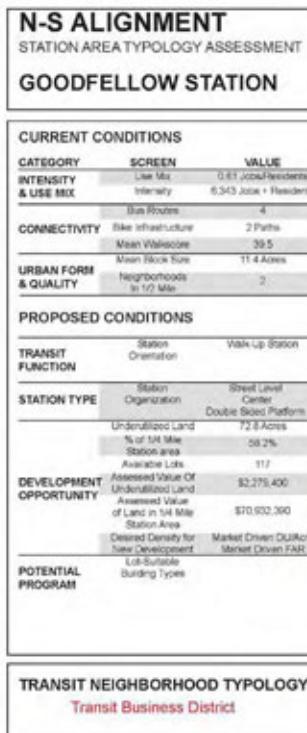
Station areas of this typology are primarily employment use with little to no residential use present.

Intensity value between 7,000 and 21,000 indicates a highly transit supportive population.

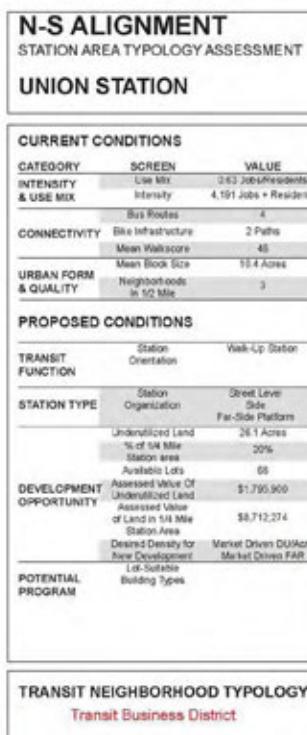
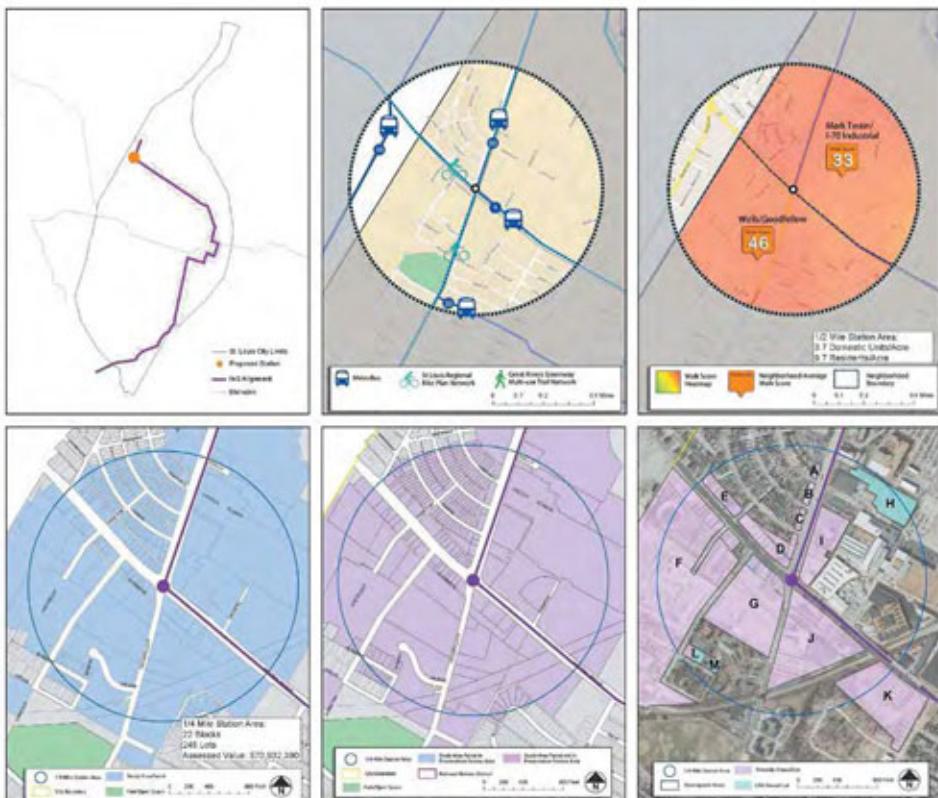
Use mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for medium to high density commercial, civic, institutional, industrial, and business uses.

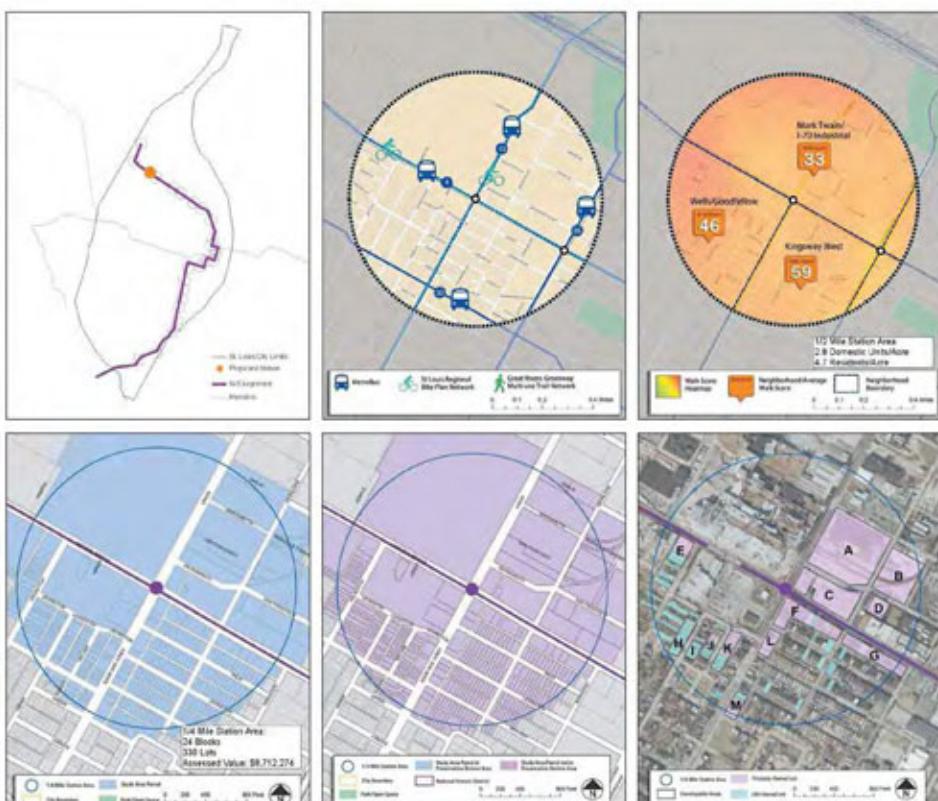




**H3 STUDIO**  
Data Sources: 2010 Census  
Missouri Department of Transportation Data  
City of St. Louis Planning & Urban Design Agency  
Northside Southside Study (2016)  
Central West End Form Based District (2012)



**H3 STUDIO**  
Data Sources: 2010 Census  
Missouri Department of Transportation Data  
City of St. Louis Planning & Urban Design Agency  
Northside Southside Study (2016)  
Central West End Form Based District (2012)



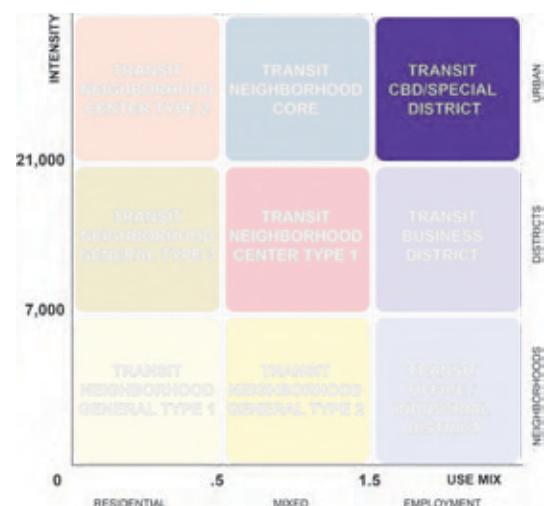
## Transit CBD/Special District (T-CBD/Special)

Station areas of this typology are primarily employment or special use with little to no residential use.

Intensity above 21,000 indicates a population supportive of the highest frequency transit system.

Use Mix above 1.5 indicates predominantly employment use and at times may be absent of residential use.

These areas may be zoned for very high density commercial, civic, institutional, industrial, business, and special uses.



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### DELMAR STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Job Mix	3.8% Jobs/Residents
	Intensity	25,129 Jobs + Residents
	Bus Routes	15
CONNECTIVITY	Bike Infrastructure	5 Paths
	Mean Walkscore	89.75
	Mean Block Size	4.0 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	4

##### PROPOSED CONDITIONS

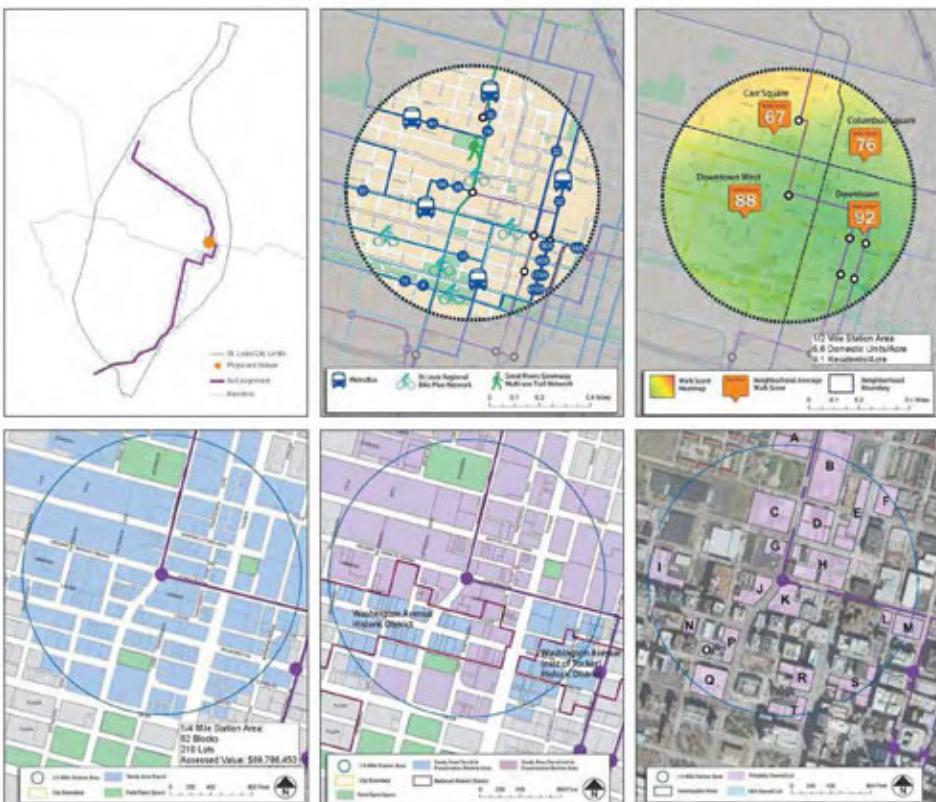
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level
		Centralized Platform
		Double-Sided Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land	33.5 Acres
	% of 1/4 Mile Station Area	27.2%
	Available Lots	94
	Assessed Value Of Undeveloped Land	\$8,845,300
	Assessed Value Of Land in 1/4 Mile Station Area	\$69,786,450
	Desired Density for New Development	Market Driven DU/Mile
POTENTIAL PROGRAM	Lot-Selectable Building Types	Market Driven FAR

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data sources: 2010 Census  
State University Health Insurance Data  
City of St. Louis Planning & Urban Design Agency  
Missouri Department of Revenue  
Central West End Land Board (2012)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### WASHINGTON STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Job Mix	10.35 Jobs/Residents
	Intensity	40,169 Jobs + Residents
	Bus Routes	17
CONNECTIVITY	Bike Infrastructure	9 Paths
	Mean Walkscore	81.75
	Mean Block Size	2.3 Acres
URBAN FORM & QUALITY	Neighborhoods in 1/2 Mile	4

##### PROPOSED CONDITIONS

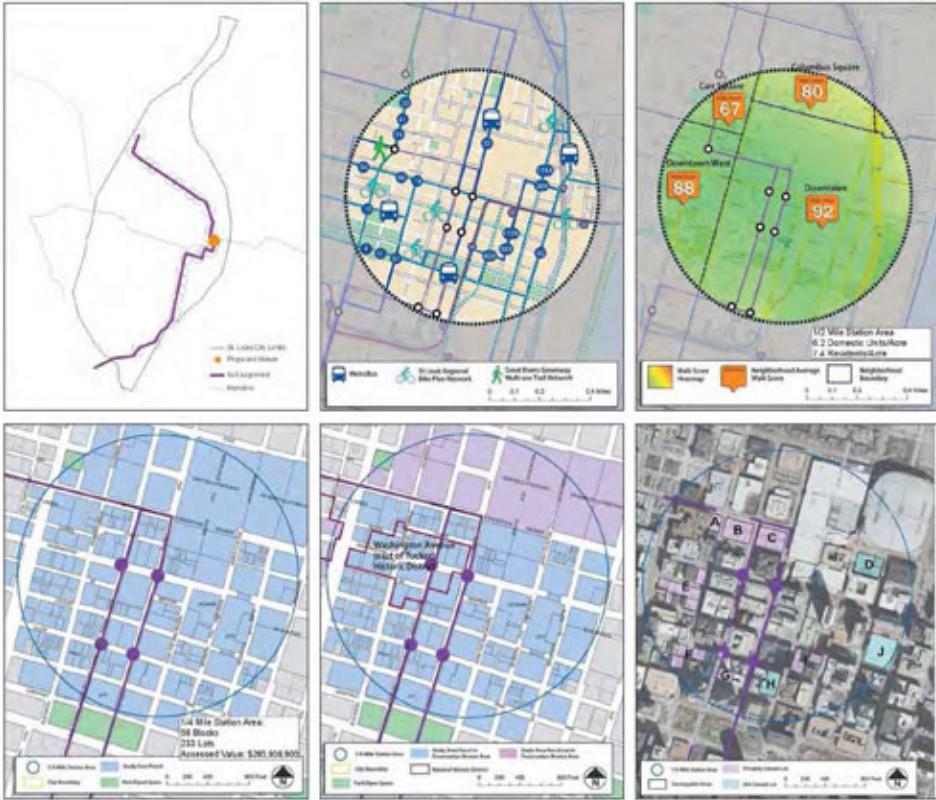
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level
		Single Platform
		Double-Sided Platform
DEVELOPMENT OPPORTUNITY	Undeveloped Land	15.8 Acres
	% of 1/4 Mile Station Area	8.4%
	Available Lots	54
	Assessed Value Of Undeveloped Land	\$6,961,000
	Assessed Value Of Land in 1/4 Mile Station Area	\$283,938,900
	Desired Density for New Development	Market Driven DU/Mile
POTENTIAL PROGRAM	Lot-Selectable Building Types	Market Driven FAR

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data sources: 2010 Census  
State University Health Insurance Data  
City of St. Louis Planning & Urban Design Agency  
Missouri Department of Revenue  
Central West End Land Board (2012)



## N-S ALIGNMENT

STATION AREA TYPOLOGY ASSESSMENT

### OLIVE STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	13.17 Jobs/Residents
	Intensity	44,894 Jobs + Residents
CONNECTIVITY	Bus Routes	20
	Bike Infrastructure	8 Paths
	Mean Walkscore	90
URBAN FORM & QUALITY	Mean Block Size	3.8 Acres
	Neighborhoods in 1/2 Mile	2

#### PROPOSED CONDITIONS

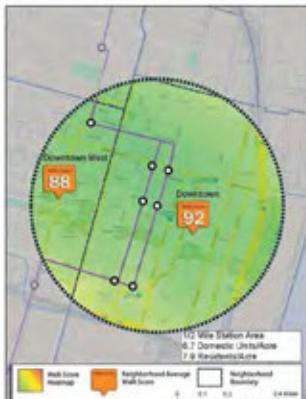
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side Single Platforms
DEVELOPMENT OPPORTUNITY	Underutilized Land	14.1 Acres
	% of 1/2 Mile Station Area	11.2%
	Available Lots	43
	Assessed Value Of Underutilized Land	\$19,626,300
	Assessed Value of Land in 1/4 Mile Station Area	\$418,170,780
	Desired Density for New Development	Market Driven DU/Acre
POTENTIAL PROGRAM	Lot-Specific Building Types	Market Driven FAR

#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data sources: 2010 Census  
State Environmental Protection Data  
City of St. Louis Planning & Urban Design Agency  
Neighborhood Scale Study (2000)  
Central West End Plan, St. Louis (2008-2012)



## N-S ALIGNMENT

STATION AREA TYPOLOGY ASSESSMENT

### CLARK STATION

#### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix	15.52 Jobs/Residents
	Intensity	35,889 Jobs + Residents
CONNECTIVITY	Bus Routes	19
	Bike Infrastructure	9 Paths
	Mean Walkscore	90
URBAN FORM & QUALITY	Mean Block Size	6.1 Acres
	Neighborhoods in 1/2 Mile	2

#### PROPOSED CONDITIONS

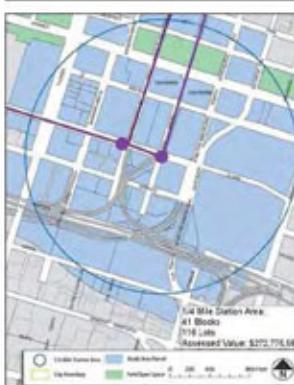
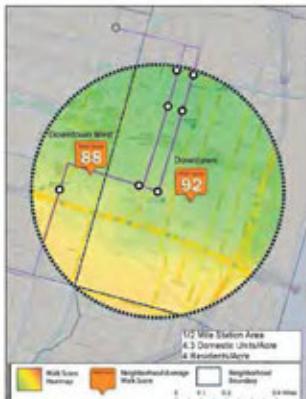
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Side Single Platforms
DEVELOPMENT OPPORTUNITY	Underutilized Land	24.8 Acres
	% of 1/2 Mile Station Area	20%
	Available Lots	22
	Assessed Value Of Underutilized Land	\$17,275,800
	Assessed Value of Land in 1/4 Mile Station Area	\$272,275,586
	Desired Density for New Development	Market Driven DU/Acre
POTENTIAL PROGRAM	Lot-Specific Building Types	Market Driven FAR

#### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data sources: 2010 Census  
State Environmental Protection Data  
City of St. Louis Planning & Urban Design Agency  
Neighborhood Scale Study (2000)  
Central West End Plan, St. Louis (2008-2012)



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### MMTZ STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix Intensity	31,677 Jobs+Residents 20,321 Jobs + Residents
CONNECTIVITY	Bus Routes	18
BIKE INFRASTRUCTURE	Bike Infrastructure	9 Paths
URBAN FORM & QUALITY	Mean Walkscore	83.3
	Mean Block Size	6.5 Acres
	Neighborhoods in 1/2 Mile	3

##### PROPOSED CONDITIONS

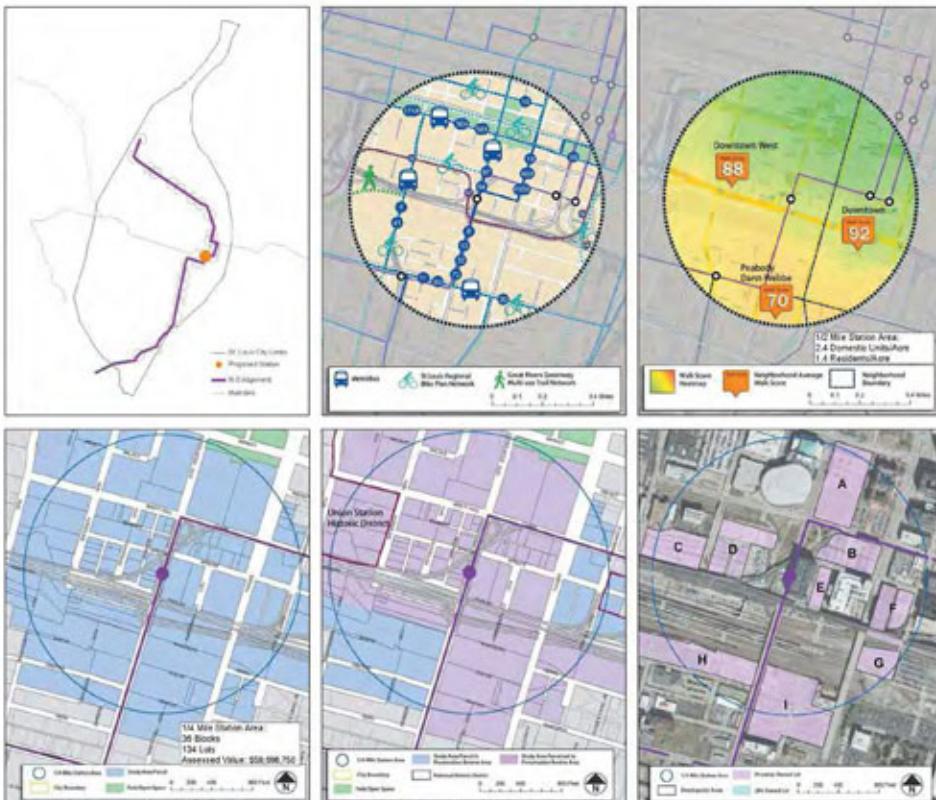
TRANSIT FUNCTION	Station Orientation	Walk-Up Station Primary E/W Metrolink Interface
STATION TYPE	Station Organization	Street Level Single Platform
DEVELOPMENT OPPORTUNITY	Unidentified Land	41.4 Acres
	% of 1/4 Mile Station Area	33.2%
	Available Lots	40
	Assessed Value Of Unidentified Land	\$5,830,400
	Assessed Value of Land in 1/4 Mile Station Area	\$50,688,750
	Desired Density for New Development	Market Driven C/D/Are
POTENTIAL PROGRAM	Lot Subtype Building Types	Market Driven F/Are

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data Sources: 2010 Census Data, University of Minnesota Project Data, City of St. Louis Planning & Urban Design Agency, National Household Survey (NHS), Center for Workforce Health Policy Center (2013).



## N-S ALIGNMENT

### STATION AREA TYPOLOGY ASSESSMENT

#### TRUMAN STATION

##### CURRENT CONDITIONS

CATEGORY	SCREEN	VALUE
INTENSITY & USE MIX	Use Mix Intensity	6,947 Jobs+Residents 5,616 Jobs + Residents
CONNECTIVITY	Bus Routes	13
BIKE INFRASTRUCTURE	Bike Infrastructure	6 Paths
URBAN FORM & QUALITY	Mean Walkscore	77.8
	Mean Block Size	7.4 Acres
	Neighborhoods in 1/2 Mile	5

##### PROPOSED CONDITIONS

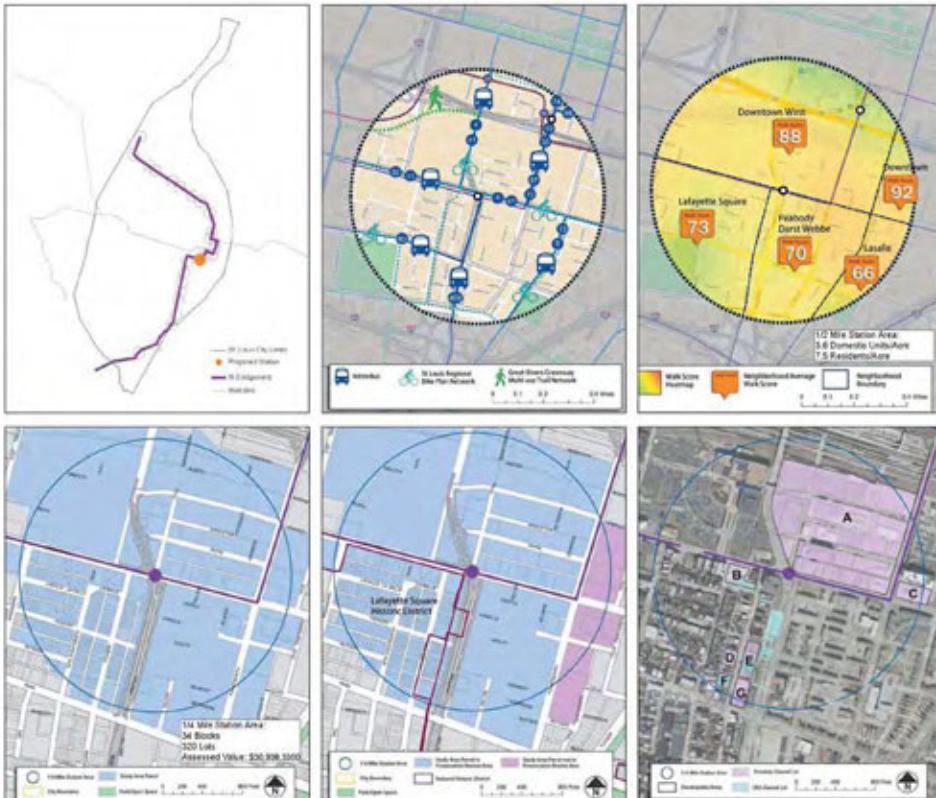
TRANSIT FUNCTION	Station Orientation	Walk-Up Station
STATION TYPE	Station Organization	Street Level Cross-Platform Areas Intersections
DEVELOPMENT OPPORTUNITY	Unidentified Land	20 Acres
	% of 1/4 Mile Station Area	24%
	Available Lots	66
	Assessed Value Of Unidentified Land	\$4,932,300
	Assessed Value of Land in 1/4 Mile Station Area	\$30,938,330
	Desired Density for New Development	Market Driven C/D/Are
POTENTIAL PROGRAM	Lot Subtype Building Types	Market Driven F/Are

##### TRANSIT NEIGHBORHOOD TYPOLOGY

Transit CBD / Special District

H3 STUDIO

Data Sources: 2010 Census Data, University of Minnesota Project Data, City of St. Louis Planning & Urban Design Agency, National Household Survey (NHS), Center for Workforce Health Policy Center (2013).







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## 5 | Preferred Station: Cherokee



**JEFFERSON AVENUE LOOKING NORTH TOWARDS CHEROKEE STREET**

The station area marks  
the intersection of  
four neighborhoods,  
an area which has  
experienced a  
resurgence over the  
past several years,  
as vacant buildings  
have been renovated  
and young, racially  
diverse citizens have  
moved in.

## PREFERRED STATION: CHEROKEE

### CHARACTER & LOCATION

The proposed station area is centered on the intersection of Jefferson Avenue and Cherokee Street, in south St. Louis. The Proposed Alignment runs north to south at this point, down the center of Jefferson Avenue. Currently, this portion of Jefferson Avenue has two travel lanes in each direction with a center turn lane and is primarily lined with one to three story residential and commercial buildings. Benton Park, a major destination for this area of the City, borders Jefferson Avenue for a couple of blocks. The station area falls within the boundaries of five national and local historic districts.

Cherokee Station area is made unique by the presence of Cherokee Street, hereby referred to as Cherokee, a regionally significant commercial attraction, with Antique Row to the east of Jefferson Avenue, and a significant Latino population and arts district with a great deal of local ownership to the west of Jefferson Avenue, hereby referred to as Jefferson. The station area marks the intersection of four neighborhoods: Benton Park, Marine Villa, Gravois Park, and Benton Park West, each primarily residential. The station area encompasses several notable commercial and industrial areas , including the Lemp Brewery Site, located at the eastern extents of Cherokee Street, as well as the St. Alexius Hospital complex and Concordia Publishing House located south of Cherokee Street on Jefferson Avenue.

The communities around Cherokee Station have organized to transform this area into a popular regional destination through festivals, public events, and excellent food. This has led to the area's resurgence over the past several years, as vacant buildings have been renovated and young, racially diverse citizens have moved in. As Cherokee and Jefferson each form the border for four historic neighborhoods, the transit station becomes a conduit between these diverse, adjacent communities.

The Preferred Cherokee Station Area Plan enhances the area's walkability and characteristics as a transit-supportive area. The existing urban morphology of the area is well-suited for Transit Oriented Development because of its small block size and uninterrupted street grid, which increase walkability and facilitate a robust bike network. Future development builds on this feature as well as the existing diversity and strength of commercial areas and residential communities. Local history and character will be reinforced through signage, public space, and public art. A redeveloped Lemp Brewery, a future creative industry center, will anchor street improvements along Cherokee that link it to the far reaches of the commercial district west of Jefferson Avenue.



STATION AREA CONTEXT PLAN SHOWING TRANSIT SHEDS

## LEGEND

- ■ NORTHSIDE-SOUTHSIDE ALIGNMENT
  - ■ 1/4 MILE TRANSIT SHED
  - ■ 1/2 MILE TRANSIT SHED



CORNER OF JEFFERSON AVE  
AND CHEROKEE STREET  
LOOKING SOUTH

## TRANSIT SHED EXTENTS

The boundaries of the area and parcels served by transit are established as the one-fourth ( $\frac{1}{4}$ ) and one-half ( $\frac{1}{2}$ ) mile transit sheds, a refinement of the five and ten minute walk radii from the transit station. Parcels within the one-fourth ( $\frac{1}{4}$ ) mile transit shed, a five minute walk from a station, should be the focus of future development, as these have a higher capture rate than the surrounding areas. Each transit shed is centered at the intersection of Jefferson and Cherokee.

The actual transit sheds for this study are augmented to account for adjacent stations along the proposed alignment, proximity of major destinations, and the anticipated attractiveness of the walking environment around the station. For example, on Cherokee, the one-fourth ( $\frac{1}{4}$ ) mile transit shed extends beyond the five minute walk radius to reflect the tremendous walkability of the Cherokee Station area and the absence of barriers (such as steep grades or highways) to pedestrian mobility along the corridor. Concurrently, the proximity of adjacent stations (Arsenal and Keokuk) limits the transit shed to the north and south.

The station area is particularly compact and contains an appreciable number of households with access to one or no vehicles. Capture rates and ridership estimates were developed with these characteristics in mind. A capture rate of 15% to 20% was deemed appropriate for the one-fourth ( $\frac{1}{4}$ ) mile transit shed and a rate of 10% to 15% was selected for areas beyond one-fourth ( $\frac{1}{4}$ ) mile up to one-half ( $\frac{1}{2}$ ) mile areas. This approach results in a ridership projection of 750 to 1,000 daily boardings based on existing land uses.

To the north, both transit sheds overlap with the one-half ( $\frac{1}{2}$ ) and one-quarter ( $\frac{1}{4}$ ) mile transit sheds of Arsenal Station mid-block north of Utah Street. To the south, the one-quarter ( $\frac{1}{4}$ ) mile transit shed extends mid-block beyond Miami Street while the one-half ( $\frac{1}{2}$ ) mile transit shed overlaps with Keokuk Station. Street improvements on Cherokee from Lemp Brewery to Pennsylvania Avenue will make Cherokee safer and more comfortable for pedestrians and allow for an expansion of the one-quarter ( $\frac{1}{4}$ ) mile transit shed. To the east, the one-quarter ( $\frac{1}{4}$ ) mile transit shed overlaps with the one-half ( $\frac{1}{2}$ ) mile transit shed to include Lemp Brewery, an employment and residential anchor for Cherokee Station. To the west, the one-quarter ( $\frac{1}{4}$ ) mile transit shed extends to Pennsylvania Avenue and the one-half ( $\frac{1}{2}$ ) mile walk transit shed extends one block further to Minnesota Avenue. To the southeast, both transit sheds are bounded by South Broadway, a busy thoroughfare which is a barrier to pedestrians.



STATION AREA BASE MAP SHOWING TRANSIT SHEDS AND WALK RADII

## LEGEND



#### EXISTING CONDITIONS

The area around Cherokee Station currently displays the key attributes supportive of Transit Oriented Development in its use mix, intensity, urban form, connectivity, and parking. Additionally, several highly desirable attributes are present within the Cherokee Station area.

Cherokee Street, as a center for entrepreneurship, creativity, and multi-cultural attractions within the City, is supportive of a wide range of commercial uses. The block pattern at Cherokee is composed of small, uniform, walkable blocks averaging 7.4 acres, making it ideal for accessing the light-rail right-of-way. It is also primarily residential and highly transit-supportive because of the low car ownership among households in the area.

In 2005, Center for TOD released “Hidden in Plain Sight: Capturing the Demand for Housing Near Transit,” a national TOD market study that found the demand for compact housing near transit is likely to more than double by 2025 because of changing demographics and housing preferences.

A preliminary assessment of parcels available for development near the station showed that there are 16 underutilized parcels totaling 6.1 acres. A more detailed assessment of parcel and building vacancy throughout the one-half (½) mile station area revealed 143 vacant properties. However, most are small parcels located within residential areas and are not suitable primary sites for Transit Oriented Development.

The population within the transit shed is primarily residential, composed of 4,700 residents and 700 workers employed at 137 firms. People are attracted to the area because it is a vibrant, historic, well-organized community that has made great strides towards improving streets, supporting an art community, and establishing its own identity within the City.

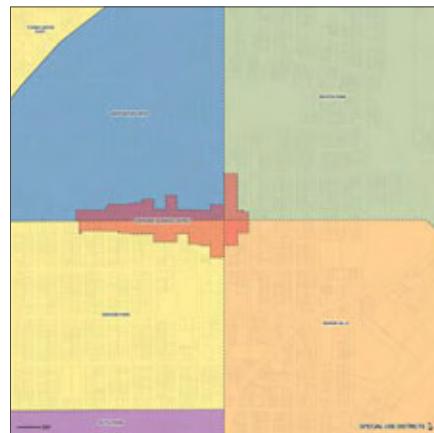
The neighborhoods bounding Cherokee and Jefferson have a mean walkscore of 76 out of a possible 100. The City’s average by neighborhood is 65, which indicates a highly walkable urban environment. The area is also served by five bus routes and five dedicated bike routes that will bolster future transit improvements, as the station can act as an intermodal facility between bicycle, bus, and rail transit networks.



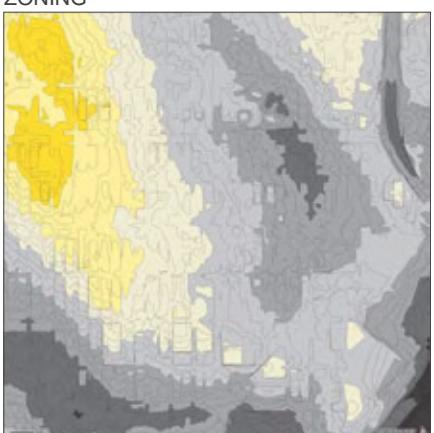
ZONING



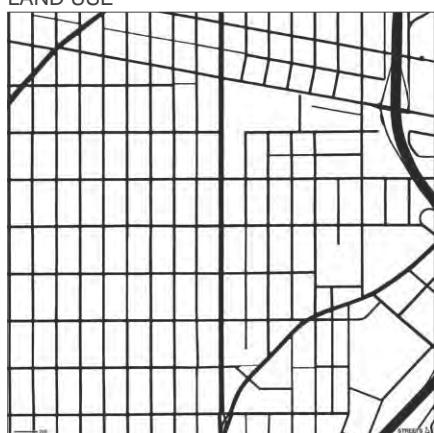
LAND USE



SPECIAL USE DISTRICTS



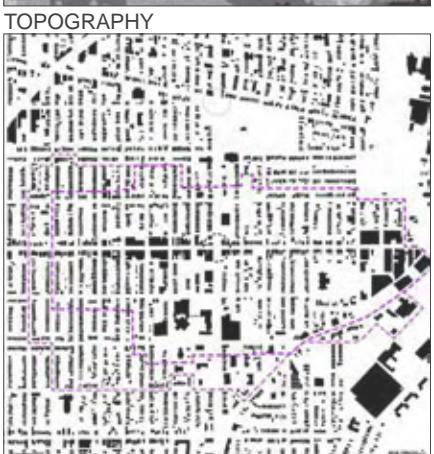
TOPOGRAPHY



STREETS



BLOCKS



BUILDINGS



BUS ROUTES



STREET HIERARCHY



PARKING



SIDEWALKS



AMENITIES

## LIVABILITY PRINCIPLES

### MOBILITY

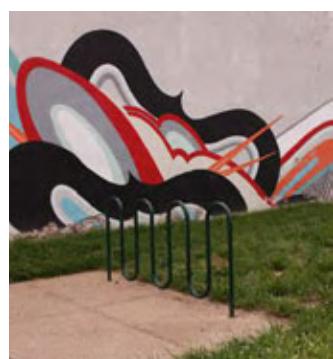
- Develop physical transit infrastructure to increase access to public transport needs by using street improvements to activate the streetscape at all hours of the day;
- Provide convenient transportation options for all citizens and reduce redundant transit infrastructure by linking bus, bicycle, and pedestrian access routes at inter-modal transfer stations along the Alignment;
- Reduce household transportation costs by offering a flexible range of public transport options;
- Increase walkability to retail, employment, and recreational needs by using street improvements to activate the streetscape at all hours of the day;
- Reduce the need for car ownership by creating enticing retail and entertainment options in new mixed-use development at the station area;
- Reduce the need for daily car trips by developing necessary services in mixed-use complexes adjacent to the station area; and
- Utilize new walkable transit stations to connect adjacent neighborhoods.

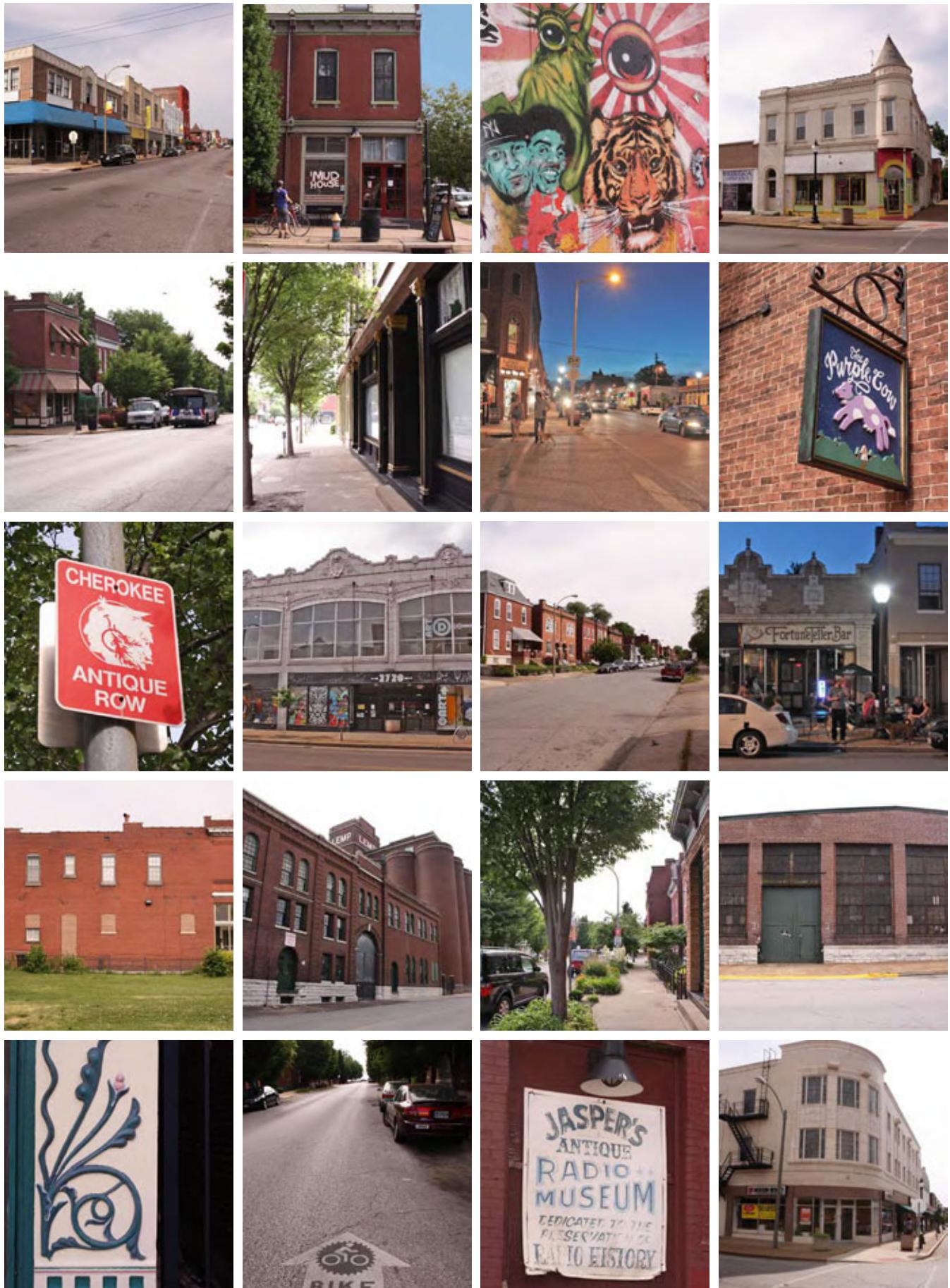
### PUBLIC SPACE

- Integrate public art into streetscape improvements, making the new transit infrastructure aesthetically pleasing while functionally effective.
- Create a cohesive, vibrant street environment reflective of the identity at the station area by encouraging public art and creative activity in streetscape improvements, public space, and businesses; and
- Improve streets, increase pedestrian scale lighting, and increase the quality and extent of bicycle infrastructure to create a saFe, walkable environment.

### GREEN INFRASTRUCTURE

- Improve air quality and manage stormwater by planting local species of street trees and vegetation in curb bumpouts, public parks, and green roofs.
- Utilize Federal, State, and Local government funds for improvements to public streets, infrastructure, and historic buildings in pursuance of ecological and economic goals; and
- Utilize local funding for water management and stormwater remediation practices to bring station areas into compliance with regional sustainability initiatives; and
- Increase greenscaped areas at all station areas to provide comfortable places for community members to meet, relax, and use.







## **ANALYSIS MAP OF VACANCY**

## LEGEND



## STATION AREA OPPORTUNITIES

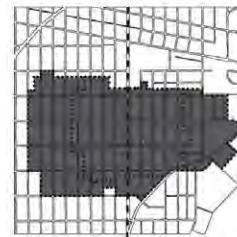
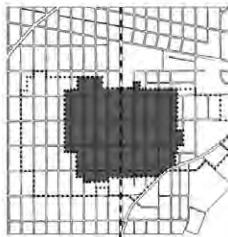
To understand more specifically how the TOD program should be distributed around the site, each vacant parcel and each vacant building within the one-half ( $\frac{1}{2}$ ) mile transit shed was identified. While there was a significant amount of vacant property within the station area, the majority is not suitable for concentrated, large scale projects; those types of projects are more appropriate when located directly adjacent to the transit station. Therefore, the first phase of development is to complete neighborhoods by redeveloping all underutilized and vacant property. This will bolster the ridership on the new transit line before any large scale development takes place.

The vacancy diagram above illustrates the number of vacant buildings as well as the gains to be expected from filling vacant property. The analysis of vacancy identified 100 vacant residential buildings, equivalent to 182 households, and 43 vacant parcels primarily suited for residential development. The vacant parcels, if filled with residential buildings scaled to match the existing context, will provide 94 new households.

In addition to redeveloping the smaller vacant parcels throughout the transit shed, the other significant component of the Cherokee Station Preferred Plan is the redevelopment of several large, underutilized, commercial parcels and the addition of new commercial and office uses along Jefferson.

## TOD STATION PLANNING STRATEGY : RESIDENTIAL REDEVELOPMENT

### CHEROKEE STATION AREA



	BUILDING TYPE (CURRENTLY VACANT)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
REDEVELOP	EXISTING SINGLE FAMILY RESIDENTIAL	43	43	90	54	54	113
	EXISTING DUPLEX	15	30	63	28	56	117
	EXISTING TRIPLEX	0	0	0	2	6	13
	EXISTING FOURPLEX	15	60	126	15	60	126
	EXISTING SIXPLEX	0	0	0	1	6	13
	EXISTING APARTMENT	0	0	0	0	0	0
<b>TOTAL</b>		<b>73</b>	<b>133</b>	<b>279</b>	<b>100</b>	<b>182</b>	<b>382</b>

	BUILDING TYPE (INFILL ON VACANT LAND)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
NEW DEVELOP	NEW SINGLE FAMILY RESIDENTIAL	9	9	19	11	11	23
	NEW DUPLEX	15	30	63	22	44	92
	NEW TRIPLEX	0	0	0	1	3	7
	NEW FOURPLEX	2	8	17	9	36	76
	NEW SIXPLEX	0	0	0	0	0	0
	NEW APARTMENT	0	0	0	0	0	0
<b>TOTAL</b>		<b>26</b>	<b>47</b>	<b>99</b>	<b>43</b>	<b>94</b>	<b>198</b>

		1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
	<b>TOTAL ADDED TO TRANSIT SHEDS FROM NEW DEVELOPMENT AND REDEVELOPMENT OF VACANT PROPERTY</b>	<b>99</b>	<b>180</b>	<b>378</b>	<b>143</b>	<b>276</b>	<b>580</b>



FESTIVAL ON CHEROKEE STREET

### Intensity

Cherokee Station's 700 workers and 4,700 residents give an intensity of 5,400, putting it within the neighborhood threshold. Intensity will be increased to 8,900 by adding 1,600 workers and 1,900 residents through future development, bringing it within the district threshold. The intensity value of Cherokee Station indicates that with a few small future developments or the renovation of existing vacant buildings, the population would easily be elevated to produce a highly transit-supportive area.

### Use Mix

Cherokee Station currently has a use mix of 0.15, the ratio of its 700 workers to 4,700 residents, putting it within the residential threshold. Use mix will be shifted to 0.5 by adding 1,600 workers and 1,900 residents in future development, putting the station area within the mixed threshold. While the addition of workers and residents will shift the use mix to a more even blend of workers and residents, the historic residential character will be maintained throughout each of the neighborhoods in the station area and by clustering significant future development within the Lemp Brewery site, and along Jefferson.

### Development Program

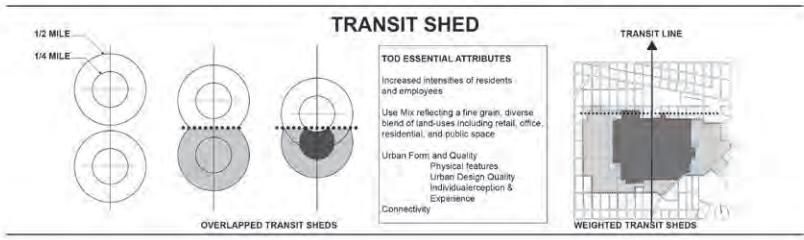
The vivacity of the Cherokee Station area will continue to grow by developing 480,000 SF of office space for 1,600 new workers. This number is based on the standard area per worker for creative industries and healthcare which is 300 SF. Additionally, 650,000 SF of newly developed residential space and the renovation of 300 vacant households will house 1,900 new residents.

With these population increases, the Cherokee Station area has been shifted to a TNGeneral Type 3. The associated building envelope standard regulates building type for new development; in this case Rowhouse and Courtyard Rowhouse, Stacked Flats, Courtyard Building, High Rise Residential Building, Commercial Block Building, Flex Building, and Liner Building. New building program distributed on 7.1 acres of developable land will accompany significant renovation and retrofitting of the existing, high-quality housing stock in the area.

### Ridership Potential

Ridership estimates based on the development program at Cherokee Station indicate 1,080 riders in the one-quarter ( $\frac{1}{4}$ ) mile transit shed and 190 within the remaining one-half ( $\frac{1}{2}$ ) mile transit shed, giving a total of 1,270 riders.

## TOD STATION PLANNING STRATEGY : APPLICATION CHEROKEE STATION PREFERRED PLAN



**USE MIX** = WORKERS  $\div$  RESIDENTS

	EXISTING	FUTURE	WORKERS	$\div$	RESIDENTS
1/2 MILE	0.15	0.35	= 700 + 1,600 WORKERS	$\div$	4,700 + 1,900 RESIDENTS
			= 2,300	$\div$	6,600

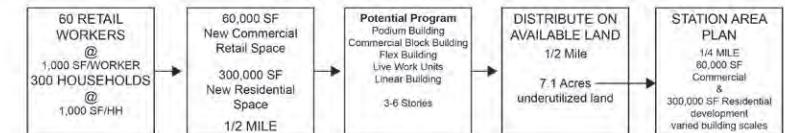


**INTENSITY** = WORKERS  $+$  RESIDENTS

	EXISTING	FUTURE	WORKERS	$+$	RESIDENTS
1/2 MILE	5,400	8,900	= 700 + 1,600 WORKERS	$+$	4,700 + 1,900 RESIDENTS
			= 2,300	$+$	6,600

Average Space per Creative Industry Worker 300 SF	Workers in New-Build Commercial Development
Average Space per Retail Worker 1,000 SF	60
Households in Redeveloped Property	New-Build Residential Household Development
625 (includes Lemp Brewery)	300 Households

### PROGRAM DISTRIBUTION



### RIDERSHIP CAPTURE

EXISTING				FUTURE			
1/2 MILE	10%	1,700	=	170			
1/4 MILE	15%	7,100	=	555			
DAILY RIDERSHIP =	725						
				1/2 MILE	10%	1,942	=
					1/4 MILE	15%	=
						4,325	1,065
						DAILY RIDERSHIP =	1,245

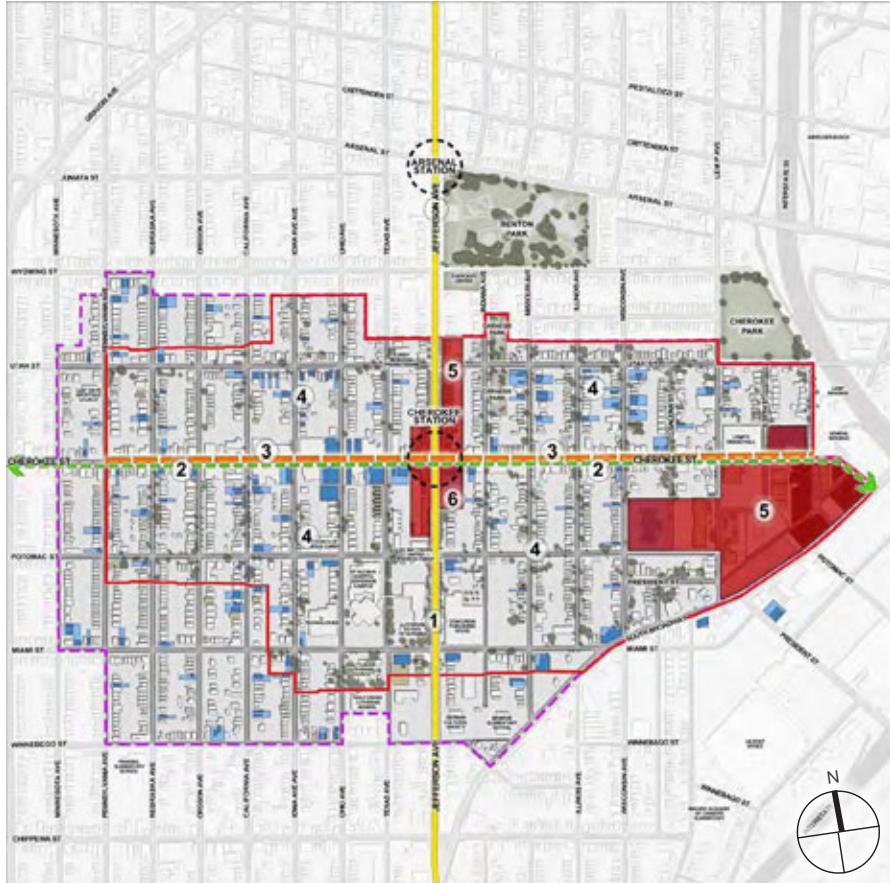


### PREFERRED STATION AREA PLAN TYPOLOGICAL SHIFT

## Cherokee Consensus Issues Map

1. Lemp Brewery is a large, underutilized, flexible parcel;
  2. The station's close proximity to the hospital means the institution is easily accessible;
  3. Highly walkable block pattern;
  4. South Broadway is a barrier for pedestrians;
  5. Well-organized commercial districts;
  6. Small and constrained developable parcels distributed throughout transit shed;
  7. High commercial and residential vacancy;
  8. Largest underutilized parcels adjacent to station;
  9. Easy access from highway;
  10. Major cultural attractions; and
  11. Interstate 55 is a barrier for pedestrians.





# **Cherokee Development Framework Plan**

## Connectivity

1. Road diet;
  2. Extend bicycle path to Compton Avenue; and
  3. Street improvements increase walkability and link station area to Lemp Brewery.

## Development

4. Renovate and redevelop vacant land and buildings;
  5. Provide 450,000 SF of office and 350 newly developed residential units at Lemp and Shepard School; and
  6. New TOD units, management, and operations.

## LEGEND

**The Cherokee Station Development Strategy would include the following:**

- Renovate vacant buildings and fill vacant parcels to complete the neighborhoods around the station area;
- Implement street improvements on Cherokee from Lemp Brewery west to Nebraska Avenue, creating a vibrant streetscape to entice visitors to explore the area's two distinct commercial attractions;
- Redevelop 450,000 SF of Lemp Brewery for office space devoted to creative industries;
- Redevelop 300,000 SF of Lemp Brewery for renovated loft apartments;
- Develop 300,000 SF of new residential units at the transit station;
- Develop 60,000 SF of new commercial space at the transit station;
- Create an intermodal transfer station, linking bus, bicycle, and light rail infrastructure at Cherokee Station; and
- Add significant new mixed-use buildings along Jefferson.

**The overall development strategy at full capacity, will add nearly 1,900 new residents and 1,600 new workers to the Cherokee Station area**

## PREFERRED STATION AREA PLAN

The Cherokee Station area is currently classified as TNGeneral Type 1, a moderately transit-supportive area with a primarily residential use mix and intensity just below 7,000. Population increase of both workers and residents within the one-half ( $\frac{1}{2}$ ) mile transit shed shifts the typological classification from TNGeneral Type 1 to TNGeneral Type 3, a classification with a use mix that is still primarily residential but with an intensity of over 7,000, the population threshold for a highly transit-supportive area. Making space for new workers and residents will be achieved through renovation and redevelopment of vacant property, and new, high-density Transit Oriented Development at the station area.

Before the Alignment is constructed, neighborhoods surrounding the transit station are completed by renovating vacant buildings and filling vacant residential property. The documented 100 vacant buildings, once renovated, will create 180 new households. The 43 vacant parcels, developed as residential property, will add another 95 households within the one half ( $\frac{1}{2}$ ) mile transit shed. Together, these developments invite 580 new residents to the Cherokee Station area. This will increase the residential base of the station area and increase ridership once the transit line is constructed.

Major development opportunities exist within the one-quarter ( $\frac{1}{4}$ ) mile transit shed. Lemp Brewery, an underutilized industrial area with roughly 750,000 SF is to be renovated with 300 new households and 450,000 SF of renovated office space for creative industries. The Shepard School, containing 50,000 SF located across the street from the Lemp Brewery, will be renovated to provide 50 new households. These two projects add 350 new households to the Cherokee Station residential market, and invite 700 new residents and 1,500 new creative industry workers. The renovation of existing buildings is a primary feature of the City's Sustainability Plan.

In addition to the redevelopment of vacant buildings and parcels, increasing density with significant new developments adjacent to the transit stop and Lemp Brewery site will be pursued as part of the development strategy. These Transit Oriented Developments, spread over several buildings, create space for 300 new households and 60,000 SF of new commercial space, enough space for 600 residents and 60 new workers.

The overall development strategy, including all new and renovated property, will add 1,900 new residents and 1,600 new workers to an increasingly vibrant district and sustain its vitality.



### PREFERRED STATION AREA PLAN

#### LEGEND

- NORTHSIDE-SOUTHSIDE ALIGNMENT
- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING



STREET DANCER DURING  
CHEROKEE CINCO DE MAYO

## STATION PLAN ALTERNATIVES

Two Station Plan Alternatives were developed for the Cherokee Station area by shifting its Transit Neighborhood Typology from its current state into one of two more intense typologies. These two options serve as a premise for refining the mix of employment and residential program to be added to the station area.

The assumed outcome for Station Plan Alternative #1 is the addition of only residents to the one-half ( $\frac{1}{2}$ ) mile transit shed to shift the station area to a TNGeneral Type 3. The assumed outcome for Station Plan Alternative #2 is the addition of only workers to the one-half ( $\frac{1}{2}$ ) mile transit shed to shift the station area to a TNCenter Type 1. Both Plan Alternatives assume the development of new Transit Oriented Development but test different distributions of building program.

### STATION PLAN ALTERNATIVE #1

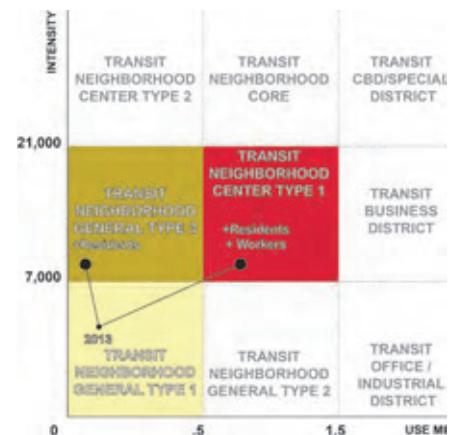
Station Plan Alternative #1 adds only residents to increase the intensity while shifting the use mix more towards primarily residential use. The design process tested the building program distribution throughout the transit shed and determined the potential for additional program at the intersection of Jefferson and Cherokee based upon the availability of large, contiguous developable parcels and the presence of the transit station. This will also create a significant influx of patrons to each of the two commercial districts along Cherokee while increasing ridership.

### STATION PLAN ALTERNATIVE #2

Station Plan Alternative #2 adds only workers to increase intensity while tilting use mix in the station area towards employment. The design explores favorable distribution of commercial program along Jefferson with the anticipation that through the refinement process, significant development program will be absorbed at Lemp Brewery.



TYPOLOGICAL MATRIX WITH CHARACTER



ALTERNATIVE 1 & 2  
TYPOLOGICAL SHIFT OPTIONS

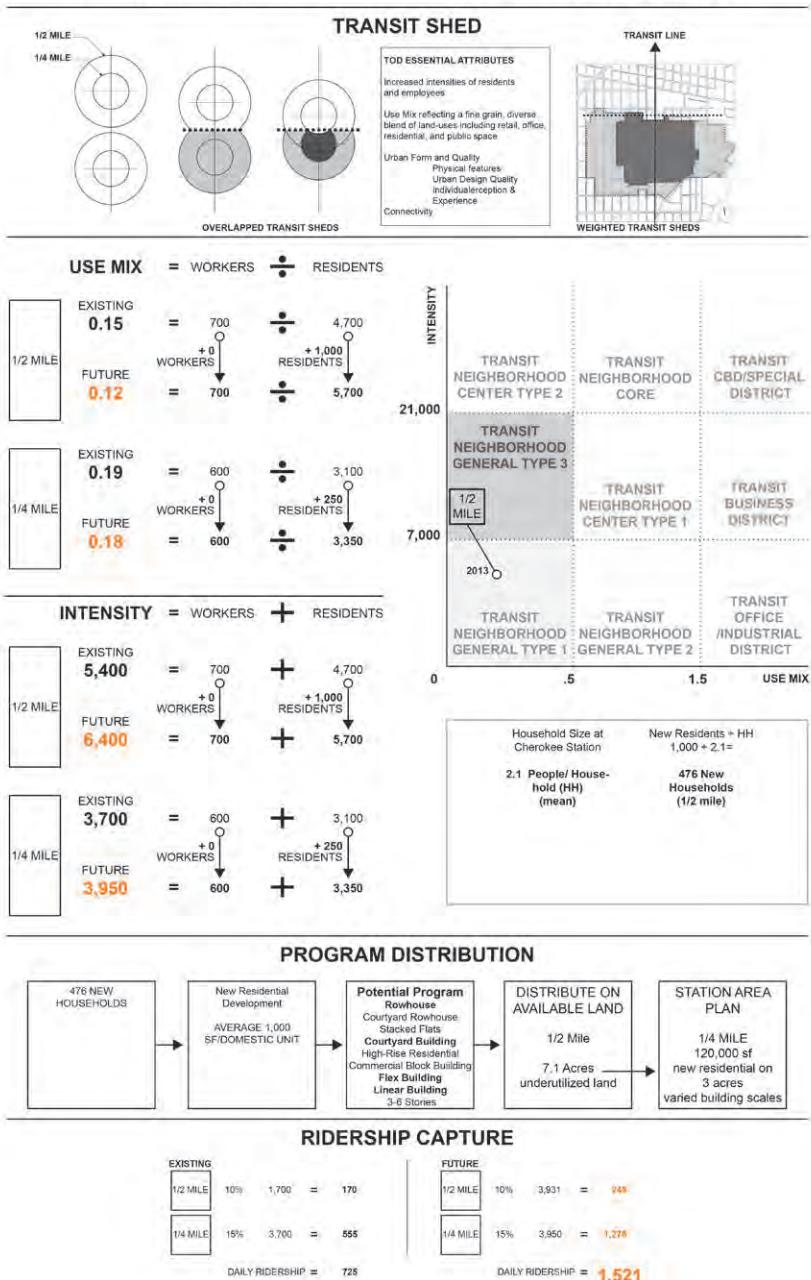


### STATION PLAN ALTERNATIVE 1

#### LEGEND

- ■ NORTHSIDE-SOUTHSIDE ALIGNMENT
- ■ NEW RESIDENTIAL BUILDING

## TOD STATION PLANNING STRATEGY : APPLICATION CHEROKEE STATION PLAN ALTERNATIVE 1: RESIDENTIAL OPTION



**Station Plan Alternative #1 elevates Cherokee Station to a TNGeneral Type 3 by:**

- Adding 1,000 residents to the one-quarter ( $\frac{1}{4}$ ) mile station area using 450,000 SF of new residential development concentrated along the length of Jefferson, extending north and south from Cherokee;
- Distributing the development program among buildings ranging from 2,000 SF duplexes to 150,000 SF high-density apartment buildings;
- Assuming even distribution of program throughout the one-half ( $\frac{1}{2}$ ) mile station area prior to detailed vacancy assessment;
- Assuming 1,000 SF per housing unit average

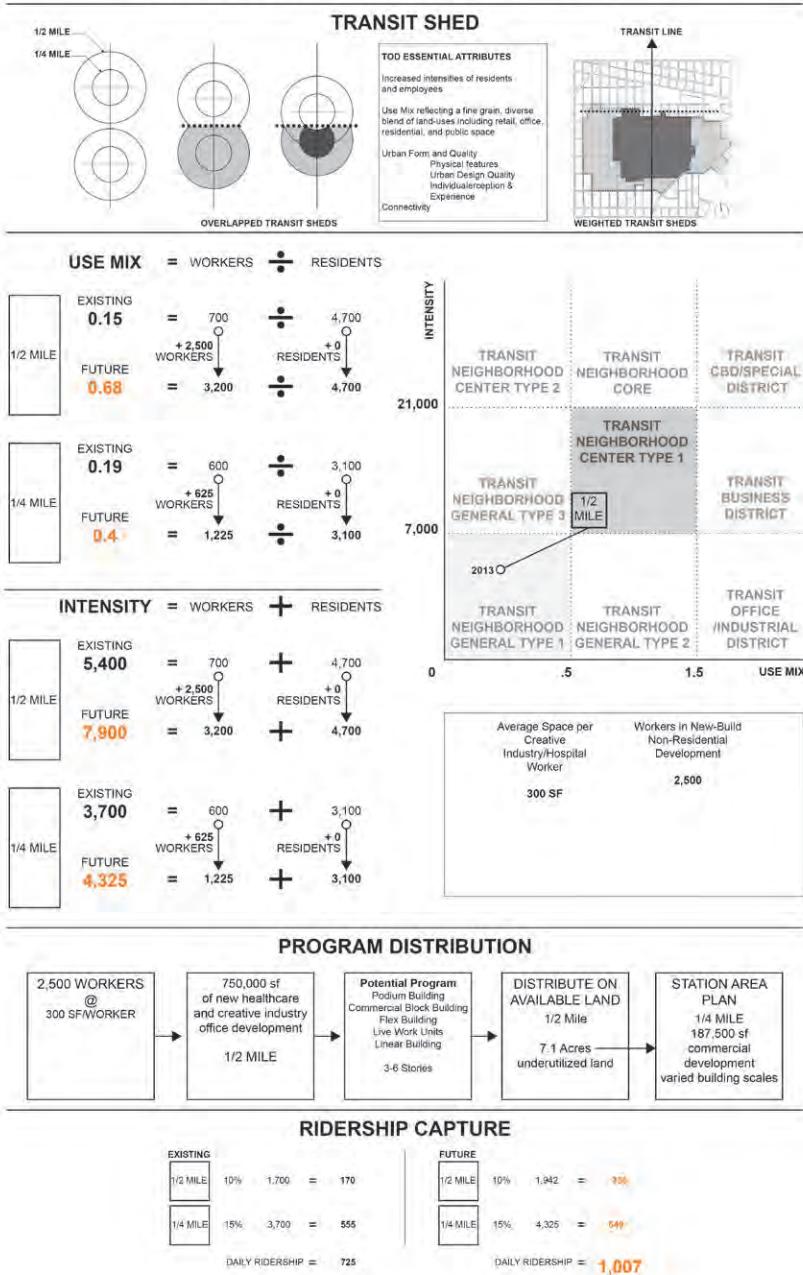


## STATION PLAN ALTERNATIVE 2

### LEGEND

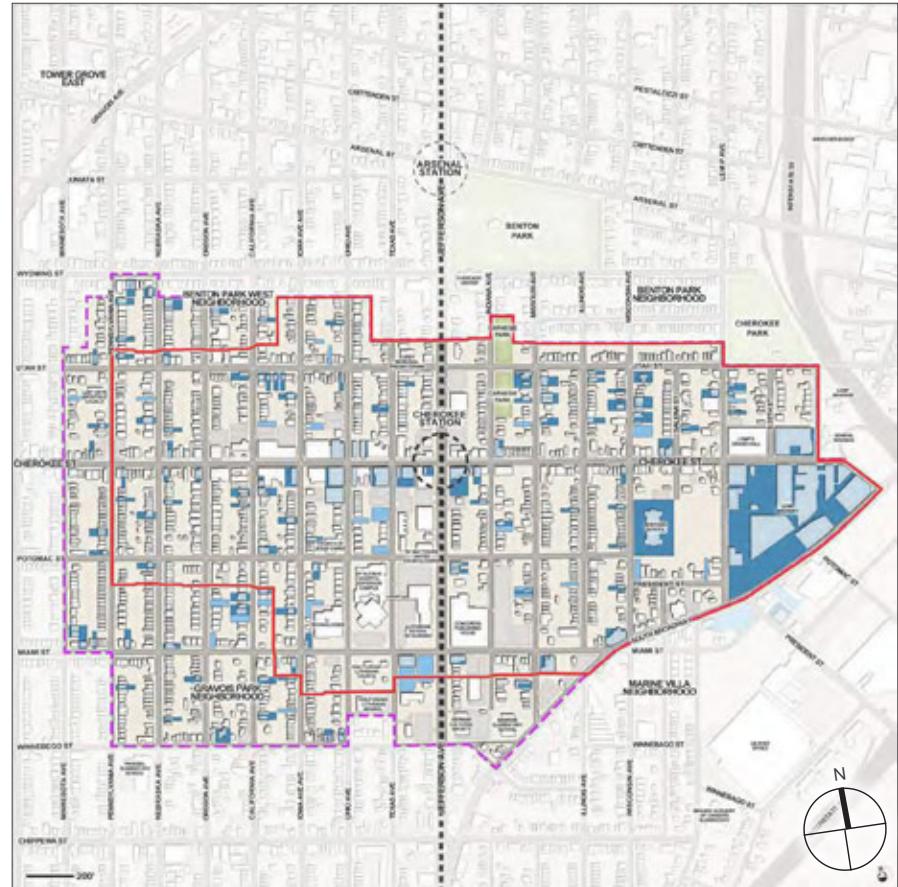
- ■ ■ NORTHSIDE-SOUTHSIDE ALIGNMENT
- ■ ■ NEW COMMERCIAL BUILDING

## TOD STATION PLANNING STRATEGY : APPLICATION CHEROKEE STATION PLAN ALTERNATIVE 2: JOBS OPTION



Station Plan Alternative #2 elevates Cherokee Station to a TNCenter Type 1 by:

- Adding 2,500 workers to the one-quarter ( $\frac{1}{4}$ ) mile station using 430,000 SF new office space concentrated along the length of Jefferson, extending north and south from Cherokee;
- Distributing the development program among buildings ranging from 68,000 SF to 125,000 SF;
- Assuming 150 SF per worker



## ANALYSIS MAP OF VACANCY DISTRIBUTION

## LEGEND



## STATION AREA OPPORTUNITIES

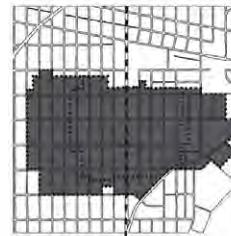
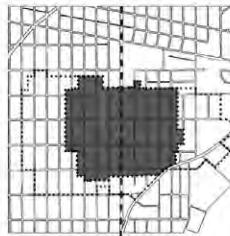
To understand more specifically how the TOD program is distributed around the site, given the existing land use patterns in the station area, each vacant parcel and each vacant building within the one-half ( $\frac{1}{2}$ ) mile station area was identified. While there was a significant amount of vacant property within the station area, the majority is not suitable for concentrated, large scale projects; those types of projects are more appropriate when located directly adjacent to the transit station. Therefore, the first phase of development is to redevelop the existing underutilized and vacant property in order to complete neighborhoods into which the Transit Oriented Development can be successfully integrated. This will bolster the ridership on the new transit line before any large scale development takes place.

Vacancy diagrams demonstrate the amount of vacant buildings as well as the gains to be expected from filling vacant property. The analysis of vacancy identify 100 existing vacant residential buildings, equivalent to 182 households and 43 vacant parcels, primarily suited for residential development which, when filled with residential buildings scaled to their existing context, equate to 94 new households.

In addition to redeveloping the smaller vacant parcels throughout the transit shed, the other significant component of the Cherokee Station Preferred Plan is the redevelopment of several large underutilized commercial parcels along with the addition of new commercial and office uses along Jefferson which replaces some existing underutilized commercial and industrial space.

## TOD STATION PLANNING STRATEGY : RESIDENTIAL REDEVELOPMENT

### CHEROKEE STATION AREA



	BUILDING TYPE (CURRENTLY VACANT)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
REDEVELOP	EXISTING SINGLE FAMILY RESIDENTIAL	43	43	90	54	54	113
	EXISTING DUPLEX	15	30	63	28	56	117
	EXISTING TRIPLEX	0	0	0	2	6	13
	EXISTING FOURPLEX	15	60	126	15	60	126
	EXISTING SIXPLEX	0	0	0	1	6	13
	EXISTING APARTMENT	0	0	0	0	0	0
<b>TOTAL</b>		<b>73</b>	<b>133</b>	<b>279</b>	<b>100</b>	<b>182</b>	<b>382</b>
NEW DEVELOPMENT	BUILDING TYPE (INFILL ON VACANT LAND)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
	NEW SINGLE FAMILY RESIDENTIAL	9	9	19	11	11	23
	NEW DUPLEX	15	30	63	22	44	92
	NEW TRIPLEX	0	0	0	1	3	7
	NEW FOURPLEX	2	8	17	9	36	76
<b>TOTAL</b>		<b>26</b>	<b>47</b>	<b>99</b>	<b>43</b>	<b>94</b>	<b>198</b>
		1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
<b>TOTAL ADDED TO TRANSIT SHEDS FROM NEW DEVELOPMENT AND REDEVELOPMENT OF VACANT PROPERTY</b>		<b>99</b>	<b>180</b>	<b>378</b>	<b>143</b>	<b>276</b>	<b>580</b>

\*Based on an average Household Size of 2.1 People/Household in the Cherokee Station Area



ANTIQUE ROW ON CHEROKEE STREET

## URBAN DESIGN & PLANNING ELEMENTS

### CULTURE & IDENTITY

Cherokee Station is a center of culture, creativity, and urban vitality. Future development program builds upon the character of the five historic districts which overlap the station area and continues the street improvements along Jefferson to unite the commercial districts on Cherokee to the east and west of Jefferson.

Local culture and identity will be emphasized around the station by:

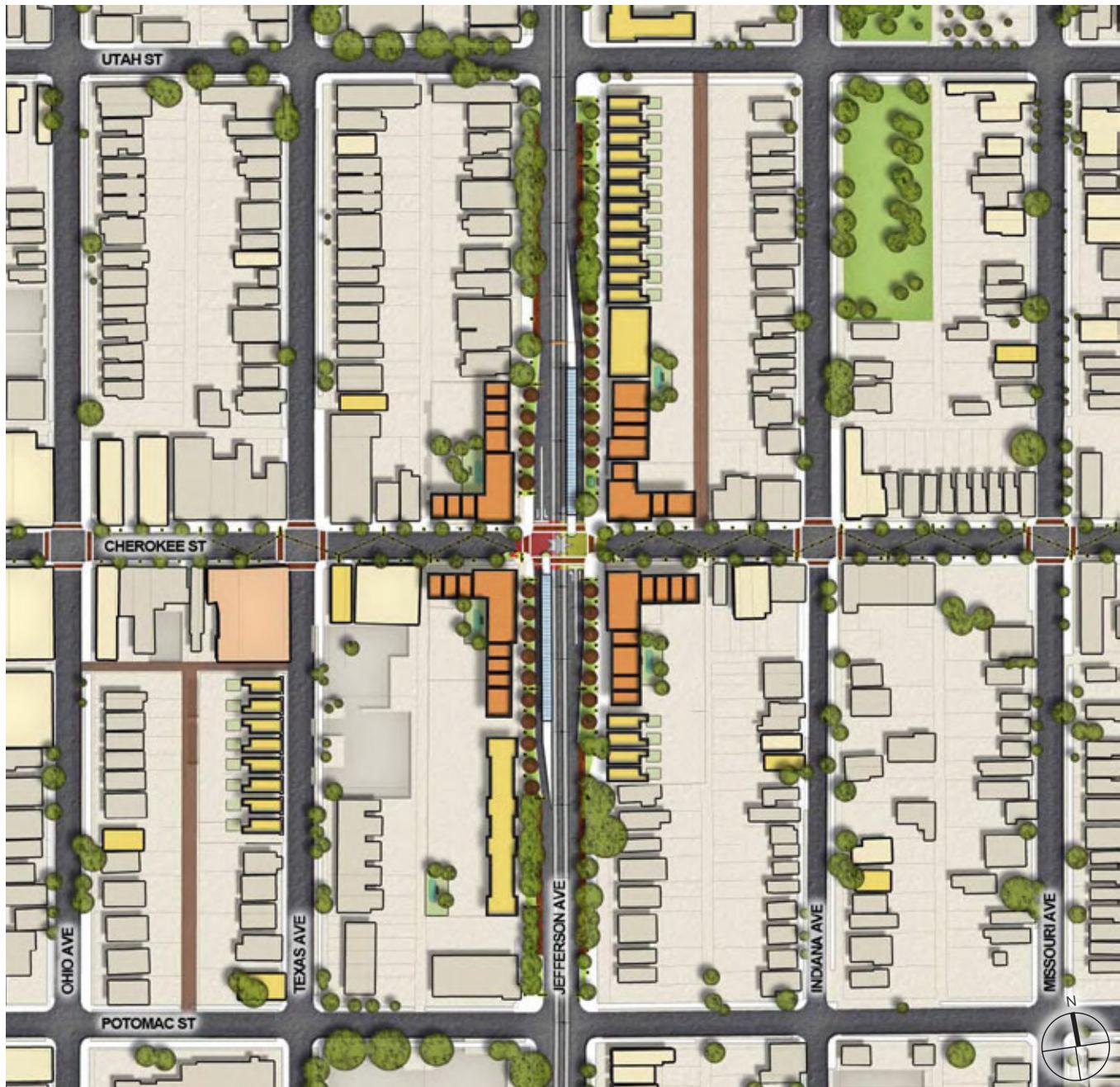


CINCO DE MAYO CELEBRATION ON CHEROKEE STREET

- Maintaining stakeholder's sense of ownership in the process and outcomes;
- Demonstrating the City's commitment to moving forward;
- Informing, consulting, and involving multiple invested stakeholders throughout each phase of development;
- Embracing the existing creative and ethnically diverse communities and ensure space for public art and gathering;
- Creating a sense of cohesiveness between the east and west sides of Cherokee Street and provide a comfortable transfer point, whether by bicycle, bus or light rail, through a well planned streetscape;
- Creating an enticing, accessible, and comfortable streetscape street furniture, shading, added greenery, and points of interest for pedestrians and bicyclists.
- Orienting visitors to attractions found in adjacent neighborhoods;
- Considering St. Louis imagery/icons when branding this area;
- Informing visitors of the rich commercial attractions and historical past found in the Cherokee Station area through signage; and
- Incorporating public art and signage as a means of placemaking for this creative and culturally rich area of the City.



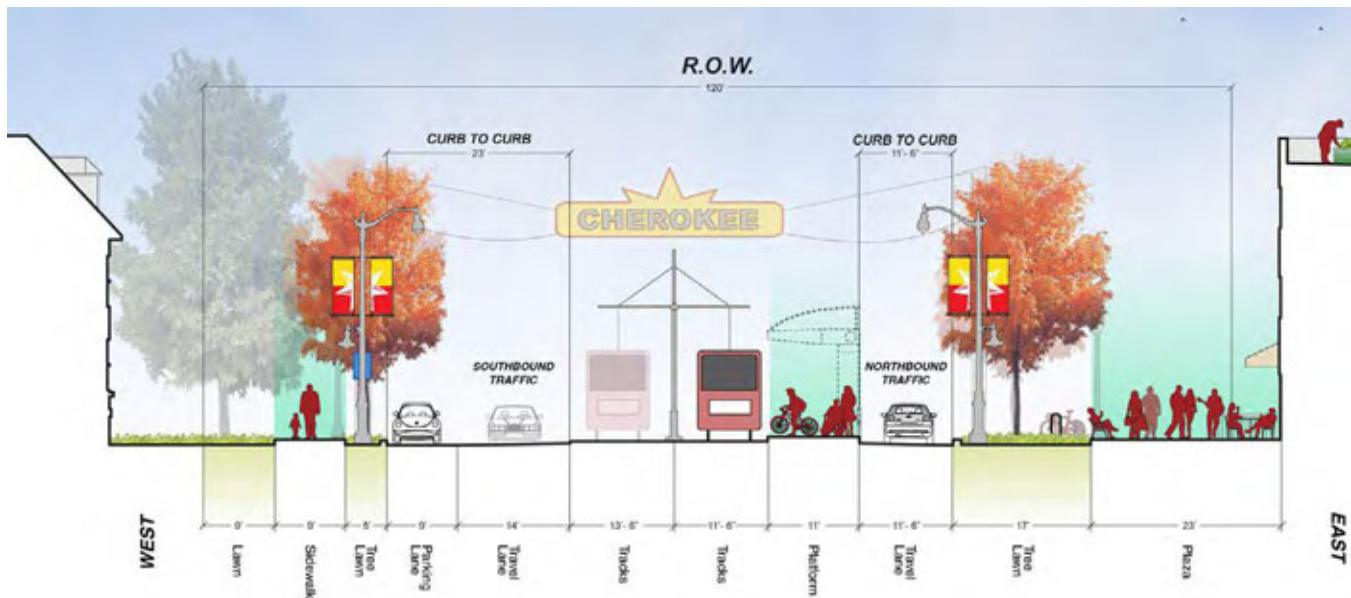
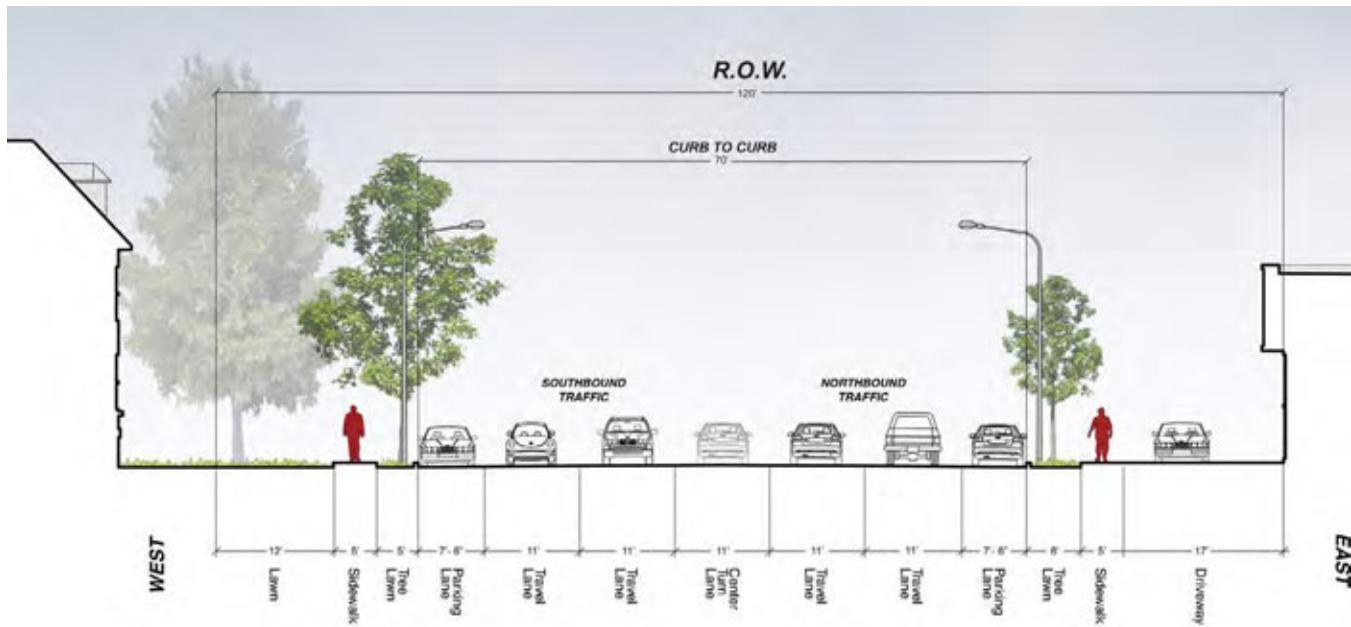
HISTORIC DISTRICT STREET SIGNAGE

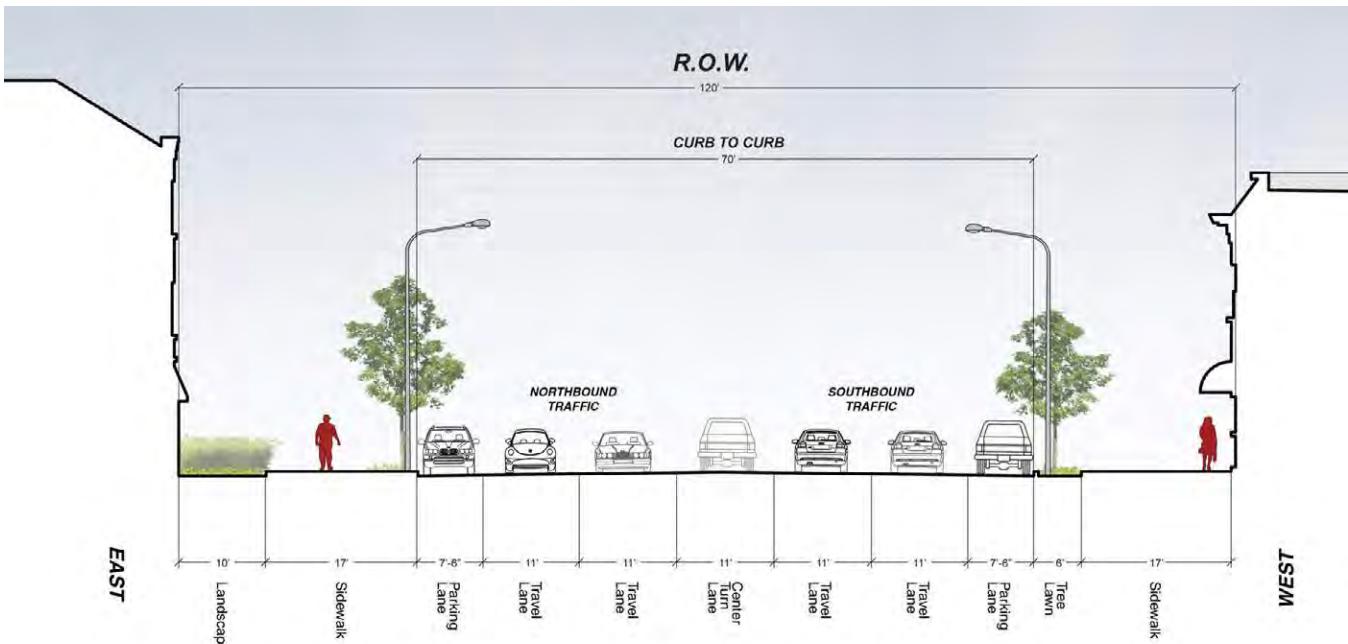


DETAILED STATION AREA PLAN

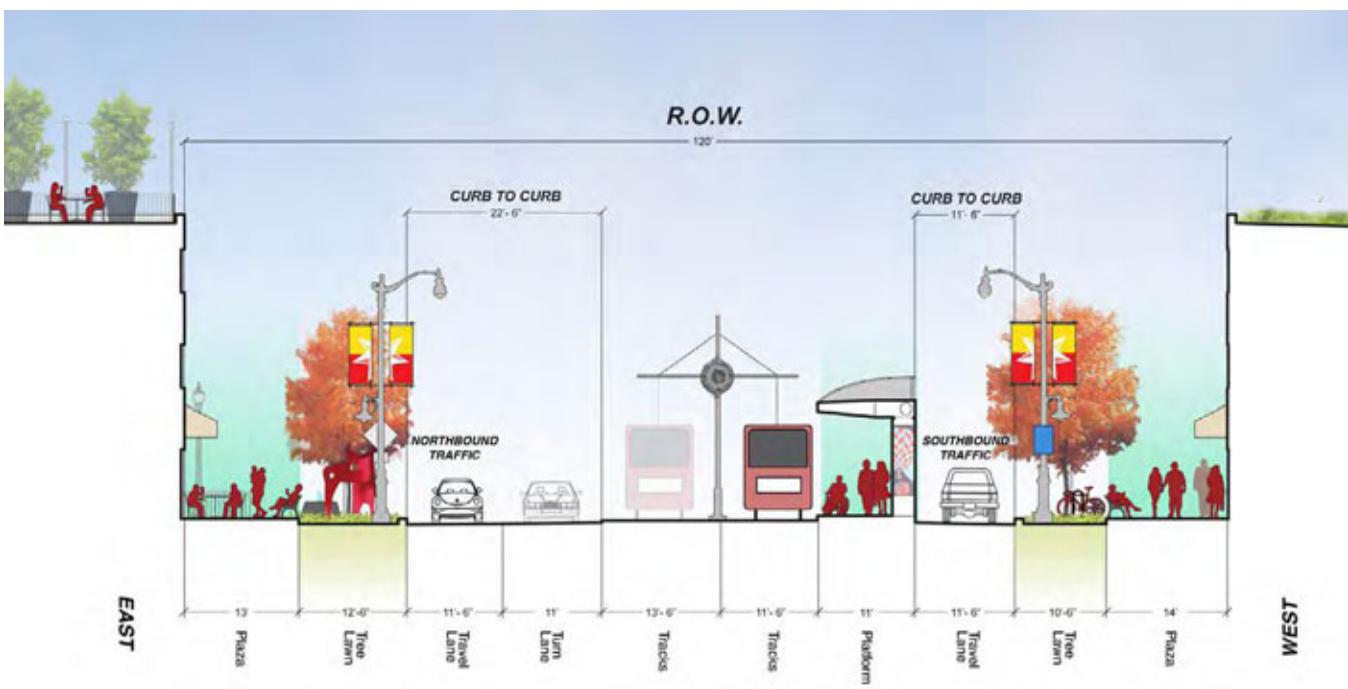
LEGEND

- █ NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- █ NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- █ NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING

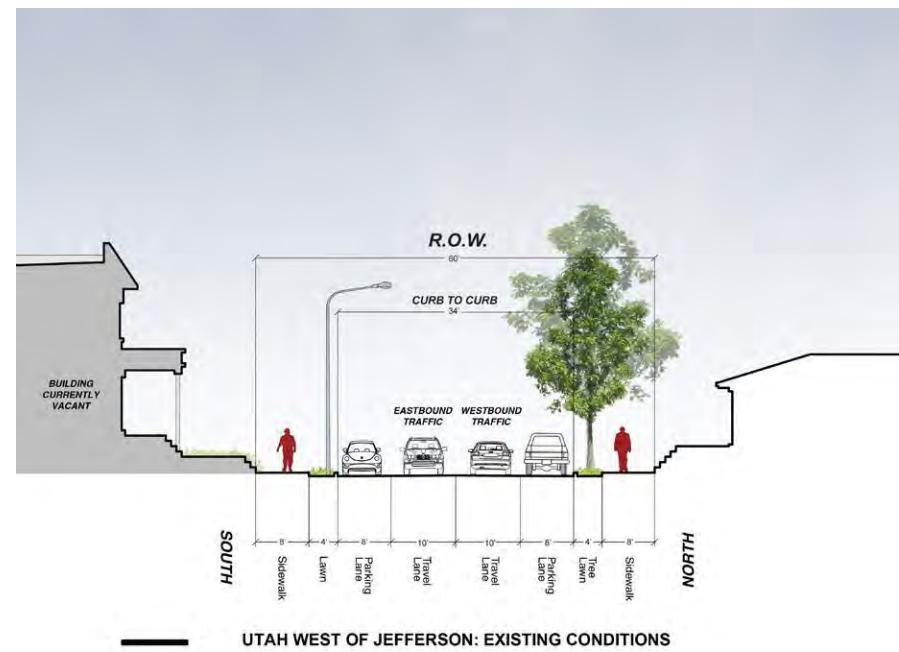
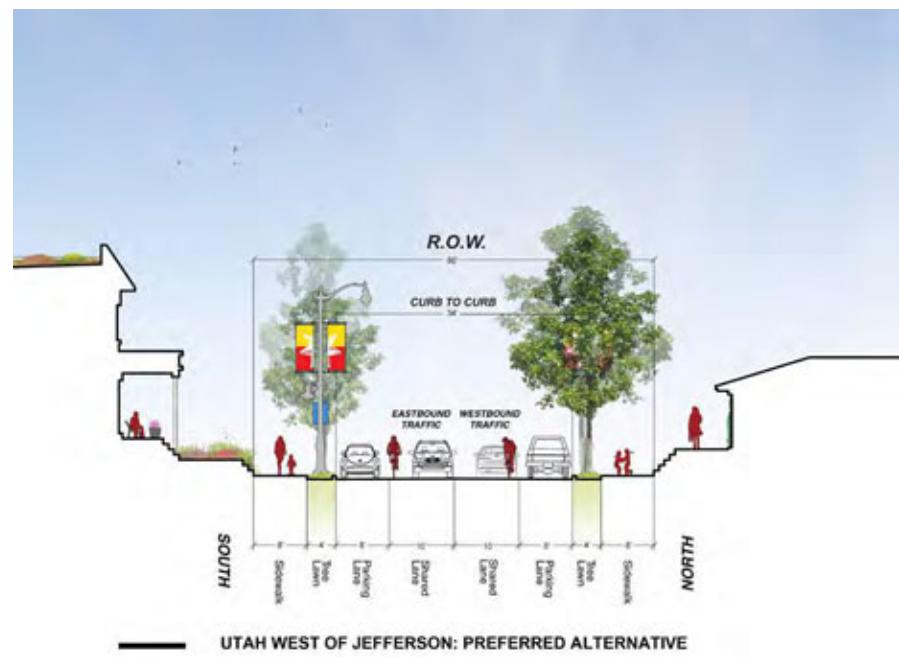


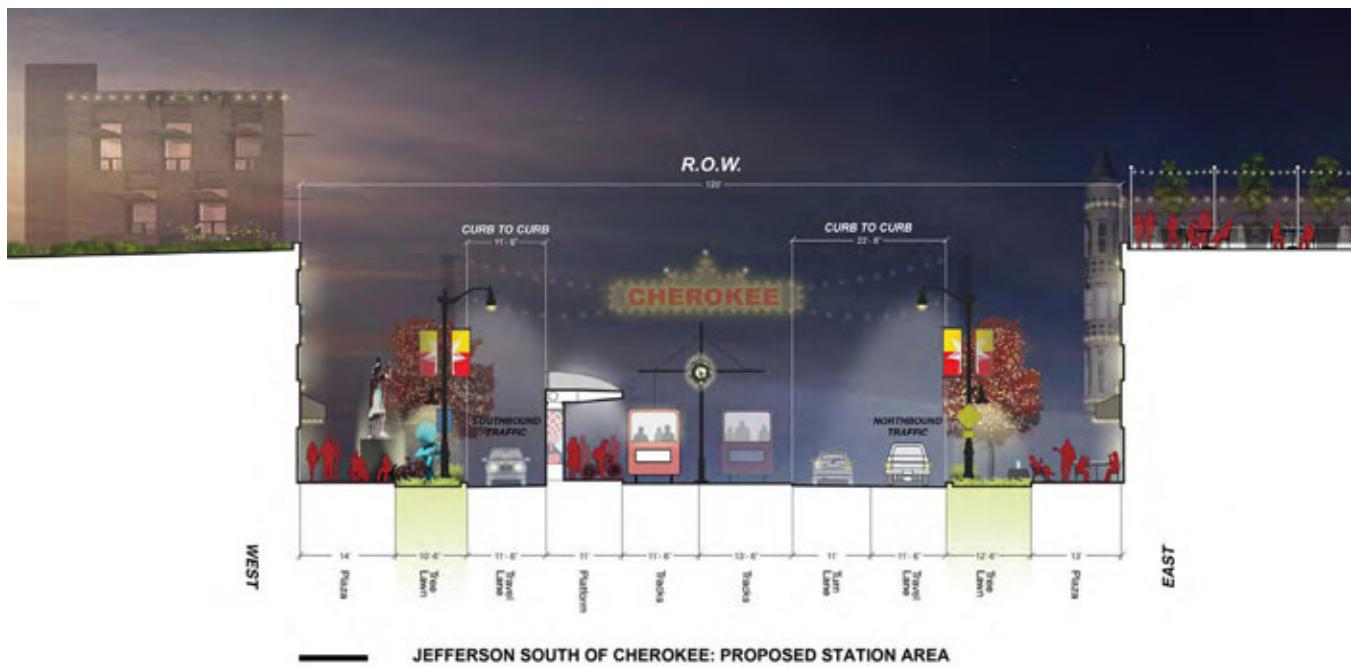
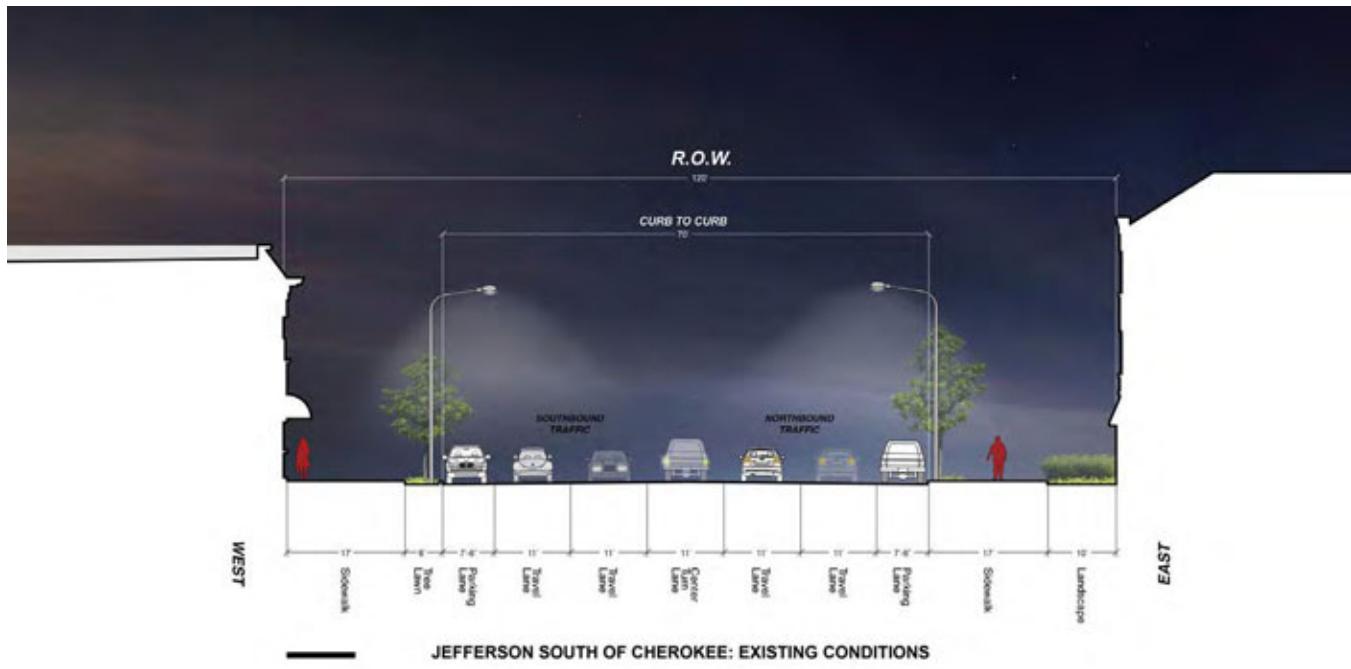


JEFFERSON SOUTH OF CHEROKEE: EXISTING CONDITIONS



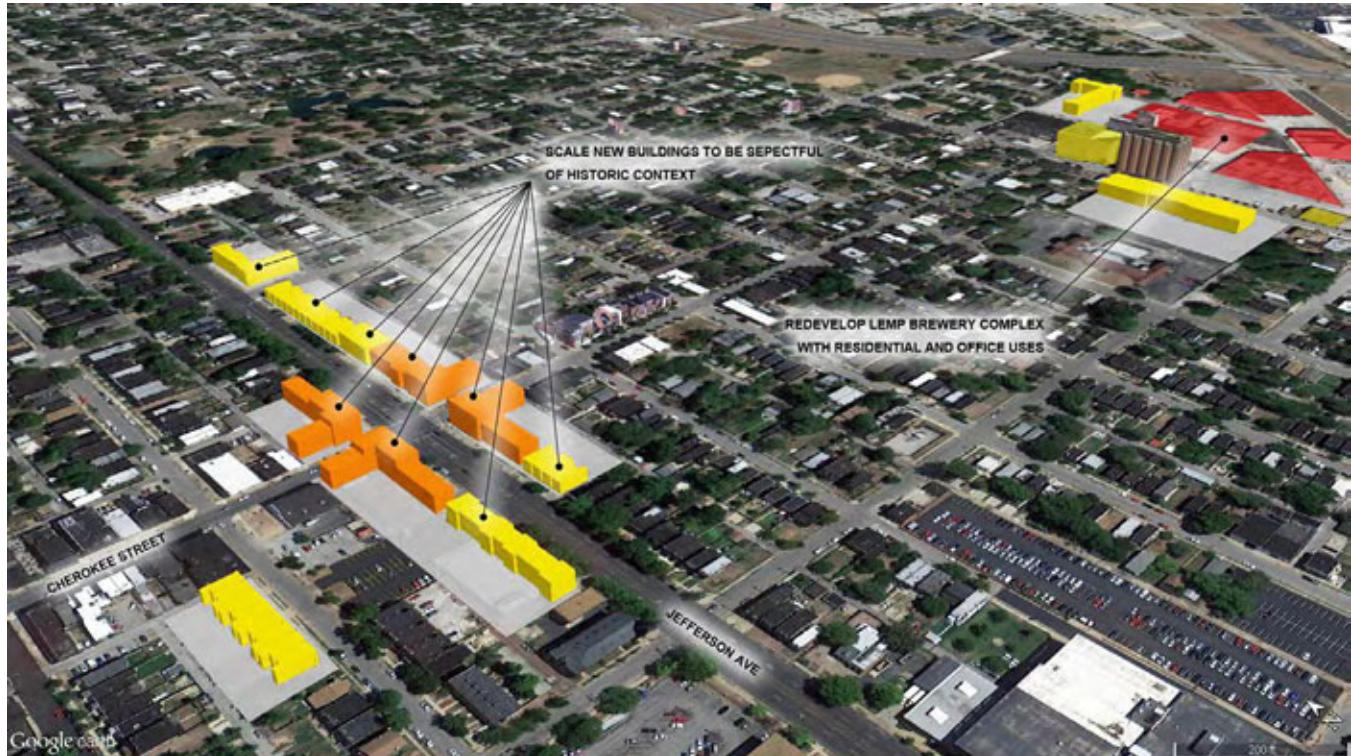
JEFFERSON SOUTH OF CHEROKEE: PROPOSED STATION AREA





## MASSING PERSPECTIVES

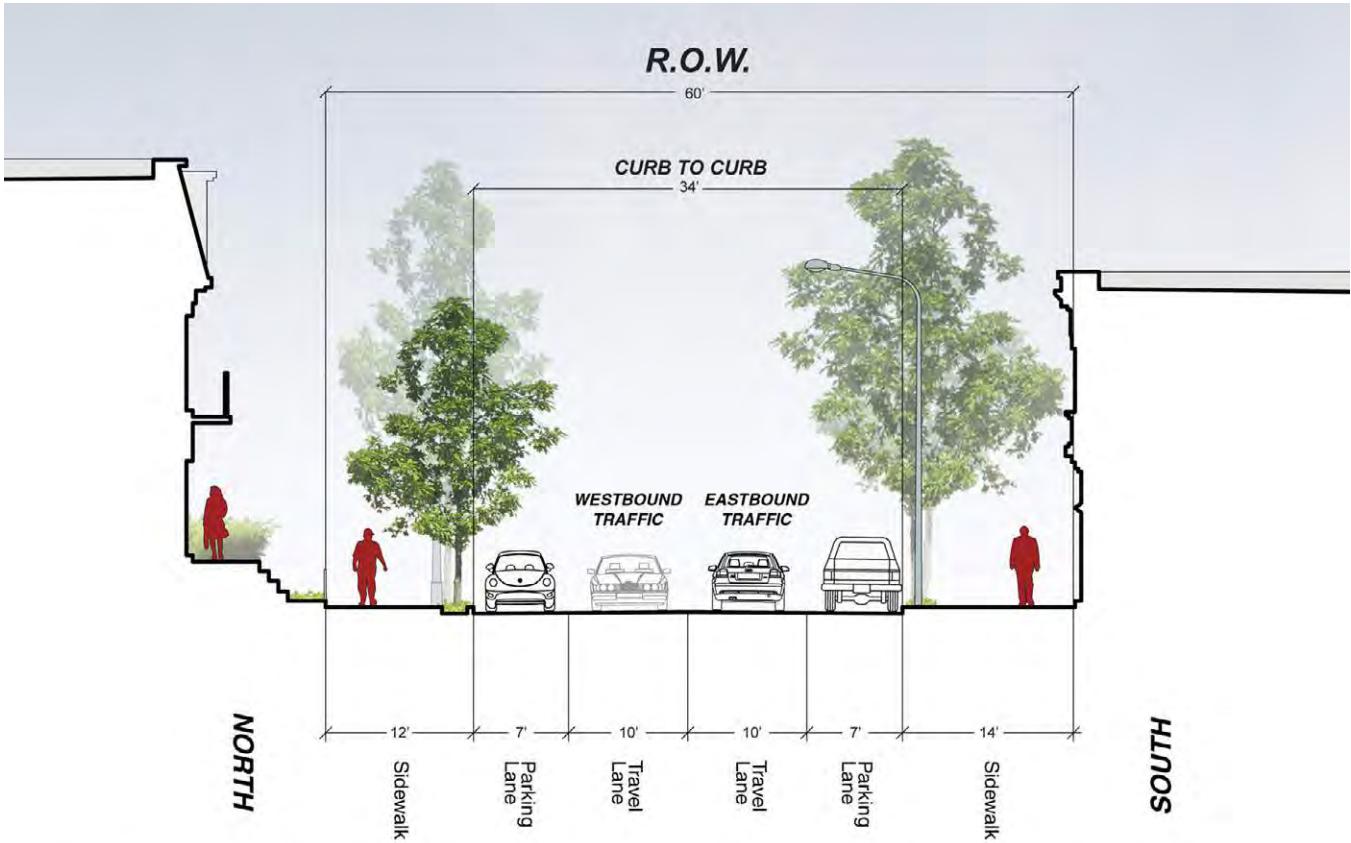
Bird's eye views of the station area show potential building forms and configurations at the Cherokee Station in 30 years.



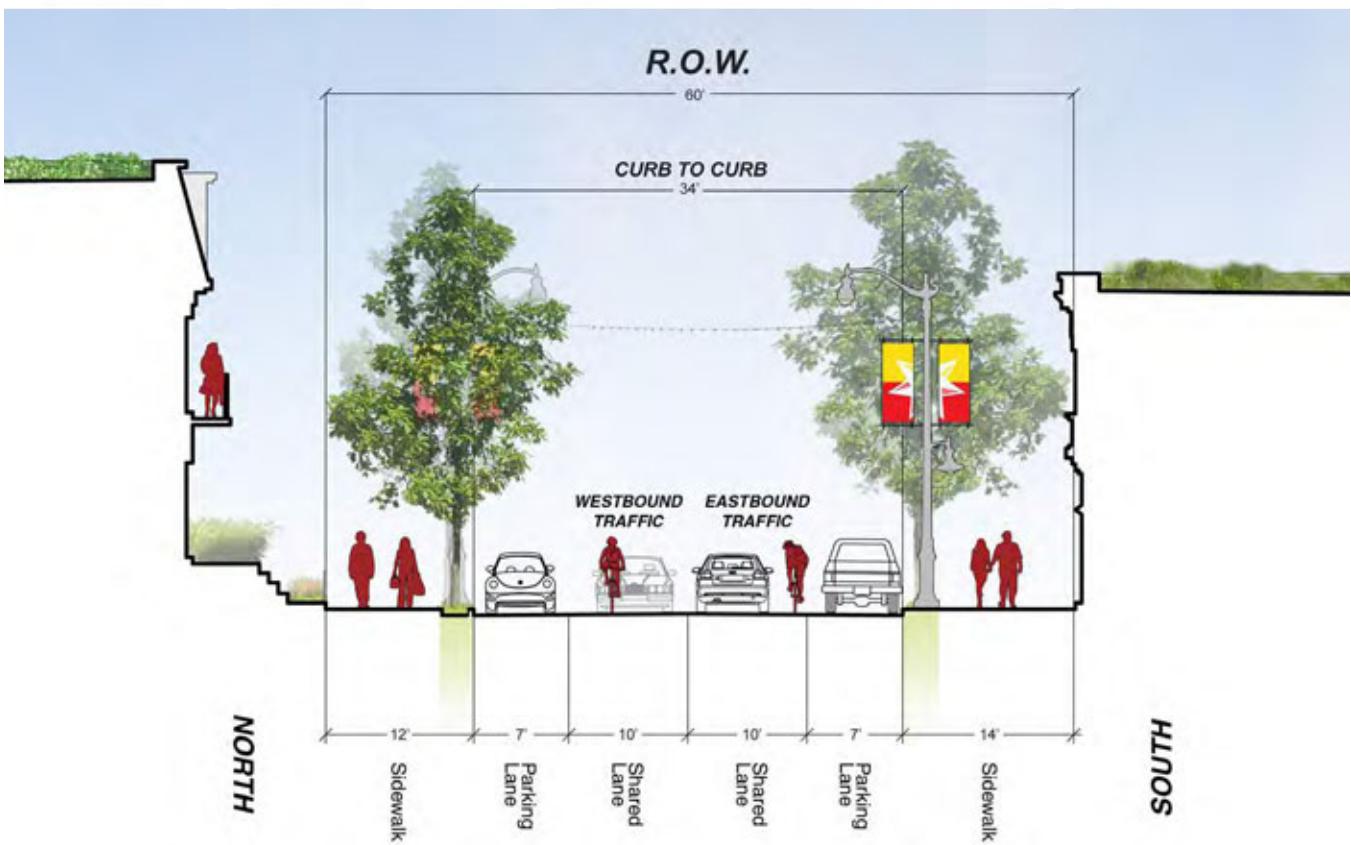
BIRD'S EYE VIEW LOOKING NORTH EAST



BIRD'S EYE VIEW LOOKING SOUTH EAST



— CHEROKEE EAST OF JEFFERSON: EXISTING CONDITIONS



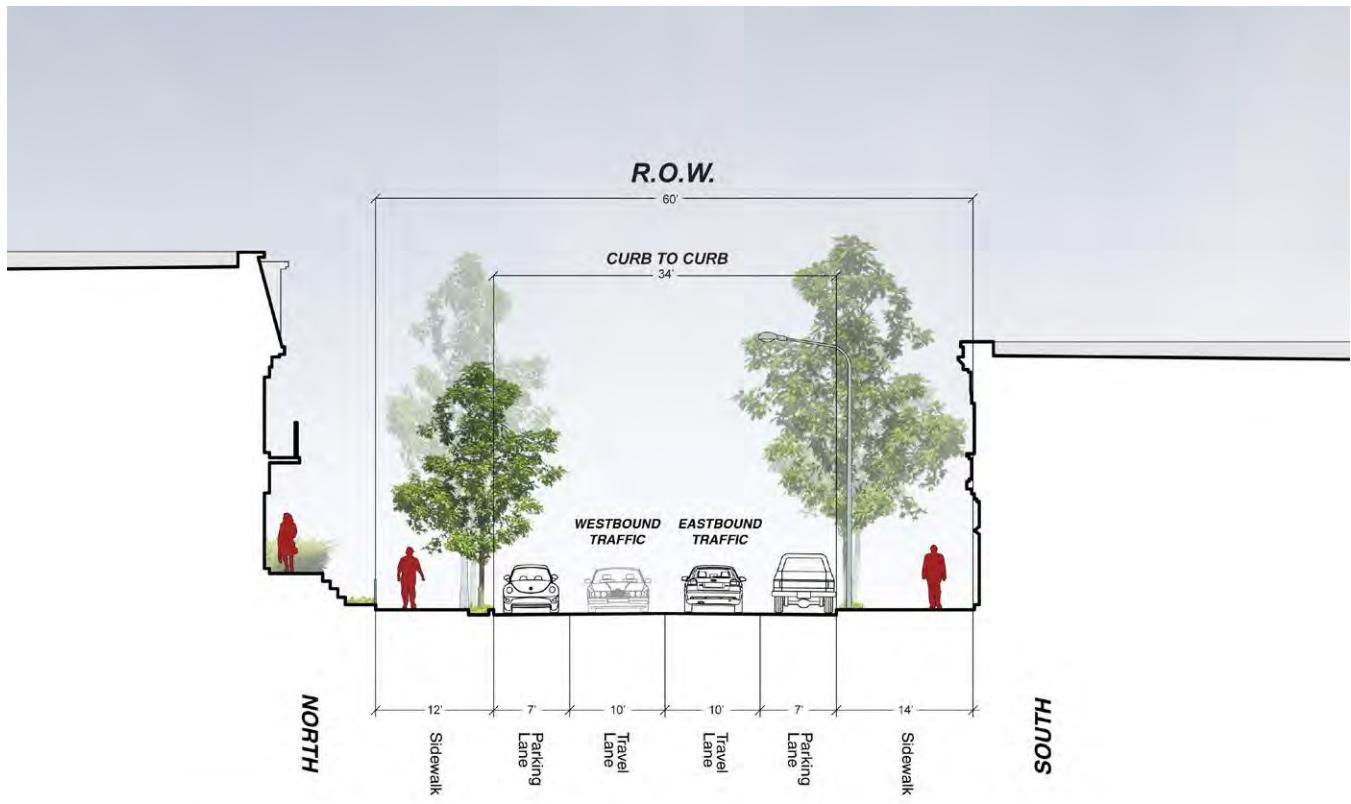
— CHEROKEE EAST OF JEFFERSON: PREFERRED ALTERNATIVE



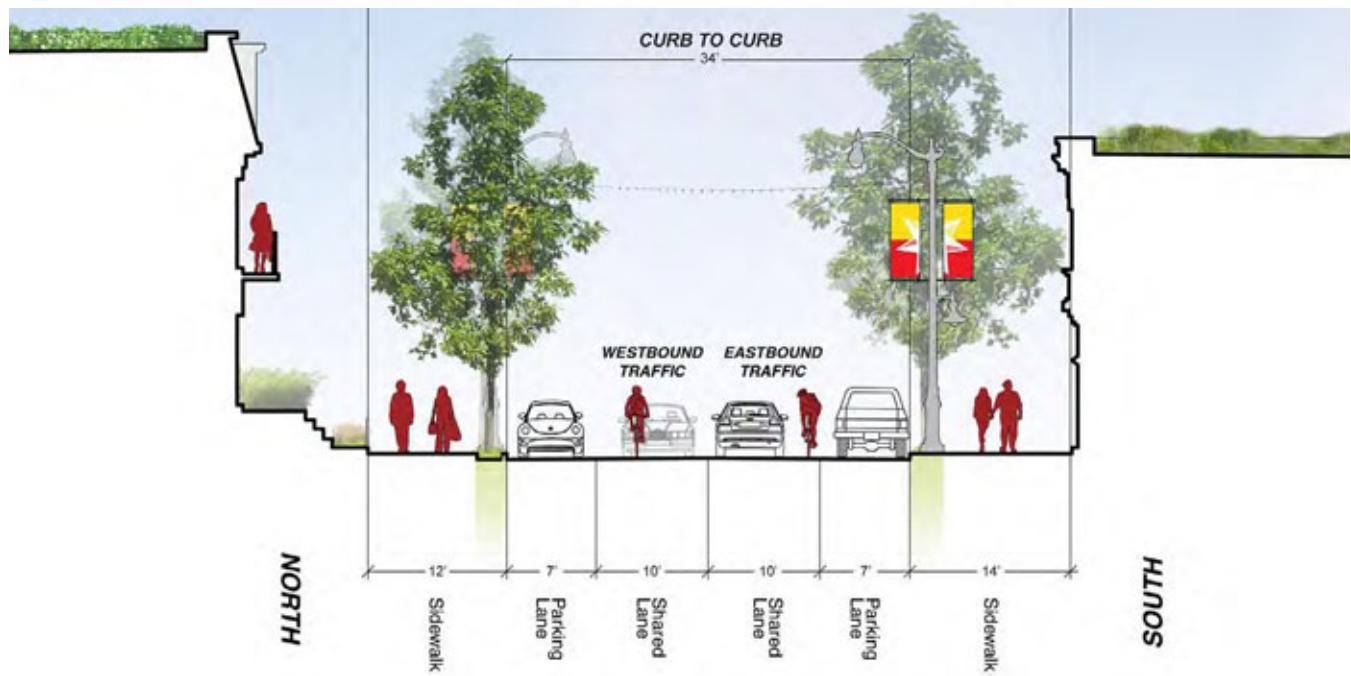
CHARACTER PERSPECTIVE - EXISTING CONDITIONS



CHARACTER PERSPECTIVE - PREFERRED STATION AREA IN 2043



## **CHEROKEE EAST OF JEFFERSON: EXISTING CONDITIONS**





EXISTING CONDITION



BUILDING ENVELOPE STUDY



CHARACTER PERSPECTIVE



PHASING PERSPECTIVE IN 2033



PHASING PERSPECTIVE IN 2023

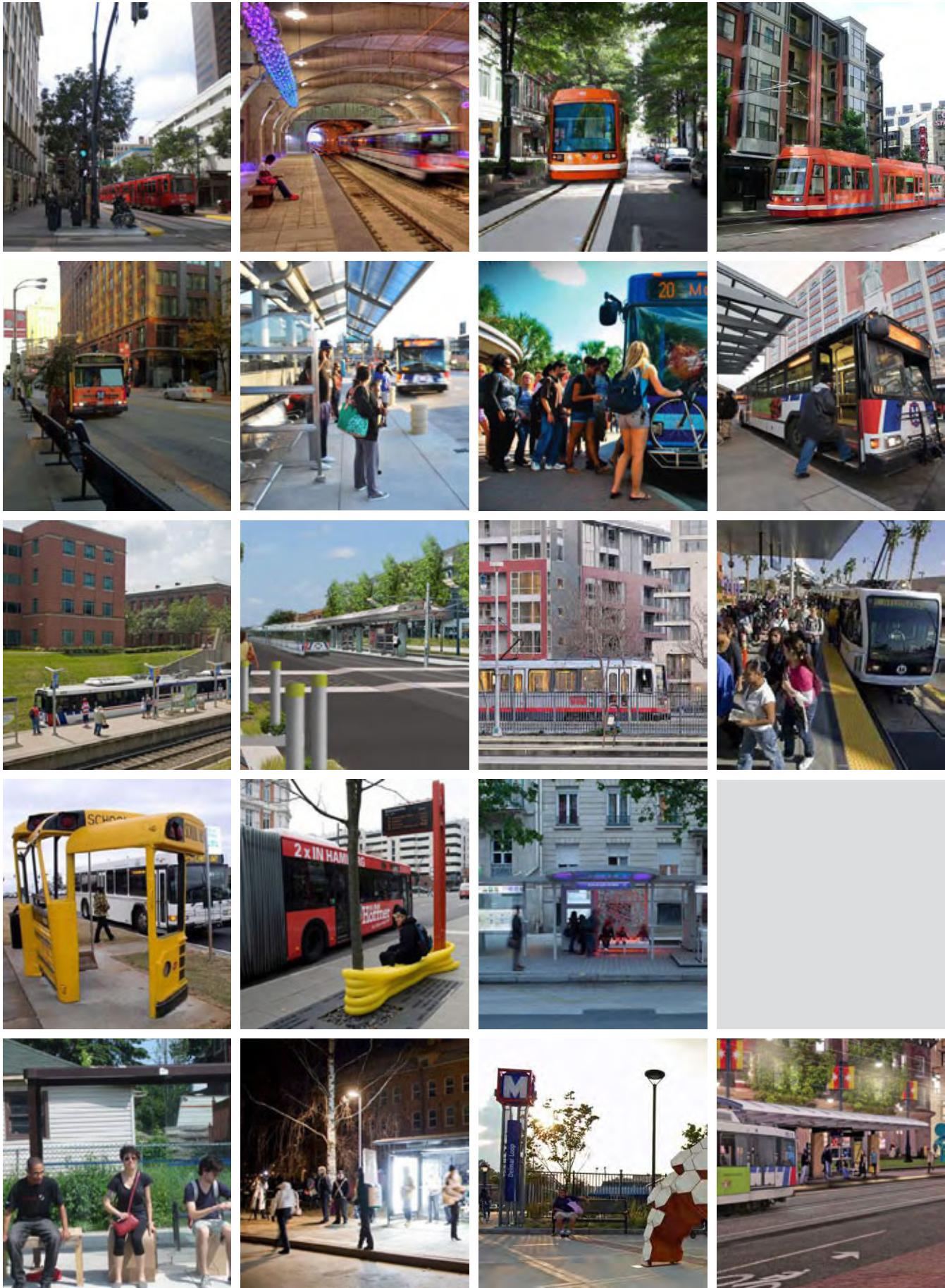
## MOBILITY

- Create a roundabout at the intersection of Cherokee and Interstate 55 to calm traffic;
- Construct a roundabout at Broadway and Utah Street to connect visitors from the highway to the station area;
- Restrict traffic flow inhibiting treatments from being implemented along Lemp Avenue between Cherokee and Arsenal Street;
- Extend President Street, 18<sup>th</sup> Street, and DeMenil Place as local streets within the Lemp Brewery Complex;
- Terminate the Jefferson portion of #11 bus service at Chippewa Street;
- Offer connections to #73 bus, a route serving local neighborhoods, using Cherokee Station as an inter-modal connector
- Increase headways of the #73 bus to either 15 or 10 minutes to increase ridership and inter-modal transfers;
- Consider a Road Diet along Jefferson to extend the sidewalk an extra ten to 15 feet beyond existing conditions;
- Ensure all sidewalks are ADA accessible;
- Enliven the streetscape above eye-level through street pole-mounted greenery and banners;
- Locate durable, comfortable street furniture near to the station stop to match ridership demands of future inter-modal transfer function; and
- Provide safe places for cyclists to store bicycles while patronizing the local businesses.



TRANSIT IMPROVEMENT DIAGRAM





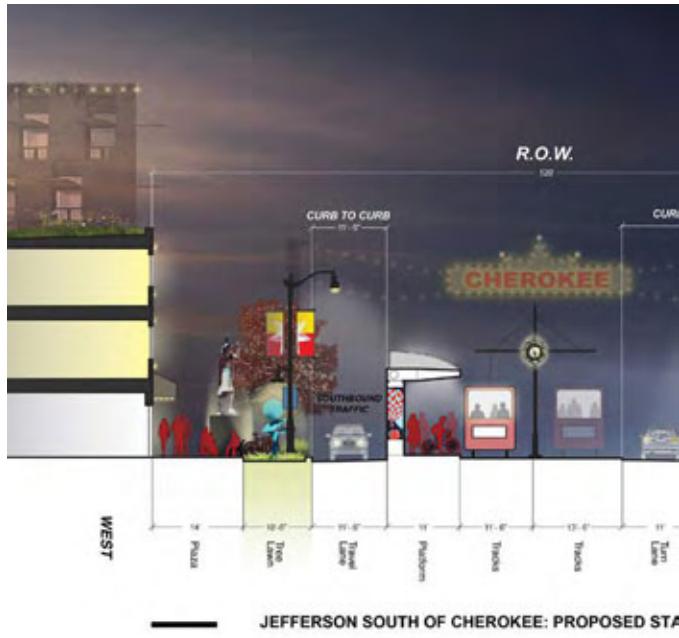
## PUBLIC SPACE

The Station Area Plan creates a public space network that anchors the neighborhood by connecting residents and visitors to housing, jobs, entertainment, and civic amenities through an improved street network, pedestrian enhancements, bicycle infrastructure, parks, and public spaces. Improved public right-of-way increases safety, accessibility, and community engagement while supporting the diversity of residents and various public events and activities. Public space enhancements will catalyze new housing, mixed-use development, and redevelopment opportunities needed to achieve the area's full market potential. Unique public spaces will support liveliness, health, and the future prosperity for the community.

The public space strategy at Cherokee Station will:

- Create space for outdoor seating, green space, places of pause, and performance;
- Create additional interest with string lights above Cherokee from Jefferson to Pennsylvania Avenue and from Jefferson to the Lemp Brewery complex (to be affixed high enough so as not to interfere with truck clearance);
- Provide shade through other means (i.e., awnings, table umbrellas) along Cherokee from Jefferson to Nebraska Avenue until the tree canopies fill in;
- Enlist local artists to disguise utility boxes;
- Distribute benches and trash receptacles evenly along Cherokee on the blocks west of Jefferson;
- Enliven the sidewalk by utilizing the ample sidewalk space along Jefferson as performance and display space for local artists and businesses;
- Respect and respond to the historical character of the Cherokee Station area through the selection of contextual street lighting standards;
- Coordinate street level display space with local studios and galleries and fill any unused storefronts;
- Build upon the legacy of the "Cherokee Indian" landmark sculpture to create a shared landmark for current business owners, residents, and visitors to Cherokee;
- Develop thematic signage continuing from the Lemp Brewery to Pennsylvania Avenue;
- Devote 1% of future development costs to public art to be located throughout the station area and transit shed;
- Highlight current events and activities using banners along Jefferson and Cherokee;
- Designate key entry points to the district with large signs, similar to that of The Grove district; and
- Create a gateway for the area by installing public art at the roundabout intersection of Cherokee and Interstate 55 (similar to Truman Parkway).





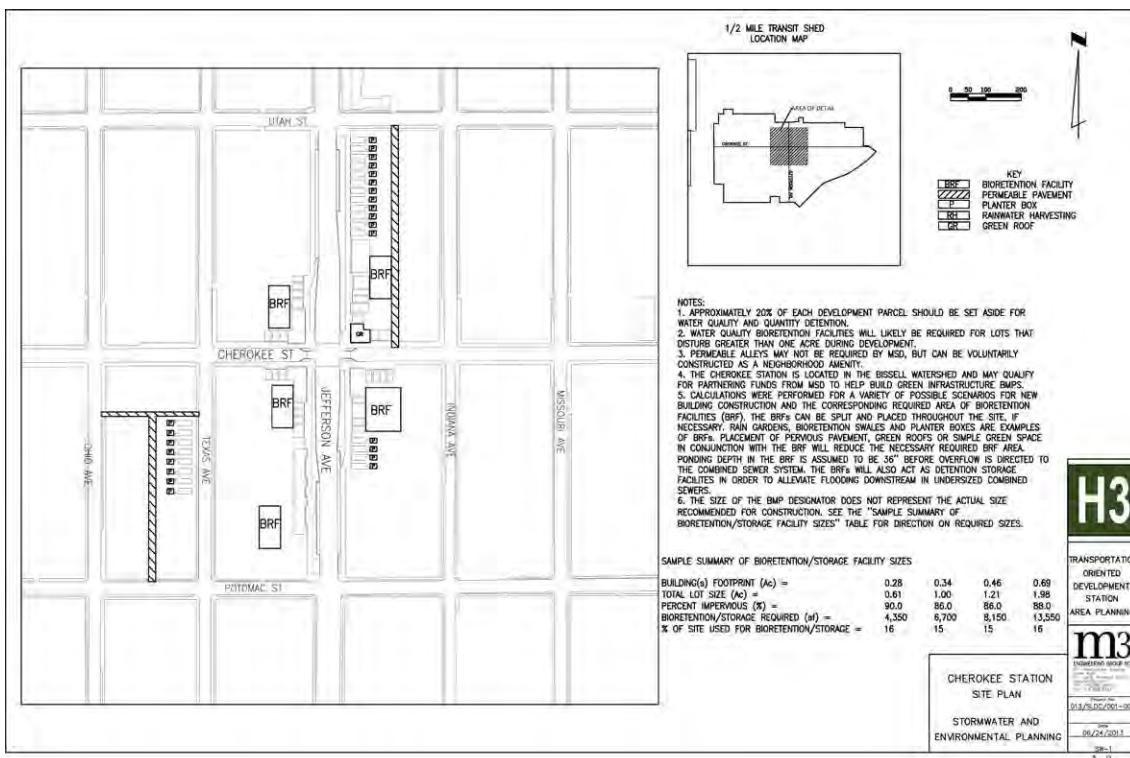
## GREEN INFRASTRUCTURE DESIGN

- Utilize permeable pavement where possible in parking lots, sidewalks, driveways, and alleys;
- Integrate bioretention facilities into curb bumpouts, providing additional greenery as part of the street level stormwater management strategy;
- Install buffer strips adjacent to new and existing streets and parking lots to reduce stormwater runoff and increase comfort on the sidewalk;
- Install aesthetically pleasing rainwater harvesting facilities on new and existing buildings, including rainbarrels and green roofs;
- Consider a water feature along Jefferson to create interest and refresh users of the area;
- Provide additional seating and activate street edges using planters;
- Screen outdoor seating and gathering spaces from the train and vehicular right-of-ways using planters;
- Use native plantings & perennials where possible;
- Plant street trees and specialty trees along all streets and public spaces; and
- Enlist the help of a neighborhood volunteer group for planting and maintenance.

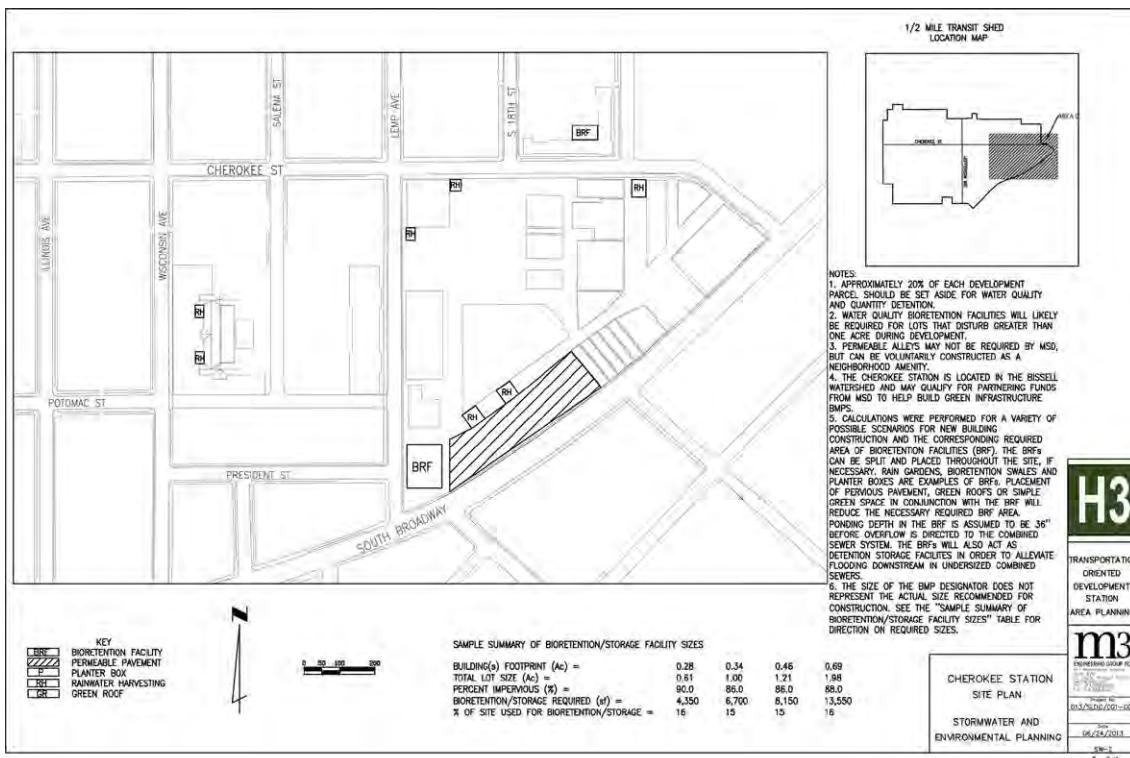


GREEN INFRASTRUCTURE DIAGRAM





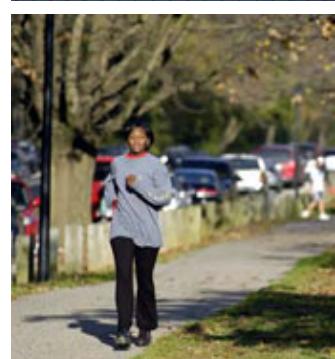
### M3 -- BMPS IN THE STATION AREA VICINITY



### M3 -- BMPS IN THE LEMP BREWERY CAMPUS

## PEDESTRIAN ACCESS & SAFETY, AND CONNECTIVITY

- Unify the two distinct commercial districts east and west on Cherokee through a consistent streetscape that runs from the Lemp Brewery to Pennsylvania Avenue;
- Create street that is comfortable in the evening with pedestrian scale lighting;
- Install pedestrian countdown signals and restrict right-turns-on-red at major intersections;
- Orient bicyclists and pedestrians to destinations and routes throughout the station area through good signage;
- Install Bike Boxes on Jefferson at Cherokee to make bicycling safer;
- Install curb bumpouts on Cherokee at Jefferson to make pedestrian crossing easier and safer;
- Maintain a clear line of sight for both pedestrians and vehicles;
- Replace Cobra-style lights with a lighting standard that is supportive of both automobile and pedestrian uses along Cherokee and Jefferson;
- Maximize sidewalk travel way by reducing street furniture and increasing pedestrian scale lighting;
- Use the Cherokee Station platform to provide pedestrian connectivity to the commercial districts on either side of Cherokee;
- Extend bicycle route west, along Cherokee to Compton Avenue;
- Ensure adequate sidewalk maintenance and prioritization of crosswalk ramp upgrades to facilitate ADA-compliance;
- Widen sidewalks along Jefferson adjacent to the station beyond the 6 foot limit illustrated by the station's conceptual design; and
- Connect to regional bike and trail systems.





## PARKING

Guidelines for providing parking for the proposed development are offered with the goal of accommodating parking needs in an efficient manner while minimizing the supply of spaces. The proposed uses would generate total demand for approximately 2,000 parking spaces. This calculation reflects the mixed-use, urban character of the station area as well as the light rail station's anticipated impact reducing vehicular trips.

Parking needs associated with infill residential development were assumed to be accommodated on the residential properties themselves (rear-facing garage) or on-street. Similarly, parking needs for the retail both at the station and within the Lemp Brewery development could be accommodated on-street. This amounts to approximately 175 spaces.

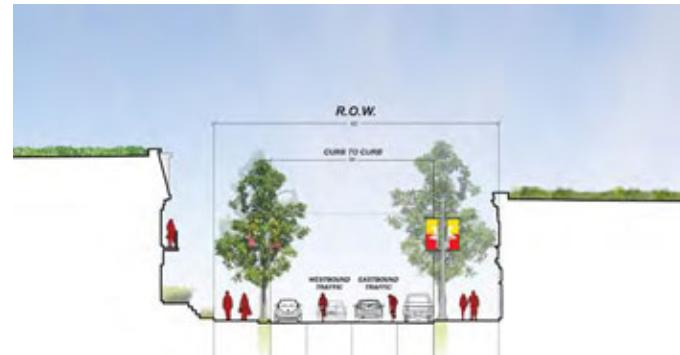
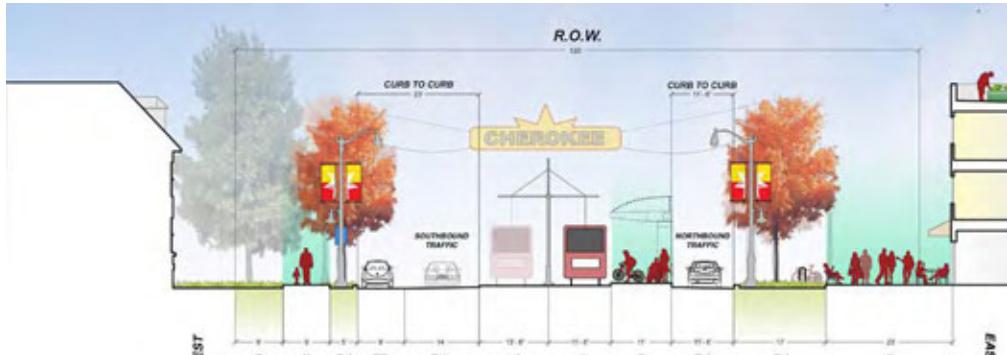
While surplus on-street parking capacity could likely accommodate additional development driven demands, the remaining parking need (1,825 spaces) should be served by dedicated off-street parking facilities. According to Development Strategies, off-street spaces would be necessary for these uses to attract residential and businesses' lease rates that are sufficient to sustain development. Moreover, forcing the parking needs of large-scale developments onto streets creates shortages that result in adverse neighborhood impacts, including parking districts and management strategies. The long-term approach for the station area is to avoid the need for on-street parking management.

The amount of the off-street space need (1,825 spaces) could be reduced by the concept of shared parking. Offsetting temporal parking demands for businesses and residents could enable the same space to be shared by both uses. For example, a residential space occupied overnight but vacated during the day when the resident is at work could be used by an office worker. The sizable residential and office components of the Lemp Brewery development would offer the greatest opportunity for shared parking. Shared parking could reduce the off-street parking needs of the Lemp Brewery development by up to 25%.

Ultimately, it is recommended that the parking needs of the station area be market based and unregulated. The proposed form-based zoning code will not stipulate minimum parking requirements, as parking needs would likely be particularly dynamic over time as the station area evolves into a Transit Oriented Neighborhood. Instead, property owners and developers will be given autonomy to decide how much parking to provide. Simultaneously, they should be encouraged by the City to provide as few spaces as they feel are needed.

- Establish a zero parking requirement for new development in Neighborhood General Type 1, Neighborhood General Type 3, and Campus Type 1, as they are transit neighborhoods.







## CHEROKEE FORM-BASED DISTRICT RECOMMENDATIONS

Cherokee Station's one-half ( $\frac{1}{2}$ ) mile transit shed also serves as the boundary of the Cherokee Form-Based District. Within this area, a form-based district will apply, as outlined in the building envelope standards recommendations. On the following pages a regulatory requirement specific to Transit Neighborhoods, the absence of parking requirements, is established. While parking will be allowed, the quantity of parking per new development will be determined by the developer according to market demand. All new development within the Form-Based District will abide by the regulations described herein.

### Intent

Building envelope standards regulate the allowable placement of buildings, land uses, and types of buildings; as well as establish requirements for the placement of parking for a given area. The intent of the building envelope standards is to regulate future development to be respectful of building height and use and to concentrate the majority of the commercial and office activity along the Jefferson and Cherokee corridors. Within the Cherokee Form-Based District, building envelope standards have been calibrated to the characteristics of the lower density historic residential areas of the transit shed. Three Building Envelope Standards apply within this Form-Based District: Neighborhood General Type 1, Neighborhood General Type 3, and Campus Type 1. These building envelope standards accommodate a range of building forms and uses ranging from single family residential within the neighborhood, to primary retail along commercial streets and large lot campus conditions within the urban environment. Adoption ordinance should contain language addressing any conflicts with historic district regulations.

### The Regulating Plan

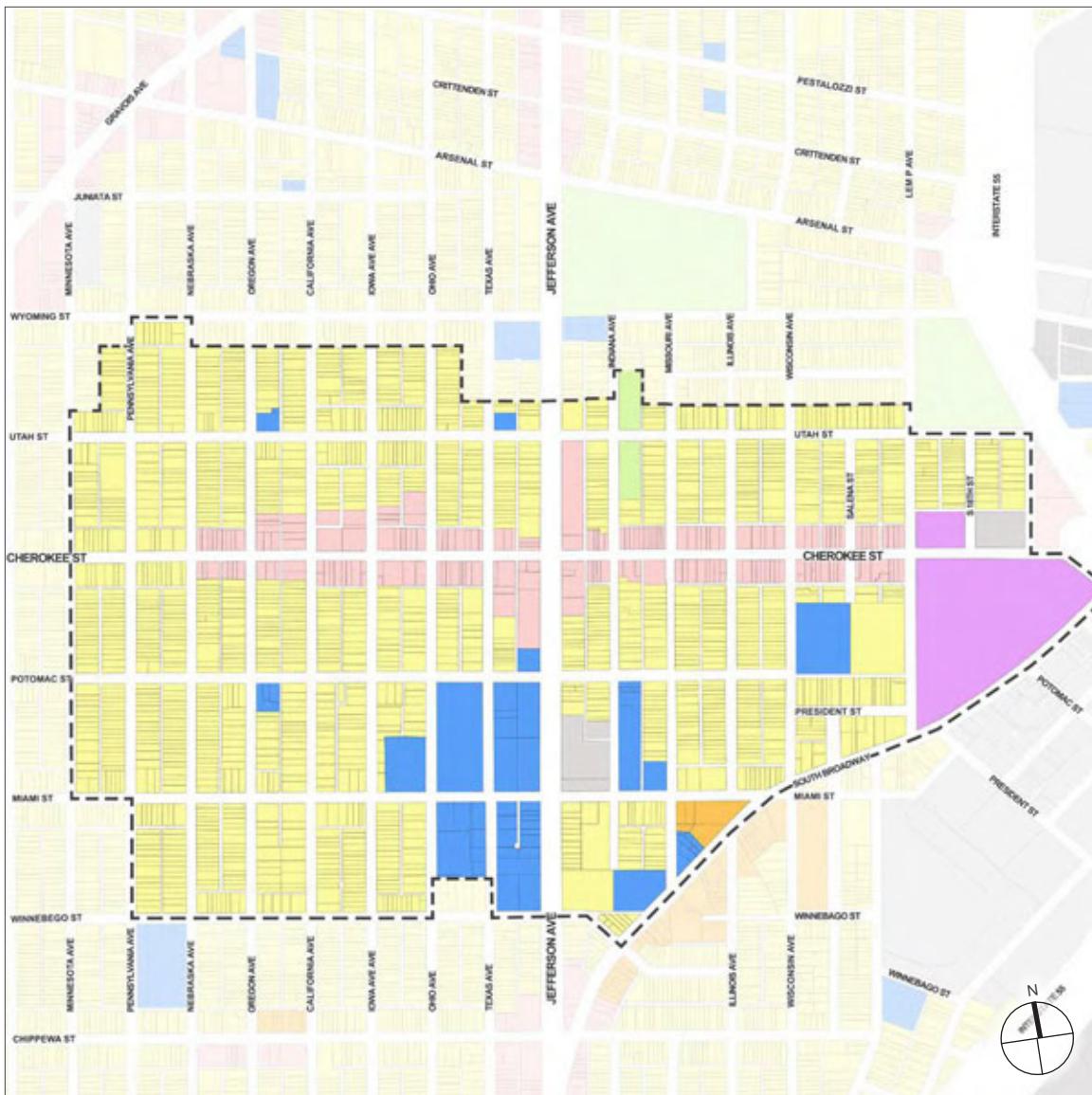
Three building envelope standards are applied throughout the Cherokee Form-Based District in order to meet the population thresholds to shift the station area to Transit Neighborhood General Type 3. The building envelope standard for Neighborhood General Type 3 is applied at the most intense urban condition within the Form-Based District, along Jefferson and Cherokee and along South Broadway, to maintain residential use and provide the appropriate placement and building types to support new primary retail spaces within the historic district. The other building envelope standards present within the Form-Based District are Neighborhood General Type 1, a standard which allows for low to medium density residential use; and Campus Type 1, a newly developed standard for large lot areas that has been applied to the Lemp Brewery site and St. Alexius Hospital.



### PREFERRED STATION AREA PLAN

#### LEGEND

- NORTHSIDE-SOUTHSIDE ALIGNMENT
- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING



#### EXISTING STRATEGIC LAND USE PLAN AT CHEROKEE STATION

#### RECOMMENDED CHANGES TO THE STRATEGIC LAND USE PLAN & OTHER CITY REGULATIONS

#### CHEROKEE STATION FORM-BASED DISTRICT

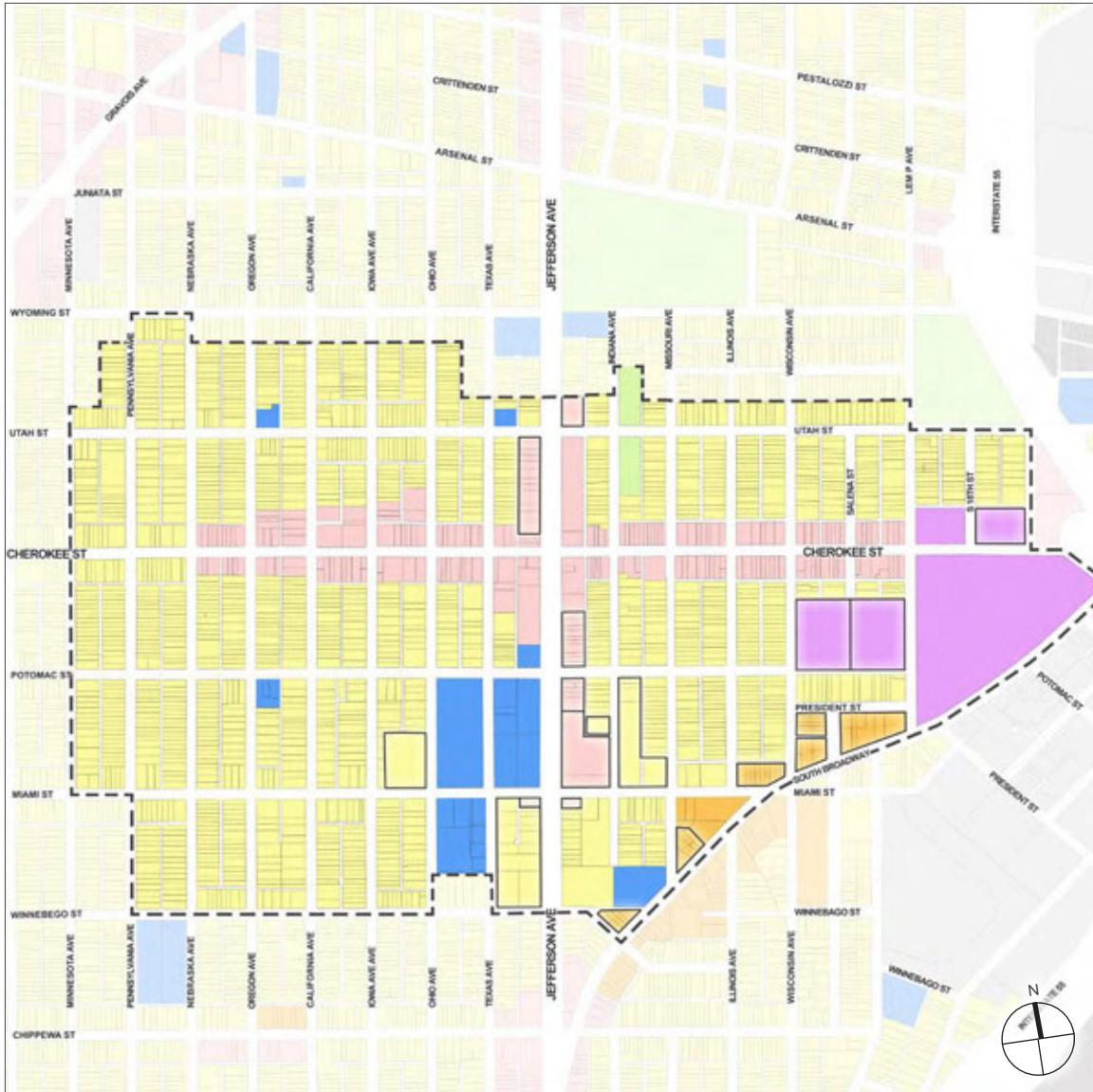
The Strategic Land Use Plan (SLUP; PDA-155-04-CMP) was established by the City of St. Louis on January 5, 2005. The purpose of the plan is to guide, at a very broad level, development and preservation throughout the area in a comprehensive manner. As the intent of the Station Area Planning Process is to establish a vision and development plan for the Cherokee Station Area, it will be necessary to make modifications to the Strategic Land Use Plan in order to ensure that it is concurrent with the Form-Based District.

As a Transit Oriented Neighborhood, parking requirements (as required by the City of St. Louis Revised Code Title 26) have been removed within the Cherokee Station Form-Based District.

The following are the recommended changes to the Strategic Land Use Plan within the Cherokee Station Form-Based District:

#### LEGEND

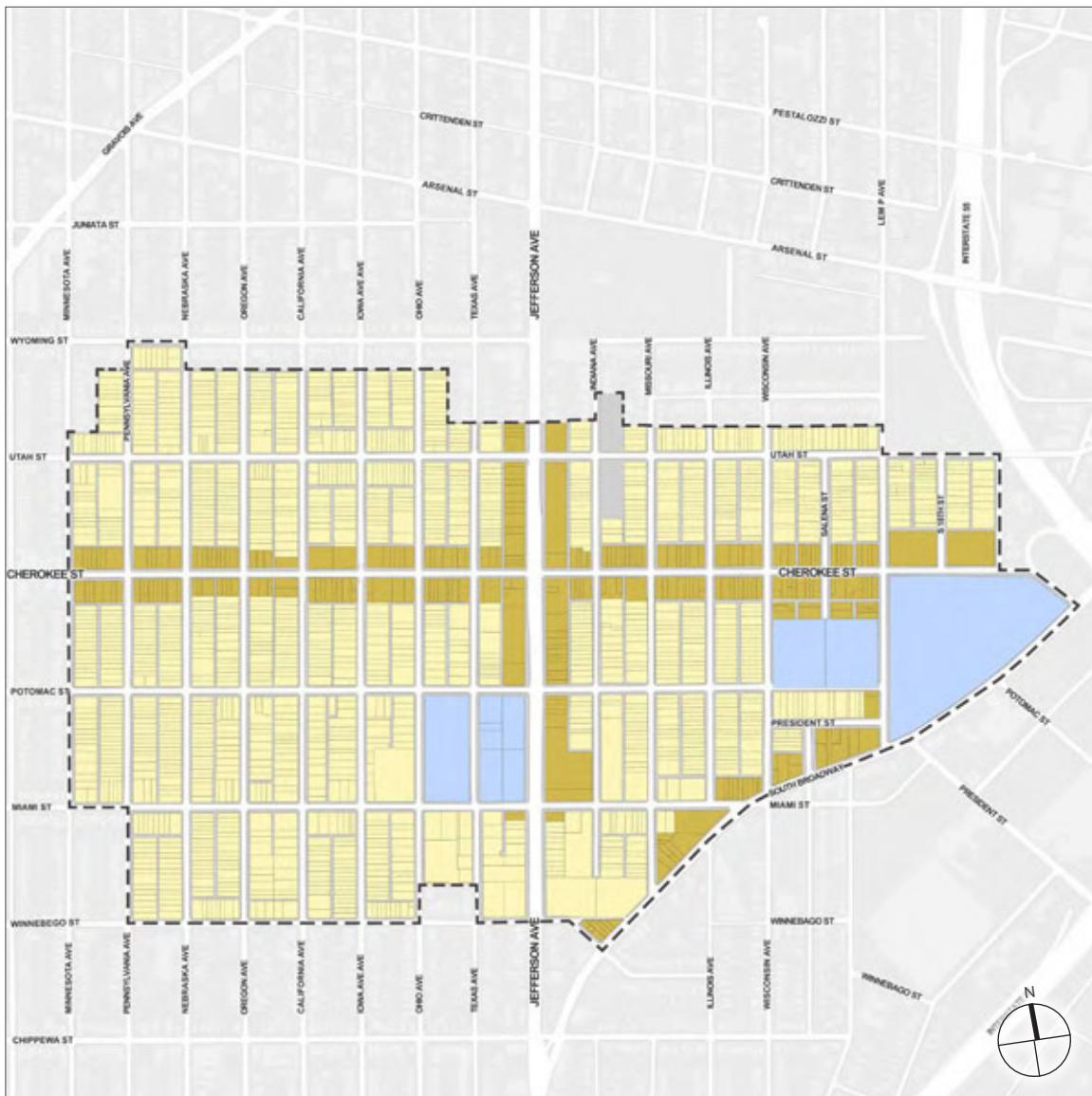
- NEIGHBORHOOD PRESERVATION
- NEIGHBORHOOD DEVELOPMENT
- NEIGHBORHOOD COMMERCIAL
- INSTITUTIONAL
- BUSINESS & INDUSTRIAL
- BUSINESS & INDUSTRIAL DEVELOPMENT
- OPPORTUNITY AREA
- RECREATIONAL OPEN SPACE
- RECOMMENDED LAND USE CHANGE



#### RECOMMENDED CHANGES TO THE STRATEGIC LAND USE PLAN AT CHEROKEE STATION

- A selected few parcels have been changed to Neighborhood Preservation from both Institutional and Neighborhood Commercial in order to support the adjacent historic neighborhood character.
- Along South Broadway Boulevard, parcels within the Form-Based District have been changed to Neighborhood Development from Neighborhood Preservation where there is a significant amount of building and parcel vacancy.
- Parcels adjacent to the Lemp Brewery have been changed to Opportunity Area from Business/Industrial Development where there is significant opportunity to create mixed-use infill development consistent with Transit Oriented Development.
- Along Jefferson, selected Neighborhood Preservation parcels and Business & Industrial parcels have been changed to Neighborhood Commercial to support commercial development along the Alignment within the defined transit shed.

SEE ABOVE MAP FOR RECOMMENDED CHANGES



#### REGULATING PLAN

LEGEND: BUILDING ENVELOPE STANDARDS

- NEIGHBORHOOD GENERAL TYPE 1
- NEIGHBORHOOD GENERAL TYPE 3
- CAMPUS TYPE

#### CHEROKEE STATION FORM-BASED DISTRICT

Three building envelope standards apply within the Cherokee Station Form-Based District. Each building envelope standard regulates building placement, height, type, encroachments, use requirements, and parking requirements.

Each building envelope standard accommodates a particular range of density and experiential character.



#### PRIMARY & SECONDARY STREETS

##### LEGEND

- PRIMARY STREETS
- SIDE STREETS

#### PRIMARY & SIDE STREETS

Primary Streets within the Cherokee Station Form-Based District are:

- Jefferson Avenue
- Cherokee Street
- South Broadway
- Miami Street
- Lemp Avenue

All other streets shall be considered Side Streets.

## **Building Envelope Standards**

### **Neighborhood General Type 1**

The intent of this Building Envelope Standard is to regulate the physical form of the Transit Neighborhood General Type 1 areas in order to preserve and enhance the integrity and quality of this primarily single family, duplex, triplex, fourplex and rowhouse residential area of the neighborhood. The area is designed to provide for sensitive and respectful infill development which allows for the variety of building types and forms, and front yards found in the neighborhood.

### **Neighborhood General Type 3**

The intent of this Building Envelope Standard is to regulate the physical form of the Transit Neighborhood General Type 3 areas in order to establish a flexible mixed-use residential area that enhances and densifies this primarily larger, lot mixed-use area of the neighborhood. The area is designed to provide for architectural appropriate infill development which allows for a variety of building types, uses, heights and forms as well as the creation of a vibrant mixed-use streetscape.

### **Campus Type 1**

The intent of this Building Envelope Standard is to regulate the physical form of the Campus Type's flexible, mixed-use areas of primarily large lot and combined lot developments while maintaining and supporting an active streetscape and a vibrant urban character. The physical form of these areas responds to the existing context by meeting a minimum coverage of the build-to-line and orienting buildings to the primary streets.

## NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



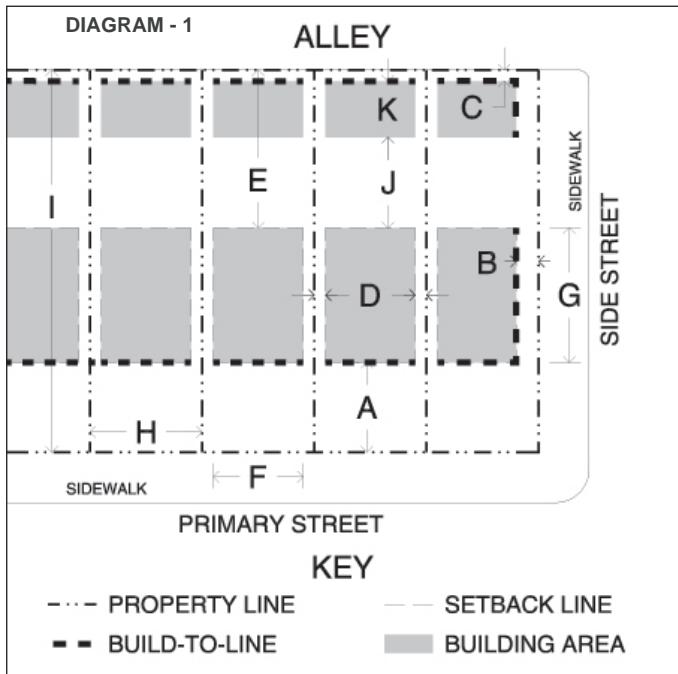
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 1 areas in order to preserve and enhance the integrity and quality of this primarily single family, duplex, triplex, fourplex and rowhouse residential area of the neighborhood. The area is designed to provide for sensitive and respectful infill development which allows for the variety of building types and forms, and front yards found in the neighborhood. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



# NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



## I - BUILDING PLACEMENT

### BUILD-TO-LINE:

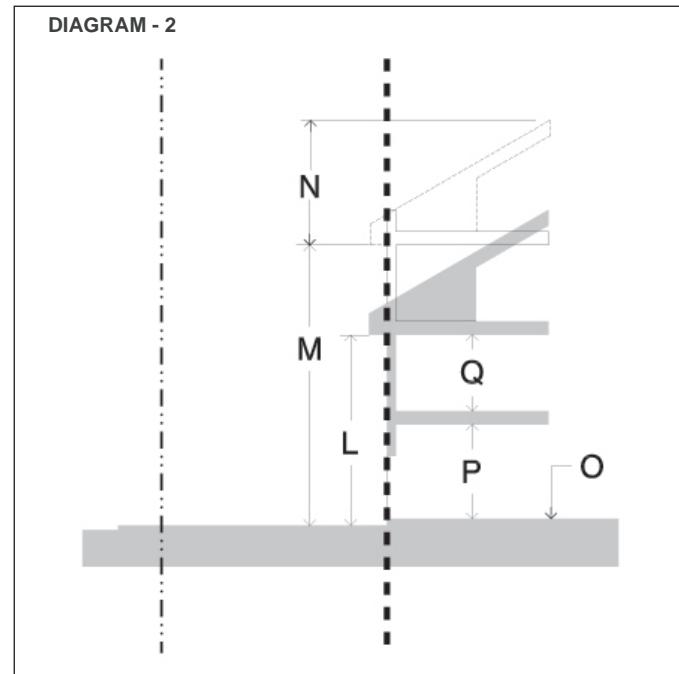
- |                                |                       |
|--------------------------------|-----------------------|
| [A] PRIMARY STREET:            | 25' Min   50' Max (1) |
| [B] SIDE ST., ANC. & MAIN BLDG | 10'                   |
| [C] ALLEY, ANC. BLDG:          | 5'                    |

### SETBACK:

- |                            |                        |
|----------------------------|------------------------|
| [D] SIDE, ANC. & MAIN BLDG | 5' Min   10' Max       |
| [E] ALLEY, MAIN BLDG:      | 60' Min   120' Max (2) |

### BUILDING FORM:

- |                          |                                   |
|--------------------------|-----------------------------------|
| [F] PRIMARY STREET:      | At least 80% of Build-to-Line     |
| [G] SIDE ST., MAIN BLDG: | At Least 25% of Build-to-Line     |
| [H] LOT WIDTH:           | Per Existing                      |
| [I] LOT DEPTH:           | Per Existing                      |
| [J] BETWEEN BLDGS:       | 25' Min b/t Main & Anc. Buildings |
| [K] DEPTH OF ANC. BLDG:  | 30' Max                           |



## II - BUILDING HEIGHT

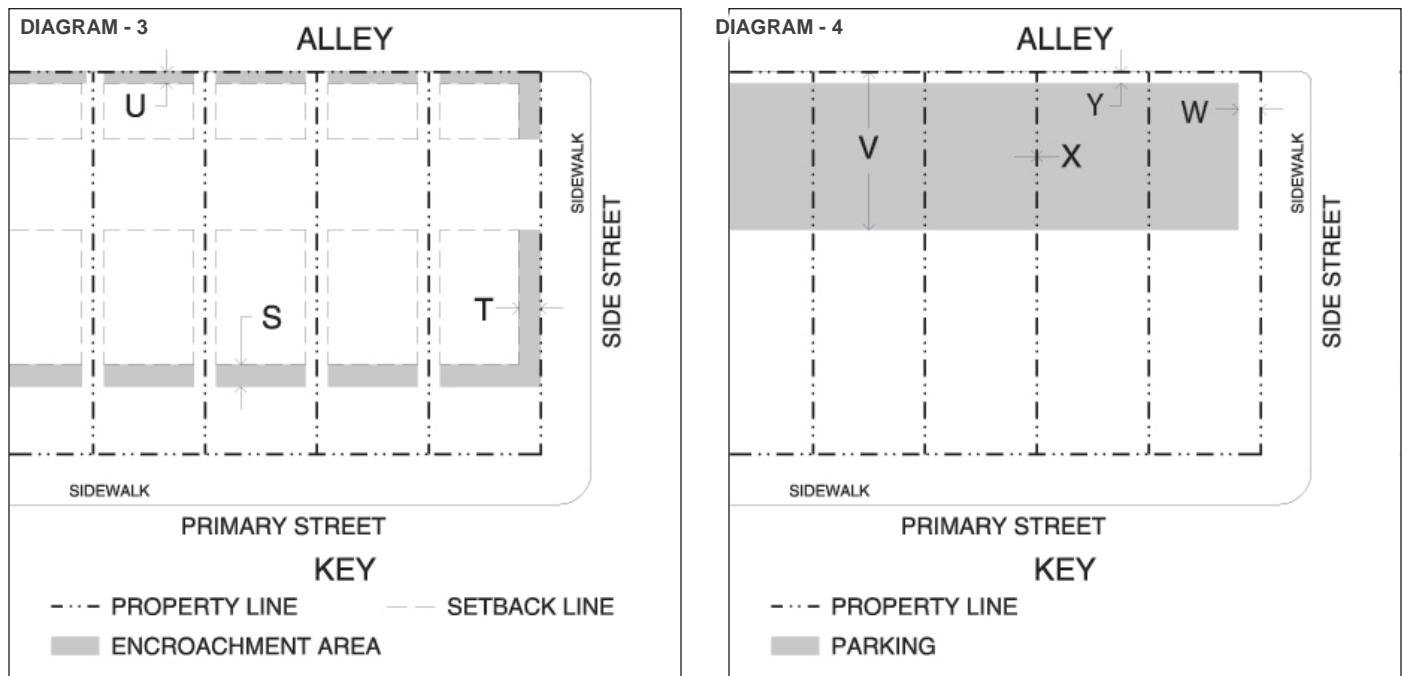
- |  |  |
|--|--|
| [L] BUILDING HEIGHT MINIMUM:                       | 2 Stories and 25'  |
| [M] BUILDING HEIGHT MAXIMUM:                       | 3 Stories and 40'  |
| [N] MAX FROM B.O. EAVE<br>TO T.O. PARAPET OR ROOF: | 15' Max  |
| [O] FINISHED GRND FLOOR LEVEL:                     | 1' Min   3' Max<br>Above Back of Sidewalk<br>or Adjacent Lot Level |
| [P] FIRST FLOOR CEILING HTS:                       | 10' Min   12' Max (F to C)   |
| [Q] UPPER FLOORS CEILING HTS:                      | 8' Min   10' Max (F to C)  |
| [R] ANC. BLDG. MAX. HEIGHT                         | 3 Stories and 40' (3)  |

## III - BUILDING TYPES

- Detached Single Family Dwelling
- Rear Garage
- Carriage House
- Duplex, Triplex, and Fourplex
- Rowhouse and Courtyard Rowhouse

FOR REFERENCE NOTES REFER  
TO FINAL PAGE OF THIS TYPE.

## NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



### IV - ENCROACHMENTS

#### LOCATION:

[S] PRIMARY STREET:	12' Max
[T] SIDE STREET:	10' Max
[U] ALLEY:	5' Max

### V - USE REQUIREMENTS

GROUND FLOOR USES: Residential

UPPER FLOOR(S) USES: Residential

### VI - PARKING REQUIREMENTS

#### LOCATION:

[V] PRIMARY SETBACK:	60' Max
[W] SIDE STREET SETBACK:	10' Min
[X] SIDE SETBACK:	0', If Surface Lot; Per Main Building if Structured Parking
[Y] ALLEY SETBACK:	5' Min

#### REQUIRED SPACES: (4)

RESIDENTIAL USES: One (1) Off-Street Parking Space Per Dwelling Unit

## **NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)**

### **VII - REFERENCE NOTES**

1. The Build-to-Line must match the average Front Facade Line of the Block Face; and lots with NO Primary Street or Side Street frontage (abutting adjacent properties) are exempt from the Primary Street Build-to-Line dimensional requirements, and are only required to have a five foot (5') setback on said frontage.
2. Lots with NO Alley frontage (abutting adjacent properties) are exempt from the Alley, Main Building Build-to-Line dimensional requirements; and are only required to have a five foot (5') setback on said frontage.
3. In no case shall the Ancillary Building have a height greater than that of the Main Building.
4. Within the Cherokee Transit Station Area, required spaces do not apply.

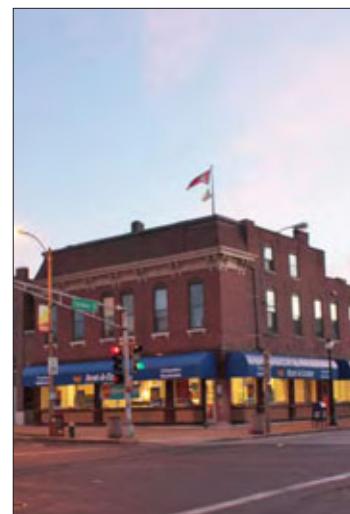
## NEIGHBORHOOD GENERAL TYPE 3 (NG3-TOD)



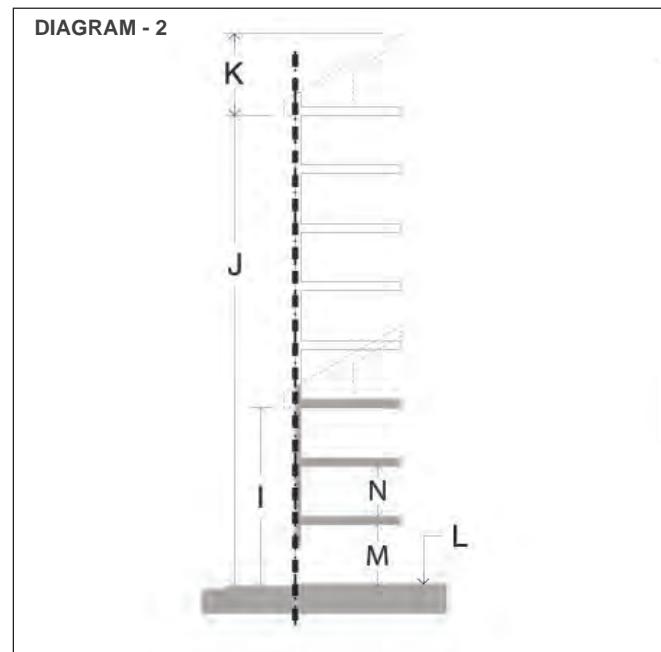
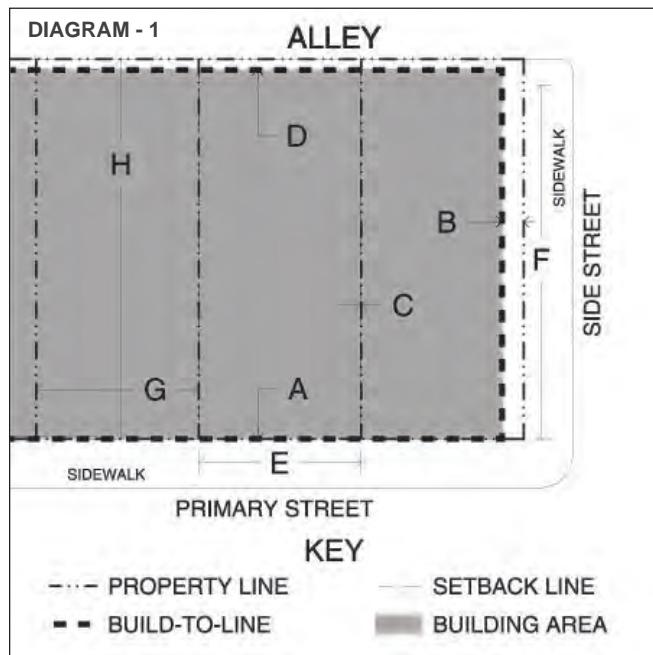
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 3 areas in order to establish a flexible mixed-use residential area that enhances and densifies this primarily larger, lot mixed-use area of the neighborhood. The area is designed to provide for architectural appropriate infill development which allows for a variety of building types, uses, heights and forms as well as the creation of a vibrant mixed-use streetscape. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



## NEIGHBORHOOD GENERAL TYPE 3 (NG3-TOD)



### I - BUILDING PLACEMENT

#### BUILD-TO-LINE:

- [A] PRIMARY STREET: 0'
- [B] SIDE STREET: 0' Min | 10' Max

#### SETBACK:

- [C] SIDE: 0' Min | 10' Max (1)
- [D] ALLEY: 5' Min | 10' Max (2)

#### BUILDING FORM:

- [E] PRIMARY STREET: At Least 80% of Build-to-Line (3)
- [F] SIDE STREET: At least 80% of Build-to-Line (4)
- [G] LOT WIDTH: Per Existing
- [H] LOT DEPTH: Per Existing

FOR REFERENCE NOTES REFER  
TO THE FINAL PAGE OF THIS TYPE.

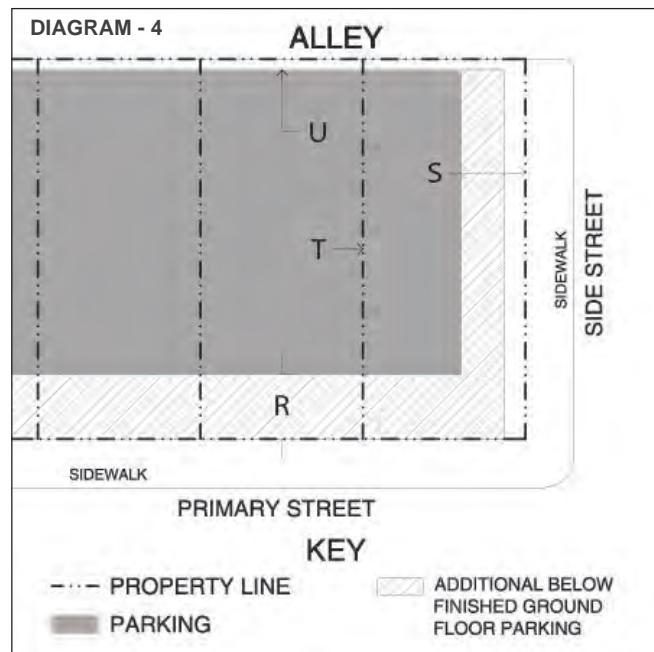
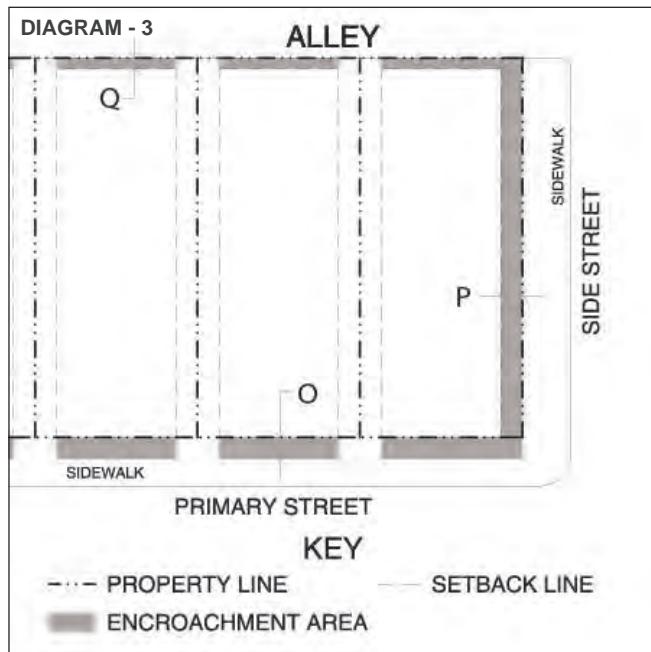
### II - BUILDING HEIGHT

- |  |   |
|--|---|
| [I] BUILDING HEIGHT MINIMUM:                       | 3 Stories and 40'   |
| [J] BUILDING HEIGHT MAXIMUM:                       | 5 Stories and 65'   |
| [K] MAX FROM B.O. EAVE<br>TO T.O. PARAPET OR ROOF: | 15' Max   |
| [L] FINISHED GRND FLOOR LEVEL:                     | 1' Min   3' Max<br>Back of Sidewalk Or Adjacent Lot Level For Residential;<br>All Other Uses are Max 6" |
| [M] FIRST FLOOR CEILING HTS:                       | 12' Min   25' Max (F to C)  |
| [N] UPPER FLOORS CEILING HTS:                      | 8' Min   12' Max (F to C)   |
| [N1] MEZZANINES AND PODIUMS:                       | Mezzanines and Podiums<br>Greater Than 1/3 of the Floor Plate Area Shall Be Counted as a Full Story     |

### III - BUILDING TYPES

Rowhouse and Courtyard Rowhouse  
Stacked Flats  
Courtyard Building  
High Rise Residential Building  
Commercial Block Building  
Flex Building  
Liner Building

## NEIGHBORHOOD GENERAL TYPE 3 (NG3-TOD)



## IV - ENCROACHMENTS

### LOCATION:

- [O] PRIMARY STREET: 10' Max
- [P] SIDE STREET: 10' Max
- [Q] ALLEY: 5' Max

## V - USE REQUIREMENTS

GROUND FLOOR USE:  
Office (5)  
Primary Retail  
Residential  
Secondary Retail  
Special

UPPER FLOOR(S) USE:  
Office (5)  
Residential  
Special

## VI - PARKING REQUIREMENTS

### LOCATION:

- [R] PRIMARY STREET SETBACK: 30' Min (7)
- [S] SIDE STREET SETBACK: 30' Min (8)
- [T] SIDE SETBACK: 0', If Surface Lot; Per Main Building if Structured Parking
- [U] ALLEY SETBACK: 5' Min

### REQUIRED SPACES: (9)

OFFICE USES:  
< 7,500 SQ FT: No Off-Street Parking Requirement  
> 7,500 SQ FT: One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT

PRIMARY RETAIL USES:  
< 3,000 SQ FT: No Off-Street Parking Requirement  
> 3,000 SQ FT: One (1) Space Per 700 SQ FT in Excess of the 3,000 SQ FT

RESIDENTIAL USES:  
One (1) Space Per Dwelling Unit

SECONDARY RETAIL USES:  
< 7,500 SQ FT: No Off-Street Parking Requirement  
> 7,500 SQ FT: One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT

## **NEIGHBORHOOD GENERAL TYPE 3 (NG3-TOD)**

### **VII - REFERENCE NOTES**

1. For buildings with Dwelling Units primarily opening to side yards, Side Setback is required to be ten feet (10'). Buildings higher than three (3) stories and forty feet (40') are required to have a ten foot (10') Side Setback.
2. Lots with NO Alley frontage (abutting adjacent properties) are required to have a five foot (5') setback on said frontage.
3. This percentage (%) can be adjusted to fifty percent (50%) in the case of the following Building Types: Courtyard Rowhouse and Courtyard Building .
4. Corner Lots will be treated as having a Primary Street for the first thirty (30') feet of the building facing any Side Street; and shall thus conform to the Primary Street Build-to-Line for that length of Building Facade.
5. This figure reflects an additional dimension of thirty feet (30') beyond the Primary Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
6. This figure reflects an additional dimension of twenty feet (20') beyond the Side Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
7. Special uses are not allowed within the Cherokee Station Area.
8. Within the Cherokee Transit Station Area, required spaces do not apply.

## CAMPUS TYPE 1 (CM1-TOD)



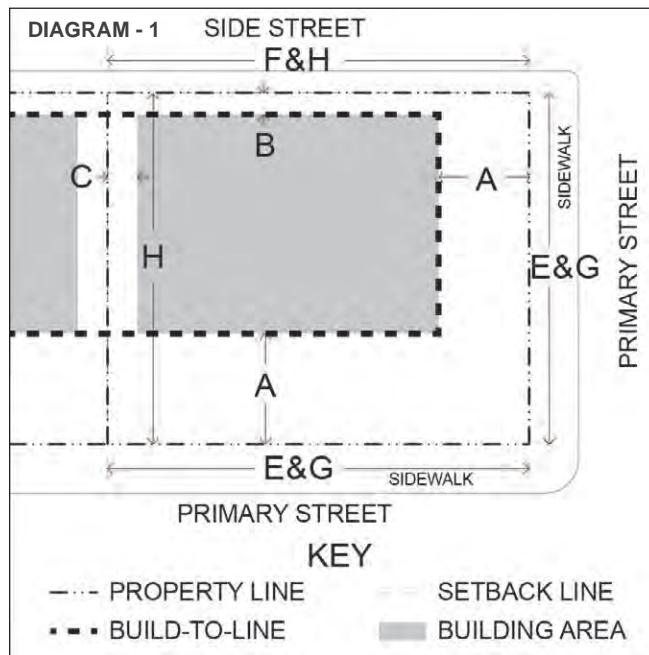
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of Campus developments, defined as large-lot developments with multiple Building Types. Campuses are singular, identifiable sites within the district, bounded by public streets and typically featuring unifying characteristics. The area is designed to allow for a variety of urban business, industrial, institutional, and academic uses while maintaining and supporting an active streetscape and a vibrant urban character. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



## CAMPUS TYPE 1 (CM1-TOD)



### I - BUILDING PLACEMENT

#### BUILD-TO-LINE:

- [A] PRIMARY STREET: 30' Min | 80' Max (1)  
 [B] SIDE STREET: 0' Min | 10' Max (2)

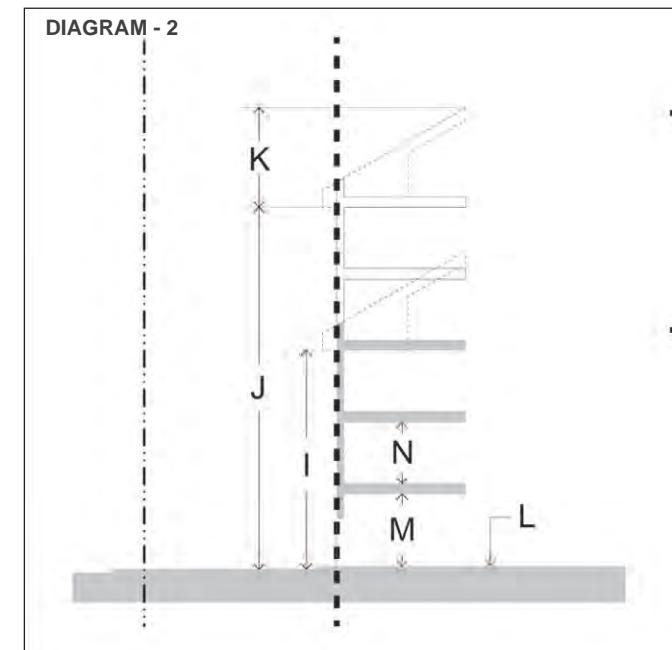
#### SETBACK:

- [C] SIDE: 0' Min | 10' Max (3)  
 [D] ALLEY: Not Applicable (3,4)

#### BUILDING FORM:

- [E] PRIMARY STREET: At Least 60% of Build-to-Line  
 [F] SIDE STREET: At Least 30% of Build-to-Line  
 [G] LOT WIDTH: At Least 500' (5)  
 [H] LOT DEPTH: At Least 425' (5)

FOR REFERENCE NOTES REFER  
TO FINAL PAGE OF THIS TYPE



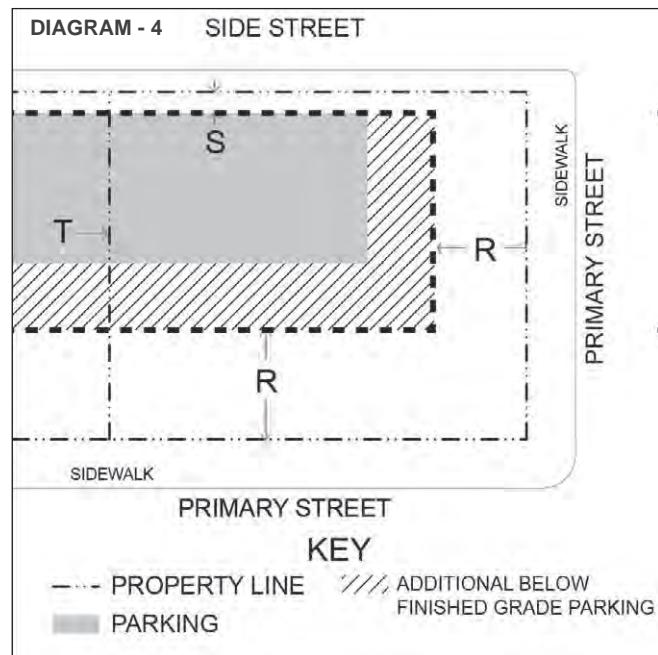
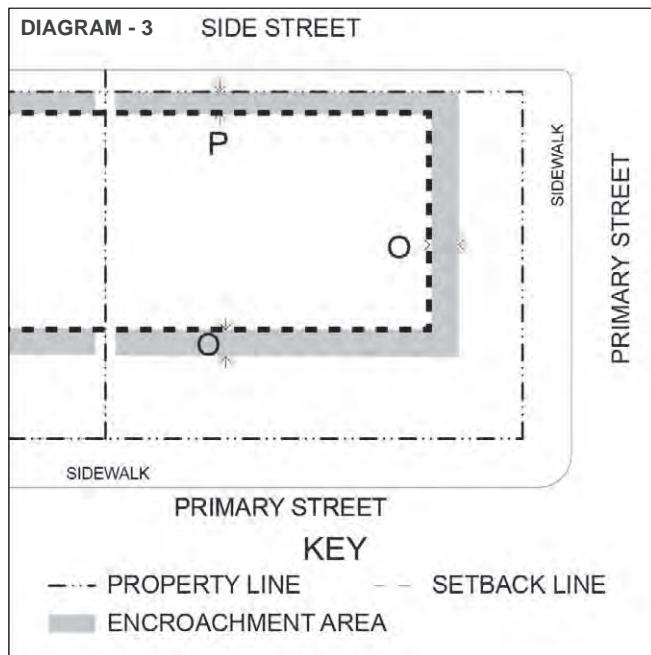
### II - BUILDING HEIGHT

- |  |   |
|--|---|
| [I] BUILDING HEIGHT MINIMUM:                       | 3 Stories and 40' (6)   |
| [J] BUILDING HEIGHT MAXIMUM:                       | 5 Stories and 65'   |
| [K] MAX FROM B.O. EAVE<br>TO T.O. PARAPET OR ROOF: | 15' Max   |
| [L] FINISHED GRND FLOOR LEVEL:                     | 2' Min   3' Max<br>Back of Sidewalk Or Adjacent Lot Level For Residential;<br>All Other Uses are Max 6" |
| [M] FIRST FLOOR CEILING HTS:                       | 12" Min   25' Max (F to C)  |
| [N] UPPER FLOORS CEILING HTS:                      | 8' Min   15' Max (F to C)   |
| [N1] MEZZANINES AND PODIUMS:                       | Mezzanines and Podiums<br>Greater Than 1/3 of the Floor Plate Area Shall Be Counted as a Full Story     |

### III - BUILDING TYPES

- Commercial Block Building (7)
- Flex Building (7)
- Live|Work Units (7)
- Liner Building (7)
- Civic|Institutional Building (7)
- Industrial Building (To Be Developed)(7)

## CAMPUS TYPE 1 (CM1-TOD)



## IV - ENCROACHMENTS

### LOCATION:

[O] PRIMARY STREET:	12' Max
[P] SIDE STREET:	10' Max
[Q] ALLEY:	Not Applicable (8)

## V - USE REQUIREMENTS

GROUND FLOOR USE:	Office Primary Retail Light Industrial Civic Institutional
UPPER FLOOR(S) USE:	Office Residential Light Industrial Civic Institutional

## VI - PARKING REQUIREMENTS

### LOCATION:

[R] PRIMARY STREET SETBACK:	60'-110' Min (9)
[S] SIDE STREET SETBACK:	30'-40' Min (10)
[T] SIDE SETBACK:	0', If Surface Lot; Per Main Building if Structured Parking
[U] ALLEY SETBACK:	Not Applicable (11)

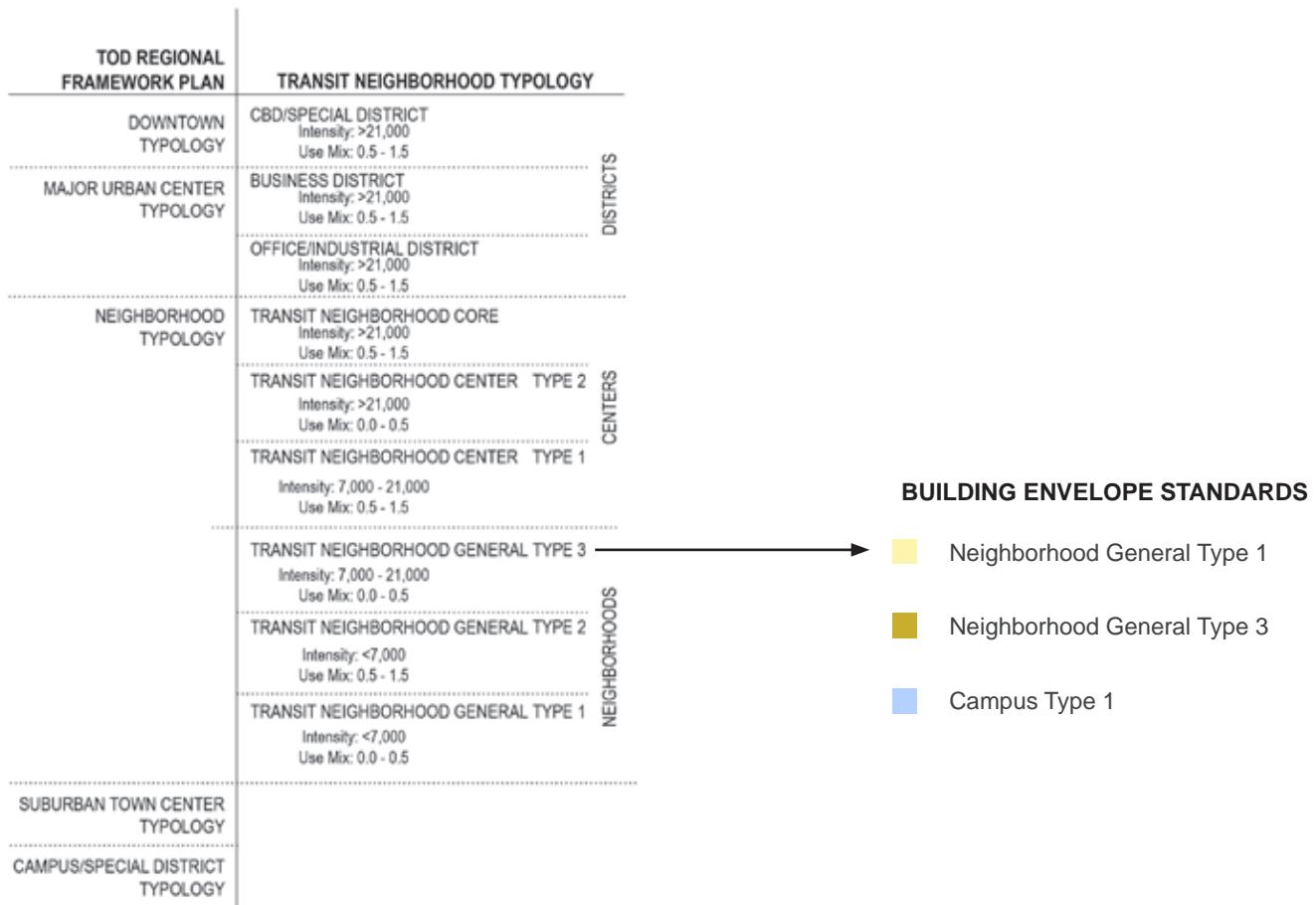
### REQUIRED SPACES:

OFFICE USES: (12)	
< 7,500 SQ FT:	No Off-Street Parking Requirement
> 7,500 SQ FT:	One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT
PRIMARY RETAIL USES: (12)	
< 3,000 SQ FT:	No Off-Street Parking Requirement
> 3,000 SQ FT:	One (1) Space Per 700 SQ FT in Excess of the 3,000 SQ FT
RESIDENTIAL USES: (12)	One (1) Space Per Dwelling Unit
SECONDARY RETAIL USES: (12)	
< 7,500 SQ FT:	No Off-Street Parking Requirement
> 7,500 SQ FT:	One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT
INDUSTRIAL USES: (12)	(Parking Requirements to be Established by the City of St. Louis)

## CAMPUS TYPE 1 (CM1-TOD)

### VII - REFERENCE NOTES

1. On all lots, a minimum of two (2) bounding streets must be Primary Streets.
2. Lots may be bounded by Side Streets on the remaining lot lines.
3. Private streets, driveways, and alleys that are internal to the lot shall not be subject to setback requirements; and when the conditions enumerated in the Build-to-Line requirements are fulfilled, side setbacks shall apply to remaining lot lines.
4. Where alleys are present, setbacks shall be from five feet (5') to ten feet (10')
5. Lots shall have a minimum area of five (5) acres, irrespective of lot dimensions; and lot dimensions and lot area shall be measured either (A) by individual lot or parcel; (B) by multiple contiguous lots or parcels under single ownership; or (C) by multiple contiguous lots or parcels agglomerated by a legally-enforceable development agreement.
6. Building Heights for buildings interior to the campus block are not required to meet the building height minimum.
7. This Building Envelope Standard allows multiple Building Types per lot.
8. Where alleys are present, setbacks shall be five feet (5') Maximum.
9. This figure reflects and additional dimension of thirty feet (30') beyond the Primary Street Build-to-Line for on grade and above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
10. This figure reflects and additional dimension of thirty feet (30') beyond the Side Street Build-to-Line for on grade and above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
11. Where alleys are present, setbacks shall be five feet (5') Minimum.
12. Within the Cherokee Transit Station Area, required spaces do not apply.



## LINKING BUILDING ENVELOPE STANDARDS TO TRANSIT NEIGHBORHOOD TYPOLOGY

For Transit Neighborhood General Type 3, the Building Envelope Standards described in this section define an appropriate character and scale for new development in the station area.

When Applied, the Form Base District establishes parameters for new, high-density development along the historic district's commercial corridors. The code maintains lower density residential areas throughout the remainder of the district. Additionally, large campuses are integrated to match the district's building scale.



## IMPLEMENTATION: STRATEGIES & ACTIONS

### DEVELOPMENT STRATEGY FRAMEWORK

Once the Northside-Southside Alignment is established as a project with an implementation timeline, the proposed Cherokee Station would be in a position to more readily meet the aspirational goals of being a station in the Transit Neighborhood General Type 3 if certain steps are taken. As a first step, the City should convene a working group of interested parties focused on the long-term improvement of the station area. Ideally, this team should consist of City employees, developers, neighborhood institution representatives, and area residents. The team should have the power to review proposed plans and make recommendations to applicable City agencies. Other powers could include the ability to recommend developers for specific funding programs and oversight of public infrastructure development. In addition to these review powers, the working group will be charged with communicating opportunities, plans, and the expected benefits of the redevelopment plan to residents, developers, and businesses.

In addition to a project team, steps must be taken to modify the zoning of the station area to promote the desired future land uses. Some industrial zoning designations remain in the area. If left as-is, this zoning could allow future unsuitable uses. Coordination with the proposed form-based code is critical to ensuring the future feasibility of TOD.

During the planning and construction phases of the transit line and station, it is critical that the City take an active approach to land banking for future development. Tax-delinquent properties that are ceded to the City's Land Reutilization Authority—especially those near the intersection of Jefferson and Cherokee—should be land-banked for future TOD development.

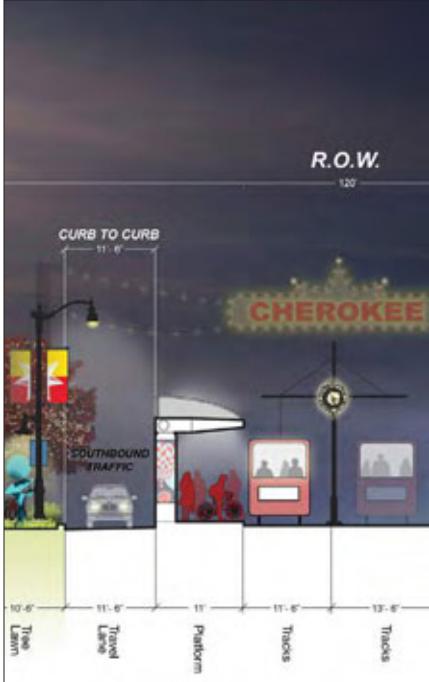
The Preferred Station Plan for the Cherokee Station creates two destination nodes in the station area: one node at the intersection of Jefferson and Cherokee and the second node at the Lemp Brewery. Both nodes would include substantial renovation and new construction. To best achieve this, it is likely that a master developer would be needed to effectively assemble parcels and remain true to the overall vision for the area. Coordinating with the working group, the City should consider the use of certain redevelopment tools in combination or in tandem (TIF, Chapter 99, Chapter 353, etc.) to select a developer.

Locating gap financing is of utmost importance to the long-term success of the Cherokee Station area as TOD. It is critical that each financing package be carefully scrutinized, ideally by both City officials and the working group, to determine the best use of public or private funds for an individual project. A general framework for the use of public and private redevelopment tools is listed below:

- TIF: public infrastructure costs, land acquisition, and commercial property renovations;
- CID/TDD: street improvements, security patrols, beautification, and other enhancements;
- Chapter 353: tax abatement to lure developers or tenants;
- Chapter 99: tax abatement for individual property owners;
- Private Grants: new construction, public infrastructure

DEVELOPMENT TYPE	STAGE 1	STAGE 2	STAGE 3
NEW RESIDENTIAL	X	X	X
RENOVATED RESIDENTIAL	X	X	
OFFICE		X	X
RETAIL	X	X	

Cherokee Station Preferred Station Area Plan	
	Preferred Scenario
Market Rate Residential (units)	395
Affordable Residential (units)	0
Renovated Residential (units)	480
Retail (sf)	60,000
Office (sf)	450,000



**DETAIL OF JEFFERSON AVE SECTION**

## TRANSPORTATION FRAMEWORK

Light rail transit and Transit Oriented Development are inherently sustainable. The transit improvements at Cherokee Station operate on the social, economic, and ecological platforms of the City's Sustainability Plan. The construction of the Alignment will reduce the demand for car ownership and the emission of greenhouse gas. Improvements to the bicycle network, including more places to store and maintain bicycles and clearer signage will make the area much safer and well connected for bicyclists. The train will connect people to jobs and services throughout the City, increasing walkability and reducing the need for cars. The transit station provides people of all income levels equal access to amenities, business opportunities, transportation, and safe and healthy neighborhoods. The presence of the station at Cherokee will give all communities along the Alignment access to a multi-use transit accessible arts and culture district.

### Walkability

**A** The existing sidewalks along Cherokee, particularly east of Jefferson, are somewhat limited in width and cannot be widened without impacting building facades or the street width. Modifications to the sidewalks along Cherokee, east of Jefferson, should be made to stimulate pedestrian connections between the station and the Lemp Brewery mixed-use development:

- Tier 1. Resurface sidewalks and construct ADA-compliant ramps at all intersections
- Tier 2. Revisit landscaping, street furniture, and lighting to maximize the travel way afforded by the existing sidewalk width

**B** Increase drivers' awareness of pedestrians and enhance pedestrian safety at the intersection of Jefferson and Cherokee:

- Tier 1. Install pedestrian countdown signals and restrict right-turns-on-red as required for ADA amendments
- Tier 2. Install colored or textured crosswalks and pedestrian-scale lighting.
- Tier 3. Install curb bumpouts to provide refuge for pedestrians and to decrease the effective crossing distance

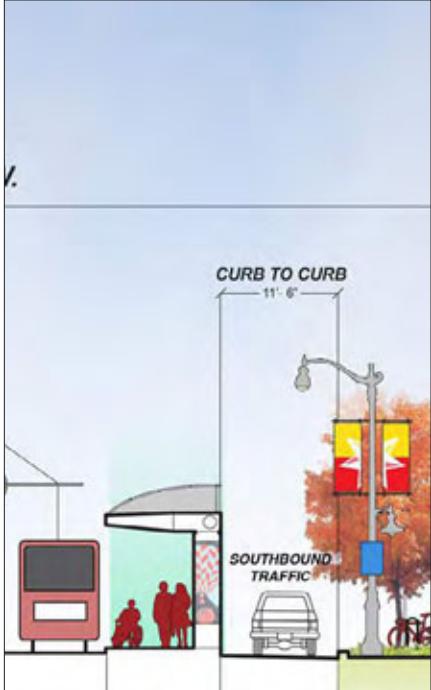
Alternative	Proposed Development	Mode	Daily Demand	Comments
1 Neighborhood General Type 3	1,100 RESIDENTIAL UNITS	Transit Trips	1,312	
		Auto Trips	6,894	689 peak hour auto trips
		Parking Spaces	1,484	720 within Lemp site
2 Neighborhood General Type 1	276 RESIDENTIAL UNITS 1,000,000 sq. ft. OFFICE	Transit Trips	1,654	
		Auto Trips	12,474	1,247 peak hour auto trips
		Parking Spaces	3,084	2,115 within Lemp site
Preferred Alternative	650 RESIDENTIAL UNITS 60,000 sq. ft RETAIL 450,000 sq. ft. OFFICE	Transit Trips	1,137	
		Auto Trips	8,358	836 peak hour auto trips
		Parking Spaces	2,017	1,651 within Lemp site

#### WALKABILITY RECOMMENDATIONS



C Anticipated traffic volumes along Jefferson would enable the corridor to be reduced to one through lane in each direction plus dedicated left-turn lanes at major intersections. As a result, there is flexibility to modify the layout of the station and/or widen sidewalk widths along Jefferson:

- Tier 1. Widen sidewalks along Jefferson adjacent to the station beyond the six feet limit illustrated by the station's conceptual design.
- The existing layout of the street grid within the station area is conducive to pedestrian connectivity between the station and its surrounding neighborhoods. Care should be taken to ensure adequate sidewalk maintenance and prioritization of crosswalk ramp upgrades to facilitate ADA-compliance.



DETAIL OF JEFFERSON AVE SECTION

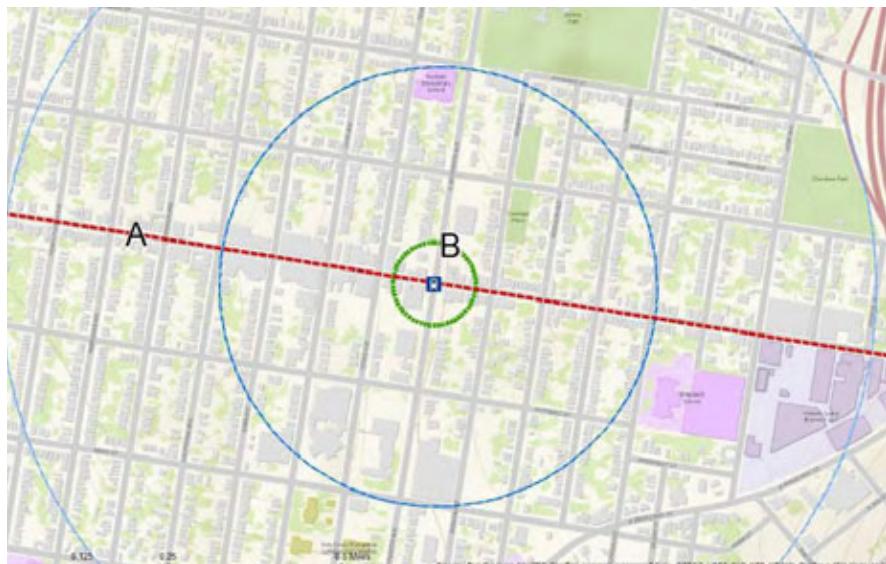
### Bikability

- A The existing share-the-road bike route along Cherokee adequately connects the proposed station with the surrounding neighborhood and the Lemp Brewery mixed-use development. Additionally, the quiet neighborhood streets within the station area serve as suitable conveyors of bicycle traffic. Extending the Cherokee Street bicycle route west of Compton Avenue could potentially capture even more bicycle to light rail transfers;
- B The effective pavement width of Cherokee at Jefferson should be modified to reduce the vehicular space by installing bike boxes, which are painted spaces at intersections where bicyclists can safely wait for a green signal. This would enhance bicycle safety as well as discourage vehicles from making right-turns-on-red, which should be prohibited anyway as they are generally hazardous to pedestrians and cyclists

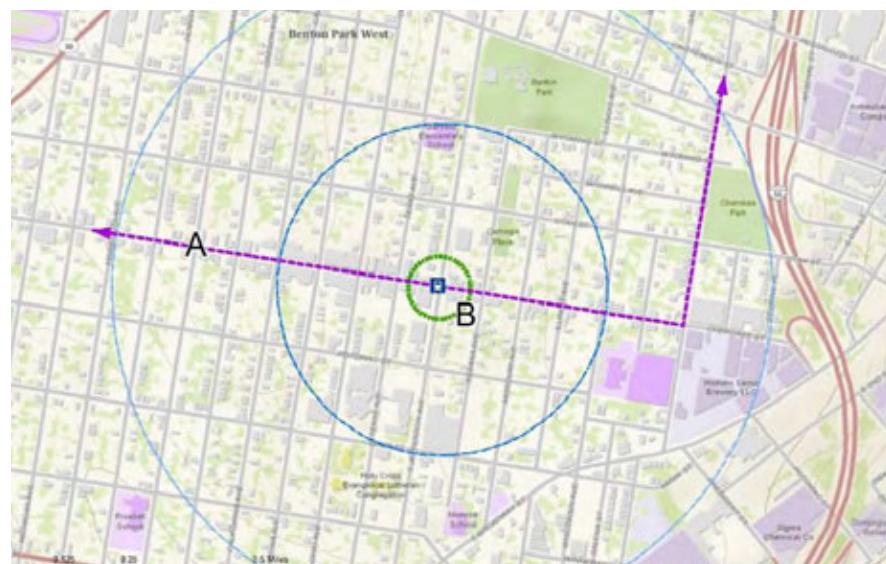
### Transit

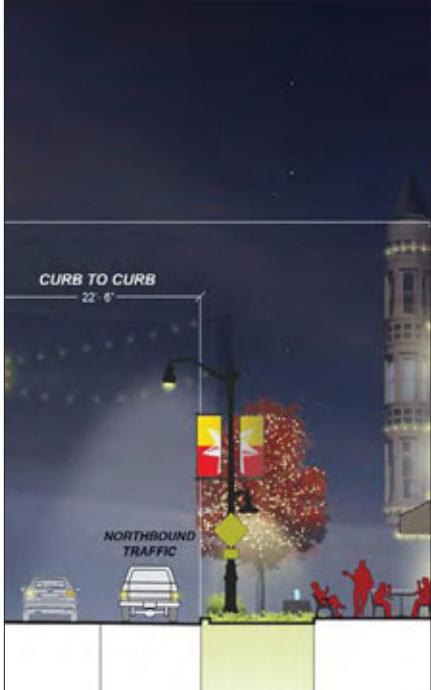
- A The #73 bus runs east-west along Cherokee as a local shuttle penetrating neighborhoods. Increasing service headways on the #73 bus would encourage more bus to light rail transfers and directly link the Cherokee Station to the Lemp Brewery mixed-use site. This line currently maintains 30 minute headways during normal operating hours. In order to attract usage of the route as a connecting service to light rail, headways should be increased to at least 15 minutes:
  - Tier 1. Increase headways to 15 minutes
  - Tier 2. Increase headways to 10 minutes
- B Currently, the #11 bus line services Chippewa Street west of Jefferson and then Jefferson north of Chippewa Street. The Jefferson portion of this service would be redundant with the proposed light rail alignment and should be eliminated altogether. The portion of the service along Chippewa Street would still be useful, and thus it may be appropriate to terminate the #11 bus at the proposed Keokuk Station, which is one station south of Cherokee Station. The Keokuk Station could potentially serve as a transit hub for the area, as it also connects with the #40 Broadway bus route.

## BIKABILITY RECOMMENDATIONS



## TRANSIT RECOMMENDATIONS





### Vehicular Traffic

- A Existing and anticipated traffic volumes on Jefferson warrant reducing the roadway to one through lane in each direction plus dedicated left-turn lanes at major intersections. Reducing streets to one lane would eliminate passing maneuvers, which results in more uniform traffic flows and speeds. This, in turn, cultivates safer driver behavior, which leads to fewer crashes and helps encourage pedestrian activity along the corridor:
  - Tier 1: Implement a road diet along Jefferson south of Gravois Avenue, whereby Jefferson would be reduced to one lane in each direction plus turn lanes
- B A roundabout should be provided at Cherokee and the on-ramp to southbound Interstate 55. The existing intersection is large and the generous radii promote the flow of traffic onto the interstate at maximum speed. The roundabout would seek to calm traffic at the intersection and delineate the unused interstate right-of-way. It would also serve as a gateway to the Cherokee Station area. A roundabout would more effectively serve existing traffic, while at the same time, provide ample reserve capacity to accommodate future increases in traffic volume that might occur as the adjacent Lemp Brewery mixed-use development matures:
  - Tier 1: Construct a roundabout at Cherokee and the southbound Interstate 55 on-ramp
  - The existing off-ramp from northbound Interstate 55 to Broadway does not accommodate left-turns onto westbound Broadway. As a result, this important interchange does not offer connection from northbound Interstate 55 into the station area. Such a connection would likely be critical to the future success of the Lemp Brewery mixed-use redevelopment. Providing a roundabout at Broadway and Utah Street to facilitate this connection would eliminate the costly reconstruction of the ramp. The roundabout would allow traffic from the Interstate 55 off-ramp to make a U-turn on Broadway and proceed southwest into the station area:
    - Tier 2: Construct a roundabout at Broadway and Utah Street
  - The existing Interstate 55/Broadway interchange only provides ramp connections to/from the south on the interstate. For access to/from Interstate 55 north, motorists must currently travel to Arsenal Street. Therefore, Lemp Avenue becomes an important traffic conduit between the Interstate 55 north ramps and eastern portions of the station area and, in particular, the Lemp Brewery mixed-use redevelopment. Lemp Avenue should be treated accordingly and efforts to hinder traffic flow should be avoided.:
    - Tier 1: Restrict traffic flow inhibiting treatments from being implemented along Lemp Avenue between Cherokee and Arsenal Streets

## VEHICULAR TRAFFIC RECOMMENDATIONS



E Local streets should be extended through the Lemp Brewery mixed-use development to better connect the development with adjacent areas and minimize the barrier and superblock effects that are exuded by the complex simply because of its size. The positioning of the historic buildings would readily facilitate an extension of President Street through the site east and west. Similarly, it appears that 18<sup>th</sup> Street and DeMenil Place could be extended through the redevelopment north and south. The streets should be constructed as multi-modal, complete streets that accommodate parking and emphasize local connections, particularly for pedestrians and bicyclists, while discouraging through vehicular traffic:

- Tier 1: Extend President Street, 18<sup>th</sup> Street, and DeMenil Place as local streets within the Lemp Brewery mixed-use development.



**DETAIL OF JEFFERSON AVE SECTION**



## GREEN INFRASTRUCTURE FRAMEWORK

In support of the City's sustainability initiatives, complete streets including green infrastructure and retrofitted buildings are prescribed around the station area. Green infrastructure is a defining element of street improvements and new developments in the station area. Local species of plants remediate toxins in the ground and control and collect rain water to increase water quality before it gets into the drinking supply; green roofs with the potential for urban agriculture and new trees reduce the heat island effect and create comfortable walking environments along Cherokee and on Jefferson leading to Benton Park and beyond. Green infrastructure also provides a venue for public art and public space. All of these features combined will increase air quality around the station, enrich the character and experience of the streetscape, and elevate property values around the station.

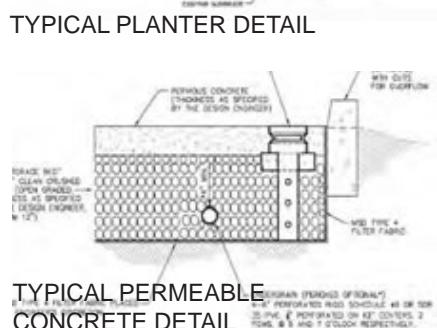
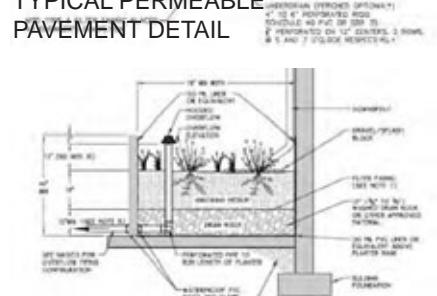
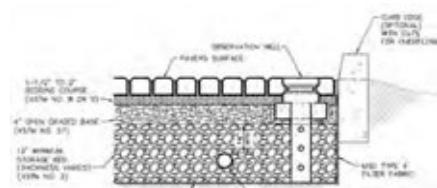
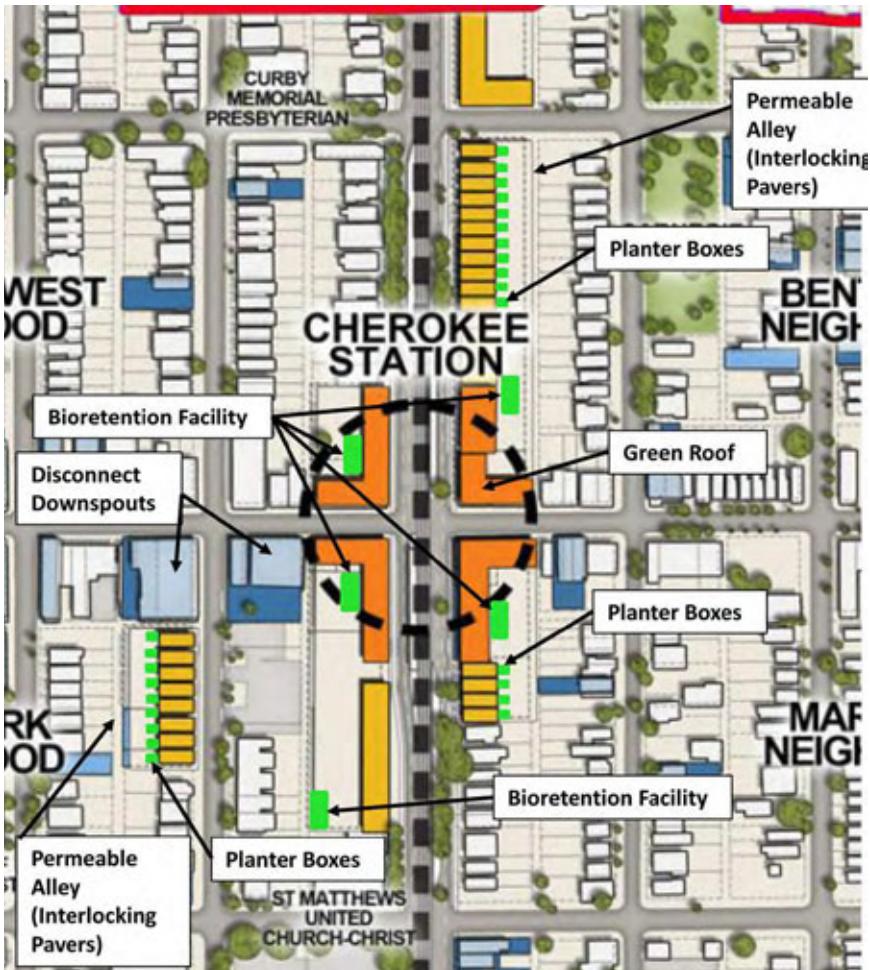
### Impact on Imperviousness/Stormwater Runoff/Water Quality

Development that increases imperviousness will cause an increase in the stormwater (and pollutants) that runs off into the enclosed combined sewer system, as well as an increase in bypass into the Mississippi River during heavy rain events. For the Cherokee Station, it appears that there will be an increase in the percent impervious surface.

### Regulatory & Permitting Requirements

*Stormwater permitting for this project will be administered by the Metropolitan St. Louis Sewer District (MSD). All projects submitted to MSD must be reviewed to determine if stormwater quantity and/or quality management will be required. A project will require stormwater quantity and/or quality management if any of the following apply:*

- *The project is a new development or redevelopment project that disturbs greater than or equal to one acre;*
- *The project on an individual parcel disturbs less than one acre, but it is part of a larger overall, project that disturbs over one acre;*
- *There is a proposed increase in stormwater runoff over two cubic feet per second (cfs) for the 20 year-20 minute design rainfall;*
- *Downstream stormwater problems (insufficient pipe capacity) exist that might require the proposed site to have quantity detention, where less than two cfs increase in runoff is proposed.*



All new development projects must reasonably mimic pre-construction runoff with the aim of preventing or reducing water quality impacts. Any project site that has an existing percent impervious of 20% or less, will be considered new development. Any succeeding or additional development to these sites will also be considered new development. All redevelopment projects must also reasonably mimic pre-construction runoff with the aim of preventing or reducing water quality impacts, by utilizing effective water quality strategies.

The three key components of stormwater quantity and quality management are water quality volume, channel protection storage volume, and flood protection volume. The preferred method to address these components is removing stormwater volume through infiltration.





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## 6 | Preferred Station: Kingshighway



**PROPOSED KINGSHIGHWAY TRANSIT STATION SITE ON NATURAL BRIDGE AVE**

## PREFERRED STATION: KINGSHIGHWAY

### CHARACTER & LOCATION

The proposed Kingshighway Station is located at the intersection of Natural Bridge Avenue and Kingshighway Boulevard in north St. Louis, hereby referred to as Natural Bridge and Kingshighway. The proposed Northside-Southside Alignment runs down the center of Natural Bridge. This portion of Kingshighway is an expansive historic greenway with a 30 to 50 foot wide grassy median that includes trees and lush planters. Kingshighway is lined by religious institutions, residential buildings, and light industrial buildings. There are two city parks located within the station area, Penrose Park and Handy Park, as well as City Academy and Mathews-Dickey Boys & Girls Club.

Natural Bridge at Kingshighway is fronted by several national fast food chain restaurants, light industrial buildings, and some higher density residential buildings. The station area marks the intersection of four neighborhoods, three of which, Mark Twain, Kingsway East, and Kingsway West, are primarily residential in character. The fourth, Mark Twain/I-70 Industrial, is composed of both occupied and unoccupied industrial buildings, with some space given over to warehousing of cars and boats.

The residential areas surrounding the station are strong as evident by the care put into its shared streets and parks, which are a point of great community pride. Families living in these communities have done so for generations, with homes passing from generation to generation and with frequent multi-generational households.

**The station area marks the intersection of four neighborhoods: Mark Twain, Kingsway East, Kingsway West, and Mark Twain/I-70 Industrial.**

The intersection of Natural Bridge and Kingshighway experiences a high volume of vehicular traffic mainly from people traveling south from Interstate 70, neighborhood traffic, and industrial traffic on Natural Bridge. The station area is easily accessible from Interstate 70 to the north, which has helped support the employment character of the station area. There is a fair amount of vacancy around the proposed Kingshighway Station, in both residential and industrial areas.

### TRANSIT SHED EXTENTS

The one-quarter ( $\frac{1}{4}$ ) and one-half ( $\frac{1}{2}$ ) mile transit sheds are, the boundaries of the area and parcels served by transit. Centered on Natural Bridge and Kingshighway, they are a refinement of the five and ten minute walk radii from the transit station. Parcels within the one-quarter ( $\frac{1}{4}$ ) mile transit shed, a five minute walk from a station, should be the focus of future high-density development, as that area has a higher capture rate than the surrounding areas.



## CONTEXT PLAN

### LEGEND

- NORTHSIDE-SOUTHSIDE ALIGNMENT
- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED



**PROPOSED KINGSHIGHWAY TRANSIT STATION SITE ON NATURAL BRIDGE AVE**

The applied transit sheds account for adjacent stations along the proposed rail alignment, proximity of major destinations, and the anticipated attractiveness of the walking environment around the station. These elements help define the geographic limits of the station's ridership capture. For example, the proximity of the proposed Union Boulevard Station reduces the transit shed to the west. The transit shed limits to the north and southeast were marginally extended beyond the ten minute walk radius in order to capture the area's two parks. The transit shed areas are illustrated in the image to the right.

A significant portion of the population around the Kingshighway Station is low income, without access to a vehicle, and transit-dependent. Capture rates for estimating transit users from the population and employment totals within the transit shed were developed with those characteristics in mind. A capture rate of 15% to 20% was deemed appropriate for the one-quarter ( $\frac{1}{4}$ ) mile transit shed and a rate of 10% to 15% was selected for areas beyond one-quarter ( $\frac{1}{4}$ ) mile up to one-half ( $\frac{1}{2}$ ) mile. This approach results in a ridership projection of 650 to 925 daily boardings based on existing land uses.

While each transit shed roughly follows the five and ten minute walk radius respectively, there are some notable exceptions. To the north, the one-half ( $\frac{1}{2}$ ) mile transit shed is bounded by Interstate 70. To the east, the one-half (1/2) mile transit shed is constrained by Newstead Station's transit shed, and runs at the back of the parcels abutting Marcus Avenue. To the west, the one-quarter ( $\frac{1}{4}$ ) mile and one-half ( $\frac{1}{2}$ ) mile transit sheds of Union Station constrain both Kingshighway transit sheds along the center line of Geraldine Avenue.

Within the Kingshighway Station transit shed there are two large parks, a historic greenway, and four neighborhoods, three of which are residential and the remaining one industrial. These neighborhoods contain numerous churches, schools, and a wide range of residential buildings, from stately brick single family homes and duplexes elevated above the street on earthen berms, to closely-spaced Craftsman style homes, to Mid-Century single family ranch homes built around cul-de-sacs.



STATION AREA PLAN WITH TRANSIT SHEDS & WALK RADII

LEGEND

- NORTHSIDE-SOUTHSIDE ALIGNMENT
- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED

## LIVABILITY PRINCIPLES

### MOBILITY

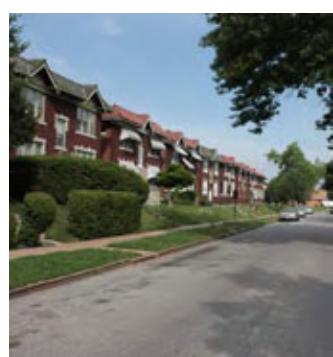
- Develop physical transit infrastructure to increase access to public transportation and provide reliable and economical transportation options to citizens of all income levels;
- Provide convenient transportation options for all citizens and reduce redundant transit infrastructure by linking bus, bicycle, and pedestrian access routes at inter-modal transfer stations along the Alignment;
- Reduce household transportation costs by offering a flexible range of public transport options;
- Increase walkability to retail, employment, and recreational needs by using street improvements to activate the streetscape at all hours of the day;
- Reduce the need for car ownership by creating enticing retail and entertainment options in new mixed-use development at the station area;
- Reduce the need for daily car trips by developing necessary services in mixed-use complexes adjacent to the station area; and
- Utilize new walkable transit stations to connect adjacent neighborhoods.

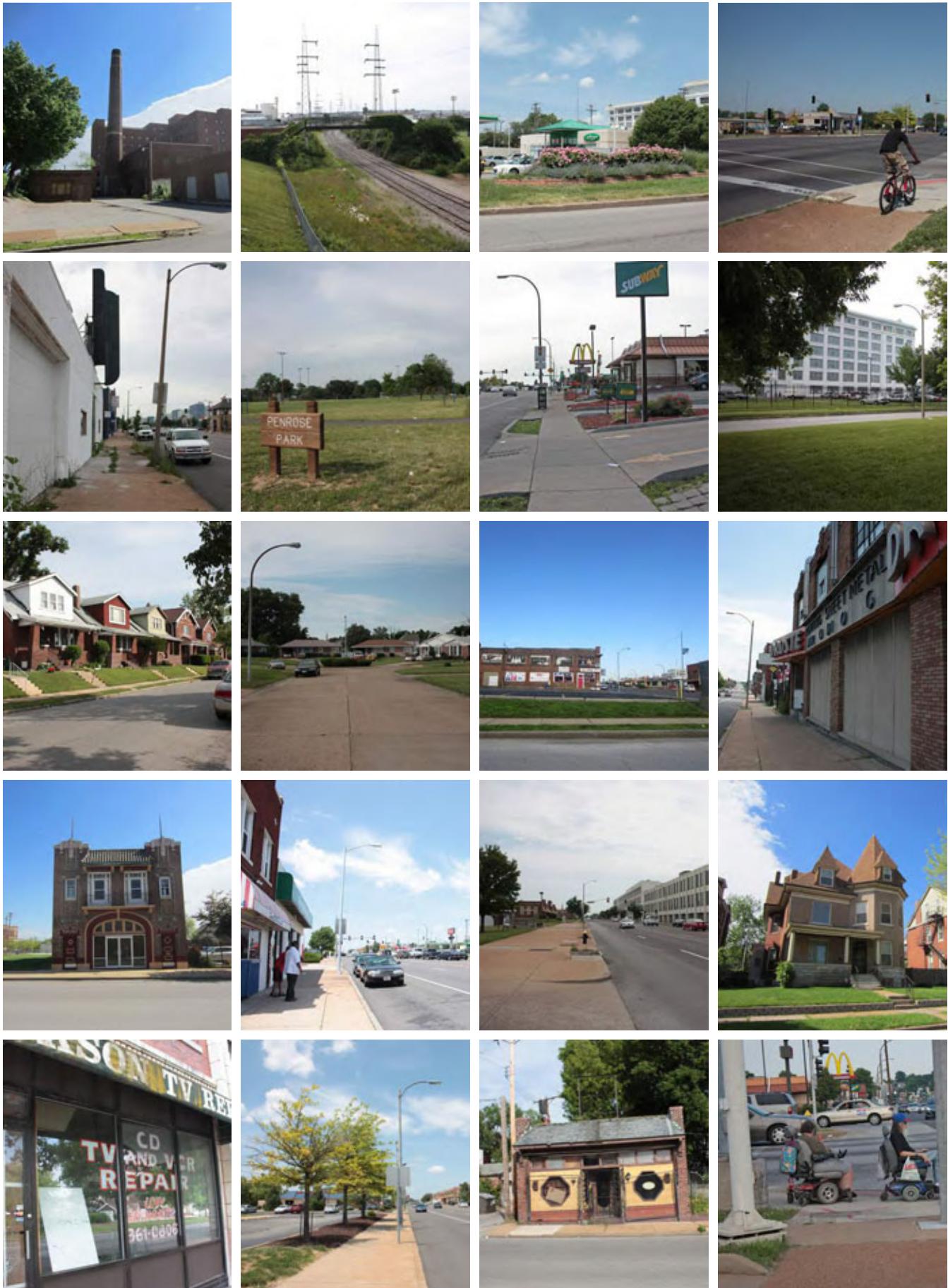
### PUBLIC SPACE

- Leverage existing infrastructure assets, such as proximity to the highway and historic greenways to assert identity and attract businesses;
- Integrate public art into streetscape improvements, making the new transit infrastructure aesthetically pleasing while functionally effective;
- Increase greenscaped areas at all station areas to provide comfortable places for community members to meet, relax, and utilize;
- Create a cohesive, vibrant street environment reflective of the identity at the station area by encouraging public art and creative activity in streetscape improvements, public space, and businesses; and
- Improve streets, increase pedestrian scale lighting, and increase the quality and extent of bicycle infrastructure to create a safe, walkable environment.

### GREEN INFRASTRUCTURE

- Improve air quality and manage stormwater by planting local species of street trees and vegetation in curb bumpouts, public parks, and green roofs; and
- Utilize local funding for water management and stormwater remediation practices to bring station areas into compliance with regional sustainability initiatives







RESIDENTIAL NEIGHBORHOOD IN THE STATION AREA

## EXISTING CONDITIONS ANALYSIS

The area around Kingshighway Station currently displays the key attributes supportive of Transit Oriented Development: use mix, intensity, urban form, connectivity, and parking. Additionally, several highly desirable attributes are present within the Kingshighway Station area.

Portions of the Kingshighway Station area are composed of large, contiguous, underutilized parcels- perfectly suited for the large, dense developments which are a hallmark of Transit Oriented Development. These large parcels are located adjacent to uniformly residential areas, but small improvements to the street infrastructure and appropriate infill of vacant land would link and serve these two development patterns and make the station area significantly more transit friendly. This process should begin prior to the construction of the alignment.

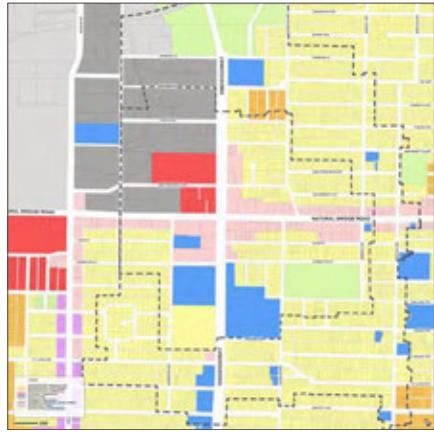
This station area serves a major employment center in north St. Louis with 102 businesses employing 1,151 workers. It also has a strong residential base of 4,465 people, living in three neighborhoods that intersect at Kingshighway and Natural Bridge. There are several public amenities within the station area including three large public parks, the Kingshighway greenway, and several schools and churches.

The area is served by five bus routes as well as two dedicated bicycle routes. The mean walkscore for the neighborhoods served by the proposed station is 51, out of a possible 100, indicating that it is somewhat walkable, but still well below the City's average of 65. The average block size within the station area is just over 11 acres which is relatively small and positively affects walkability.

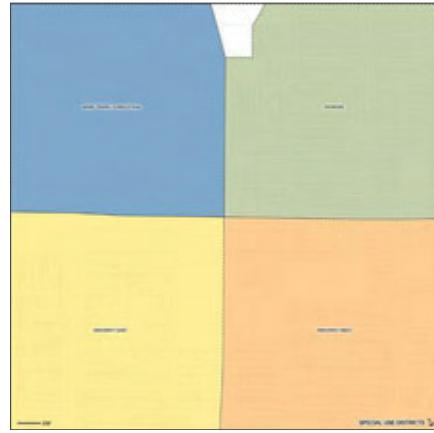
The grassy median of Kingshighway should be reconfigured to support a more robust green infrastructure, including a linear rain garden with local plant species to clean water and reduce the strain on local water infrastructure. Due to the considerable amount of potentially developable land lining Kingshighway along with its historic green median, a significant opportunity exists to create a new “green” gateway into the station area from Interstate 70.



ZONING



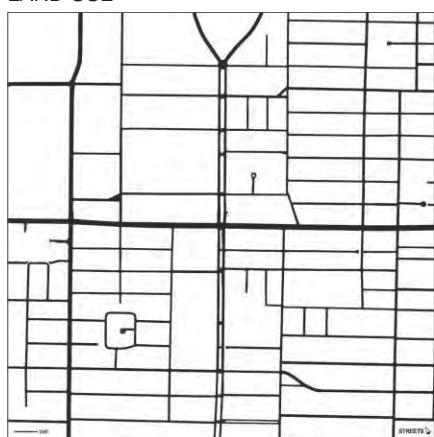
LAND USE



SPECIAL USE DISTRICTS



TOPOGRAPHY



STREETS



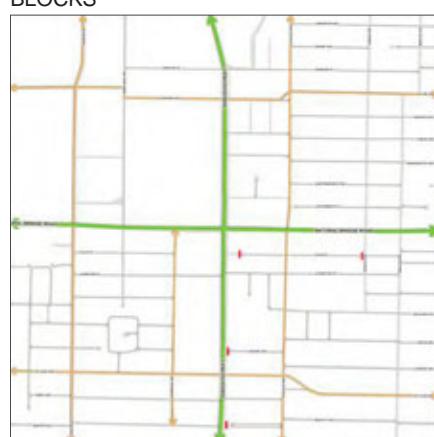
BLOCKS



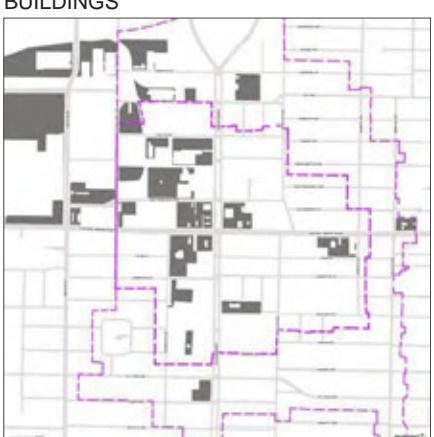
BUILDINGS



BUS ROUTES



STREET HIERARCHY



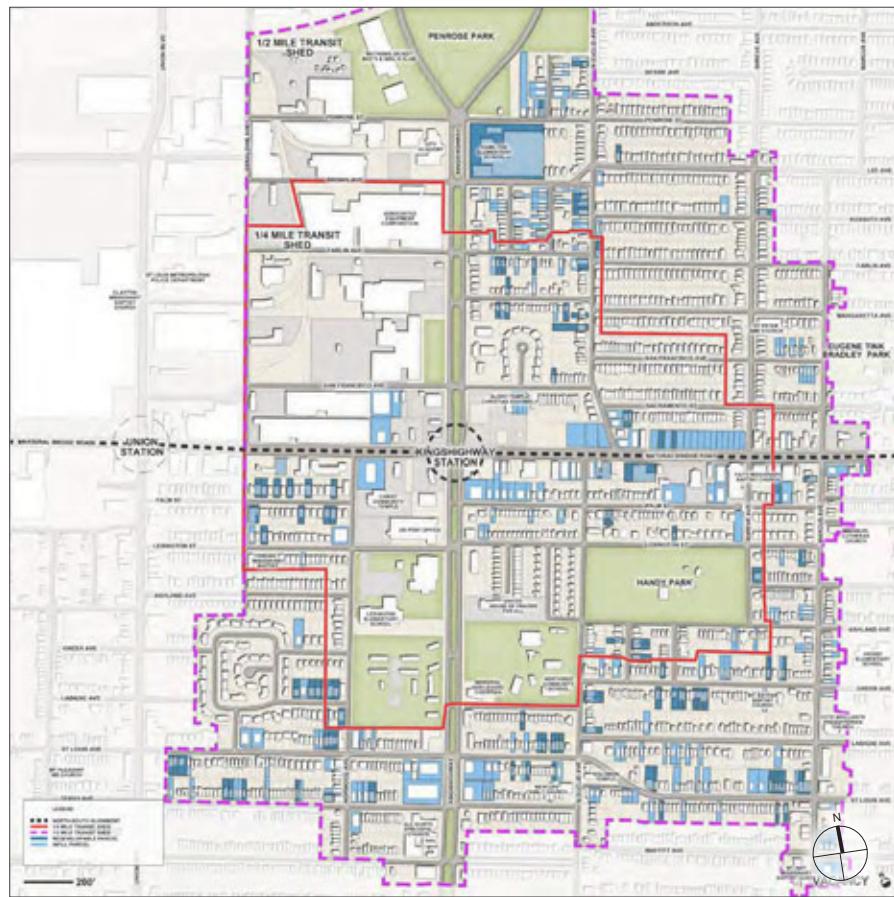
PARKING



SIDEWALKS



AMENITIES



## STATION AREA OPPORTUNITIES

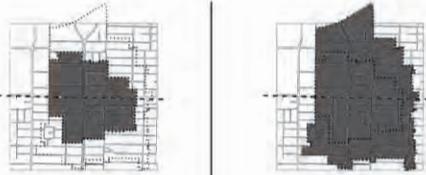
To understand more specifically how the TOD program is distributed around the site, given the existing land use patterns in the station area, each vacant parcel and each vacant building within the one-half ( $\frac{1}{2}$ ) mile station area was identified. While there is a significant amount of vacant property within the station area, the majority of it is not suitable for a concentrated Transit Oriented Development; those types of projects are more appropriate when located directly adjacent to the transit station. Therefore, the first phase of development is to redevelop the existing underutilized and vacant property to complete neighborhoods into which the Transit Oriented Development can be integrated. This will bolster ridership on the new transit line before any large scale development takes place.

The building program assumes the redevelopment of vacant residential property. Vacancy diagrams demonstrate the amount of vacant buildings as well as the gains to be expected from filling vacant property. The analysis of vacancy identified 97 vacant buildings, equivalent to 195 households, and 165 vacant parcels suitable mainly for residential development. These parcels, if filled with residential buildings scaled to match the existing context, would provide 254 new households.

In addition to redeveloping small vacant parcels throughout the transit shed, the primary component of the Kingshighway Station Preferred Plan is the redevelopment of large, underutilized parcels into a major employment campus.

**TOD STATION PLANNING STRATEGY :  
RESIDENTIAL REDEVELOPMENT**

**KINGSHIGHWAY STATION AREA**



	BUILDING TYPE (CURRENTLY VACANT)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
REDEVELOP	EXISTING SINGLE FAMILY RESIDENTIAL	20	41	90	53	53	109
	EXISTING DUPLEX	3	12	63	17	34	70
	EXISTING TRIPLEX	0	0	0	0	0	0
	EXISTING FOURPLEX	15	60	123	27	108	222
	EXISTING SIXPLEX	0	0	0	0	0	0
	EXISTING APARTMENT	0	0	0	0	0	0
<b>TOTAL</b>		<b>38</b>	<b>86</b>	<b>279</b>	<b>97</b>	<b>195</b>	<b>401</b>
NEW DEVELOPMENT	BUILDING TYPE (INFILL ON VACANT LAND)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
	NEW SINGLE FAMILY RESIDENTIAL	26	26	54	96	98	47
	NEW DUPLEX	4	8	15	59	118	243
	NEW TRIPLEX	0	0	0	0	0	0
	NEW FOURPLEX	2	8	16	10	40	82
<b>TOTAL</b>		<b>32</b>	<b>42</b>	<b>86</b>	<b>165</b>	<b>254</b>	<b>372</b>
REMOVED	BUILDING TYPE (REMOVED FOR NEW DEVELOPMENT)	1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
	REMOVED SINGLE FAMILY RESIDENTIAL	28	28	56	28	28	56
	REMOVED DUPLEX	0	10	0	0	0	0
	REMOVED TRIPLEX	0	0	0	0	0	0
	REMOVED FOURPLEX	0	0	0	0	0	0
<b>TOTAL REMOVED</b>		<b>28</b>	<b>28</b>	<b>56</b>	<b>28</b>	<b>28</b>	<b>56</b>
		1/4 MILE TRANSIT SHED			1/2 MILE TRANSIT SHED		
		BUILDINGS	HOUSEHOLDS	POPULATION	BUILDINGS	HOUSEHOLDS	POPULATION*
<b>NET RESIDENTIAL INCREASE IN TRANSIT SHEDS FROM REMOVAL, NEW DEVELOPMENT, AND REDEVELOPMENT OF VACANT PROPERTY</b>		<b>10</b>	<b>66</b>	<b>236</b>	<b>202</b>	<b>387</b>	<b>642</b>

\*BASED ON AN AVERAGE HOUSEHOLD SIZE OF 2.1 PEOPLE AT KINGSHIGHWAY STATION

### **Intensity**

Kingshighway Station currently has an intensity of 3,800, composed of 900 workers and 2,900 residents, putting it within the neighborhood threshold. Intensity will be increased to 12,800 by adding 6,700 workers and 2,300 residents in future development, putting it within the district threshold. Significant elevation of intensity at the Kingshighway Station is possible through the renovation of vacant buildings within the transit shed before and during the construction of the transit line. This effort will boost initial ridership, and act as a counterpoint to future commercial development after the construction of the Northside-Southside Alignment.

### **Use Mix**

Kingshighway Station currently has a use mix of 0.3, the ratio of its 900 workers to 2,900 residents, putting it within the residential threshold. Use mix will be shifted to 1.5 by adding 6,700 workers and 2,300 residents in future development, putting it within the employment threshold. While the residential neighborhoods will be maintained, the industrial quadrant of the Kingshighway Station will be used as an employment campus which will ultimately provide a wider range of jobs to local residents in addition to attracting new services and primary retail such as grocery stores, cafes, and restaurants, all supported by a significant influx of new workers and residents.

### **Development Program**

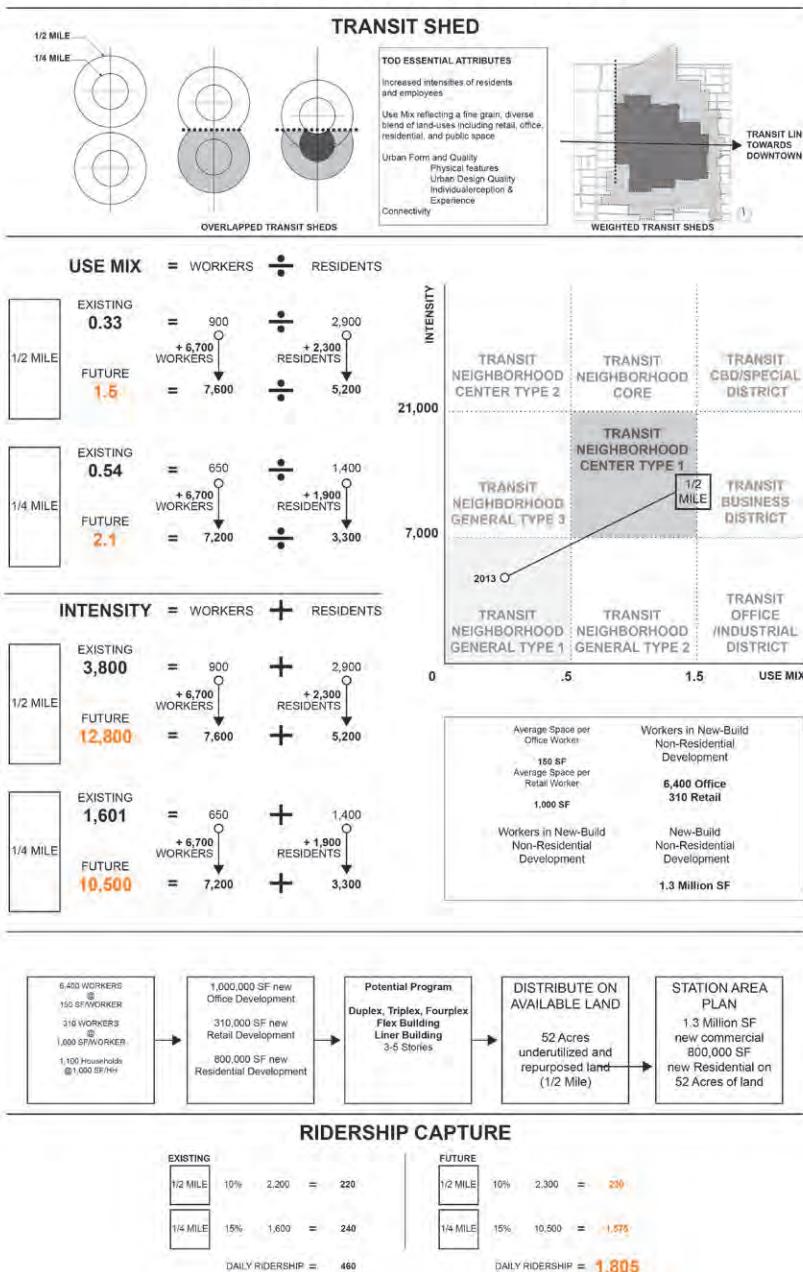
The development and transformation of the Kingshighway Station area will create 1.3 million sf of office and commercial space for 6,700 new workers. Additionally, 800,000 SF of newly developed residential space and the renovation of 300 vacant buildings would create housing for 2,300 new residents.

With these population increases, the Kingshighway Station area has been shifted to a TNCenter Type 1 typology. The associated building envelope standard regulates building type for new development, which in this case includes the courtyard building, commercial block building, flex building, live/work units, liner building, civic/institutional building. The program will be distributed on 52 acres.

### **Ridership Potential**

Ridership generated by the Kingshighway Station will be 1,995 total, with 1,580 riders within the one-quarter ( $\frac{1}{4}$ ) mile transit shed and 415 riders within the remaining one-half ( $\frac{1}{2}$ ) mile transit shed.

## TOD STATION PLANNING STRATEGY : APPLICATION KINGSHIGHWAY STATION PREFERRED PLAN

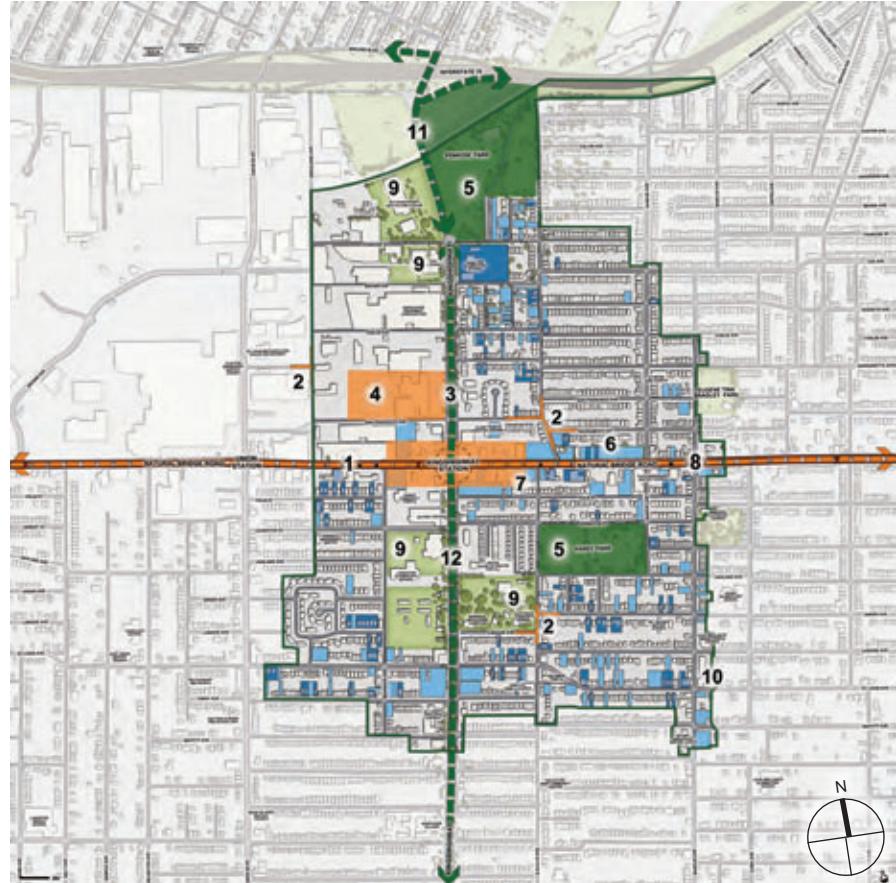


## PREFERRED STATION AREA PLAN TYPOLOGICAL SHIFT

### PREFERRED STATION PLAN

## Kingshighway Consensus Issues Map

1. Natural Bridge Avenue is an uncomfortable environment for pedestrians and cyclists;
2. The block pattern within the station area is discontinuous, limiting bicycle connectivity and making navigation difficult;
3. Historic greenway is a unique asset within the City;
4. Large adjacent parcels occupied by underutilized industrial use which is not conducive to walkability;
5. Large public parks near to station are an asset to the community;
6. Significant residential and commercial vacancy distributed throughout the station area;
7. Available development sites occupied by low density, car-oriented program;
8. Natural Bridge Avenue is a significant barrier to pedestrians and bicyclists;
9. Well-established civic amenities within the station area (e.g. schools, churches, boys and girls club);
10. Area previously served by streetcar, so block pattern easily configured for public transit; and
11. Easy access to station area businesses from highway.





## Kingshighway Development

### Framework Plan

#### Connectivity

1. Bike route on St. Louis Avenue and Euclid Avenue circumvents Natural Bridge road while increasing connectivity within the station area;
2. The Proposed Northside-Southside Alignment will increase transit options, connect the station area to a wide range of employment; and
3. Dedicated bus lanes will provide faster transit through Queue jump signalization and connections with the light-rail route.

#### Development

4. Renovate and redevelop vacant land and buildings;
5. Provide 1 million SF of new office development;
6. Provide 350,000 SF of commercial and 800,000 SF of new TOD mixed-use developments; and
7. Provide bike storage options within mixed-use developments.

**The Kingshighway Station development strategy would include the following:**

- Renovate vacant buildings and fill vacant parcels to complete the neighborhoods around the station area;
- Utilize the existing historic Kingshighway greenway for ecologically sustainable green gateway to the city;
- Develop 1.1 million SF residential units within the transit shed;
- Develop 285,000 SF new commercial space within the transit shed;
- Develop 1 million SF new office space in a campus configuration

**New developments adjacent to the transit stop on Natural Bridge Avenue and extending north on Kingshighway will make space for 2,300 new residents and 6,700 new workers**

## PREFERRED STATION AREA PLAN

The Kingshighway Station area is currently classified as a TNGeneral Type 1 due to its primarily residential use mix and an intensity below 7,000, indicating moderate support of a transit system. Population increase of both workers and residents within the one-half ( $\frac{1}{2}$ ) mile at the station area shifts the typological classification from TNGeneral Type 1 to TNCenter Type 1 typology, a classification with a use mix reflective of a more even proportion of residents and workers and an intensity above 7,000, the threshold population for a highly transit-supportive area. Making space for all new workers and residents will be achieved through renovation and redevelopment of vacant property, and new development of high-density Transit Oriented Development at the station area.

Before the Alignment is constructed, the surrounding neighborhoods should be completed by renovating vacant buildings and filling vacant residential parcels. The documented 97 vacant buildings, once renovated, will create 195 new households. When combined with the 165 vacant parcels to be developed as residential property, 254 households will be added within the  $\frac{1}{2}$  mile transit shed. Together, these developments would invite nearly 800 new residents to the Kingshighway Station area. This will increase the residential base of the station area and increase ridership once the transit line is constructed

In addition to the redevelopment of vacant buildings and parcels, increasing the density with new developments adjacent to the transit station along Natural Bridge and extending north on Kingshighway, along the existing greenway is recommended as part of the development strategy. These Transit Oriented Developments include 1 million SF for office use, 285,000 SF for commercial use, and 1.1 Million SF of new residential development, each distributed throughout multiple building types. These new developments make space for 2,300 new residents and 6,700 new workers.

The overall development strategy, taking into account all new and renovated property, will add 3,100 new residents and 6,700 new workers, elevating the Kingshighway Station area to a vibrant employment district situated amongst strong, complete residential neighborhoods.



PREFERRED STATION AREA PLAN

LEGEND

- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING

## **STATION PLAN ALTERNATIVES**

Two Station Plan Alternatives were developed for the Kingshighway Station area by shifting its Transit Neighborhood Typology from its current state into one of two more intensive typologies. These two options serve as a premise for refining the mix of employment and residential program to be added to the station area.

The assumed outcome of Station Plan Alternative #1 is an equal number of workers and residents within the one-half ( $\frac{1}{2}$ ) mile station area, bringing the station area into TNCenter Type 1. The assumed outcome of the Station Plan Alternative #2 is a primarily employment-based use mix within the one-half ( $\frac{1}{2}$ ) mile station area, bringing the station area into a Business District. Both Plan Alternatives assume the addition of employment program, but at two different orders of magnitude. The Preferred Station Plan is a result of the refined Station Plan Alternatives.

### **STATION PLAN ALTERNATIVE #1**

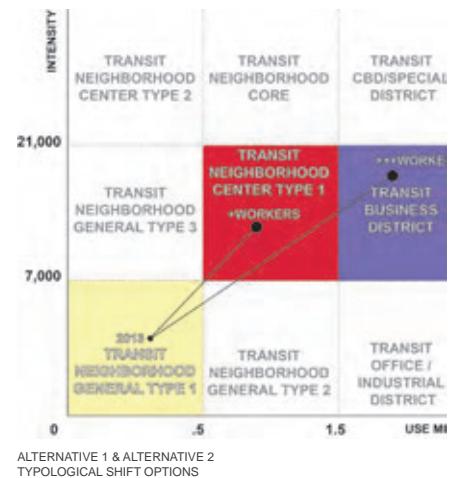
Station Plan Alternative #1 adds only workers to equalize the use mix at 1.0, meaning one worker for every resident within the transit shed. This design tests the minimum required building program to meet intensity thresholds within the transit shed. Building program has been added at the southern edge of Natural Bridge, bisected by Kingshighway to bring new commercial and employment options closer to the two residential neighborhoods south of Natural Bridge. This is a favorable location for new development as it replaces current low density, auto-oriented land use with higher density buildings that are adjacent to the transit platform.

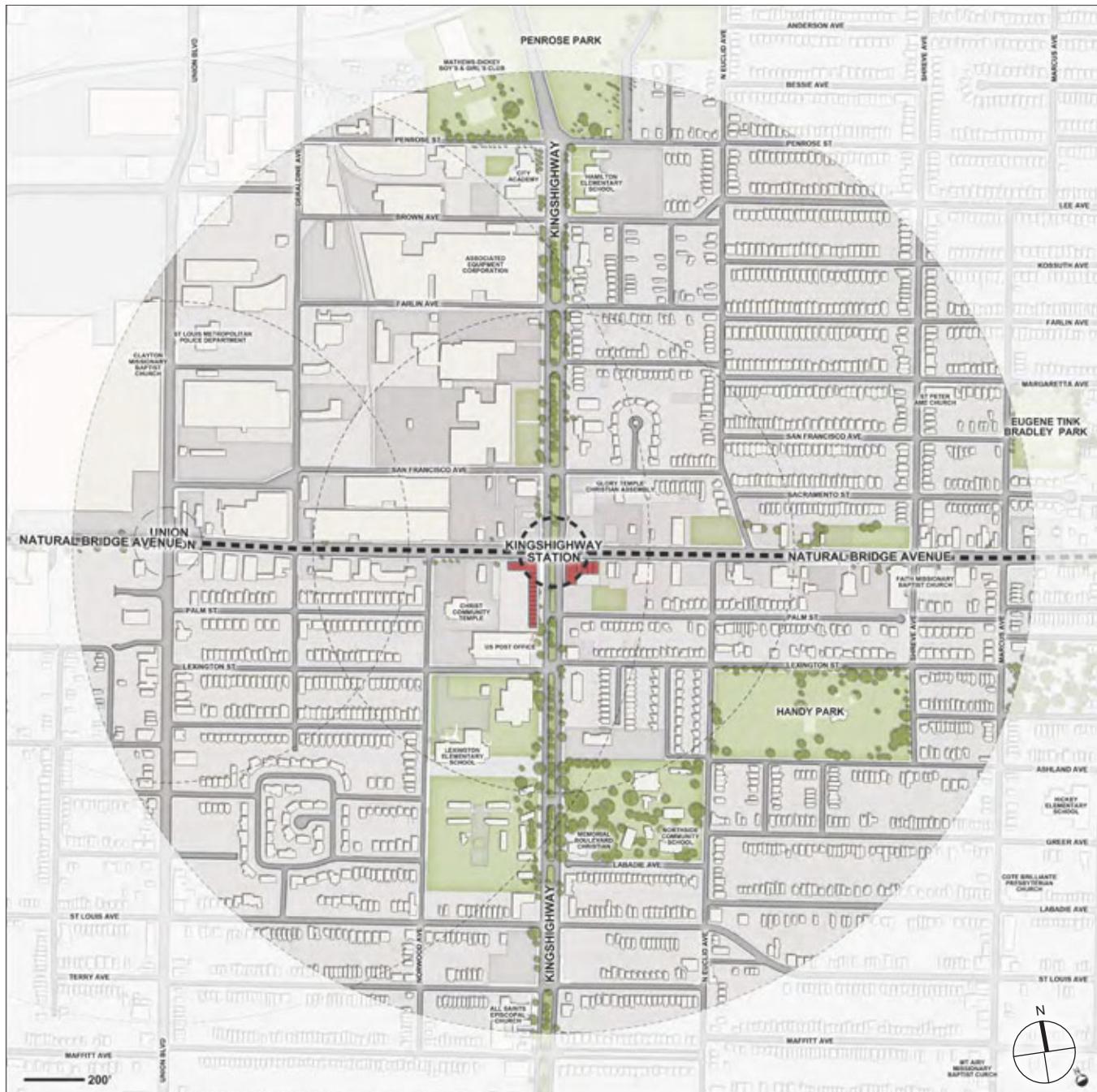
### **STATION PLAN ALTERNATIVE #2**

Station Plan Alternative #2 adds only workers to a level that is twice that of the residential population. The design process tested building program distribution throughout the transit shed and in this option has been added at all four corners of Natural Bridge and Kingshighway. In particular, the large lot parcels northwest of the intersection is a primary site for significant new development. This favorable location for new development replaces the current low density, auto-oriented land use with higher density buildings that are adjacent to both transit platforms.



TYPOLOGICAL MATRIX WITH CHARACTER





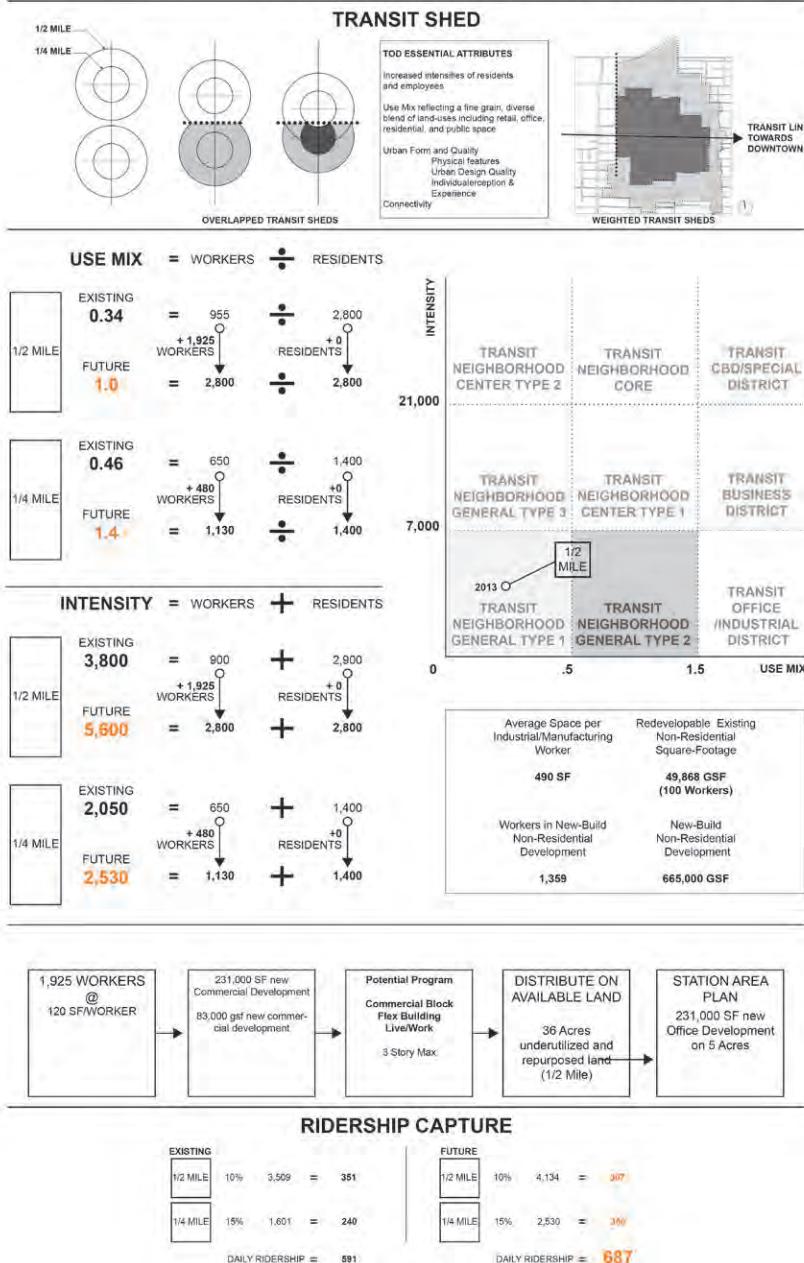
## STATION PLAN ALTERNATIVE 1

### LEGEND

- ■ ■ NORTHSIDE-SOUTHSIDE ALIGNMENT
- ■ ■ NEW COMMERCIAL BUILDING

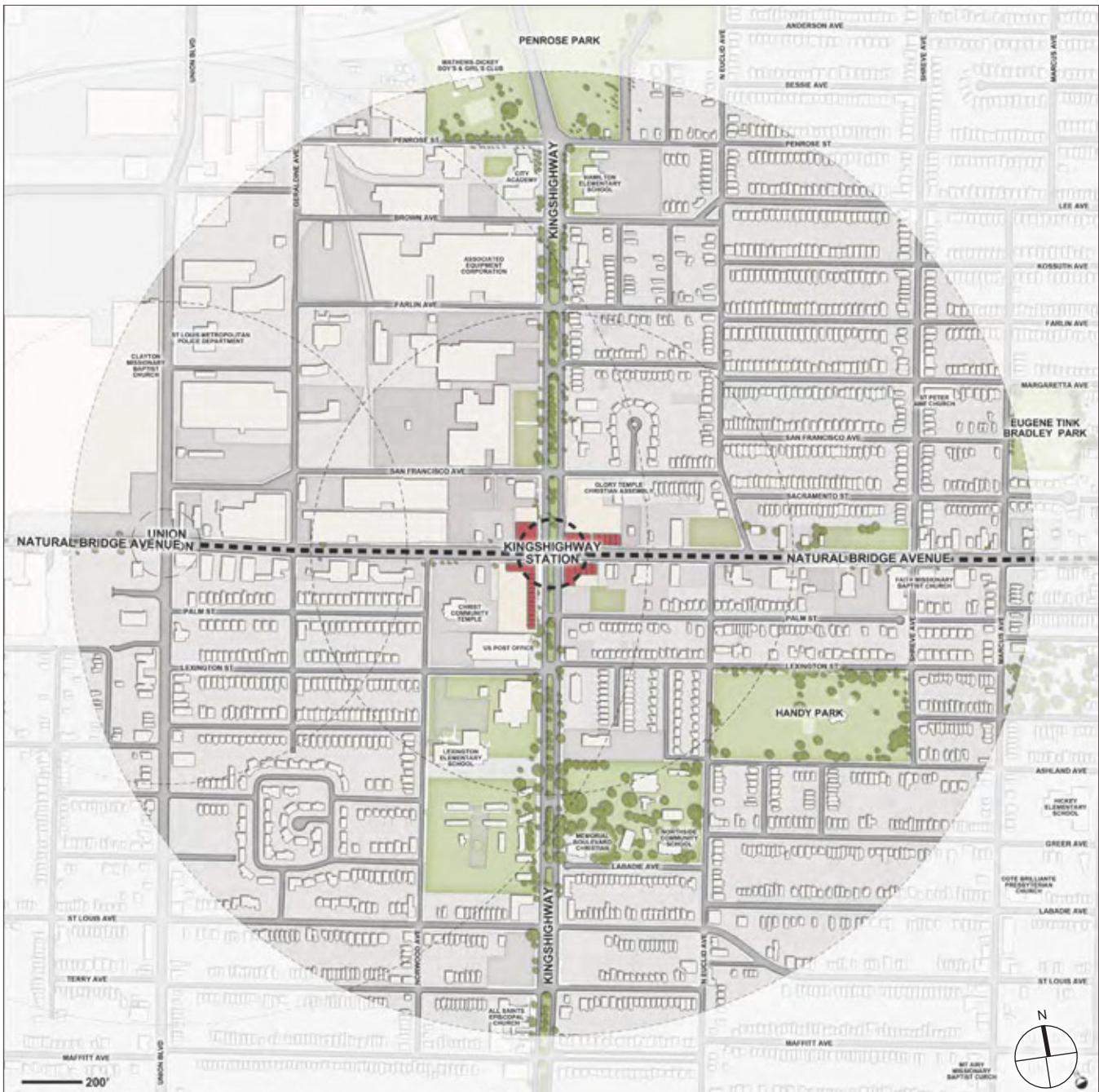
## TOD STATION PLANNING STRATEGY : APPLICATION

### KINGSHIGHWAY STATION PLAN ALTERNATIVE 1: EQUAL MIX OF JOBS AND RESIDENTS



Station Plan Alternative #1 elevates the Kingshighway Station to a **TNCenter Type 1** typology by:

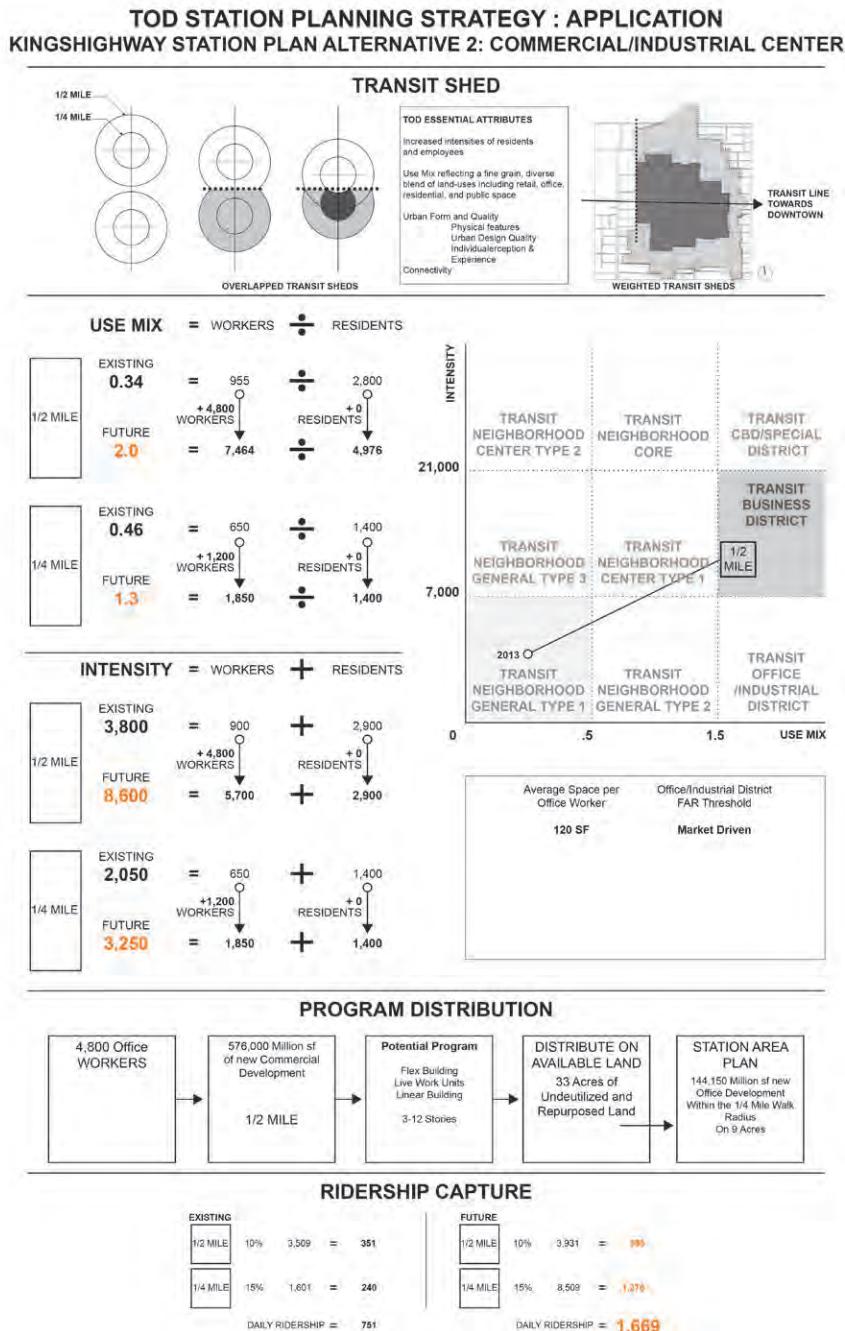
- Adding 1,900 workers using 57,000 SF of new commercial development concentrated at the south side of the intersection of Kingshighway Boulevard and Natural Bridge Avenue, with a long building frontage extending south along Kingshighway Boulevard;
- Distributing the development program among buildings ranging from 20,000 SF to 37,000 SF; and
- Assuming an average of 150 SF per worker.



## STATION PLAN ALTERNATIVE 2

### LEGEND

- ■ ■ NORTHSIDE-SOUTHSIDE ALIGNMENT
- ■ ■ NEW COMMERCIAL BUILDING



## Station Plan Alternative #2 elevates Kingshighway Station to a Transit Business District by:

- Adding 4,800 workers using 144,000 SF of new commercial development concentrated along the north and south sides of the intersection of Kingshighway and Natural Bridge. The developments south of the intersection extend south down Kingshighway while the developments north of the intersection extend east-west along Natural Bridge;
- Distributing the development program among buildings ranging from 25,000 SF to 60,000 SF; and
- Assuming an average of 150 SF per worker.



DETAIL OF MASSING  
PERSPECTIVE

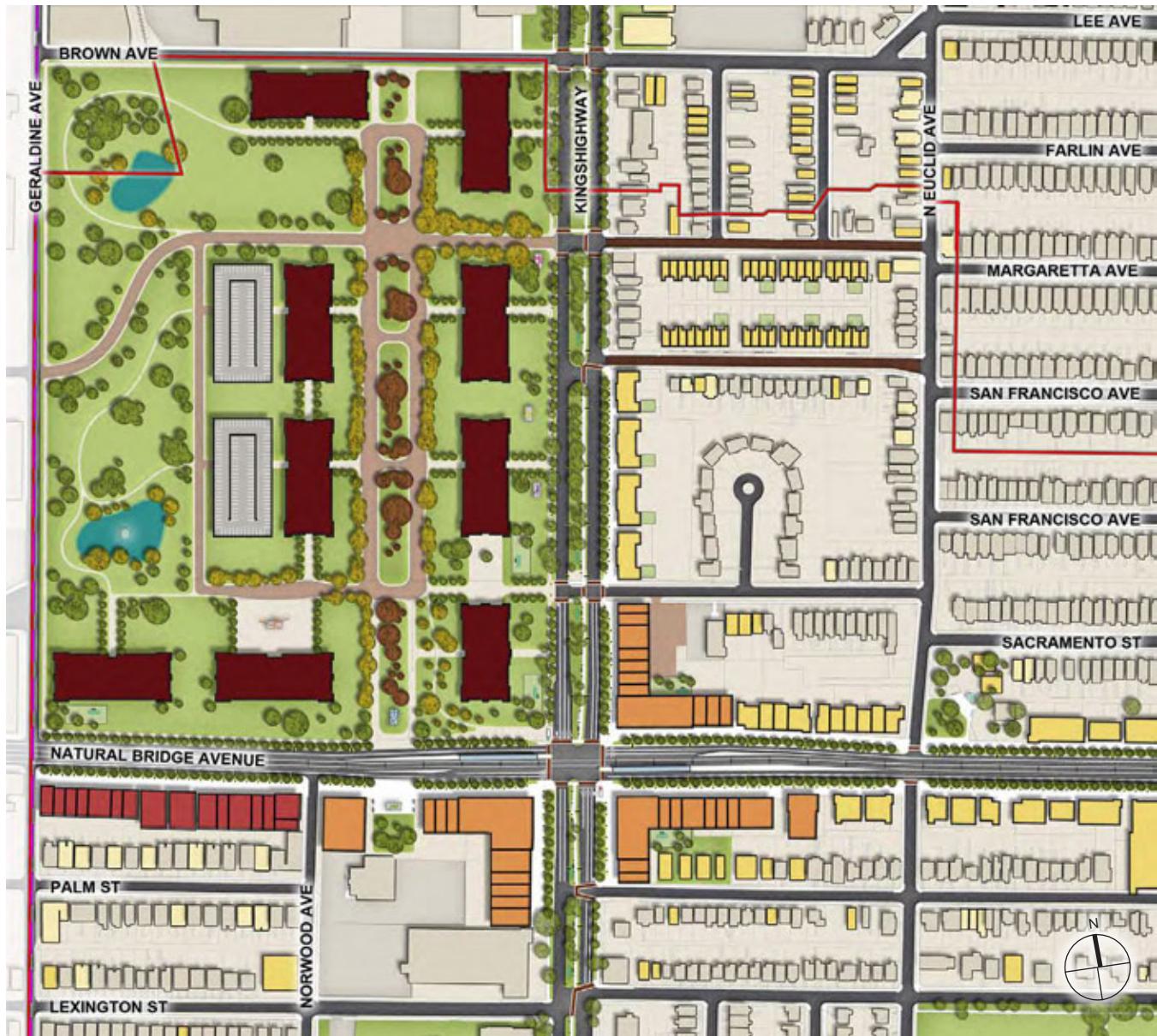
## URBAN DESIGN & PLANNING ELEMENTS

### CULTURE & IDENTITY

The Kingshighway Station falls at the center of three residential neighborhoods. Many households are multi-generational and have been passed down from generation to generation. These long-standing communities are both proud and resilient. Three large public parks, the largest is Penrose with its historic velodrome, lie in close proximity to the Kingshighway Station. The station area is bisected by the historic Kingshighway greenway, a prominent feature of the City for nearly a century. In the early 1900's, this area was served by the St. Louis streetcar network, and consequently has a walkable block pattern amenable to streetcar platform configurations.

A strategy to highlight on local culture and identity will:

- Maintain stakeholder's sense of ownership in the process and outcomes;
- Demonstrate the City's commitment to moving forward;
- Inform, consult, and involve multiple invested stakeholders throughout each phase of development;
- Attract more visitors and pedestrians with new retail, entertainment, and employment options;
- Demonstrate united and inclusive city through signage, imagery, and continuity of platform appearance;
- Leverage the community's rich history by mixing contextual development into residential neighborhoods; and
- Provide a corridor ready for development and a new phase of prosperity for north St. Louis.



KINGSHIGHWAY STATION AREA PLAN

LEGEND

- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING

## MASSING PERSPECTIVES

Bird's eye views of station area shows potential building forms and configurations at the Kingshighway Station in 30 years.



BIRD'S EYE VIEW NORTH EAST



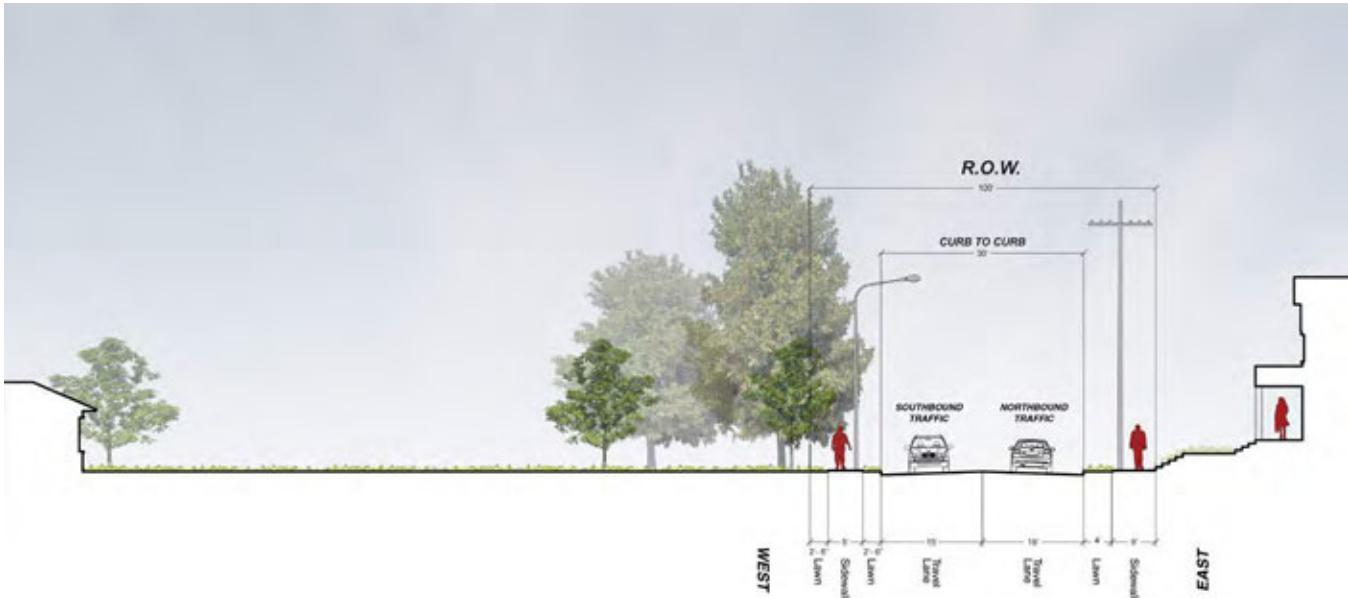
BIRD'S EYE VIEW SOUTH EAST



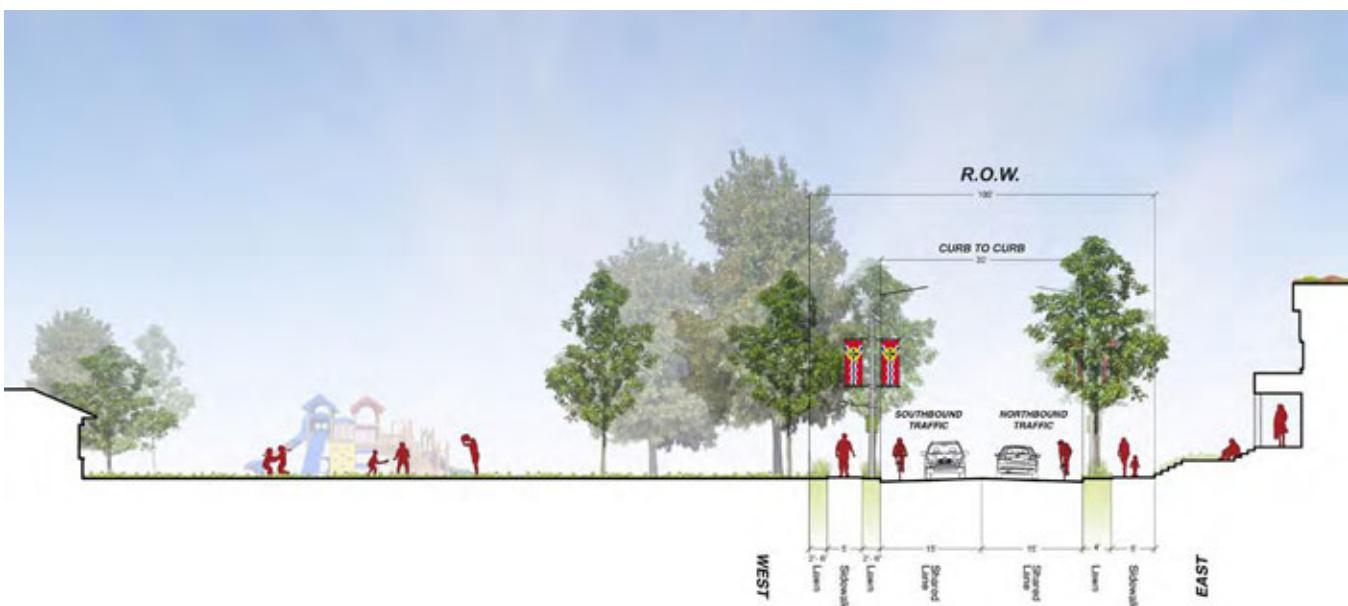
KINGSHIGHWAY NORTH OF NATURAL BRIDGE: EXISTING CONDITIONS



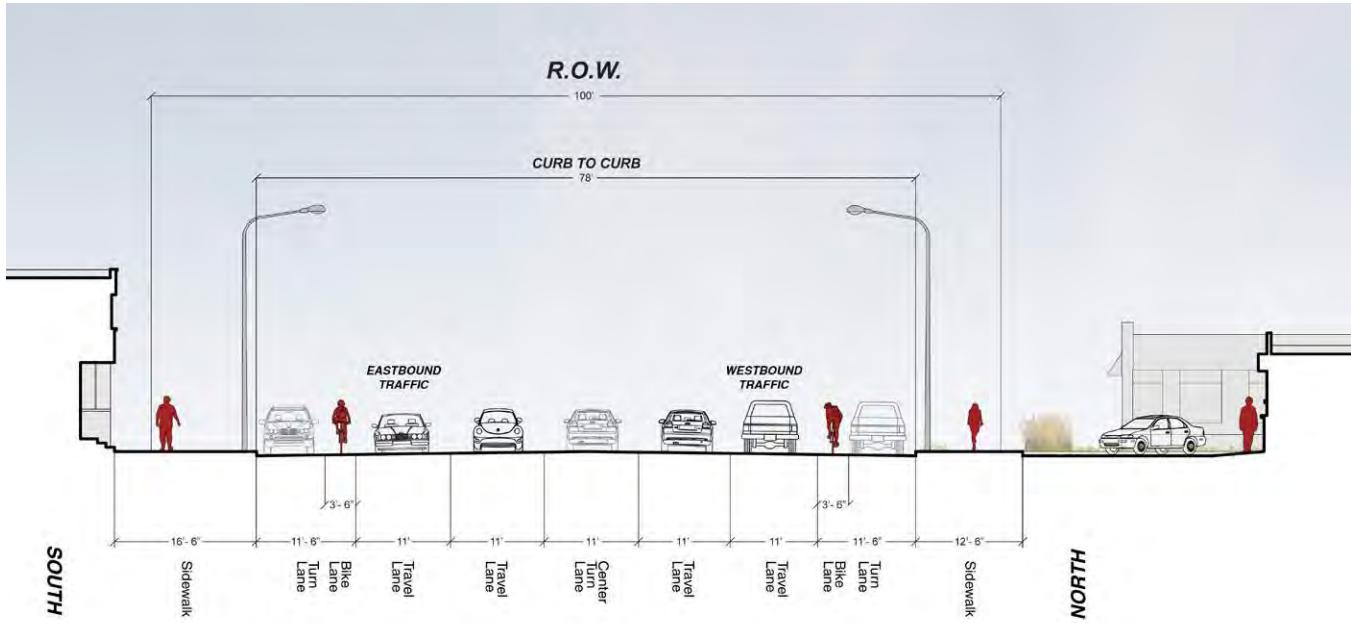
KINGSHIGHWAY NORTH OF NATURAL BRIDGE: PREFERRED ALTERNATIVE



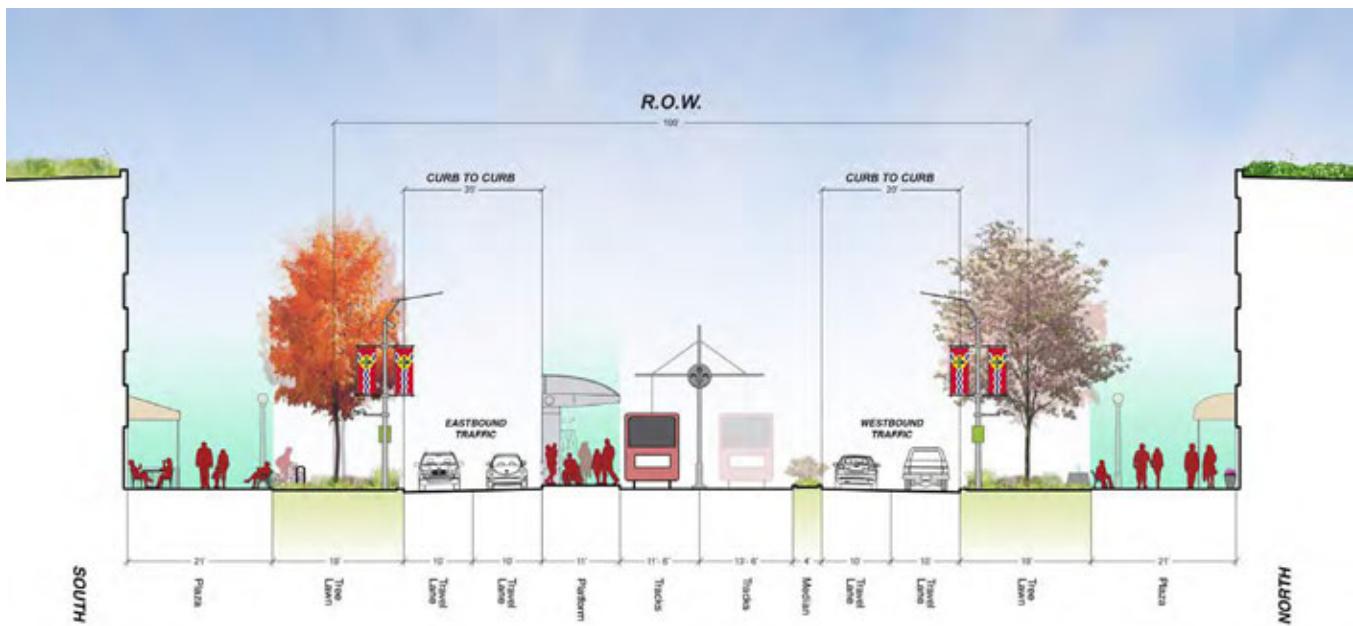
EUCLID: EXISTING CONDITIONS



EUCLID: PREFERRED ALTERNATIVE



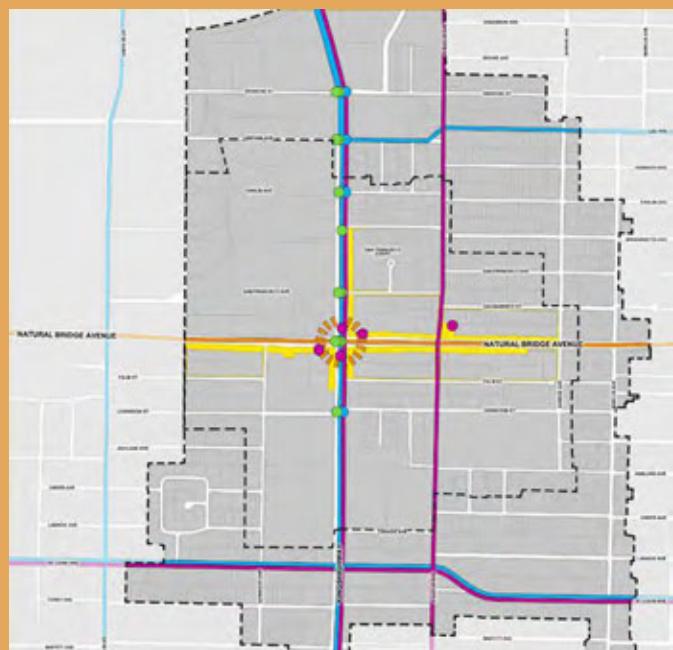
NATURAL BRIDGE LOOKING WEST: EXISTING CONDITIONS



NATURAL BRIDGE LOOKING WEST: PREFERRED STATION AREA PLAN

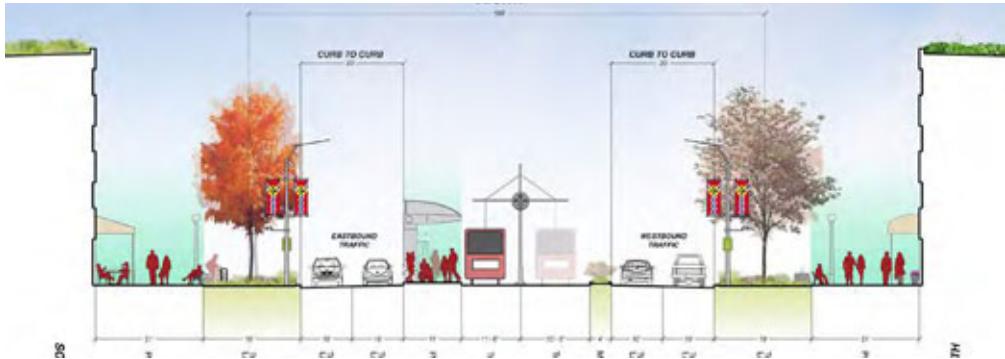
## MOBILITY

- Emphasize direct route to the station through the design of wide, clear sidewalks;
- Maximize access to the Campus area by including vehicular connections to Union Boulevard, Natural Bridge, and Kingshighway. Union Boulevard is particularly important given its connection to Interstate 70;
- Realign Farlin Avenue to connect with Margaretta Avenue to achieve a direct connection between the Campus and Union Boulevard;
- Realign Euclid Avenue at Natural Bridge to create a more direct route for cyclists;
- Configure the transit station as an important transfer hub that links with the existing bus network and replaces the #95 bus line which runs along Kingshighway and is a major north-south transit route;
- Replace the curb lane of Kingshighway as it approaches Natural Bridge with a dedicated bus lane and associated priority signalization (i.e., queue jump lane) to reduce traffic interference with buses leaving the #95 bus stop;
- Reduce headways for the #95 bus route to 15 or 10 minutes to increase ridership and support multi-modal transfer at the station area;
- Provide connections to the station from the north via Euclid Avenue or a new mixed-use trail within the median of Kingshighway;
- Include secure bicycle parking with new developments to encourage cycling to/from the station. Options ranging from indoor bicycle lockers to outdoor bicycle racks should be considered at the station itself as well as for future developments;
- Create a dedicated left-turn lane at Kingshighway and Natural Bridge by eliminating the traffic lane designated for buses and taking a portion of the landscaped median; and
- Designate St. Louis Avenue as a share-the-road bicycle route by replacing on-street parking with dedicated bike lanes.



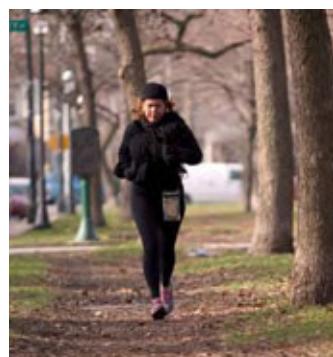
TRANSIT IMPROVEMENT DIAGRAM



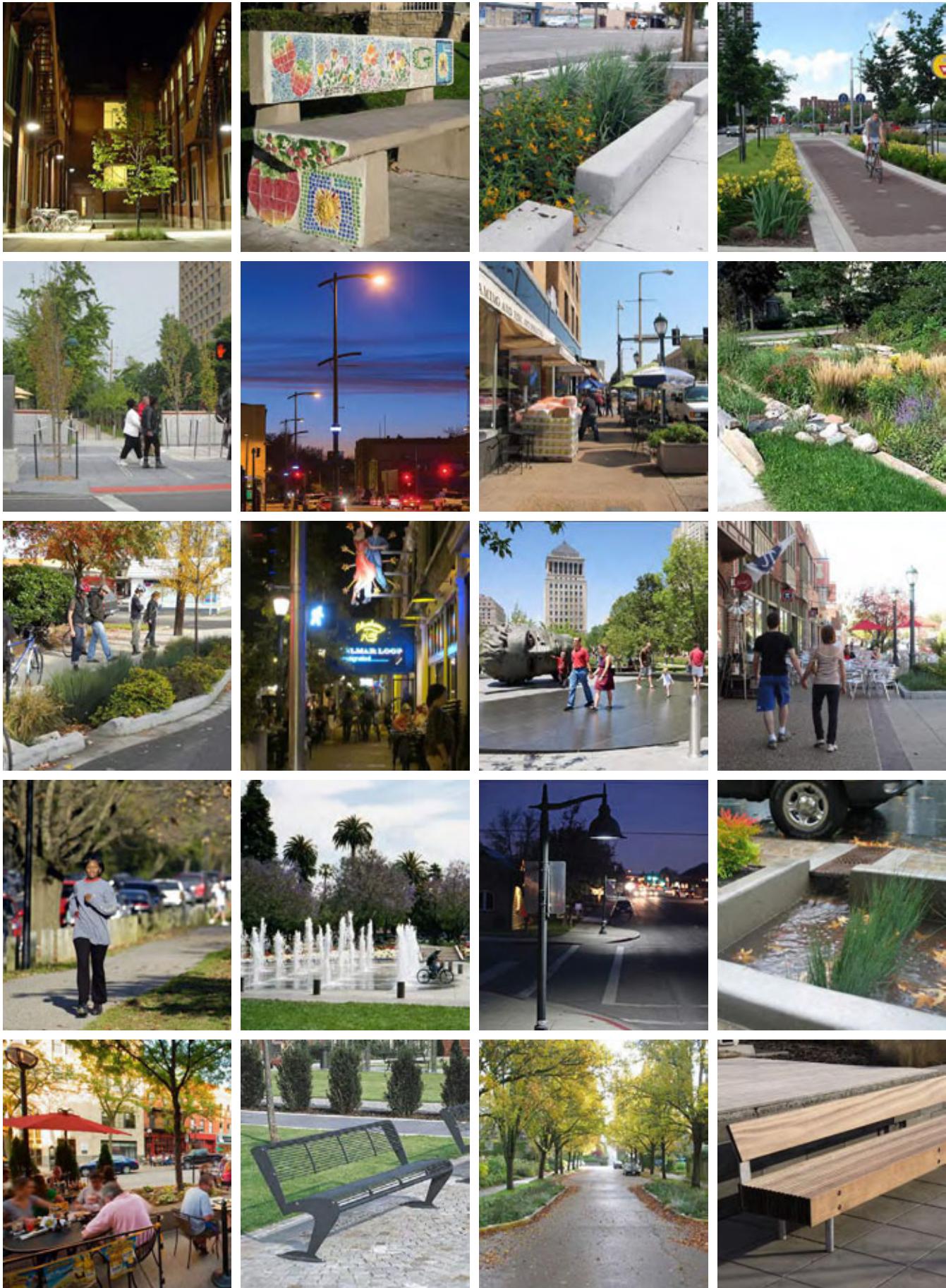


## PUBLIC SPACE

- Configure sidewalks to mark the clearest connection to the station area;
- Widen sidewalks where possible and ensure that they are ADA accessible;
- Install colored or textured crosswalks, curb bumpouts, pedestrian signal indicators, right-turn-on-red restrictions, and pedestrian-scale lighting at the intersection of Natural Bridge and Kingshighway;
- Provide direct pedestrian and bicycle linkages to the station from the Campus Area, northwest of the station, using multi-use paths or sidewalks that cut through the development to provide the most direct route possible to the station;
- Establish a bicycle route along St. Louis Avenue, approximately one-half ( $\frac{1}{2}$ ) mile south of the station. The width of St. Louis Avenue would restrict the route to a share-the-road configuration, but it would facilitate a long, continuous connection to the North Riverfront Trail to the east; and
- Improve access to the station from the north and south with a multi-use pedestrian and bicycle path constructed within the landscaped median of Kingshighway.



STREETSCAPE IMPROVEMENT DIAGRAM



## GREEN INFRASTRUCTURE DESIGN

- Establish a wide, landscaped setback along Kingshighway to create a more spacious green gateway entrance to the station/City from the north;
- Subdivide long setbacks on the employment campus with varied species of trees and greenery to make them more appealing to pedestrians and workers;
- Install bioretention areas within the median of Kingshighway and on newly developed large-lot parcels;
- Install rain gardens at the intersection of Kingshighway and San Francisco, and
- Install rainwater harvesting facilities at building downspouts.
- Use native plantings & perennials where possible;
- Plant street trees and specialty trees along all streets and public spaces; and
- Enlist the help of a neighborhood volunteer group for planting and maintenance.



GREEN INFRASTRUCTURE IMPROVEMENT DIAGRAM

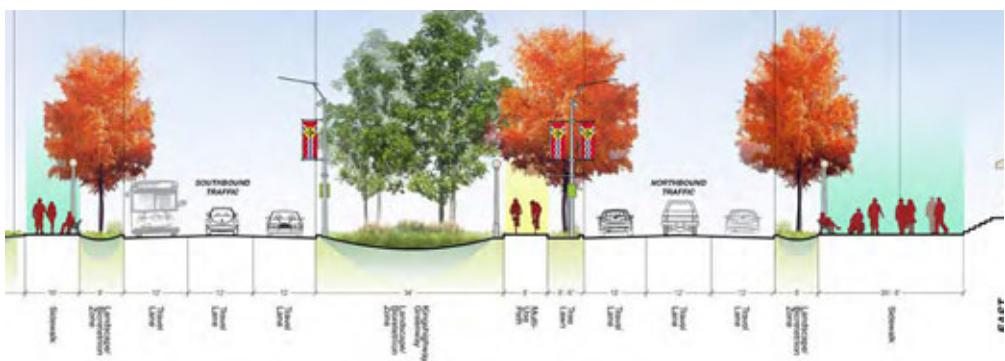




## PEDESTRIAN ACCESS & SAFETY, AND CONNECTIVITY

- Install signage to direct transit passengers, workers, and residents to the existing parks within the station area;
- Install pedestrian countdown signals at the intersection of Natural Bridge and Kingshighway;
- Use signage to direct bicyclists to the transit station from St. Louis Avenue using either Euclid Avenue or Kingshighway;
- Use signage to clarify pedestrian right-of-ways on Natural Bridge and Kingshighway;
- Widen sidewalks and construct ADA-compliant ramps at each intersection along Kingshighway within the station area;
- Install colored or textured crosswalks to slow traffic and make pedestrian crossing more comfortable;
- Install a pedestrian refuge within the median of Kingshighway;
- Install a multi-use trail for pedestrian and bicyclists within the wide, landscaped median of Kingshighway;
- Install a multi-use path through the station area that would reduce walking and biking time from the station to all new developments and existing neighborhoods;
- Utilize St. Louis Avenue, Kingshighway, and Euclid Avenue as primary bicycle routes to connect to the station;
- Designate St. Louis Avenue as a share-the-road bicycle route by replacing on-street parking with dedicated bike lanes;
- Replace cobra-style lights with a lighting standard that is supportive of both automobile and pedestrian uses along Kingshighway and Natural Bridge; and
- Create streets that are comfortable in the evenings with pedestrian-scale lighting.





## PARKING

Guidelines for providing parking for the proposed development are offered with the goal of accommodating parking needs in an efficient manner, while minimizing the supply of spaces. The proposed uses would generate total demand for approximately 4,450 parking spaces. This calculation reflects the mixed-use, urban character of the station area as well as the light rail station's anticipated impact of reducing vehicular trips.

Parking needs associated with infill residential development were assumed to be accommodated on the residential properties themselves (rear-facing garage) or on-street. This amounts to approximately 750 spaces.

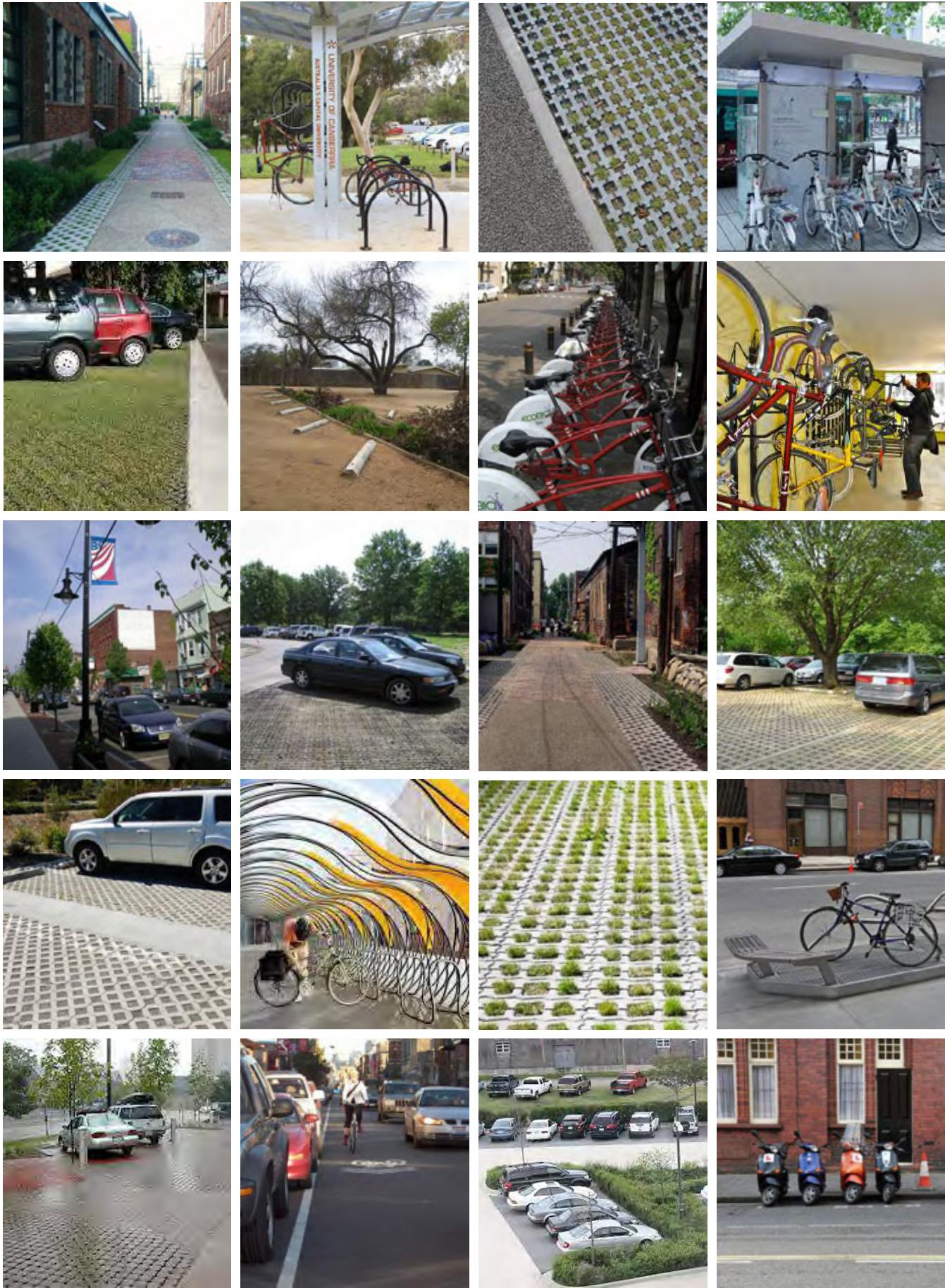
While surplus on-street parking capacity could likely accommodate additional development driven demands, the remaining parking need (3,700 spaces) should be served by dedicated off-street parking facilities. According to Development Strategies, off-street spaces would be necessary for these uses to attract residential and businesses lease rates that are sufficient to sustain development. Moreover, forcing the parking needs of large-scale developments onto streets creates shortages that result in adverse neighborhood impacts, including parking districts and management strategies. The long-term approach for the station area is to avoid the need for on-street parking management.

The amount of the off-street space need (3,700 spaces) could be reduced by the concept of shared parking. Offsetting temporal parking demands for retailers and residents could enable the same space to be shared by both uses. For example, a residential space occupied overnight but vacated during the day when the resident is at work could be used by a retail customer. Shared parking could reduce the parking supply for the mixed-use development at the station by 25%. However, the segregation of uses away from the station, particularly the concentration of office space northwest of the station, would limit opportunities for shared parking elsewhere.

Ultimately, it is recommended that the parking needs of the station area be market based and unregulated. The proposed form-based zoning code will not stipulate minimum parking requirements, as parking needs would likely be particularly dynamic over time as the station area evolves into a transit oriented neighborhood. Instead, property owners and developers will be given autonomy to decide how much parking to provide. Simultaneously, they should be encouraged by the City to provide as few spaces as they feel are needed.

- Decrease a large portion of the vehicular traffic and parking demand generated by visitors to the area; and
- Establish a zero parking requirement for new development in Neighborhood General Type 1, Neighborhood General Type 2, Neighborhood Center Type 2, and Campus Type 1, as they are transit neighborhoods.



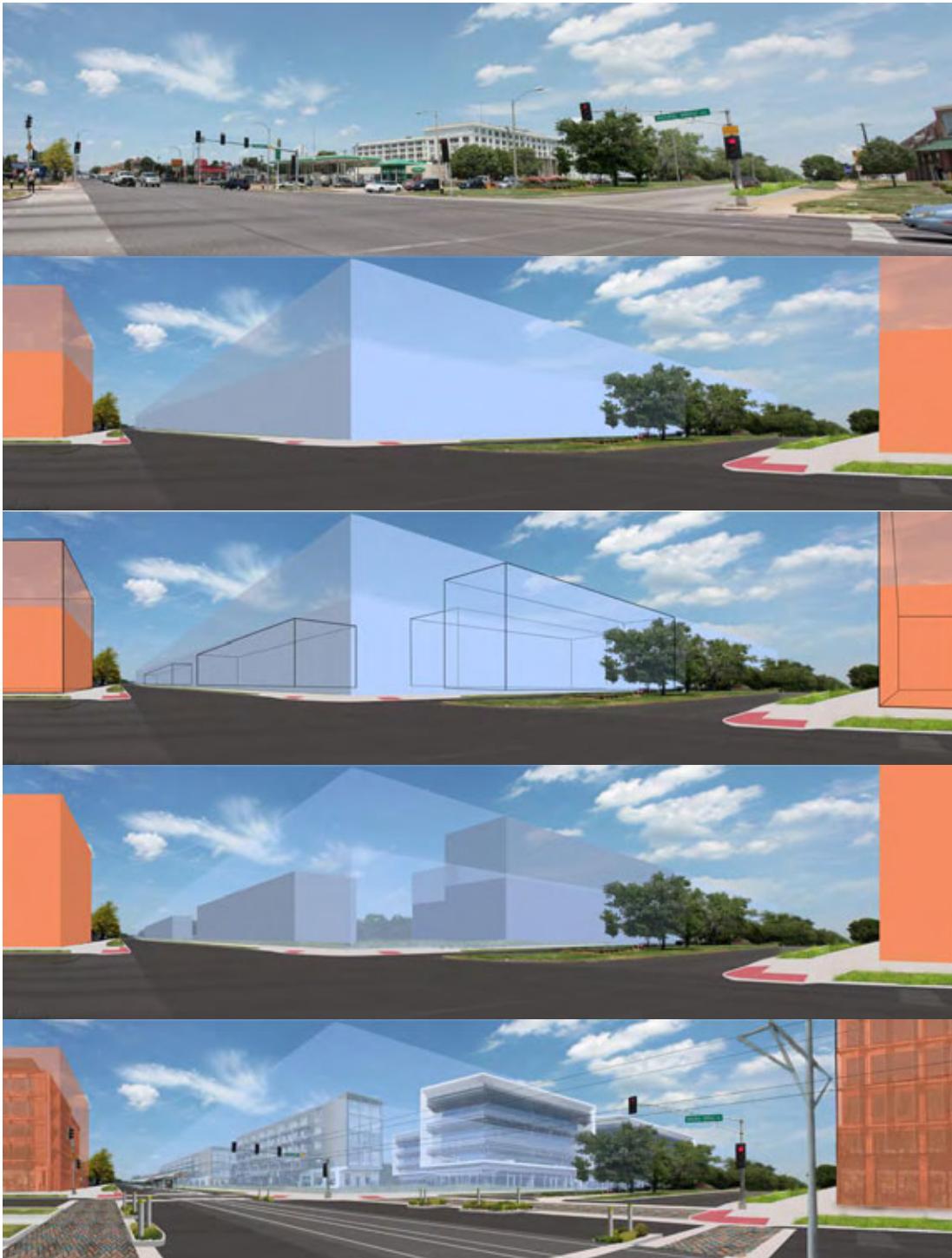




KINGSHIGHWAY EXISTING CONDITIONS LOOKING SOUTHWEST.



KINGSHIGHWAY CHARACTER PERSPECTIVE LOOKING SOUTHWEST



BUILDING ENVELOPE STANDARD PROGRESSION



CHARACTER IMAGE AT THE INTERSECTION OF NATURAL BRIDGE AND KINGSHIGHWAY



EXAMPLE OF NEIGHBORHOOD GENERAL TYPE 1



EXAMPLE OF NEIGHBORHOOD GENERAL TYPE 2



EXAMPLE OF NEIGHBORHOOD CENTER TYPE 2

## KINGSHIGHWAY FORM-BASED DISTRICT RECOMMENDATIONS

Kingshighway Station's one-half ( $\frac{1}{2}$ ) mile transit shed generally serves as the boundary of the Kingshighway Form-Based District. Within this area, a form-based district will apply, as outlined in the building envelope standards recommendations. On the following pages a regulatory requirement specific to Transit Neighborhoods—the absence of parking requirements—is established. While parking will be allowed, the quantity of parking per new development will be determined by the developer according to market demand. All new development within the Form-Based District will abide by the regulations described herein.

### Intent

Building envelope standards regulate the allowable placement of buildings, land uses, and types of buildings; as well as establish requirements for the placement of parking for a given area. The intent of the building envelope standards is to regulate future development to be respectful of building height and uses while also concentrating the majority of commercial and office activity on the Natural Bridge and Kingshighway corridors. The standards selected for this station area also regulate a series of setbacks to create a spacious green intersection at the station area. These building envelope standards accommodate a range of building forms and uses ranging from single family residential within the neighborhood, to primary retail along commercial streets and large lot campus conditions within the urban environment.

### The Regulating Plan

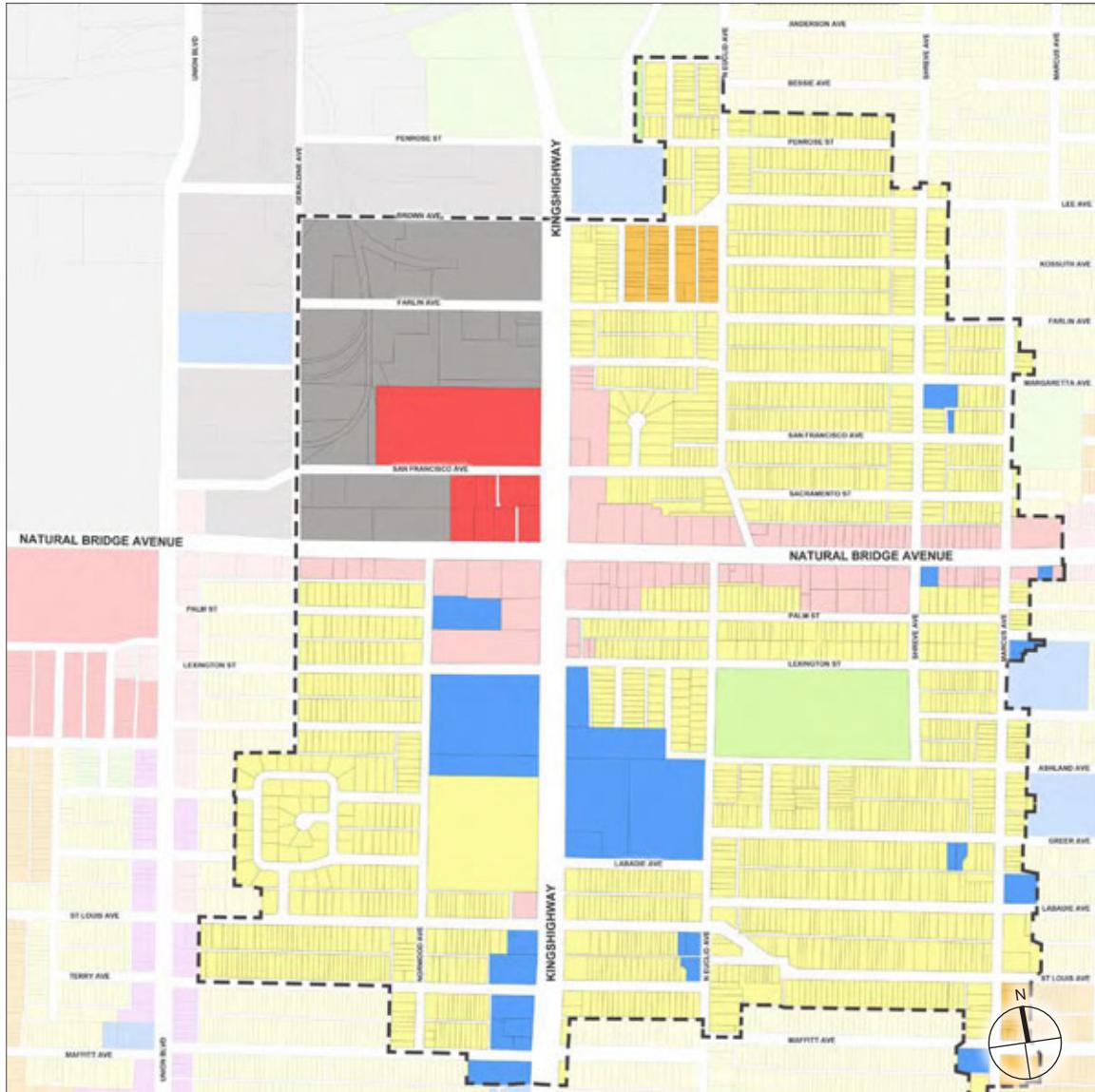
Four building envelope standards are applied throughout the Kingshighway Form-Based District in order to meet the population increase to shift the station area to Transit Neighborhood Center Type 1. The building envelope standard for Campus Type 1 is applied at the most intense urban condition within the Form-Based District, northwest of the intersection of Natural Bridge and Kingshighway, to allow for development patterns which support a rich urban experience while providing development regulations for large parcel developments with flexible internal configurations. The other building envelope standards present within the Form-Based District are Neighborhood General Type 1, which allows for low to medium density residential use; Neighborhood General Type 2, which allows for high density residential building types along Kingshighway south of Natural Bridge; and Neighborhood Center Type 2, which allows for a 30 foot setback and retail at the ground level.



PREFERRED STATION AREA PLAN

LEGEND

- 1/4 MILE TRANSIT SHED
- 1/2 MILE TRANSIT SHED
- NEW RESIDENTIAL BUILDING
- RENOVATED RESIDENTIAL BUILDING
- NEW COMMERCIAL BUILDING
- RENOVATED COMMERCIAL BUILDING
- NEW MIXED-USE BUILDING
- RENOVATED MIXED-USE BUILDING



EXISTING STRATEGIC LAND USE PLAN AT KINGSHIGHWAY STATION

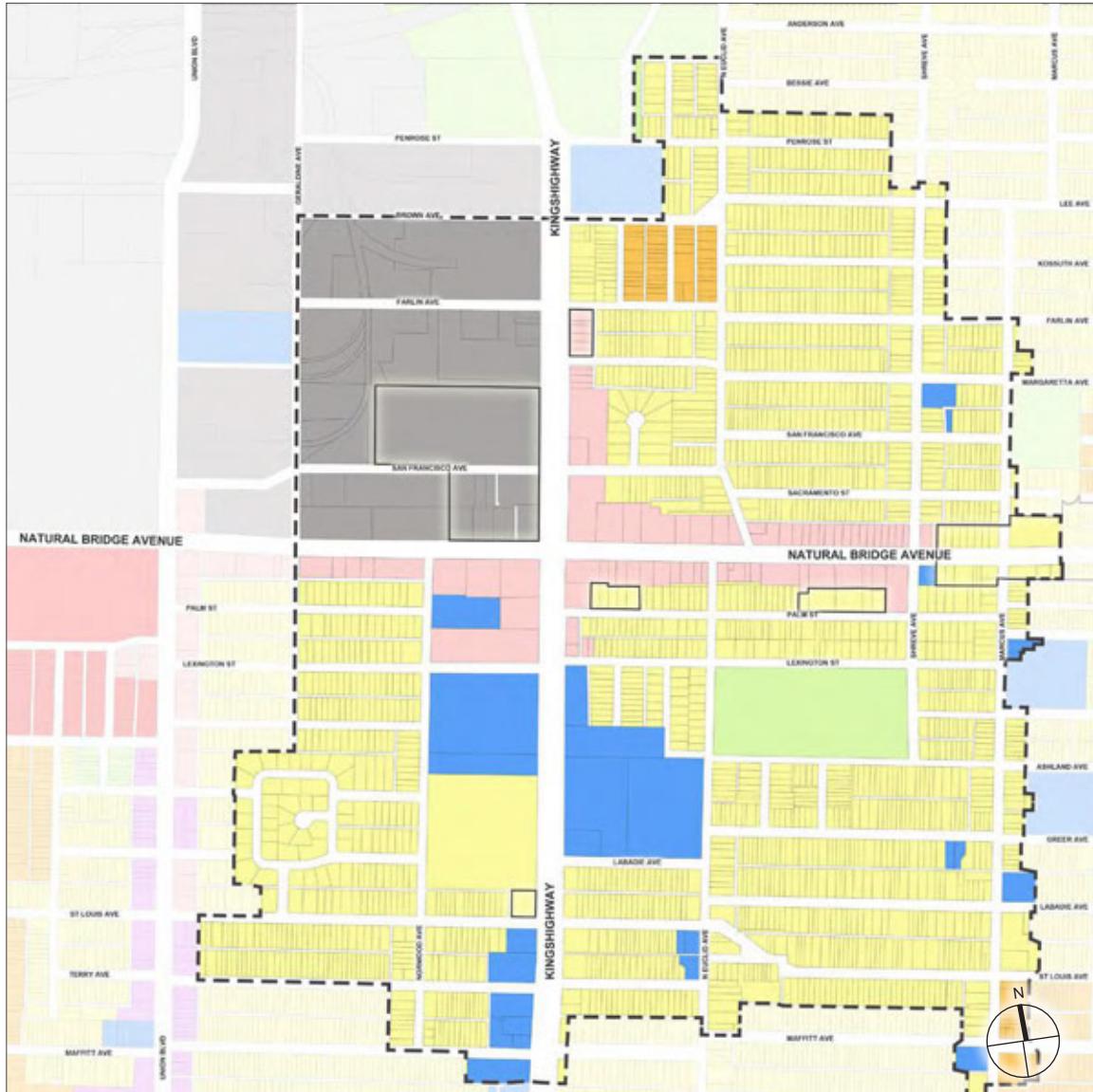
### Changes To The Strategic Land Use Plan & Other City Regulations

The Strategic Land Use Plan (SLUP; PDA-155-04-CMP) was established by the City of St. Louis on January 5, 2005. The purpose of that plan is to guide, at a very broad level, development and preservation throughout the area in a comprehensive manner. All Form-Based Districts within the City of St. Louis must be concurrent with the Strategic Land Use Plan. As the intent of the Station Area Planning Process is to establish a vision and development plan for the Kingshighway Station Area, it will be necessary to make modifications to the Strategic Land Use Plan in order to ensure that it is concurrent with the Form-Based District. The following are the recommended changes to the Strategic Land Use Plan to make it concurrent with the Building Envelope Standards used within the Kingshighway Form-Based District.

As a Transit Oriented Neighborhood, parking requirements (as required by the City of St. Louis Revised Code Title 26) have been removed within the Kingshighway Form-Based District.

#### LEGEND

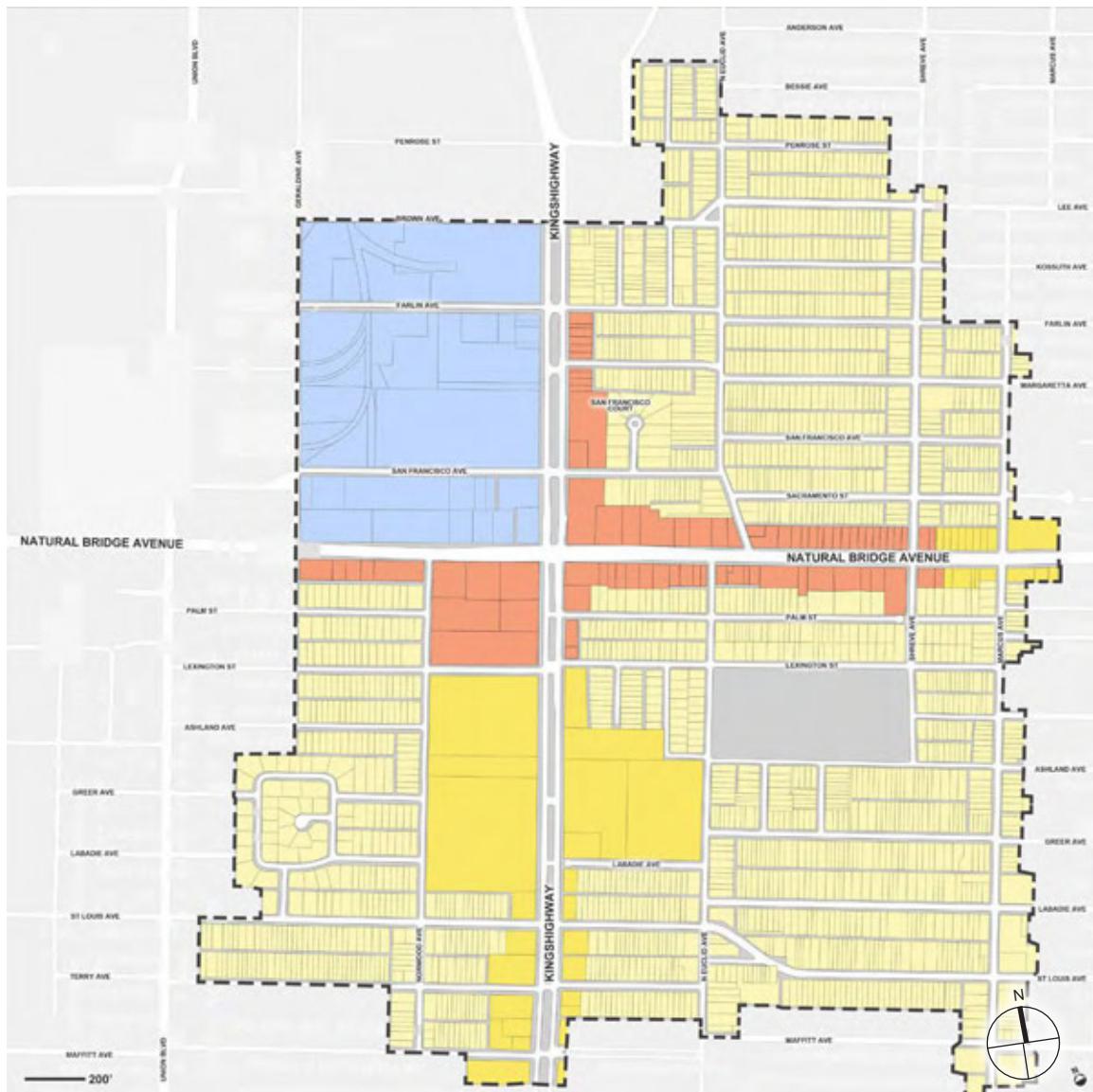
■ NEIGHBORHOOD PRESERVATION
■ NEIGHBORHOOD DEVELOPMENT
■ NEIGHBORHOOD COMMERCIAL
■ INSTITUTIONAL
■ BUSINESS & INDUSTRIAL
■ BUSINESS & INDUSTRIAL DEVELOPMENT
■ RECREATIONAL OPEN SPACE
■ RECOMMENDED LAND USE CHANGE



#### RECOMMENDED CHANGES TO THE STRATEGIC LAND USE PLAN AT KINGSHIGHWAY STATION

- A selected few parcels have been changed to Neighborhood Preservation to support the future character of the stable residential areas.
- Parcels at the northwest corner of Kingshighway and Natural Bridge have been changed to Business/Industrial Development Area from Regional Commercial Area. This will unify planning guidelines among several large underutilized parcels.
- As a Transit Oriented Neighborhood, parking requirements (as required by the City of St. Louis Revised Code Title 26) have been removed within the Kingshighway Station Form-Based District.
- Selected parcels on Kingshighway north of Natural Bridge have been changed from neighborhood Preservation to Neighborhood Commercial to support the future character of Kingshighway.

SEE MAP FOR RECOMMENDED CHANGES



## REGULATING PLAN

LEGEND: BUILDING ENVELOPE STANDARDS

- NEIGHBORHOOD GENERAL TYPE 1
- NEIGHBORHOOD GENERAL TYPE 2
- NEIGHBORHOOD CENTER TYPE 2
- NEIGHBORHOOD CAMPUS TYPE

## KINGSHIGHWAY STATION FORM-BASED DISTRICT

Four building envelope standards apply within the Kingshighway Station Form-Based District. Each building envelope standard regulates building placement, height, type, encroachments, use requirements, and parking requirements.

Each building envelope standard accommodates a particular range of density and experiential character.



#### PRIMARY & SECONDARY STREETS LEGEND

— PRIMARY STREETS  
— SIDE STREETS

#### PRIMARY & SIDE STREETS

Primary Streets within the Kingshighway Station Form-Based District are:

- Natural Bridge Avenue
- Kingshighway Boulevard

All other streets shall be considered Side Streets.

## **Building Envelope Standards**

### **Neighborhood General Type 1**

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 1 areas in order to preserve and enhance the integrity and quality of this primarily single family, duplex, triplex, fourplex, and rowhouse residential area of the neighborhood. The area is designed to provide for sensitive and respectful infill development that allows for the variety of building types and forms and front yards found in the neighborhood.

### **Neighborhood General Type 2**

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 2 areas in order to preserve and enhance the integrity and quality of this primarily denser and taller, larger lot residential area of the neighborhood. The area is designed to provide for denser and architecturally appropriate infill development which allows for a variety of building types, heights and forms as well as the common yards found in the neighborhood.

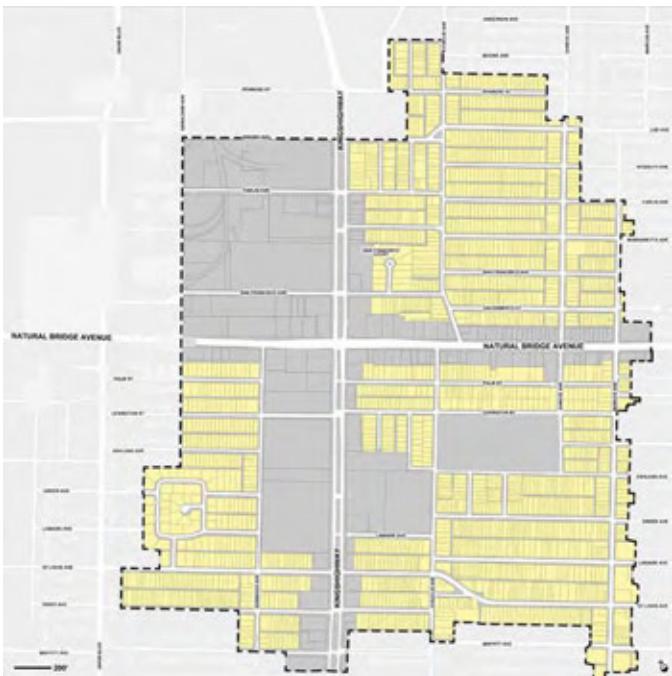
### **Neighborhood Center Type 2**

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood Center Type 2 areas which are typically neighborhood mixed-use areas in order to establish, preserve, or enhance the existing vibrant, pedestrian-oriented character of these areas while allowing flexibility in use. The physical form of these mixed-use areas follow the existing pattern of the area wherein there is a great variety of building types set back from the sidewalk with a common yard. These neighborhood centers are especially useful in close proximity to residential areas.

### **Campus Type 1**

The intent of this Building Envelope Standard is to regulate the physical form of Campus developments, defined as large-lot developments with multiple Building Types. Campuses are singular, identifiable sites within the district, bounded by public streets and typically feature unifying characteristics. The area is designed to allow for a variety of urban business, industrial, institutional, and academic uses while maintaining and supporting an active streetscape and a vibrant urban character.

## NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



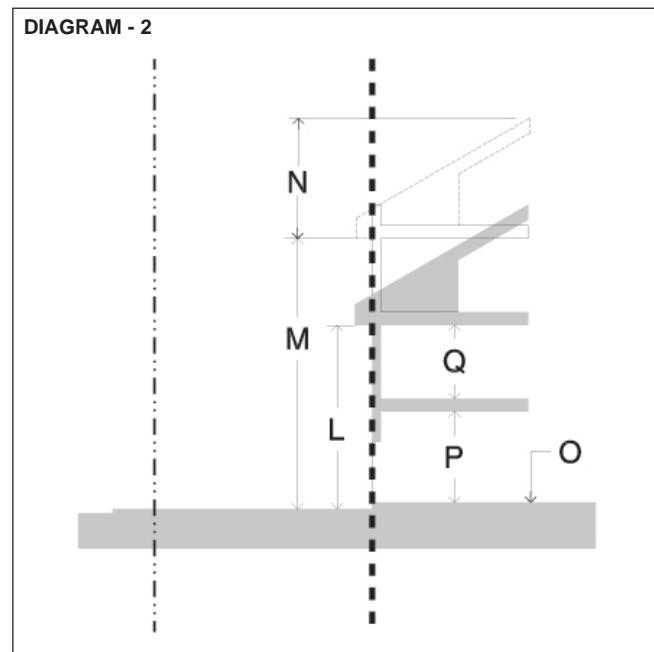
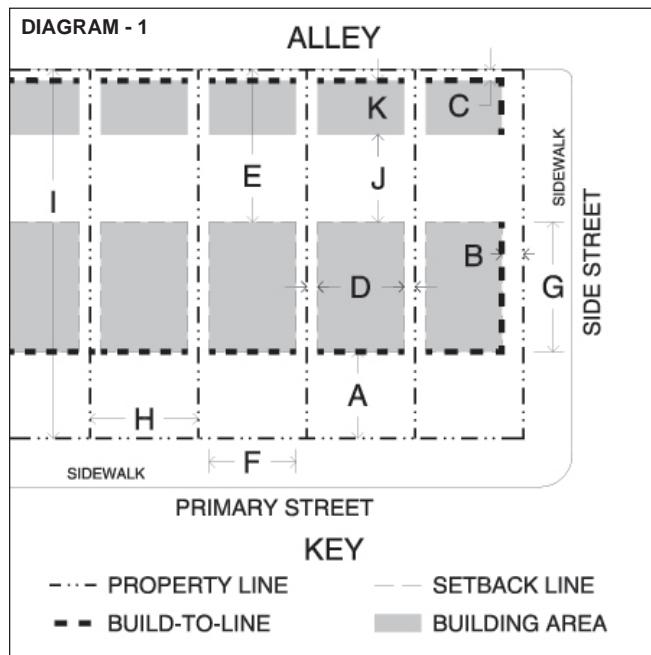
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 1 areas in order to preserve and enhance the integrity and quality of this primarily single family, duplex, triplex, fourplex and rowhouse residential area of the neighborhood. The area is designed to provide for sensitive and respectful infill development which allows for the variety of building types and forms, and front yards found in the neighborhood. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



# NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



## I - BUILDING PLACEMENT

### BUILD-TO-LINE:

[A] PRIMARY STREET:	25' Min   50' Max (1)
[B] SIDE ST., ANC. & MAIN BLDG	10'
[C] ALLEY, ANC. BLDG:	5'

### SETBACK:

[D] SIDE, ANC. & MAIN BLDG	5' Min   10' Max
[E] ALLEY, MAIN BLDG:	60' Min   120' Max (2)

### BUILDING FORM:

[F] PRIMARY STREET:	At least 80% of Build-to-Line
[G] SIDE ST., MAIN BLDG:	At Least 25% of Build-to-Line
[H] LOT WIDTH:	Per Existing
[I] LOT DEPTH:	Per Existing
[J] BETWEEN BLDGS:	25' Min b/t Main & Anc. Buildings
[K] DEPTH OF ANC. BLDG:	30' Max

## II - BUILDING HEIGHT

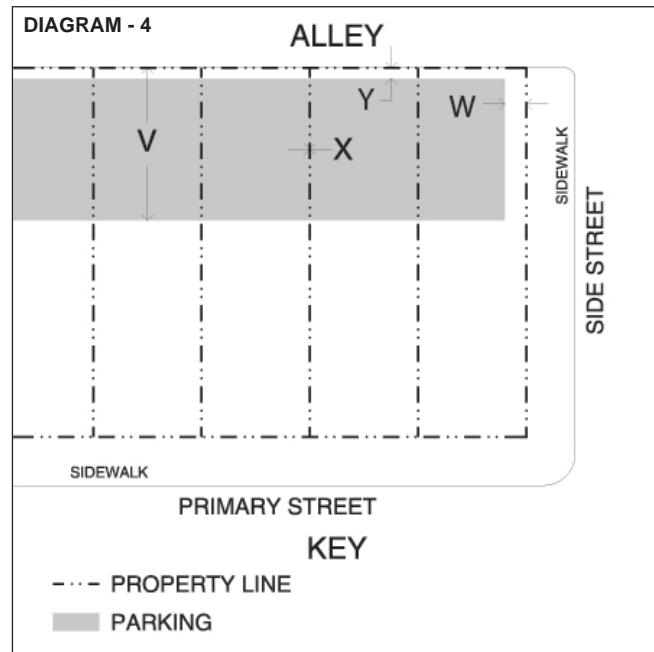
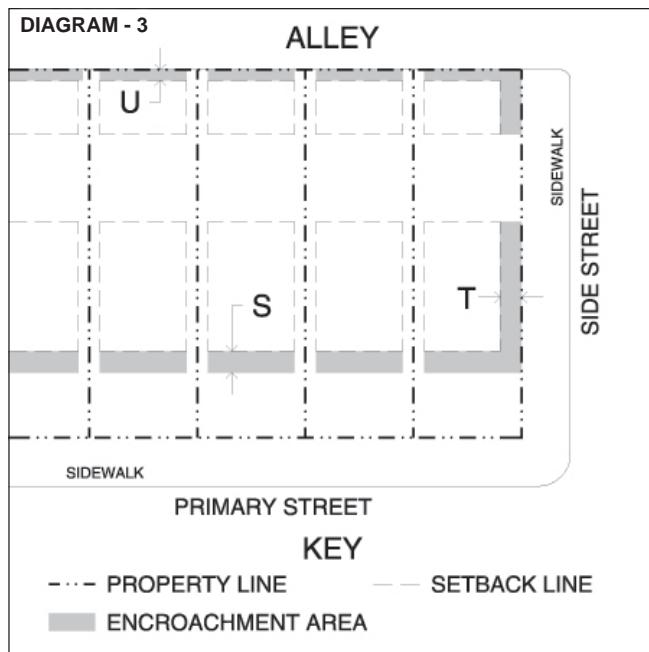
[L] BUILDING HEIGHT MINIMUM:	2 Stories and 25'
[M] BUILDING HEIGHT MAXIMUM:	3 Stories and 40'
[N] MAX FROM B.O. EAVE TO T.O. PARAPET OR ROOF:	15' Max
[O] FINISHED GRND FLOOR LEVEL:	1' Min   3' Max Above Back of Sidewalk or Adjacent Lot Level
[P] FIRST FLOOR CEILING HTS:	10' Min   12' Max (F to C)
[Q] UPPER FLOORS CEILING HTS:	8' Min   10' Max (F to C)
[R] ANC. BLDG. MAX. HEIGHT	3 Stories and 40' (3)

## III - BUILDING TYPES

Detached Single Family Dwelling  
Rear Garage  
Carriage House  
Duplex, Triplex, and Fourplex  
Rowhouse and Courtyard Rowhouse

FOR REFERENCE NOTES REFER  
TO FINAL PAGE OF THIS TYPE.

## NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)



## IV - ENCROACHMENTS

### LOCATION:

[S] PRIMARY STREET:	12' Max
[T] SIDE STREET:	10' Max
[U] ALLEY:	5' Max

## V - USE REQUIREMENTS

GROUND FLOOR USES: Residential

UPPER FLOOR(S) USES: Residential

## VI - PARKING REQUIREMENTS

### LOCATION:

[V] PRIMARY SETBACK:	60' Max
[W] SIDE STREET SETBACK:	10' Min
[X] SIDE SETBACK:	0', If Surface Lot; Per Main Building if Structured Parking
[Y] ALLEY SETBACK:	5' Min

### REQUIRED SPACES: (4)

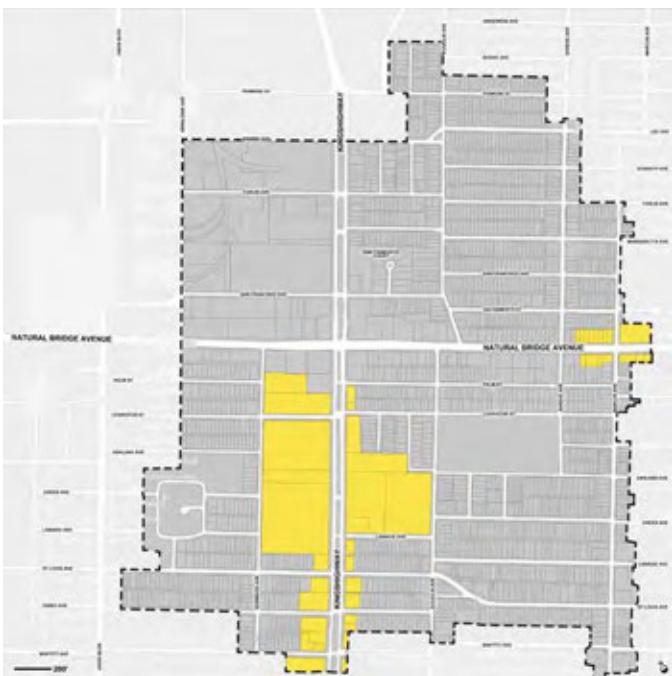
RESIDENTIAL USES: One (1) Off-Street Parking Space Per Dwelling Unit

## **NEIGHBORHOOD GENERAL TYPE 1 (NG1-TOD)**

### **VII - REFERENCE NOTES**

1. The Build-to-Line must match the average Front Fa-  
cade Line of the Block Face; and lots with NO Primary  
Street or Side Street frontage (abutting adjacent prop-  
erties) are exempt from the Primary Street Build-to-  
Line dimensional requirements, and are only required  
to have a five foot (5') setback on said frontage.
2. Lots with NO Alley frontage (abutting adjacent prop-  
erties) are exempt from the Alley, Main Building  
Build-to-Line dimensional requirements; and are only  
required to have a five foot (5') setback on said front-  
age.
3. In no case shall the Ancillary Building have a height  
greater than that of the Main Building.
4. Within the Kingshighway Transit Station Area, re-  
quired spaces do not apply.

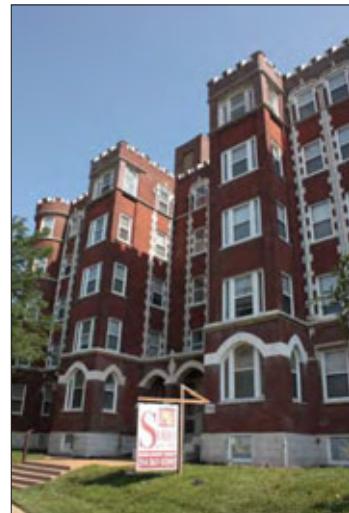
## NEIGHBORHOOD GENERAL TYPE 2 (NG2-TOD)



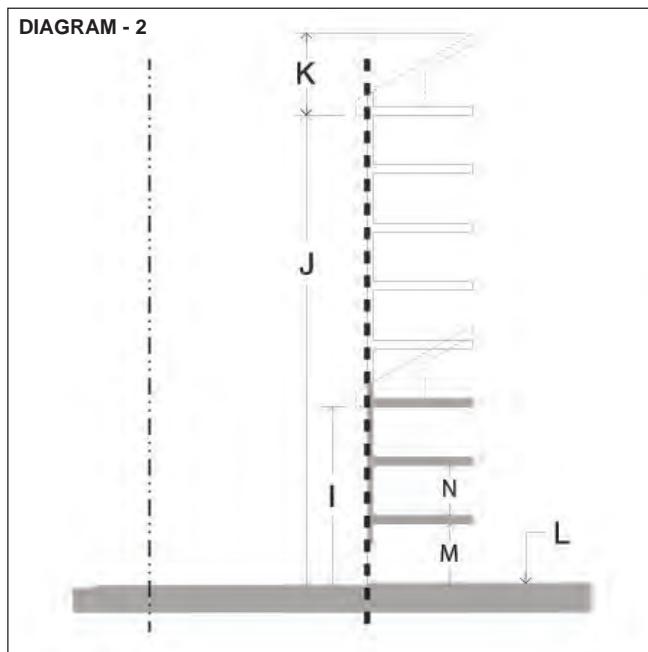
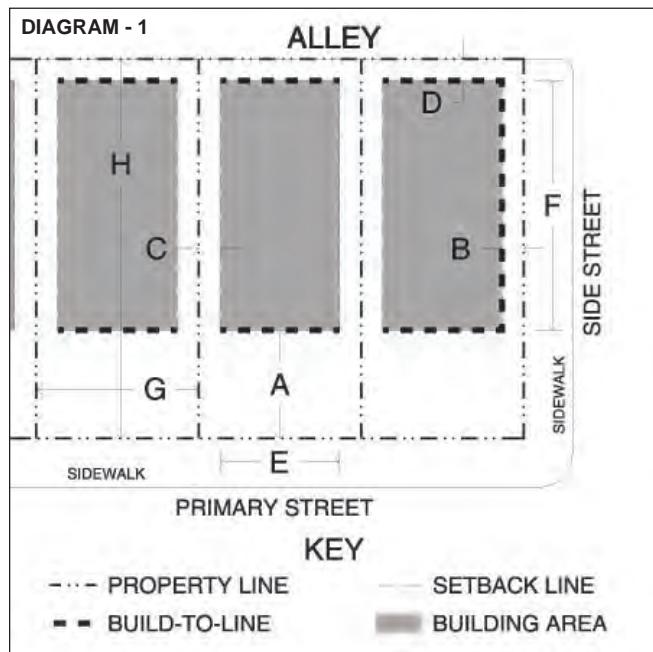
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood General Type 2 areas in order to preserve and enhance the integrity and quality of this primarily denser and taller, larger lot residential area of the neighborhood. The area is designed to provide for denser and architecturally appropriate infill development which allows for a variety of building types, heights and forms as well as the common yards found in the neighborhood. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



## NEIGHBORHOOD GENERAL TYPE 2 (NG2-TOD)



### I - BUILDING PLACEMENT

#### BUILD-TO-LINE:

- [A] PRIMARY STREET: 25' Min | 50' Max (1)  
 [B] SIDE STREET: 10'

#### SETBACK:

- [C] SIDE: 5' Min | 10' Max (2)  
 [D] ALLEY: 5' Min | 10' Max (3)

#### BUILDING FORM:

- [E] PRIMARY STREET: At least 80% of Build-to-Line (4)  
 [F] SIDE STREET: At Least 80% of Build-to-Line  
 [G] LOT WIDTH: Per Existing  
 [H] LOT DEPTH: Per Existing

### II - BUILDING HEIGHT

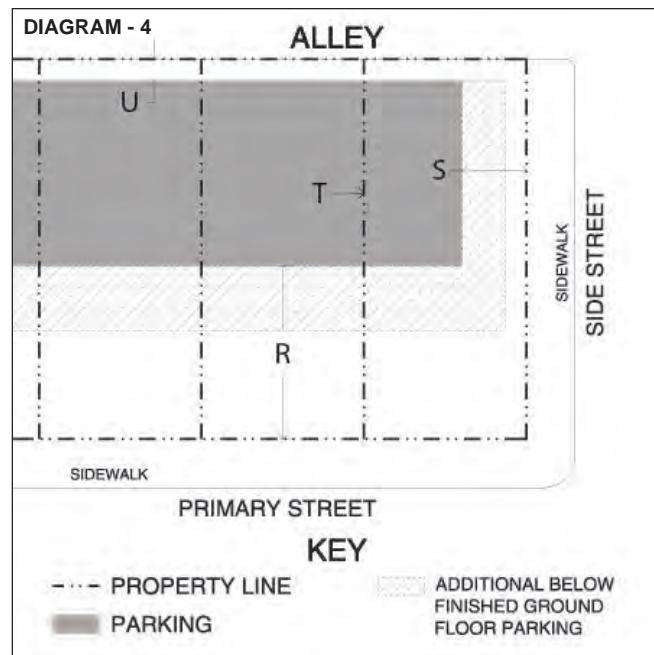
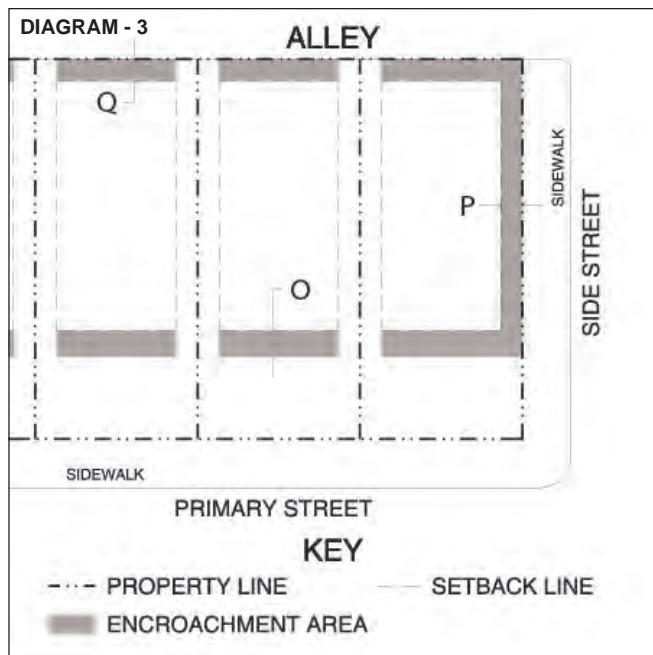
- |   |   |
|---|---|
| [I] BUILDING HEIGHT MINIMUM:                    | 3 Stories and 40'   |
| [J] BUILDING HEIGHT MAXIMUM:                    | 8 Stories and 90'   |
| [K] MAX FROM B.O. EAVE TO T.O. PARAPET OR ROOF: | 15' Max   |
| [L] FINISHED GRND FLOOR LEVEL:                  | 1' Min   3' Max<br>Above Back of Sidewalk<br>Or Adjacent Lot Level  |
| [M] FIRST FLOOR CEILING HTS:                    | 12' Min   15' Max (F to C)  |
| [N] UPPER FLOORS CEILING HTS:                   | 8' Min   12' Max (F to C)   |
| MEZZANINES AND PODIUMS:                         | Mezzanines and Podiums<br>Greater Than 1/3 of the<br>Floor Plate Area Shall<br>Be Counted as a Full Story |

### III - BUILDING TYPES (5)

- Duplex, Triplex, and Fourplex
- Rowhouse and Courtyard Rowhouse
- Stacked Flats
- Courtyard Building
- High Rise Residential Building

FOR REFERENCE NOTES REFER  
TO FINAL PAGE OF THIS TYPE.

## NEIGHBORHOOD GENERAL TYPE 2 (NG2-TOD)



## IV - ENCROACHMENTS

### LOCATION:

- [O] PRIMARY STREET: 12' Max
- [P] SIDE STREET: 10' Max
- [Q] ALLEY: 5' Max

## V - USE REQUIREMENTS (6)

GROUND FLOOR USE: Residential

UPPER FLOOR(S) USE: Residential

## VI - PARKING REQUIREMENTS

### LOCATION:

- [R] PRIMARY STREET SETBACK: 55' Min (7)
- [S] SIDE STREET SETBACK: 30' Min (8)
- [T] SIDE SETBACK: 0', If Surface Lot; Per Main Building if Structured Parking
- [U] ALLEY SETBACK: 5' Min

### REQUIRED SPACES: (9)

RESIDENTIAL USES: One (1) Off-Street Parking Space Per Dwelling Unit

## **NEIGHBORHOOD GENERAL TYPE 2 (NG2-TOD)**

### **VII - REFERENCE NOTES**

1. The Build-to-Line must match the average Front Facade Line of the Block Face; and lots with NO Primary Street or Side Street frontage (abutting adjacent properties) are exempt from the Primary Street Build-to-Line dimensional requirements, and are only required to have a five foot (5') setback on said frontage.
2. For buildings with Dwelling Units primarily opening to side yards, the Side Setback is required to be ten feet (10'). Buildings higher than three (3) stories and forty feet (40') are required to have a ten foot (10') Side Setback.
3. Lots with NO Alley frontage (abutting adjacent properties) are required to have a five foot (5') setback on said frontage.
4. This percentage (%) can be adjusted to fifty percent (50%) in the case of the following Building Types: Courtyard Rowhouses and Courtyard Buildings
5. Civic | Institutional building types also allowed.
6. Civic | Institutional building types also allowable with direct frontage on Kingshighway.
7. This figure reflects an additional dimension of thirty feet (30') beyond the Primary Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
8. This figure reflects an additional dimension of twenty feet (20') beyond the Side Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
9. Within the Kingshighway Transit Station Area, required spaces do not apply.

## NEIGHBORHOOD CENTER TYPE 2 (NC2-TOD)



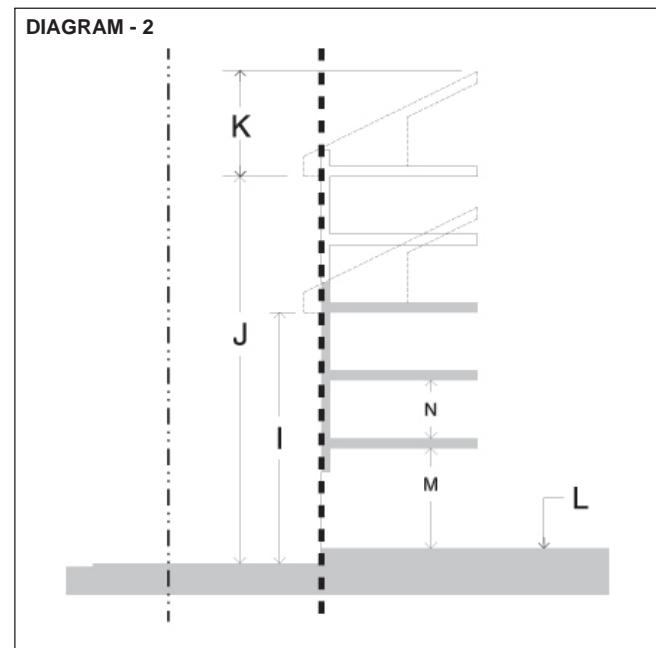
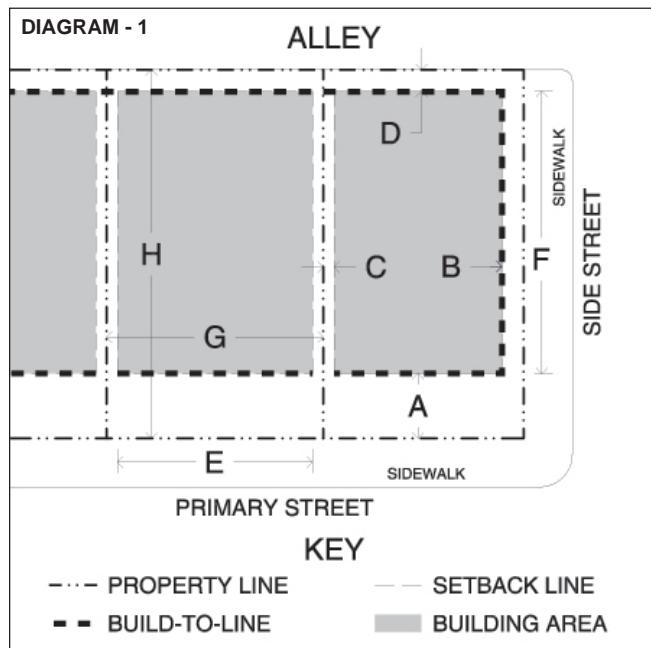
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of the Neighborhood Center Type 2 areas which are typically neighborhood MIXED-USE areas in order to establish, preserve or enhance the existing vibrant, pedestrian oriented character of these areas while allowing flexibility in use. The physical form of these mixed-use areas follow the existing pattern of the area wherein there is a great variety of building types set back from the sidewalk with a common yard. These neighborhood centers are especially useful in close proximity to residential areas. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



## NEIGHBORHOOD CENTER TYPE 2 (NC2-TOD)



### I - BUILDING PLACEMENT

#### BUILD-TO-LINE:

- [A] PRIMARY STREET: 30' Min | 50' Max (1)
- [B] SIDE STREET: 10'

#### SETBACK:

- [C] SIDE: 5' Min | 10' Max (2)
- [D] ALLEY: 5' Min | 10' Max (3)

#### BUILDING FORM:

- [E] PRIMARY STREET: At Least 85% of Build-to-Line (4)
- [F] SIDE STREET: At Least 25% of Build-to-Line
- [G] LOT WIDTH: Per Existing
- [H] LOT DEPTH: Per Existing

FOR REFERENCE NOTES REFER  
TO THE FINAL PAGE OF THIS TYPE

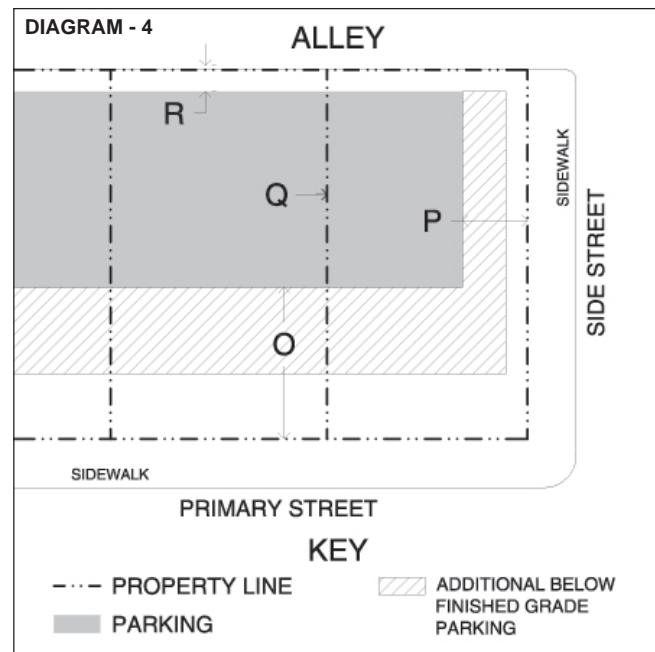
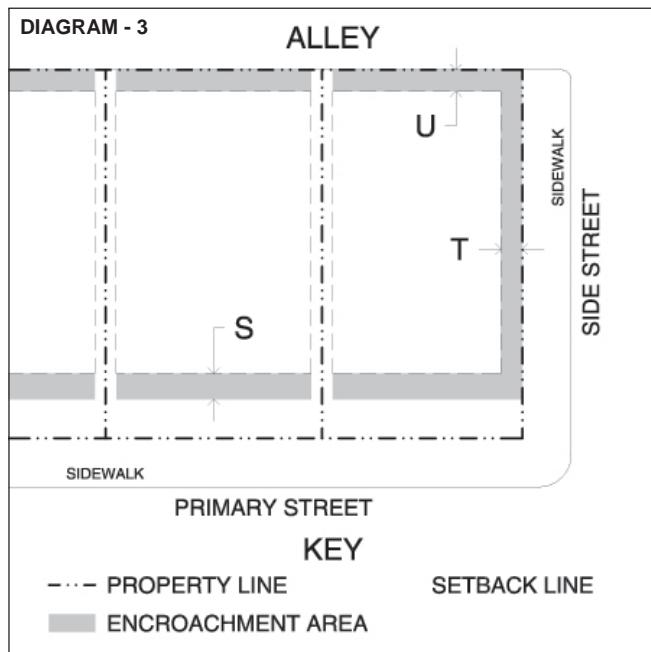
### II - BUILDING HEIGHT

- [I] BUILDING HEIGHT MINIMUM: 3 Stories and 40'
- [J] BUILDING HEIGHT MAXIMUM: 5 stories and 65'
- [K] MAX FROM B.O. EAVE TO T.O. PARAPET OR ROOF: 15' Max
- [L] FINISHED GRND FLOOR LEVEL: 2' Min | 3' Max  
Back of Sidewalk Or Adjacent Lot Level For Residential;  
All Other Uses are Max 6"
- [M] FIRST FLOOR CEILING HTS: 12' Min | 25' Max (F to C)
- [N] UPPER FLOORS CEILING HTS: 8' Min | 15' Max (F to C)
- [N1] MEZZANINES AND PODIUMS: Mezzanines and Podiums Greater Than 1/3 of the Floor Plate Area Shall Be Counted as a Full Story

### III - BUILDING TYPES (5)

Duplex, Triplex, and Fourplex  
Rowhouse and Courtyard Rowhouse  
Stacked Flats  
Courtyard Building  
High Rise Residential Building  
Flex Building  
Live / Work Units

## NEIGHBORHOOD CENTER TYPE 2 (NC2-TOD)



## IV - ENCROACHMENTS

### LOCATION:

[S] PRIMARY STREET:	12' Max
[T] SIDE STREET:	10' Max
[U] ALLEY:	5' Max

## V - USE REQUIREMENTS

GROUND FLOOR: (6)	Office Residential Secondary Retail
UPPER FLOOR(S):	Office Residential

## VI - PARKING REQUIREMENTS

### LOCATION:

[O] PRIMARY STREET SETBACK:	60' Min (7)
[P] SIDE STREET SETBACK:	30' Min (8)
[Q] SIDE SETBACK:	0' , If Surface Lot   Per Main Building If Structured Parking
[R] ALLEY SETBACK:	5' Min

### REQUIRED SPACES: (9)

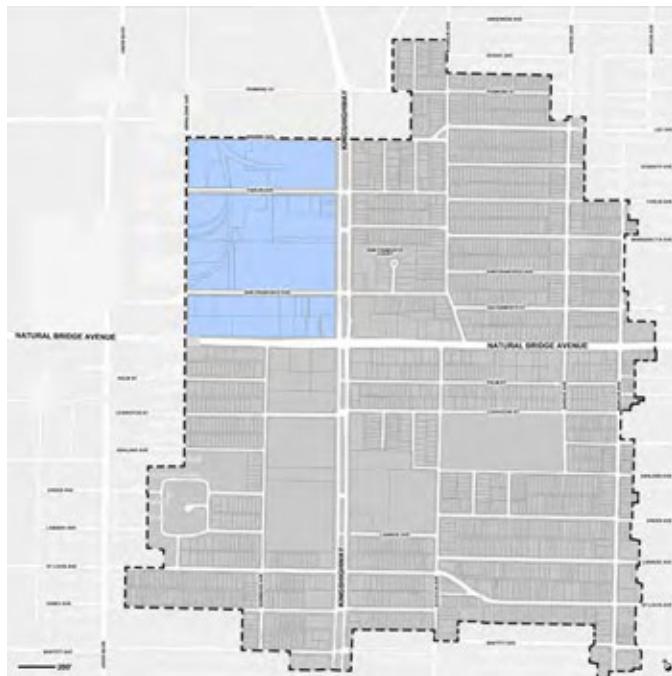
OFFICE USES:	$< 7,500 \text{ SQ FT}$ : No Off-Street Parking Requirement $> 7,500 \text{ SQ FT}$ : One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT
PRIMARY RETAIL USES:	$< 3,000 \text{ SQ FT}$ : No Off-Street Parking Requirement $> 3,000 \text{ SQ FT}$ : One (1) Space Per 700 SQ FT in Excess of the 3,000 SQ FT
RESIDENTIAL USES:	One (1) Space Per Dwelling Unit
SECONDARY RETAIL USES:	$< 7,500 \text{ SQ FT}$ : No Off-Street Parking Requirement $> 7,500 \text{ SQ FT}$ : One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT

## **NEIGHBORHOOD CENTER TYPE 2 (NC2-TOD)**

### **VII - REFERENCE NOTES**

1. The Build-to-Line must match the average Front Facade Line of the Block Face; and lots with NO Primary Street frontage (abutting adjacent properties) are exempt from the Primary Street Build-to-Line dimensional requirements; and are only required to have a five foot (5') setback on said frontage.
2. For buildings with Dwelling Units primarily opening to side yards, Side Setback is required to be ten feet (10'). Buildings higher than three (3) stories or forty feet (40') are required to have a ten foot (10') Side Setback.
3. Lots with NO Alley Frontage (abutting adjacent properties) are required to have a ten foot (10') setback on said Frontage.
4. The percentage (%) for the Primary Street can be adjusted to fifty percent (50%) in the case of the following Building Types: Courtyard Rowhouse and Court-yard Building.
5. Commercial Block Building will be allowed within the first block of the intersection of Natural Bridge and Kingshighway.
6. Primary retail will be allowed on the Ground Floor for 300' within the intersection of Natural Bridge and Kingshighway.
7. This figure reflects an additional dimension of thirty feet (30') beyond the Primary Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
8. This figure reflects an additional dimension of twenty feet (20') beyond the Side Street Build-to-Line for above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
9. Within the Kingshighway Transit Station Area, required spaces do not apply.

## CAMPUS TYPE 1 (CM1-TOD)



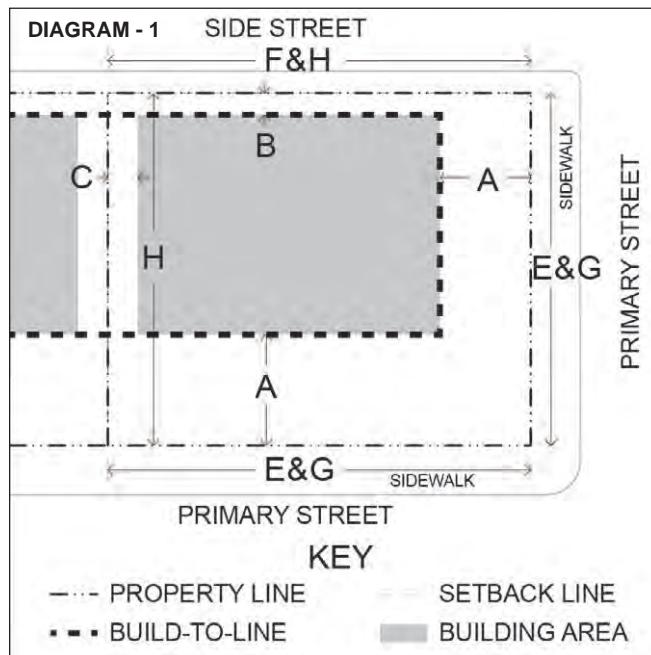
### INTENT STATEMENT:

The intent of this Building Envelope Standard is to regulate the physical form of Campus developments, defined as large-lot developments with multiple Building Types. Campuses are singular, identifiable sites within the district, bounded by public streets and typically feature unifying characteristics. The area is designed to allow for a variety of urban business, industrial, institutional, and academic uses while maintaining and supporting an active streetscape and a vibrant urban character. This intent statement and the images shown below are advisory only.

### EXAMPLES OF CHARACTER



## CAMPUS TYPE 1 (CM1-TOD)



### I - BUILDING PLACEMENT

#### BUILD-TO-LINE:

- [A] PRIMARY STREET: 30' Min | 80' Max (1)  
 [B] SIDE STREET: 0' Min | 10' Max (2)

#### SETBACK:

- [C] SIDE: 0' Min | 10' Max (3)  
 [D] ALLEY: Not Applicable (3,4)

#### BUILDING FORM:

- [E] PRIMARY STREET: At Least 60% of Build-to-Line  
 [F] SIDE STREET: At Least 30% of Build-to-Line (5)  
 [G] LOT WIDTH: At Least 500' (6)  
 [H] LOT DEPTH: At Least 425' (6)

FOR REFERENCE NOTES REFER  
TO FINAL PAGE OF THIS TYPE

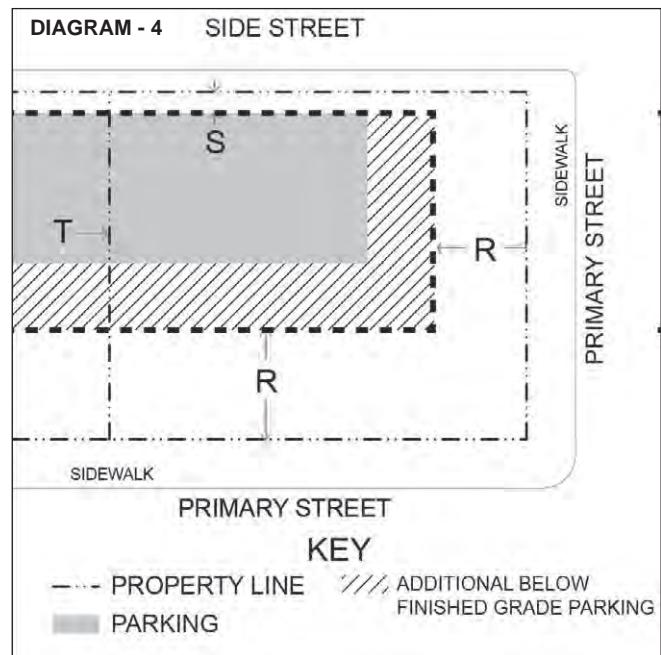
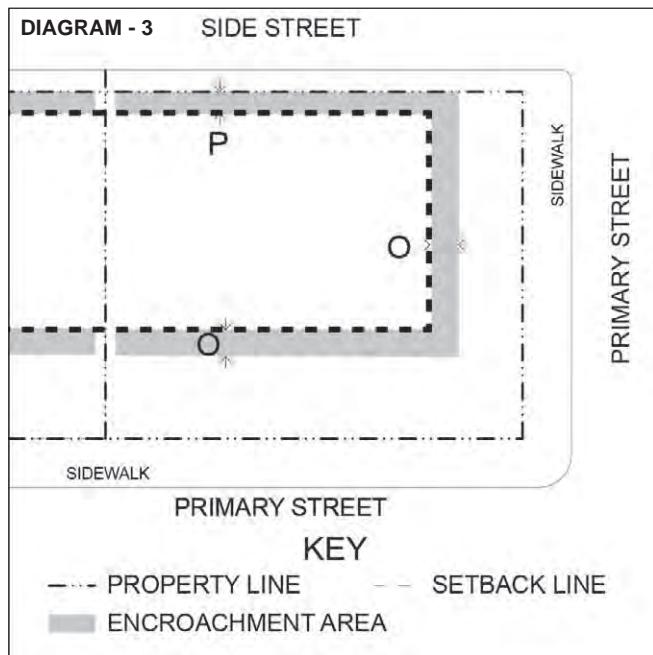
### II - BUILDING HEIGHT

- |  |  |
|--|--|
| [I] BUILDING HEIGHT MINIMUM:                       | 3 Stories and 40' (7)  |
| [J] BUILDING HEIGHT MAXIMUM:                       | 5 Stories and 65'  |
| [K] MAX FROM B.O. EAVE<br>TO T.O. PARAPET OR ROOF: | 15' Max  |
| [L] FINISHED GRND FLOOR LEVEL:                     | 2' Min   3' Max<br>Back of Sidewalk Or Adjacent<br>Lot Level For Residential;<br>All Other Uses are Max 6" |
| [M] FIRST FLOOR CEILING HTS:                       | 12" Min   25' Max (F to C)   |
| [N] UPPER FLOORS CEILING HTS:                      | 8' Min   15' Max (F to C)  |
| [N1] MEZZANINES AND PODIUMS:                       | Mezzanines and Podiums<br>Greater Than 1/3 of the<br>Floor Plate Area Shall<br>Be Counted as a Full Story  |

### III - BUILDING TYPES

- Commercial Block Building (8)
- Flex Building (8)
- Live|Work Units (8)
- Liner Building (8)
- Civic|Institutional Building (8)
- Industrial Building (To Be Developed) (8)

## CAMPUS TYPE 1 (CM1-TOD)



## IV - ENCROACHMENTS

### LOCATION:

[O] PRIMARY STREET:	12' Max
[P] SIDE STREET:	10' Max
[Q] ALLEY:	Not Applicable (9)

## V - USE REQUIREMENTS

GROUND FLOOR USE:	Office Primary Retail Light Industrial Civic Institutional
UPPER FLOOR(S) USE:	Office Residential Light Industrial Civic Institutional

## VI - PARKING REQUIREMENTS

### LOCATION:

[R] PRIMARY STREET SETBACK:	60'-110' Min (10)
[S] SIDE STREET SETBACK:	30'-40' Min (11)
[T] SIDE SETBACK:	0', If Surface Lot; Per Main Building if Structured Parking
[U] ALLEY SETBACK:	Not Applicable (12)

### REQUIRED SPACES:

#### OFFICE USES: (13)

< 7,500 SQ FT:	No Off-Street Parking Requirement
> 7,500 SQ FT:	One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT

#### PRIMARY RETAIL USES: (13)

< 3,000 SQ FT:	No Off-Street Parking Requirement
> 3,000 SQ FT:	One (1) Space Per 700 SQ FT in Excess of the 3,000 SQ FT

#### RESIDENTIAL USES:

One (1) Space Per Dwelling Unit

#### SECONDARY RETAIL USES: (13)

< 7,500 SQ FT:	No Off-Street Parking Requirement
> 7,500 SQ FT:	One (1) Space Per 1,250 SQ FT in Excess of the 7,500 SQ FT

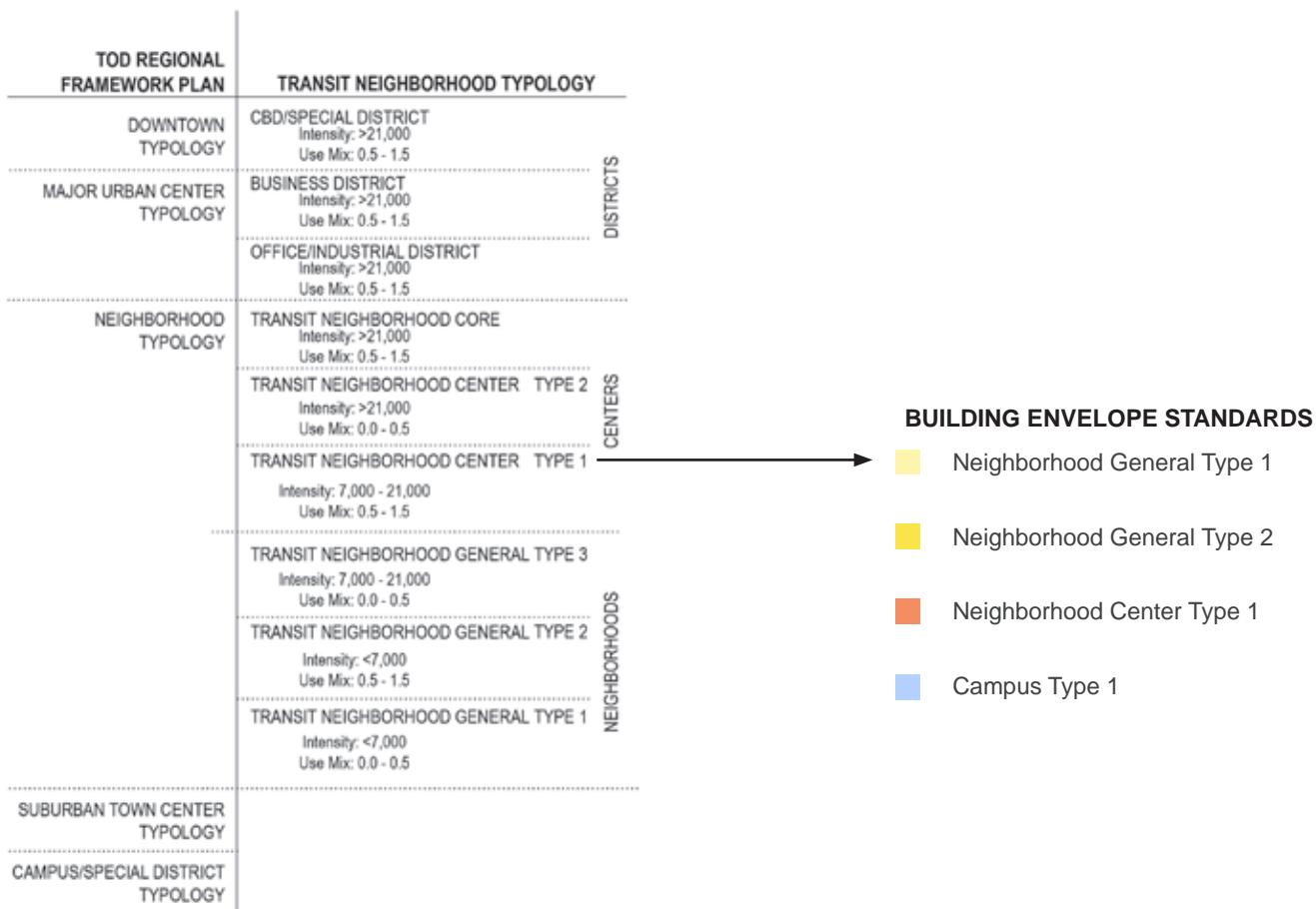
#### INDUSTRIAL USES: (13)

(Parking Requirements to be Established by the City of St. Louis)

## **CAMPUS TYPE 1 (CM1-TOD)**

### **VII - REFERENCE NOTES**

1. On all lots, a minimum of two (2) bounding streets must be Primary Streets.
2. Lots that are bounded by at least two (2) Primary Streets may be bounded by Side Streets on the remaining lot lines.
3. Private streets, driveways, and alleys that are internal to the lot shall not be subject to setback requirements; and when the conditions enumerated in the Build-to-Line requirements are fulfilled, side setbacks shall apply to remaining lot lines.
4. Where alleys are present, setbacks shall be from five feet (5') to ten feet (10')
5. All lots with direct frontage onto Geraldine Avenue between Natural Bridge and Brown Avenue are not required to build out 30% of the Build-to-Line.
6. Lots shall have a minimum area of five (5) acres, irrespective of lot dimensions; and lot dimensions and lot area shall be measured either (A) by individual lot or parcel; (B) by multiple contiguous lots or parcels under single ownership; or (C) by multiple contiguous lots or parcels agglomerated by a legally-enforceable development agreement.
7. Building Heights for buildings interior to the campus block are not required to meet the building height minimum.
8. This Building Envelope Standard allows multiple Building Types per lot.
9. Where alleys are present, setbacks shall be five feet (5') Maximum.
10. This figure reflects an additional dimension of thirty feet (30') beyond the Primary Street Build-to-Line for on grade and above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
11. This figure reflects an additional dimension of thirty feet (30') beyond the Side Street Build-to-Line for on grade and above grade parking. Below finished ground floor level parking can be coterminous with the Facade Line of the building.
12. Where alleys are present, setbacks shall be five feet (5') Minimum.
13. Within the Kingshighway Transit Station Area, required spaces do not apply.



## LINKING BUILDING ENVELOPE STANDARDS TO TRANSIT NEIGHBORHOOD TYPOLOGY

For Transit Neighborhood Center Type 1, the Building Envelope Standards described in this section define an appropriate character and scale for new development in the station area.

When Applied, the Form Base District establishes wide setbacks along Natural Bridge and Kingshighway to make space for new trees, buffers, and gracious setbacks. The code maintains the lower-density residential areas in most places, and allows higher density along the major throughfares within the station area.



## IMPLEMENTATION STRATEGIES & ACTIONS

### DEVELOPMENT STRATEGY FRAMEWORK

Once the Northside-Southside Alignment is established as a project with an implementation timeline, the proposed Kingshighway Station would be in a position to more readily meet the aspirational goals of being a station in the Transit Neighborhood Center Type 1 typology, if certain steps are taken.

As a first step, the City must convene a working group of interested parties focused on the long-term improvement of the station area. Ideally, this team will consist of City employees, developers, neighborhood institution representatives, and area residents. The team should have the power to review proposed plans and make recommendations to applicable City agencies. Other powers could include the ability to recommend developers for specific funding programs and oversight of public infrastructure development. In addition to these review powers, the working group will be charged with communicating opportunities, plans, and the expected benefits of the redevelopment plan to residents, developers, and businesses.

In addition to a project team, steps must be taken to modify the zoning of the station area to promote the desired future land uses. For example, many of the parcels where office development is proposed are zoned K, unrestricted. If left as-is, this zoning could allow future undesirable uses such as industrial or trucking facilities. Coordination with the proposed form-based code is critical to ensuring the future feasibility of TOD.

During the planning and construction phases of the transit line and station, it is critical that the City take an active approach to land banking for future development. Tax-delinquent properties that are ceded to the City's Land Reutilization Authority—especially those near the intersection of Natural Bridge and Kingshighway or at the suggested office campus—should be land-banked for future TOD development.

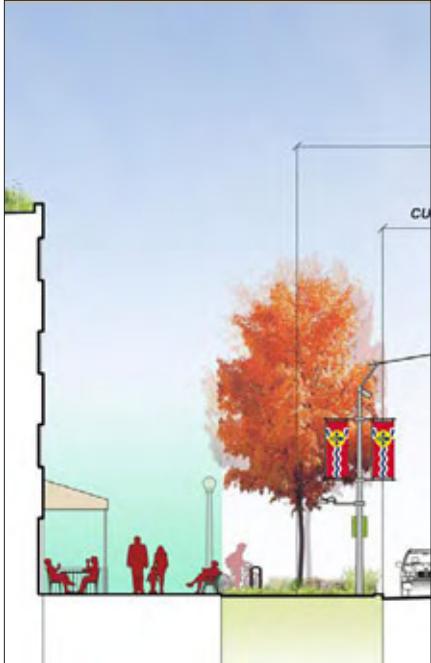
The preferred redevelopment plan for the Kingshighway Station creates a modern office campus adjacent to a vibrant mixed-use district centered around the proposed station at Kingshighway and Natural Bridge. While some renovation is anticipated, much of the redevelopment activity will consist of new construction. To best achieve this, it is likely that a master developer would be needed to develop the office campus portion of the suggested project. Coordinating with the working group, the City should consider the use of certain redevelopment tools (TIF, Chapter 99, Chapter 353, etc.) to select a developer. Individual developers may be selected for the development of the mixed-use and residential buildings surrounding the station and scattered throughout the neighborhood.

Locating gap financing is of utmost importance to the long-term success of the Kingshighway Station area as TOD. It is critical that each financing package be carefully scrutinized—ideally by both City officials and the working group—to determine the best use of public or private funds for an individual project. A general framework for the use of public and private redevelopment tools is below:

- TIF: public infrastructure costs, land acquisition, and commercial property renovations;
- CID/TDD street improvements, security patrols, beautification, and other enhancements;
- Chapter 353 tax abatement to lure developers or tenants;
- Chapter 99 tax abatement for individual property owners;
- Form an internal redevelopment team for the station area; and
- Identify master developer for specific nodes or programs.

DEVELOPMENT TYPE	STAGE 1	STAGE 2	STAGE 3
NEW RESIDENTIAL	X		X
RENOVATED RESIDENTIAL	X		
OFFICE		X	
RETAIL	X		X

Kingshighway Station Preferred Station Area Plan	
	Preferred Scenario
Market Rate Residential (units)	1,100
Affordable Residential (units)	254
Renovated Residential (units)	195
Retail (sf)	285,000
Office (sf)	1,000,000



**DETAIL OF NATURAL BRIDGE AVE SECTION**

## TRANSPORTATION FRAMEWORK

Light rail transit and Transit Oriented Development are inherently sustainable. The transit improvements at the Kingshighway Station operate on the social, economic, and ecological platforms of the City's Sustainability Plan. The construction of the Alignment will reduce the demand for car ownership and the emission of greenhouse gas. Walkability will increase within the station area, as people are connected to jobs and services throughout the City. The transit station provides people of all income levels equal access to amenities, business opportunities, transportation, and safe and healthy neighborhoods.

### Walkability

A The proposed commercial developments in the northwest quadrant of the station area should provide direct pedestrian and bicycle linkages to the station:

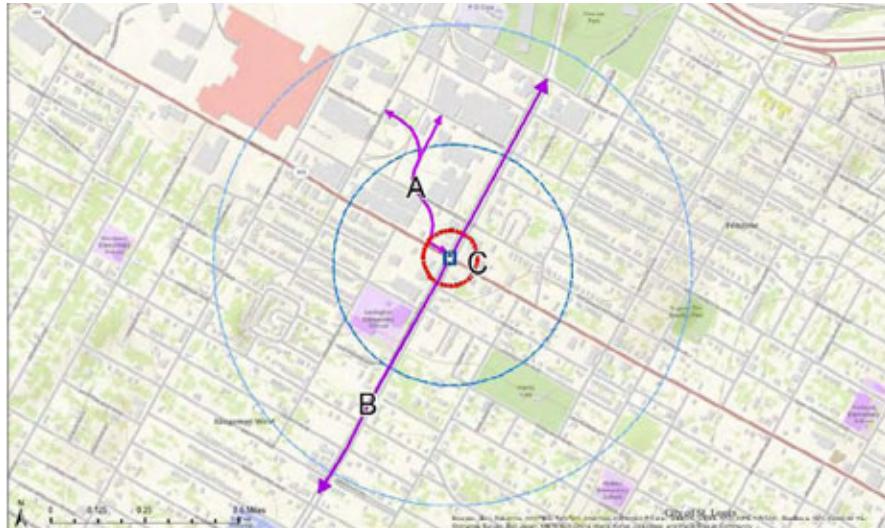
- Tier 1: Design all sidewalks with an emphasis on maintaining a direct route to the station; and
- Tier 2: Design a multi-use path through the development that would serve all of the proposed buildings and the station, minimizing the distances in between.

B Streets within the station area do not form a uniform street grid, and the discontinuity tends to lengthen connections between the station and surrounding neighborhoods. Improving access to the station from the north and south along Kingshighway would be advantageous:

- Tier 1: Widen sidewalks and construct ADA-compliant ramps at each intersection along Kingshighway within the station area;
- Tier 2: Install a multi-use trail for pedestrians and bicyclists within the wide, landscaped median of Kingshighway; and
- Tier 3: Enhance the multi-use path within the median of Kingshighway as a linear park with features oriented to pedestrians such as benches, lighting, and aesthetic treatments.

Alternative	Proposed Development	Mode	Daily Demand	Comments
1 Neighborhood Center Type 1	1,900 units RESIDENTIAL 310,000 sq. ft. RETAIL 1,000,000 sq. ft. OFFICE	Transit Trips	4,174	
		Auto Trips	27,579	2,758 peak hour auto trips
		Parking Spaces	5,654	2,500 from office space
2 Business District	1,000 units RESIDENTIAL 310,000 RETAIL 2,000,000 sq. ft. OFFICE	Transit Trips	4,998	
		Auto Trips	31,381	3,138 peak hour auto trips
		Parking Spaces	6,879	5,000 from office space
Preferred Alternative	1,100 units RESIDENTIAL 258,000 sq. ft. RETAIL 1,000,000 sq. ft. OFFICE	Transit Trips	3,420	
		Auto Trips	21,508	2,151 peak hour auto trips
		Parking Spaces	4,441	2,500 from office space

## WALKABILITY RECOMMENDATIONS



C It was observed that drivers in the area are aggressive, particularly at the intersection of Natural Bridge and Kingshighway. Given their functionality as arterials, traffic calming measures would not be appropriate along either corridor. However, elements to increase drivers' awareness of pedestrians and enhance pedestrian safety are advised:

- Tier 1: Install pedestrian countdown signals and restrict right-turns-on-red as required for ADA amendments;
- Tier 2: Install colored or textured crosswalks and pedestrian-scale lighting; and
- Tier 3: Install pedestrian refuge areas within the median of Kingshighway.



## Bikability

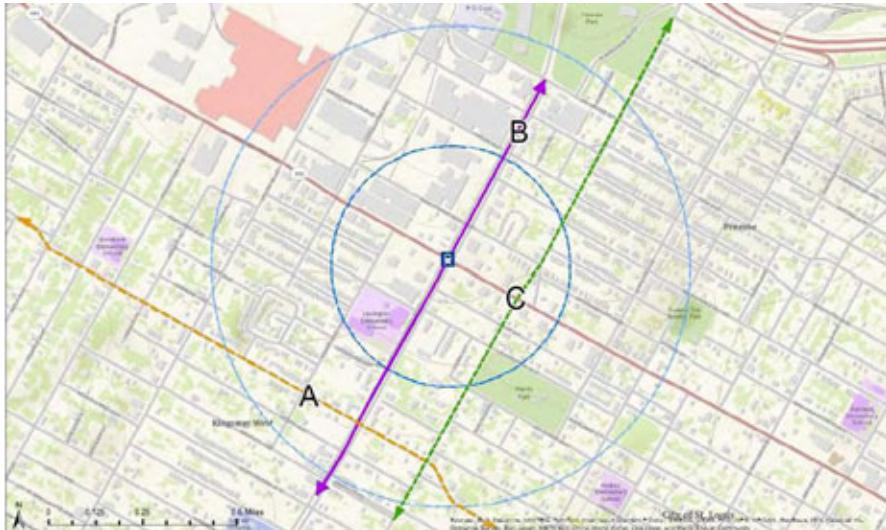
A Existing east-west bicycle lanes along Natural Bridge would be displaced by the proposed light rail line and should be relocated to St. Louis Avenue at the periphery of the study area approximately  $\frac{1}{2}$  mile south of the station. Relocating the lanes to adjacent parallel streets would not restore the same level of connectivity, as most of these corridors are not continuous over long distances like St. Louis Avenue is. While the character of St. Louis Avenue would be more conducive to bicycling, its width would constrain the route to a share-the-road configuration. The relocation of the bike route would facilitate a long, continuous connection to the North Riverfront Trail to the east. Connections to the station could be made via Euclid Avenue or the multi-use trail along Kingshighway:

- Tier 1: Designate St. Louis Avenue as a share-the-road bike route; and
- Tier 2: Eliminate parking along St. Louis Avenue and install dedicated bike lanes.

B Streets within the station area do not form a uniform street grid, and the discontinuity tends to lengthen connections between the station and surrounding neighborhoods. Improving access to the station from the north and south along Kingshighway would be advantageous:

- Tier 1: Install a multi-use trail for pedestrian and bicyclists within the wide, landscaped median of Kingshighway; and
- Tier 2: Enhance the multi-use path within the median of Kingshighway as a linear park with features oriented to pedestrians such as benches, lighting, and aesthetic treatments.

## BIKABILITY RECOMMENDATIONS



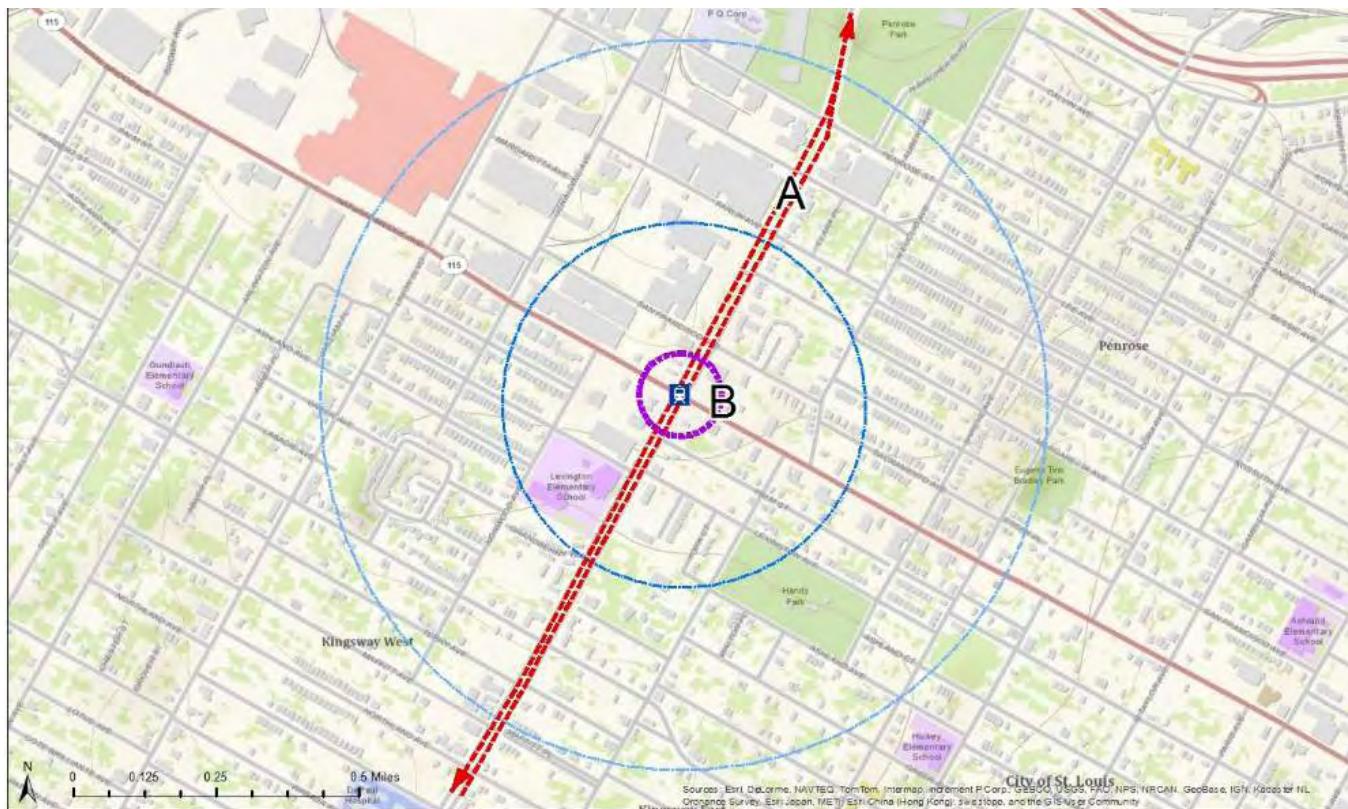
C The north and south legs of Euclid Ave at Natural Bridge are offset and do not align opposite each other. Since Euclid is a designated bike route, realigning the north leg in conjunction with adjacent redevelopments would eliminate the need for bicyclists to use Natural Bridge to remain on Euclid when traveling north and south:

- Tier 1: Realign the north leg of Euclid Avenue at Natural Bridge (in conjunction with development) opposite the south leg.



## Transit

- A Increase service for the #95 bus that runs along Kingshighway to maximize ridership, encourage more bus to rail trips, and reinforce this station as an important transfer hub for transit riders. This line currently maintains 20-minute headways during normal operating hours:
- Tier 1: Increase headways to 15 minutes; and
  - Tier 2: Increase headways to 10 minutes.
- B The #95 is a major north-south bus route. Implementing transit priority features at the intersection of Natural Bridge and Kingshighway would reduce traffic interference with buses entering and leaving the stop. This would help to maintain on-time service and reliability, thereby maximizing scheduled connections between buses and light rail:
- Tier 1: Convert the curb lane of Kingshighway at Natural Bridge into a bus only lane. To preserve the existing 4-lane approaches, it may be necessary to relocate the left-turn lane within the landscaped median; and
  - Tier 2: Implement transit signal priority at the intersection in the form of an early “queue jump” signal that would allow buses to proceed before other vehicles providing an opportunity for them to easily rejoin normal traffic lanes.
- The #4 bus running east-west along Natural Bridge would be redundant with the proposed light rail line:
- Tier 1: Eliminate the #4 route altogether.



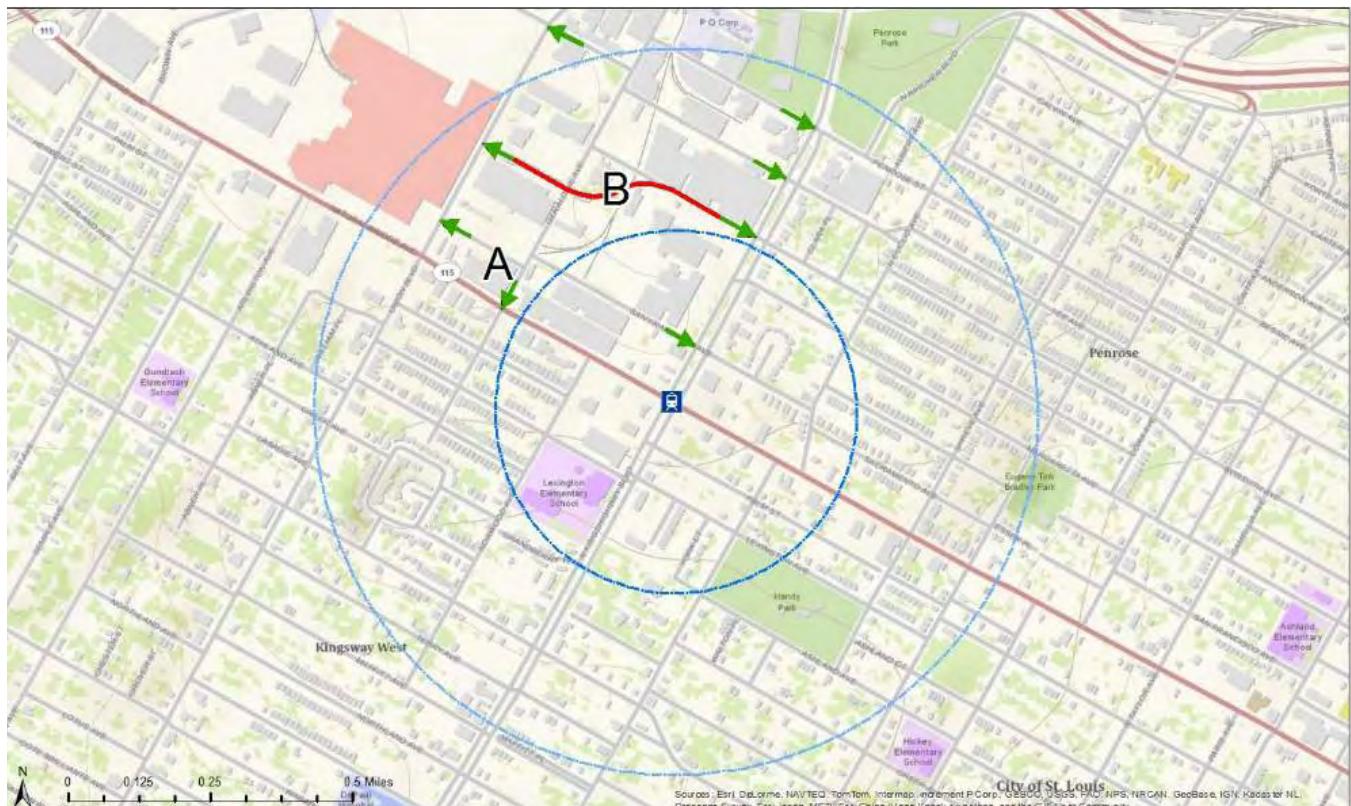
## TRANSIT RECOMMENDATIONS



**DETAIL OF NATURAL BRIDGE AVE SECTION**

#### Vehicular Traffic

- A The commercial development within the station area's northwest quadrant would generate a sizable amount of vehicular traffic. To maximize traffic dispersion and avoid reliance upon any one particular corridor for access, vehicular connections should be provided to all major adjacent thoroughfares, including Union Boulevard, Natural Bridge, and Kingshighway. Union Boulevard is of particular importance, given its connection to Interstate 70;
- B Currently there is no direct route between Kingshighway and Union Boulevard through the northwest quadrant of the station area. Such a connection would be desirable to maximize wayfinding and connectivity:
  - Tier 1. Realign Farlin Avenue to connect with Margaretta Avenue to the west
  - Natural Bridge is a heavily traveled state road and should maintain two through lanes in each direction plus dedicated left-turn lanes at major intersections to accommodate traffic volumes. Likewise, Kingshighway should maintain three through lanes in each direction;
  - Although outside the station area, some level of improvements would likely be needed at Kingshighway and its interchange with Interstate 70 to accommodate increased traffic volumes. The improvements may include extending or adding dedicated turn lanes, improving signalization, and/or expanding ramps onto or off of the interstate



## VEHICULAR RECOMMENDATIONS



## GREEN INFRASTRUCTURE FRAMEWORK

In support of the City's sustainability initiatives, complete streets including green infrastructure and retrofitted buildings are prescribed throughout the station area. Green infrastructure is a defining element of street improvements and new developments within the Kingshighway Station area. Local species of plants remediate toxins in the ground and control and collect rain water to increase water quality before it gets into the drinking supply; green roofs with the potential for urban agriculture and new trees reduce the heat island effect and create comfortable walking environments along Natural Bridge and Kingshighway leading to Penrose and Handy Parks and beyond. Green infrastructure also provides a venue for public art and public space. All of these features combined will increase air quality around the station, enrich the character and experience of the streetscape, and elevate property values around the station.



### Impact on Imperviousness/Stormwater Runoff/Water Quality

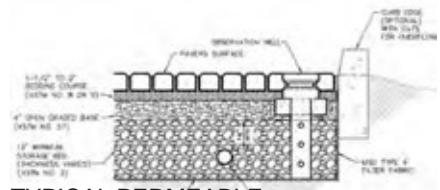
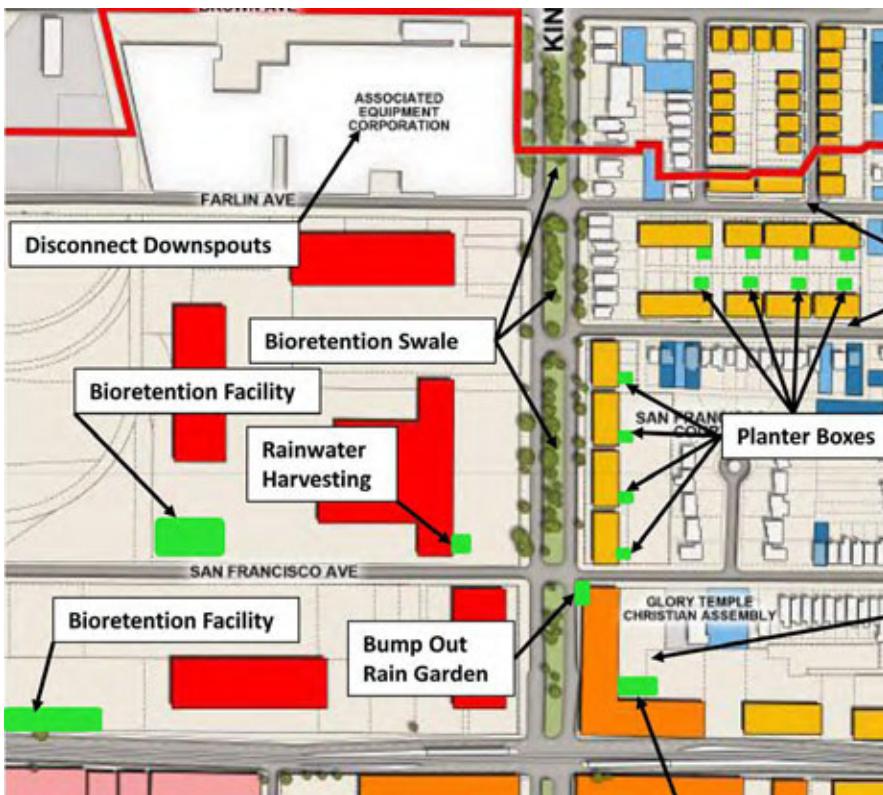
Development that increases imperviousness will cause an increase in the stormwater (and pollutants) that runs off into the enclosed combined sewer system, as well as an increase in bypass into the Mississippi River during heavy rain events. For the Kingshighway Station, it appears that there may be an increase in the percent impervious on certain sites. In general, the best approach is to maximize green space for each site while satisfying the development requirements for parking, etc.

### Regulatory and Permitting Requirements

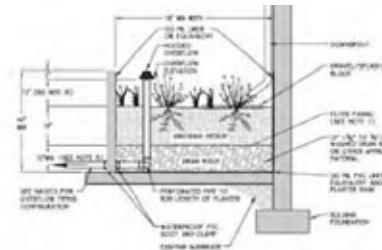
Stormwater permitting for this project will be administered by the Metropolitan St. Louis Sewer District (MSD). All projects submitted to MSD must be reviewed to determine if stormwater quantity and/or quality management will be required. A project will require stormwater quantity and/or quality management if any of the following apply:

- The project is a new development or redevelopment project that disturbs greater than or equal to one acre;
- The project on an individual parcel disturbs less than one acre, but it is part of a larger overall, project that disturbs over one acre;
- There is a proposed increase in stormwater runoff over two cubic feet per second (cfs) for the 20 year-20 minute design rainfall;
- Downstream stormwater problems (insufficient pipe capacity) exist that might require the proposed site to have quantity detention, where less than two cfs increase in runoff is proposed.

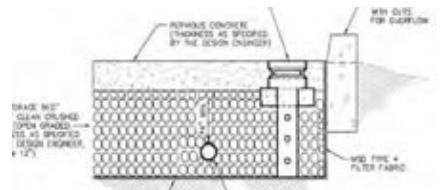




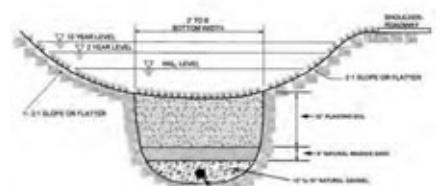
**TYPICAL PERMEABLE PAVEMENT DETAIL**



**TYPICAL PLANTER DETAIL**



**PERVIOUS CONCRETE DETAIL**



**TYPICAL BIOSWALE DETAIL**



**DISCONNECTED DOWNSPOUT**

All new development projects must reasonably mimic pre-construction runoff with the aim of preventing or reducing water quality impacts. Any project site that has an existing percent impervious of 20% or less, will be considered new development. Any succeeding or additional development to these sites will also be considered new development. All redevelopment projects must also reasonably mimic pre-construction runoff with the aim of preventing or reducing water quality impacts, by utilizing effective water quality strategies.

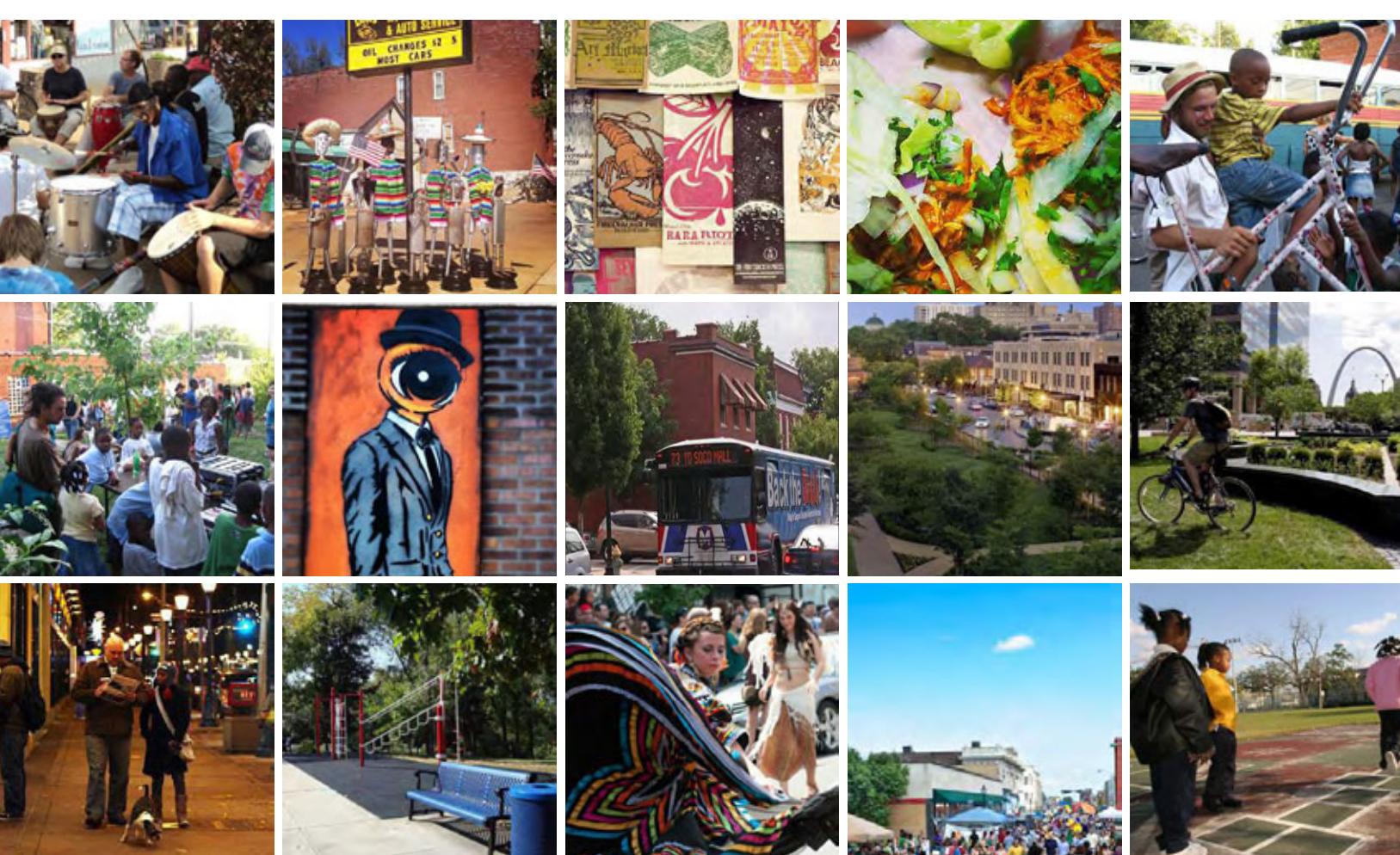
The three key components of stormwater quantity and quality management are water quality volume, channel protection storage volume, and flood protection volume. The preferred method to address these components is removing stormwater volume through infiltration.

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*Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the Federal Transit Administration.*





## 7 | Appendix