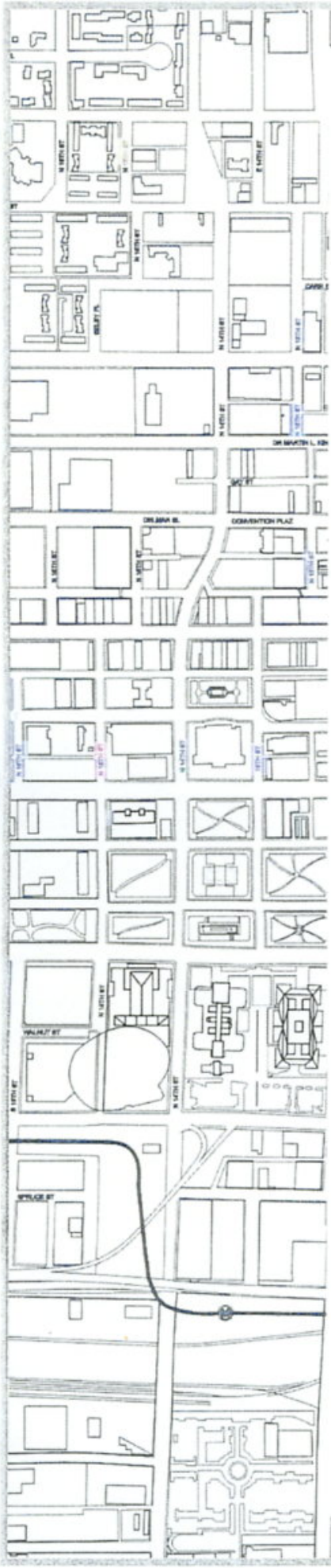


City of St. Louis
Downtown Development Action Plan

Phase II

Understanding of the Physical Setting and Market Opportunities

Acknowledgements

City of St. Louis
Downtown Development Action Plan
Phase II:
Understanding of the Physical Setting and Market Opportunities

Prepared for:
The City of St. Louis
St. Louis Development Corporation
Downtown Saint Louis Partnership
Regional Commerce and Growth Association
Saint Louis 2004

Prepared by:
EDAW, Inc.
The Concord Group
DSI
Kiku Obata & Co.
Kwame Building Group
Marketing Works
David Mason Associates
SMWM
Soskolne & Associates
TDA
Trivers Associates
USI

August 31, 1998
Revisions December 1, 1998
Revisions January 11, 1999

A majority of the existing conditions information was provided by the St. Louis Development Corporation, with supplemental information obtained by members of the consulting team. The 'Understanding of the Physical Setting' is based primarily on existing conditions in the City of St. Louis and St. Louis region as of August 31, 1998, with revisions and newer information added in some cases through January 11, 1999.

Table of Contents

I. Project Overview

A. Phase I Strategic Planning 1
B. Phase I Master Planning 2
- Mission 2
- Principles and Priorities 2

C. Purpose of Phase II 3
D. Study Areas 5

II. Existing Physical Conditions

A. Regional Conditions 1
- Regional Place 1
- Regional Transportation 3

B. Growth and Evolution 9
- Origins 9
- Urban Renewal 11

C. Land Use, Zoning and Regulatory Entities 15
- Existing Ground Level Land Use 15
- Existing Upper Level Land Use 17
- Existing Open Space 19
- Existing Parking Lots and Structures 21
- Parking Requirements 21
- Existing Zoning 23
- Historic Districts and Sites 25
- Property Ownership 29
- Government and Quasi-Public Organizations 30
- Codes, Ordinances and Permitting 32

D. Vehicular Circulation 35
- Functional Classification of Streets 35
- Street Widths 37
- Street Pavement Conditions 37
- One-Way Designations 37
- Traffic Volumes 37
- Street Capacity 39
- Traffic Controls 39
- Special Event Access, Circulation and Parking 39
- Pedestrian/Vehicle Conflicts 40

E. Transit Circulation 43
- Bus Routing 43
- Bus Stops 43
- MetroLink Stations 43
- Transit Ridership 44
- Demographics 44
- Signage and Wayfinding 44
- Connections 45
- Shuttles 45
- Travel Characteristics 45

F. Vehicular and Transit Survey Results Summaries 46
- Passenger Transit Survey 46

- Employee Surveys 46
- Visitor Surveys 47

G. Pedestrian Circulation 49
- Sidewalks 49
- Pedestrian Activity 51
- Experience 51
- Bikeways, Bike Routes and Bike Storage 51

H. Infrastructure 53
- Utility Infrastructure 53
- Technology Infrastructure 56

I. Buildings Conditions Analysis 59
- Exterior Building Materials 59
- Building Height 61
- Building Age 63
- Building Use and Occupancy 65

J. User Framework 67
- Building Street Level Transparency 67
- Pedestrian Corridors 69
- Existing Daytime and Nighttime Activity Zones 73

III. Redevelopment Potentials

A. Summary of Current Plans and Proposals Presentations 1
- Board of Public Service Plans and Proposals 1
- Streets Department Plans and Proposals 2
- Bi-State Development Agency Plans and Proposals 2
- Missouri Department of Transportation Plans and Proposals 2
- Corp of Engineers Plans and Proposals 2
- East-West Gateway Plans and Proposals 3
- City Treasurer Plans and Proposals 3
- Laclede's Landing and Riverside North Current Plans and Proposals 3
- East St. Louis Riverfront Current Plans and Proposals 4
- Union Station Current Plans and Proposals 5
- Darst Webbe Current Plans and Proposals 5
- Gateway/Convention Center Hotel Current Plans and Proposals 5
- St. Louis Centre Current Plans and Proposals 6
- Cupples Station Current Plans and Proposals 6
- Other Projects and Planning 6
- Additional Topics of Discussion 7

B. Summary of Stakeholder Interviews 8
- Overview 8
- Business Summit 8
- Local and Regional Retailers Summit 9
- Transportation Summit 10
- Residential Development Summit 10
- Political and Public Policy Roundtable 11
- Convention and Tourism Roundtable 11
- Education Summit 12
- Festivals Summit 13
- Parks Department Summit 13
- Paraquad Summit 14

C. Potential Projects and Sites 15

- Current Plans and Proposals 15
- Soft Sites 19

IV. Market Analysis

A. Executive Summary 1
- The Economy 1
- The Site 1
- The Real Estate Market 2
- Preliminary Product Program Recommendations 4
- Preliminary Planning Concepts 5
- Case Study Analyses 6

B. Overview 7

C. Economy of the Metro Area and the Role of Downtown 10
- St. Louis Metro Area Economic Trends 10
- City of St. Louis Economic Trends 12

D. Real Estate Market Analysis 16
- Market Evaluation of the Study Area 16

E. Case Studies Analyses 32
- Overview 32
- Philadelphia, Pennsylvania 32
- Baltimore, Maryland 34
- Dallas, Texas 37
- San Antonio, Texas 38
- Cleveland, Ohio 40
- Indianapolis, Indiana 40

V. Opportunities and Constraints

A. Overview of Opportunities and Constraints 1
- Location 1
- The River 1
- Transportation and Infrastructure 1
- Utilities and Infrastructure Conditions 4
- Transit 4
- Pedestrian Environment 5
- Tourism, Entertainment, Retail and Office 5
- Neighborhood and Housing Redevelopment 7
- Other Market Opportunities 8
- Hinderances 9

B. First Directions 10
- The Planning Process So Far 10
- The Big Ideas 13
- Strategy 1:
  The 24-Hour, 7-day a week City, for living, working and having fun 21
- Strategy 2:
  The Entertainment and Tourism Center of the Region 23
- Strategy 3:
  The Education and Technology Continuum 25
- Strategy 4:
  Streets for People 27
- Next Steps 28

VI. Preliminary Design Concepts

A. Overview 1
- Market 1
- Purpose 2

B. Concept A 3
- Transportation 3
- Land Use and Districts 3
- Edges and Connections 3
- Market 5

C. Concept B 7
- Transportation 7
- Land Use and Open Space 7
- Edges and Connections 7
- Gateways 8
- Market 8

D. Concept C 9
- Transportation 9
- Land Use and Open Space 9
- Edges and Connections 9
- Market 11

E. Prime Study Area Framework Plan 13
- Transportation 13
- Land Use and Districts 13
- Open Space Connections 14

List of Tables

- **Table II-1:** Freeway Ramp Capacity to Downtown.....II-7
- **Table II-2:** Parking Supply in Downtown Core Area II-21
- **Table II-3:** Parking Rates and Time Limits.....II-21
- **Table II-4:** Historic Districts in the Downtown Core Study Area..... II-26
- **Table II-5:** Historic Buildings and Structures in the Downtown Core Study Area II-26
- **Table II-6:** Historic Districts other than in the Downtown Core Study Area..... ..... II-27
- **Table II-7:** Historic Buildings and Structures other than in the Downtown Core Study Area II-27
- **Table II-8:** Building Age – Downtown Core Totals II-63
- **Table II-9:** Downtown Totals – Building Use..... II-65
- **Table IV-1:** Product Program Summary.... .....IV-4
- **Table IV-2:** Average Employment St. Louis MSA and St. Louis County 1987 through 1997..... .....IV-11
- **Table IV-3:** Top 10 Industries by Numerical Job Growth Missouri Side of St. Louis MSA 1990 through 1997 .....IV-11
- **Table IV-4:** Top 10 Sectors by Projected Numerical Growth Missouri Side of St. Louis MSA 1997 through 2005.....IV-12
- **Table IV-5:** Average Employment City of St. Louis 1986 through 1996 ....IV-13
- **Table IV-6:** Employment Trends by Standard Industrial Classification 1986 through 1996 .....IV-13
- **Table IV-7:** Top 10 Categories by Numerical Job Growth City of St. Louis 1990 through 1995 .....IV-14
- **Table IV-8:** Top Sectors of the St. Louis Metro Area Economy Compared to the National Economy 1990 and 1997 .....IV-15
- **Table IV-9:** Housing Permits Issued St. Louis MSA 1992 through 1996 ....IV-16
- **Table IV-10:** Housing Permits Issued City of St. Louis 1992 through 1996 ....IV-17
- **Table IV-11:** Projected Downtown Housing Absorption Rental Units Years 1 through 5 of Redevelopment IV-20
- **Table IV-12:** Projected Downtown Housing Absorption for Sale Units Years 1 through 5 of Redevelopment IV-21
- **Table IV-13:** Industrial Space and Vacancy in Millions of Square Feet in the Region and City of St. Louis.....IV-22
- **Table IV-14:** Office Market Trends St. Louis Region and Downtown 1992 through 1997 .....IV-24
- **Table IV-15:** Retail Market Opportunities Years 1 through 5 of Redevelopment IV-29
- **Table IV-16:** Product Program Summary.... .....IV-31

List of Maps

- **Map 1:** Study Areas I-4
- **Map 2:** Regional Place II-2
- **Map 3:** Vehicular and Transit Circulation: Existing/Proposed I-70/US-40 Service II-4
- **Map 4:** Vehicular and Transit Circulation: Existing Ramp Service II-6
- **Map 5:** Growth and Evolution II-8
- **Map 6:** Urban Renewal II-12
- **Map 7:** Existing Street Level Land Use II-14
- **Map 8:** Existing Second Floor Through Top Floor Land Use II-16
- **Map 9:** Existing Open Space II-18
- **Map 10:** Existing Parking Lots and Structures II-20
- **Map 11:** Existing Zoning II-22
- **Map 12:** Historic Districts and Sites II-24
- **Map 13:** Property Ownership II-28
- **Map 14:** Vehicular Circulation: Existing Functional Classifications II-34
- **Map 15:** Vehicular Circulation: Street Pavement Conditions II-36
- **Map 16:** Vehicular Circulation: One Way Streets and Daily Traffic Volumes II-38
- **Map 17** Transit Circulation II-42
- **Map 18:** Pedestrian Circulation: Existing Sidewalk Dimensions II-48
- **Map 19:** Pedestrian Circulation: Pedestrian Activity II-50
- **Map 20:** Infrastructure: Water, Sewer, and Gas II-52
- **Map 21:** Communications and Other Cabling: Electric, Telephone, Fiber Optics II-54
- **Map 22:** Building Conditions Analysis: Exterior Building Materials II-58
- **Map 23:** Building Conditions Analysis: Building Height II-60
- **Map 24:** Building Conditions Analysis: Building Age Survey II-62
- **Map 25:** Building Conditions Analysis: Building Usage and Occupancy II-64
- **Map 26:** User Framework: Street Level Transparency Conditions with Restaurants and Retail II-66
- **Map 27:** User Framework: Pedestrian Corridors and Open Space II-68
- **Map 28:** User Framework: Linkages/Barriers/Views/Historic Memories II-70
- **Map 29:** User Framework: Existing Daytime and Nighttime Activity Zones and Uses II-72

- **Map 30:** Redevelopment Potentials: Current Plans and Proposals III-16
- **Map 31:** Redevelopment Potentials: Soft Sites III-18
- **Map 32:** Opportunities and Constraints V-2
- **Map 33:** First Directions: The Big Ideas V-12
- **Map 34:** First Directions: Strategy 1: The 24 Hour, 7 Days-A-Week City V-20
- **Map 35:** First Directions: Strategy 2: The Entertainment and Tourism Center V-22
- **Map 36:** First Directions: Strategy 3: The Education and Technology Continuum V-24
- **Map 37:** First Directions: Strategy 4: Streets for People V-26
- **Map 38:** Prime Study Area: Concept A VI-4
- **Map 39:** Prime Study Area: Concept B VI-6
- **Map 40:** Prime Study Area: Concept C VI-10
- **Map 41:** Composite Framework Plan VI-12

Exhibits and Appendices

I. Exhibits

- **Exhibit 1:** Preliminary Market Driven Product Program City of St. Louis Downtown Development Action Plan
- **Exhibit 2:** Market Assessment of the Study Area St. Louis Downtown Development Action plan
- **Exhibit 3:** Potential Annual Demand for Market Rate Housing St. Louis MSA and Capture Potential for Downtown St. Louis, Annual Average 1997-2002
- **Exhibit 4:** Potential Annual Demand for Industrial Space by Product Segment Based on New Employment Growth and Turnover
- **Exhibit 5:** Potential Demand for Office use Based on Office Using Employment Growth and Turnover St. Louis MSA and Capture Potential for Downtown St. Louis Annual Average 1998-2005

II. Appendices

- **Appendix A:** Employee Survey Results
- **Appendix B:** Visitor Survey Results
- **Appendix C:** Economic Position of the City of St. Louis and Downtown St. Louis within Metropolitan St. Louis and Potentials for Downtown Real Estate Development 1990-2005
- **Appendix D:** The 500 Fastest Growing Companies within Metropolitan St. Louis
- **Appendix E:** Economic Position of the City of St. Louis within Metropolitan St. Louis: An Employment Analysis 1990-2005
- **Appendix F:** Transportation Concepts Spreadsheet and Explanation of Projects
- **Appendix G:** City of St. Louis Development Action Plan Parking Supply and Occupancy within Core Area
- **Appendix H:** Pedestrian Counts Outside the Downtown Core

I. Project Overview

A. Phase I Strategic Planning

This project is a continuation of recent planning efforts undertaken by the City of St. Louis. The 1993 Strategic Plan, which identified six specific objectives and seven goals, is used as a basis for current master planning for the Downtown. The six Strategic Plan objectives include making St. Louis:

- the Heart of the Region
- a Place of Diversity and Excitement
- a Place of Design Excellence
- a Place that encourages Conservation and Environmental Protection
- a Place that encourages Interdependence of Downtown and City Neighborhoods and
- a Place that provides for Ongoing Plan Advocacy.

The seven major focuses for the Downtown, based on the objectives, include:

- Housing
- Office Anchors
- Hospitality and Tourism
- Retail Centers and Anchors
- Street-front Shopping
- Small Businesses and Institutions and
- Circulation, Transportation and Infrastructure.

This planning process included participation by more than 125 persons involved in numerous visioning sessions, task force meetings, stakeholder meetings and public meetings.

B. Phase I Master Planning

The above mentioned Downtown Strategic Plan provided a basis for Phase I of the Master Planning process completed by Downtown Now. Downtown Now is a unique partnership, created in October 1997, designed to initiate positive change within Downtown St. Louis. This collaboration consists of the Downtown Saint Louis Partnership, the Regional Commerce and Growth Association, Saint Louis 2004, the St. Louis Development Corporation and the City of St. Louis. Downtown Now, through Phase I of the Master Planning process, worked with Mayor appointed Co-Chairs, the Task Force members and citizens to establish a mission statement and principles and priorities, which will be used as a basis for Phase II of the Downtown Development Action Plan. The mission and related principles are as follows:

Mission

Downtown revitalization will capitalize on and strengthen the center City's role as premier office location in the region and will utilize retail, entertainment, housing, and cultural attractions to extend the time people spend Downtown, enhance livability, and attract visitors.

Principles and Priorities

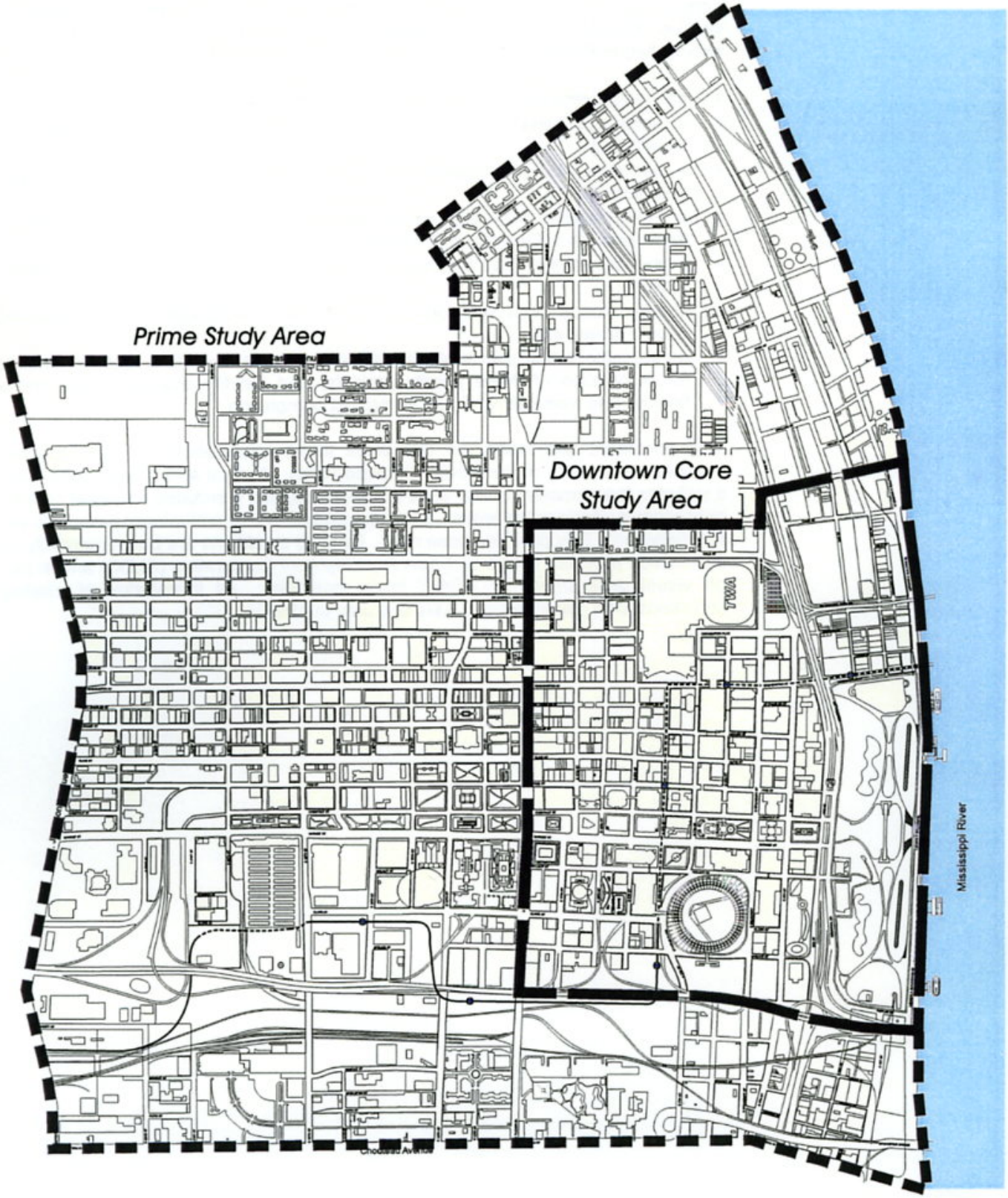
- Downtown revitalization will be supported by private sector investment leveraged by public resources and financial incentives in primarily targeted development areas.
- Downtown revitalization will focus on residential and business retention, promotion, and growth in order to strengthen and diversify the economic and residential base.
- Downtown revitalization will be interdependent with the economic, physical and functional strengths of the City's neighborhoods in order to maintain its role as the economic anchor of both the City and the region.
- Downtown revitalization will concentrate immediately on targeted development areas and incremental growth strategies that build upon past investments to achieve major transformation.
- Downtown revitalization will consist of identifiable and unique places and districts that are compact, pedestrian-scaled, and have a distinct character and diversity of uses and users.
- Downtown will incorporate a public space network that links each district with one another, City neighborhoods and the region through attractive, clearly identified corridors and landmarks.
- Downtown will be supported by a hierarchical transportation system consisting of an effective access, circulation and parking system that integrates and balances the use of public transit, the highway system, City streets, and pedestrian and bike corridors in a manner consistent with each district's character and use.
- Downtown development will be facilitated by an aggressive district management system that effectively markets and maintains attractive, clean, and safe environments within Downtown.
- Downtown redevelopment will be facilitated by a coordinated and comprehensive strategy that includes a streamlined, one-stop, customer-oriented service delivery system that facilitates the attraction of new businesses and the retention of existing ones.

C. Purpose of Phase II

This document, which is Phase II of the City of St. Louis Downtown Development Action Plan, will develop detailed physical design and implementation plans for various districts in Downtown based on the mission, principles and priorities established in Phase I. These component parts will include:

- an investigation of existing transportation, physical and market conditions;
- a series of 'what-if' workshops to address big picture possibilities for Downtown;
- a marketing plan that establishes a detailed list of projects capable of a five year absorption;
- a transportation plan that establishes a clear direction for the future of transportation in Downtown S. Louis;
- a physical master plan that supports the transportation strategy and market realities;
- detailed focus area development plans for sub-districts that are deemed priority areas; and
- an implementation plan that will prioritize projects, identify a specific timeline for completion of these priority projects, and identify cost estimates and a finance and management plan for project completion.

This document addresses the first three items listed above. The document includes a summary of the existing transportation, physical and market conditions, it includes the summary of the 'what-if workshops, and it includes a market plan for appropriately designated areas. Existing conditions and preliminary proposals are illustrated on a City provided base map. Existing conditions are based primarily on information provided by the St. Louis Development Corporation (SLDC) and in part on visual assessment by EDAW team members. All inventories of existing conditions took place between April and July of 1998.



DowntownNow!

D. Study Areas

This project will address Downtown St. Louis. Levels of analysis and presentation will include both a *Prime Study Area*, defined with the boundaries of Cass Avenue and Madison Street to the north, Chouteau Avenue to the south, the Mississippi River to the east and Jefferson Avenue to the west. A greater level of urban design will address a *Downtown Core Study* area, bounded by Carr and Biddle Streets to the north, Interstate 64 and Highway 40 to the south, the Mississippi River to the east and Tucker Boulevard to the west.

II. Existing Physical Conditions

A. Regional Conditions and Growth

Regional Place

The City of St. Louis is located on the eastern edge of Missouri just south of the confluence of the Missouri, Mississippi and Illinois rivers. Historically, the City became a literal "Gateway to the West" through its crossroads location of river travels from north to south and critical location for crossing the Mississippi for travel to the west. The City today is also in a prominent crossroads location due to the confluence of Interstates 44, 55, 64 and 70.

Numerous rail lines are active in the St. Louis region. These lines, which include the Burlington Northern, CXS Corp., Norfolk Southern, Union Pacific, Illinois Central, Gateway Western, Eastern, Alton, Southern, and Terminal Rail Road Association. Of these lines, the Burlington Northern and Union Pacific are the primary lines that travel north-south through Downtown St. Louis and the Norfolk Southern and Union Pacific are the primary lines that travel east-west through Downtown St. Louis.

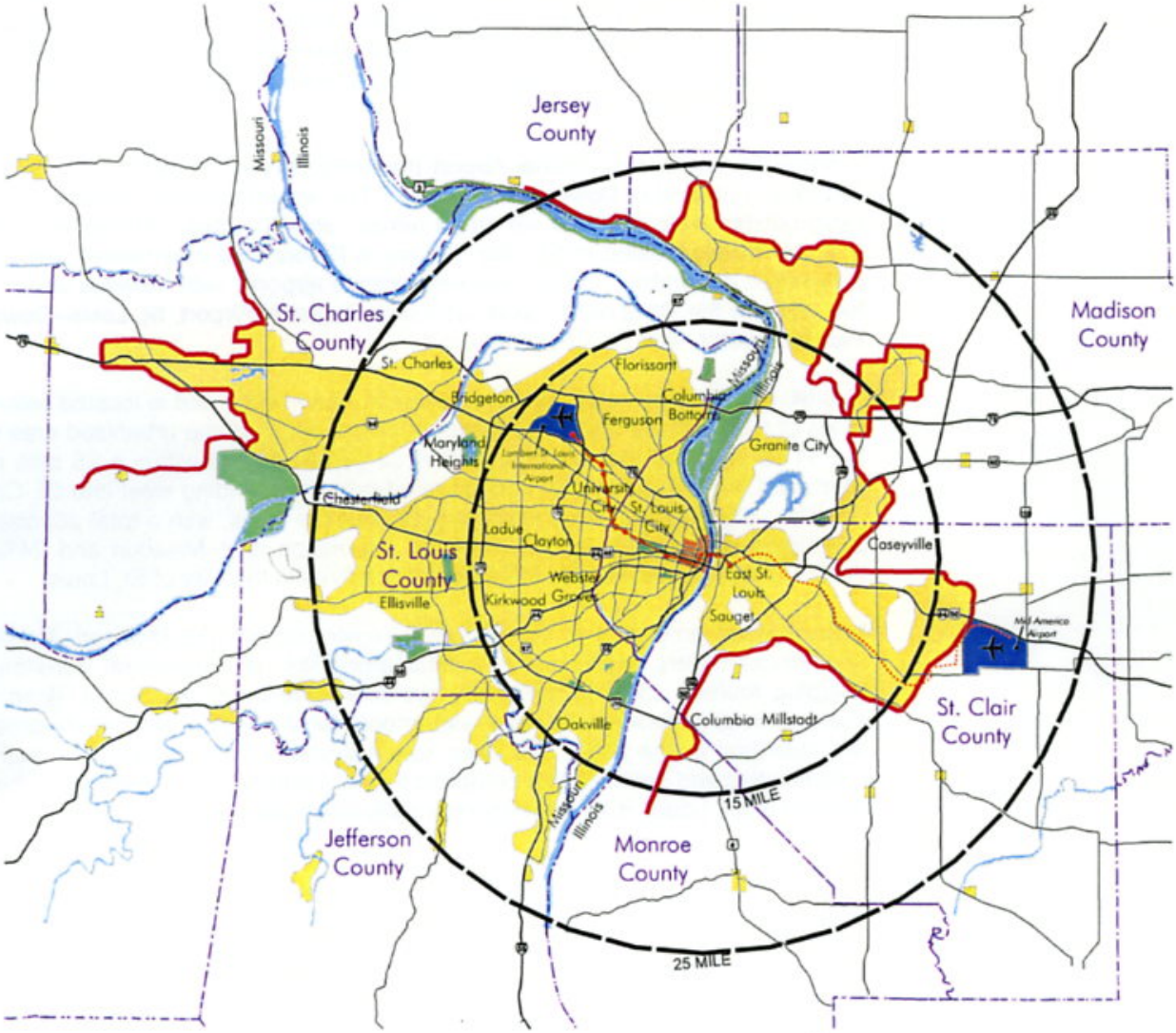
Lambert-St. Louis International Airport presently serves 17 carriers and is located 15 miles northwest of Downtown St. Louis. The airport is currently planning a multi million-dollar expansion that will add a runway and 20 gates. Mid-America airport is a new facility located in St. Clair County in Illinois, and may relieve some of the congestion at Lambert. Other regionally located airports, with runways under 8,100 feet, include the Spirit of St. Louis, St. Louis Regional Airport, St. Louis–Downtown Parks, Cahokia, and St. Charles Airport.

The St. Louis region ranks 17th in population nationwide, and is located within 500 miles of a third of the United State's population. Much of the urbanized area within the 11 county Metropolitan Statistical Area (MSA) occurs within a 25 mile radius from the City, with additional concentrated growth extending west into St. Charles County. The entire MSA consists of 6,391 square miles, with a total population of 2.6 million people. Of this, 76% of the population is in Missouri and 24% is in Illinois. A total of 16% of the MSA population lives in the City of St. Louis.

Major natural amenities in the St. Louis region include the Missouri, Mississippi and Illinois Rivers which act as visual amenities, environmental corridors and shipping routes. Existing greenway systems have been developed along these rivers, providing flora and fauna environments for the region. Man-made amenities are abundant in the parks and open space systems developed by the individual communities and counties that comprise the St. Louis MSA. Forest Park, located in the City of St. Louis, is the primary regionally sized urban park.

Regional Place

- Interstate Highway
- MetroLink Light Rail Line
- Proposed MetroLink Line
- Prime Suburban Growth Areas
- County Lines
- Major Airport
- Urbanized Areas
- Study Area
- Park



Note:
Basemap and base data provided by Development Strategies, Inc.

Downtown Now!

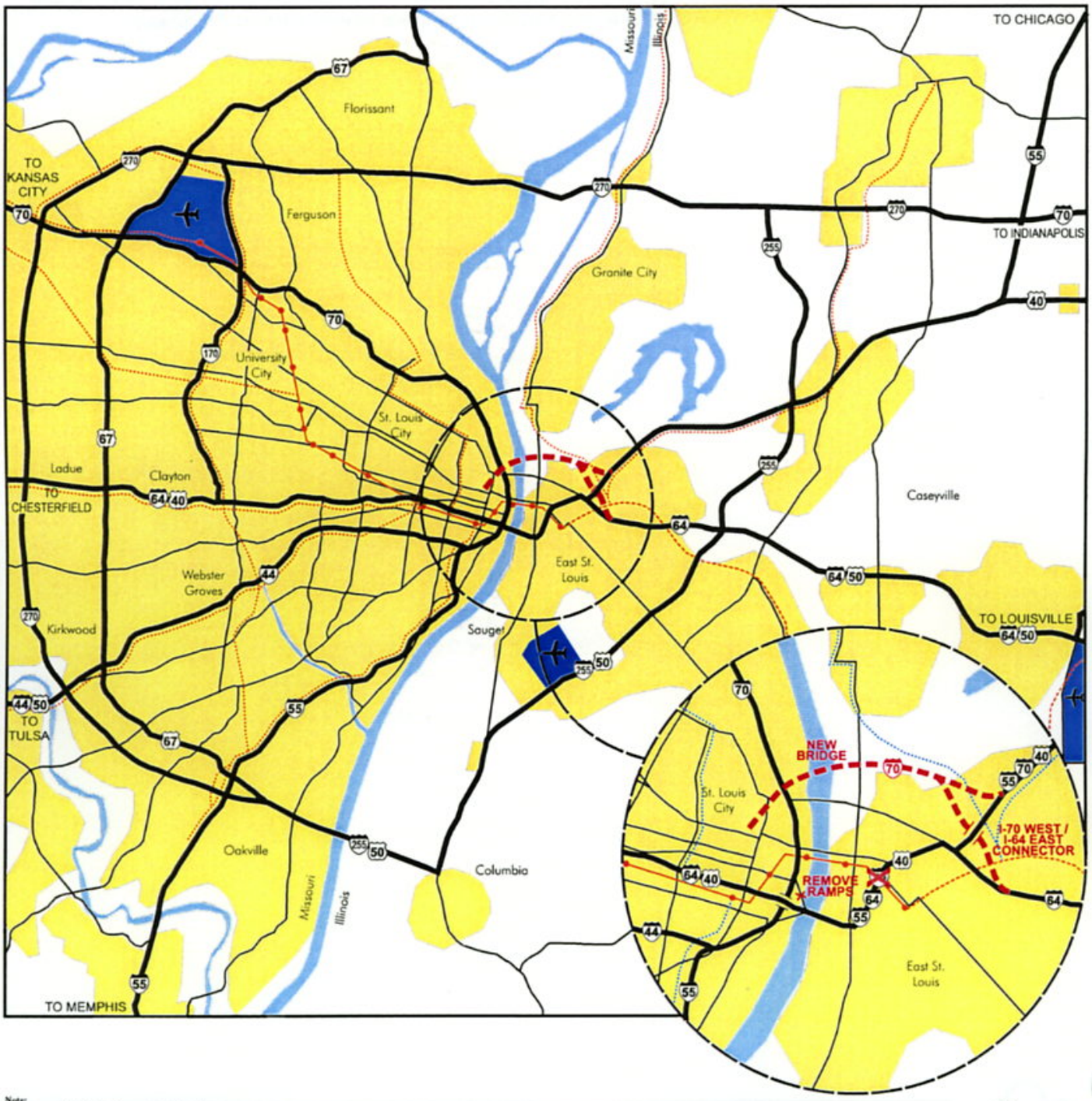
Regional Transportation

Existing Freeway Access

Downtown is generally well served by freeways with a total of 32 lanes passing through. Many people we interviewed felt that freeway access and capacity were quite good. This is borne out in the fact that the 32 lanes provide a carrying capacity of approximately 70,400 vehicles per hour. Volumes during the afternoon peak hour (estimated from daily counts) appear well within this capacity, using roughly 48% of outbound capacity and 29% of inbound capacity. However, there are some missing movements. Notably missing are movements between eastbound I-70 and westbound I-64, and between eastbound I-64 and westbound I-70. On a regional basis, these movements are handled further west by I-170 and within downtown they are handled by surface streets such as Broadway.

Vehicular and Transit Circulation: Existing / Proposed I-70 / US-40 Service

- Interstate Highways
- Future Interstate Highways
- MetroLink
- MetroLink Extension
- Proposed MetroLink Extension
- Urbanized Areas



Note:
Basemap provided by Development Strategies, Inc.

Downtown Now!

Freeway Signs
Our field observations indicate that highway signing could be improved to reduce confusion, particularly for those not familiar with downtown. The number of freeways that radiate from the heart of the City present a challenge for signing from a visitors perspective. Interstate routes 44, 55, 64 and 70 pass through the City. I-64 has equal billing with its predecessor, US 40. I-64/US 40 connects only to the Poplar Bridge at the main downtown interchange. Connection with the north leg (I-70) or south leg (I-55, I-44) is via surface streets. Hence, freeway to freeway signing at the approach to the main interchange has to cover an overwhelming array of conventional freeway alternatives as well as local street routing messages. For example, a motorist heading east on I-70 is given the following four-sign overhead left to right lane display:

SIGN #1 - WEST I-44 / SOUTH I-55 Tulsa/Memphis
SIGN #2 - NORTH I-55 / EAST I-64, I-70, US 40 Illinois
SIGN #3 - Memorial Drive/ Arch Riverfront
SIGN #4 - Downtown / Pine St.

Motorists wanting to go West on I-64 / US 40 have to pick up post-mounted trailblazer signs along Memorial Drive.

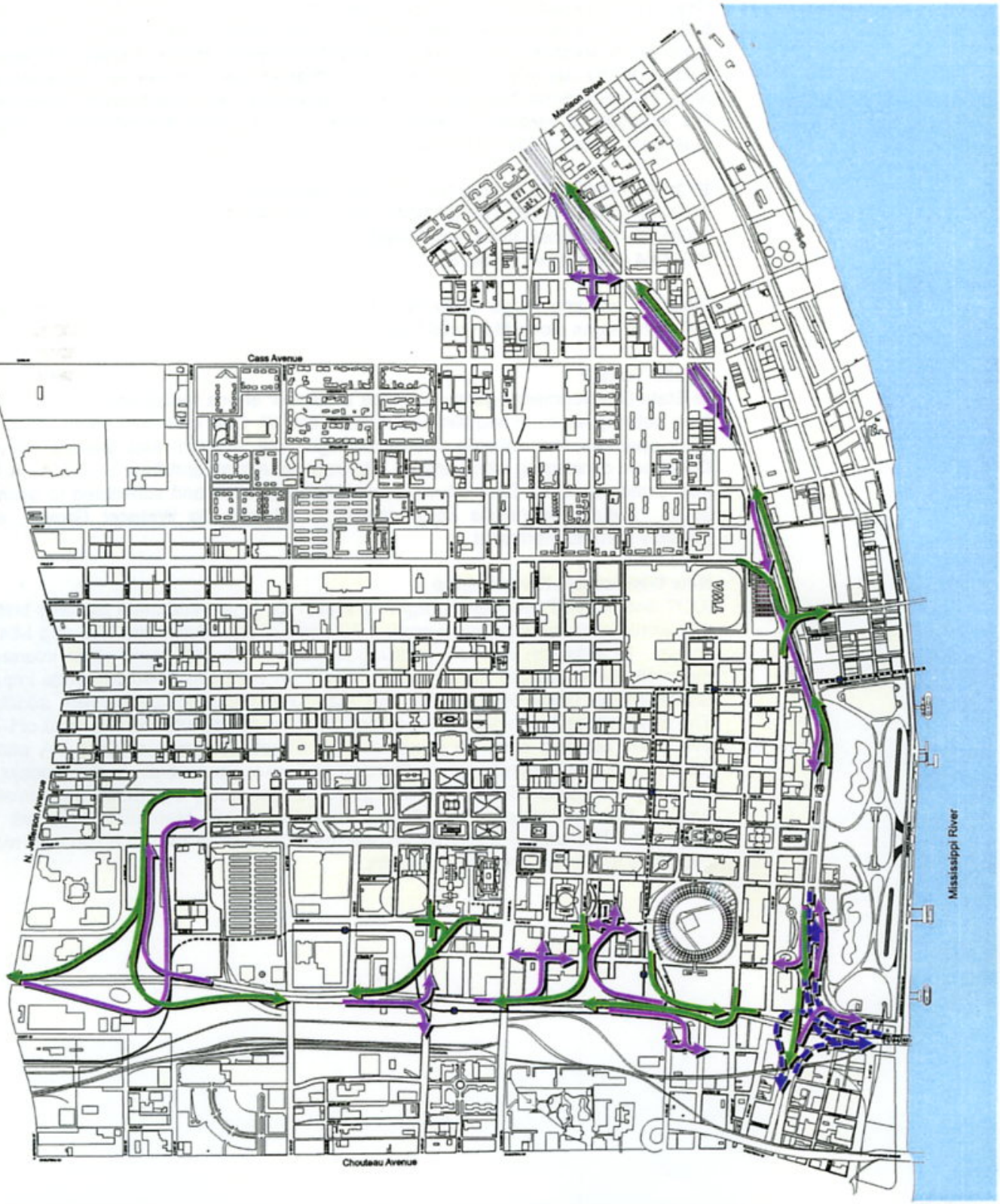
Public Transit
Bi-State Development Agency provides a number of bus routes serving Downtown from outlying Missouri and Illinois (Madison and St. Clair counties) areas. Bi-State also operates the 18-mile MetroLink light rail system that passes though Downtown connecting with Lambert International Airport and East St. Louis. A 17-mile extension to St. Clair County is under construction and scheduled to open in 2001. Future extensions could radiate to Clayton, to Webster Groves, and possibly north to Florissant.

New Mississippi River Bridge
IDOT and MoDOT are jointly preparing a plan for a new interstate highway bridge that would connect with below-grade I-70 north of Downtown and I-55 and I-64 in Illinois. In essence, the new crossing will allow I-70 and some other interstate motorists to bypass the Poplar Street bridge. A draft EIS (Environmental Impact Statement) is being prepared for this major regional highway network addition. The EIS preferred plan depicts an extension of the bridge into the City west of I-70, eventually ramping down to grade at 14th Street just north of Cole. A partial (to/from the east) interchange is depicted at Tucker Boulevard. In the process of updating the Poplar Bridge interchange to current safety standards as a related project, the two ramps connecting to the Bridge via Memorial Drive will be removed. The loss of these ramps will make access to the Arch grounds more circuitous for Illinois interstate travelers.

Freeway-to-Freeway Connector
Freeway On-Ramp
Freeway Off-Ramp

North

Vehicular and Transit Circulation: Existing Ramp Service



Note:
Basemap provided by SLDC.

Downtown Now!

Ramp Service

The facing map shows the location of the existing freeway ramp system. Most ramps are 30-40 years old and in fair to good condition. A current construction project is replacing I-70 northbound and southbound ramps at the elevated section near the TWA Dome. The ramps will provide convenient surface street connection to/from the ML King Bridge.

Interstate highway travelers connecting with the City's street grid and connecting between I-70 and the Poplar Bridge heavily use the portion of Memorial Drive north of the Poplar Bridge to Pine Street. The heavy use of Memorial Drive by interstate motorists creates something of a barrier for pedestrians connecting to the Arch grounds during high traffic times.

Freeway traffic has the choice of eleven ramps for both inbound and outbound travel. These ramps provide capacity for approximately 17,250 vehicles per hour, or about 25% of the total freeway capacity. Generally, these ramps operate within their capacity though exceptions occur due to the multiplicity of ramp junctions and merges, which slow traffic.

Data on hourly ramp volumes or documentation of their capacities was not available, however an estimate of likely ramp capacity based on the type of traffic control affecting the ramp and the number of lanes on the ramp is illustrated below.

Table II-1
Freeway Ramp Capacity to Downtown

Traffic Control	Ramp Capacity (Vehicles per Lane per Hour)	Inbound Lanes	Outbound Lanes	Total Ramp Capacity in Downtown
Stop	600	3	2	3,000
Signal	750	7	8	11,250
Free Flow	1500	1	1	3,000
Totals		**11**	**11**	**17,250**

Numerous US 40/I-64 on and off opportunities are available to Downtown in the stretch between the Poplar Bridge interchange and 22nd Street due to the existing double-deck structure. Left hand, as well as conventional right hand ramping is possible due to having stacked rather than side-by-side eastbound and westbound levels. Conversely, the absence of direct ramp connections between the double deck section of US 40/I-64 and either I-70 to the north or I-55 to the south leads to wayfinding problems for some interstate highway travelers who have an expectancy of such connections at typical freeway-to-freeway interchanges.

B. Growth and Evolution

Origins

The current 61.4 square mile City began as a small riverside village with an area of approximately 7.6 square miles. This village grew up around a trading post established in 1764 by Pierre Laclede Ligueste. In 1804 Laclede and Auguste Chouteau planned St. Louis as a linear village, concentrated along the River, like Montreal, with a grid of streets that was only three blocks deep and 19 blocks from north to south. Development occurred no further westward than the current 3rd Street. In 1809, the Territorial Court of Common Pleas incorporated the Town of St. Louis.

By 1816, the first subdivisions were established, extending the boundaries to 7th, St. Charles and Spruce. This brought the area total to 50 acres with a population of 3,000. Early business development occurred in North St. Louis where mills were located. In 1821, the population of the region grew to 9,732 and that of St. Louis to 5,500. In 1822, Missouri became a state and St. Louis was incorporated as a City. It was divided into three wards and a government with a Mayor and nine aldermen was formed. By then, the boundaries had extended north to what is now Ashley Street, and south to the location of the current Rutger Street, making the area of the City 385 acres.

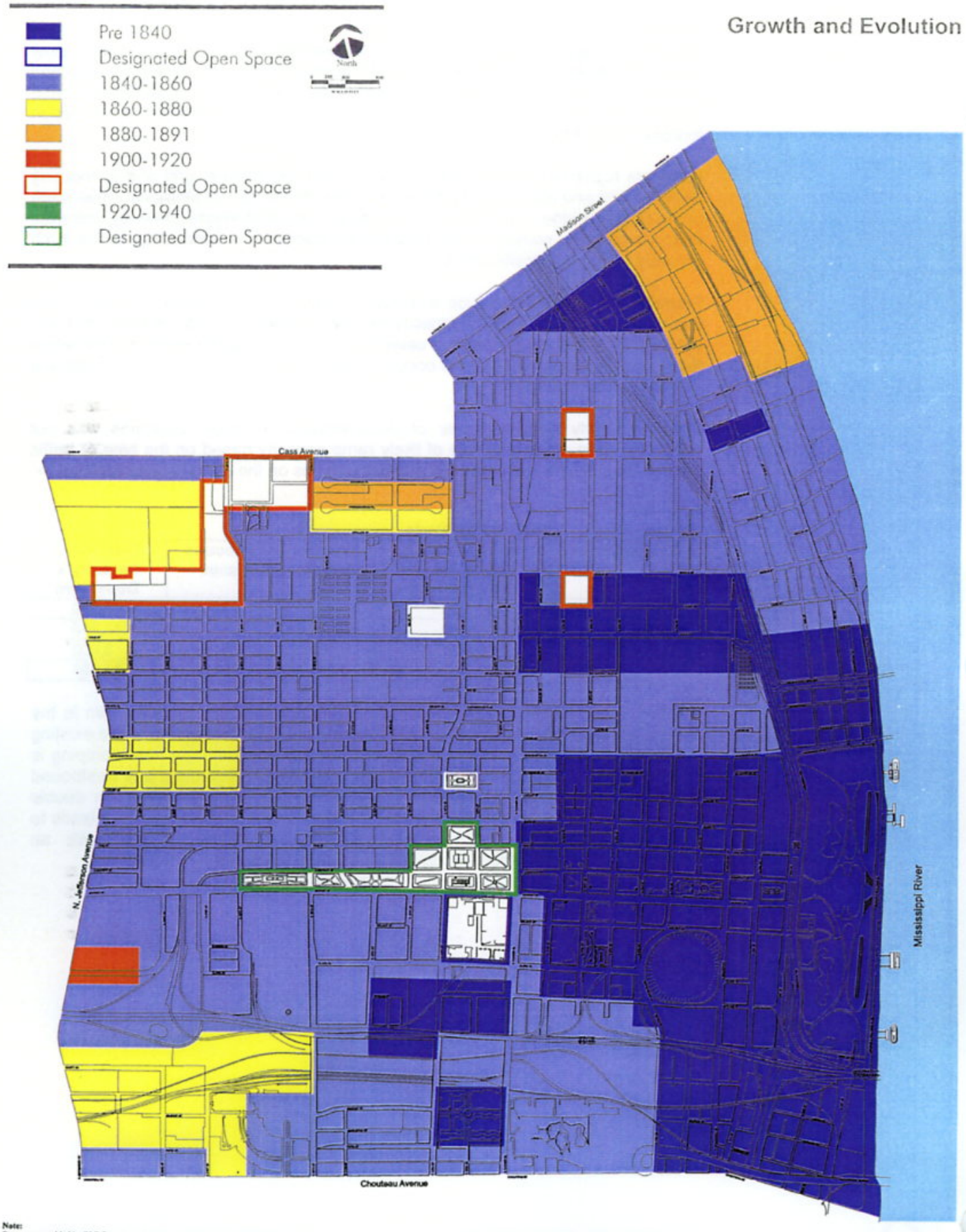
In the 1820's the riverfront became a busy place as an outfitting post for trappers and explorers of the west. The government became a major player in the development of the City at this time. In 1823, it paved the main street which generated a series of building projects, including the levee, the Arsenal, Courthouse, and the Market House. This brought on a wave of construction by private developers too, which extended to all parts of the City.

The time between 1830-1840 was a time of booming growth for the City. The population grew from 6,694 to 16,649 and the physical expansion went west to 9th, south to Soulard, north to Washington and Franklin. Church construction was abundant, and the St. Louis Theatre and St. Louis University opened. The adjacent map illustrates the growth of the City within the Prime Study Area.

Steamboats

The period from 1840 to 1850 was considered the Golden Age of Steamboating, due to push for westward expansion. By 1846, there were 1,200 steamers on the river, 50 at a time in St. Louis. Steamboat construction was the industry of the time. Growth continued parallel to river, since there were few means of transportation to move inland. More industrial activities developed. The introduction of the horse-drawn omnibus and eventually the horse-car lines allowed westward expansion in the late 40's. There was an influx of immigrants at this time and the City developed residential communities, expanding to the north, south and southwest.

Growth and Evolution



Note:
Basemap provided by SLDC.
Base data provided by the St. Louis City Plan Commission, June 1973 Plan.

Railroads
The coming of the railroads in the mid-1850's had a huge impact on St. Louis. Railroads not only allowed westward expansion, but also provided a link from the river traffic to landlocked points west. In 1849, the state charted the Pacific Railroad to cross Missouri from St. Louis to eventually connect with the transcontinental highway. The City, with its prime location at the confluence of the Mississippi and Missouri Rivers, became the link to the northern and eastern United States and a key transfer point for goods. Warehouse and industrial development continued along the riverfront, and the City extended west to 18th Street. Population increased from 16,469 to 160,733. Demand for housing, goods and services were high.

By 1860, development had extended 6 miles west of the river. The first rail line would run through Mill Creek across Choteau's pond. The pond, once full of clean fresh water, became polluted with garbage and waste and was blamed for the cholera epidemic in 1849. The City filled it in 1851 and it thus became the location of the first rail lines. These became a barrier separating the City from the south and remain so today.

By 1870, the City covered approximately 18 square miles and the population had reached 310,000. It was the fourth largest City at the time. Plants developed along rail lines and formed industrial corridors. Multi family residential was constructed near the riverfront to house the industrial employees. In 1874, the Eads Bridge was completed across the Mississippi River, which connected St. Louis to the State of Illinois. Rail lines ran in underground tunnels to Mill Creek which prompted the development of Union Depot in 1875.This was replaced by Union Station in 1894, which handled passengers and freight was handled at Cupples Station, which opened in 1891. Large parks were established on the western edges of the City and large homes were built around them. The wealthy moved west.

The Current City of St. Louis
In 1875 the Missouri Constitution was adopted creating "homerule". In 1876 the citizens voted on the final boundaries for St. Louis, separating it from the county and fixing its physical limits to 61.4 square miles to this day. The wisdom of this decision is still questioned. In 1891 the boulevard system was established, most of which ran east west. The remainder of the century development occurred in a corridor approximately 3 miles wide extending west-northwest from Downtown.

City Plan Commission
1900 to 1910 was the last period of unmarred growth. In 1907 the first City plan was prepared. The City Plan Commission was established in 1911 to adopt a comprehensive plan and a zoning plan to guide the physical development of the City. The City limits contained three major areas: Grand Olive, Downtown and Lindell/Kingshighway. In 1904 Louisiana Purchase Exposition St. Louis Worlds Fair was held in Forest Park, the largest World's Fair. This was a catalyst for the development of facilities and activities in the west, outside the City limits.

Early in the 20th Century, the grand east-west axis was first promoted for the City. The Mall was proposed from 12th to Jefferson in 1912 and goes to 21st Street today. The City Plan Commission concentrated on government buildings and improvement to streets because of the new prominence of the automobile. It undertook a citywide improvement plan for street lighting, sewer, streets, drainage and park and hospital construction. In 1923, $86 million in bonds was approved by the citizens to make these improvements, the largest in the City's history.

Urban Renewal

In the 1930's there was a shift to the social problems of the City. St. Louis was fully developed but decaying. The population had built-up, the riverfront was aging, and the multi-family housing north and south of Downtown was deteriorating. In 1936, the St. Louis Plan Commission recognized the need to revise the zoning regulations and to address sanitary laws and minimum housing standards. They advocated the removal of obsolete buildings and the construction of low cost, large-scale housing projects. They worked with the federal government on urban renewal. This proposal to rebuild the riverfront strip was delayed until 1950. By that time over 50% of housing supply was in various stages of deterioration. In 1939 the public housing program was formed and the St. Louis Housing Authority was established. By 1965, ten large-scale public housing developments, containing 8,045 units for 30,000 people, had been completed for more than $100 million. The first two, Carr Square and Clinton Peabody Terrace were built in 1942. From 1953 to 1958 Cochran Gardens, Pruitt, Igoe, Vaughn and Darst Webbe were constructed. Several were immediately adjacent to Downtown. Some were successful and others were not, eventually being demolished. After 1968 projects were constructed by private developers and sold to the Housing Authority.

Mill Creek Valley

In 1949 the federal government enacted legislation to help cities in redevelopment. Land cleared could be used for various purposes other than housing. In St. Louis, the Land Clearance Redevelopment Authority was created by the Board of Alderman in 1951 to buy and clear blighted areas and sell property to developers who agreed to rebuild in accordance with a plan. A change in Federal Urban Redevelopment law in 1954 allowed financing of commercial and industrial redevelopment.

Mill Creek Valley was the largest project of this kind in St. Louis, and one of the largest in the United States. Land acquisition began in 1958, producing new industrial sites, commercial sites, land for new highways and a 22-acre expansion for St. Louis University. The Housing Act of 1954 allowed rehabilitation as a method to produce housing and as a result, 2,500 new residential units were produced with City and private development money.

Interstates

The Federal Highway Act in 1956 provided money for additions to the new interstate highway system. This, in combination with local bond issues started in 1955, provided funds to complete I-70 in 1961. Other highways and freeways to be completed by these incentives were US 40, I-64, I-55 and I-44. The development of these roadways hastened the decline of urban neighborhoods by encouraging sprawl to the south and north county. Retail businesses left the center City moving to the shopping centers and malls in the suburbs. The presence of the highways, while providing great vehicular access to Downtown, separated it from surrounding neighborhoods and the river.

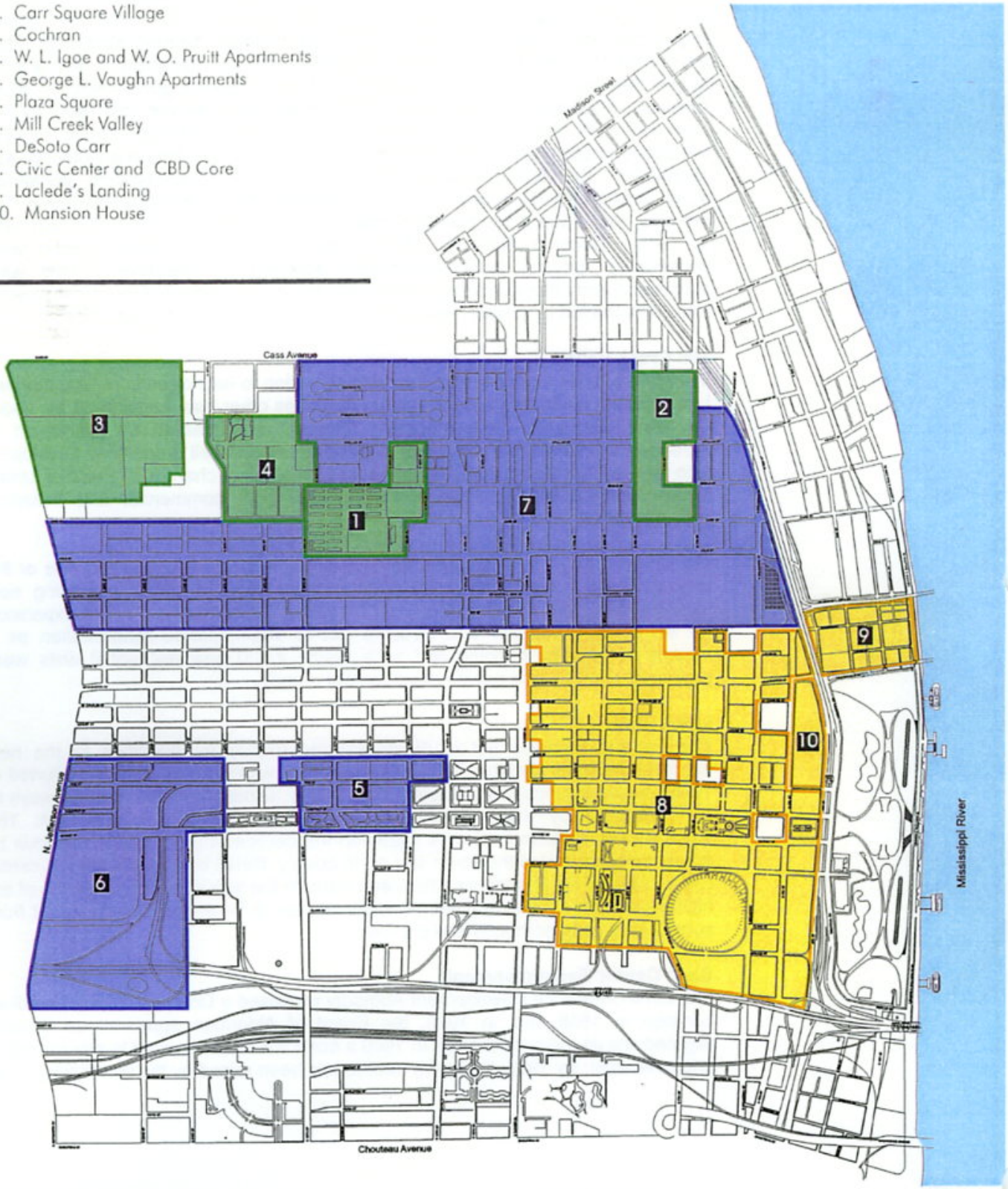
Civic Center Redevelopment

The Land Clearance Development Authority proposed a Downtown sports stadium complex in 1958 and, in 1960, the Board of Alderman approved an 82-acre blighted site as the project area. In 1960 a bond issue was passed to pay for public improvements. By 1962, the equity capital had been raised by the community. The

Urban Renewal

- Public Housing
- Urban Renewal
- 353 Development Incentive Areas

1. Carr Square Village
2. Cochran
3. W. L. Igoe and W. O. Pruitt Apartments
4. George L. Vaughn Apartments
5. Plaza Square
6. Mill Creek Valley
7. DeSoto Carr
8. Civic Center and CBD Core
9. Laclede's Landing
10. Mansion House



Note:
Basemap provided by SLDC.
Base data provided by the St. Louis City Plan Commission, June 1973 Plan.

stadium and parking garages were completed in 1966 and became an impetus for cultural and economic activity in the area.

Jefferson Memorial Arch Expansion Grounds

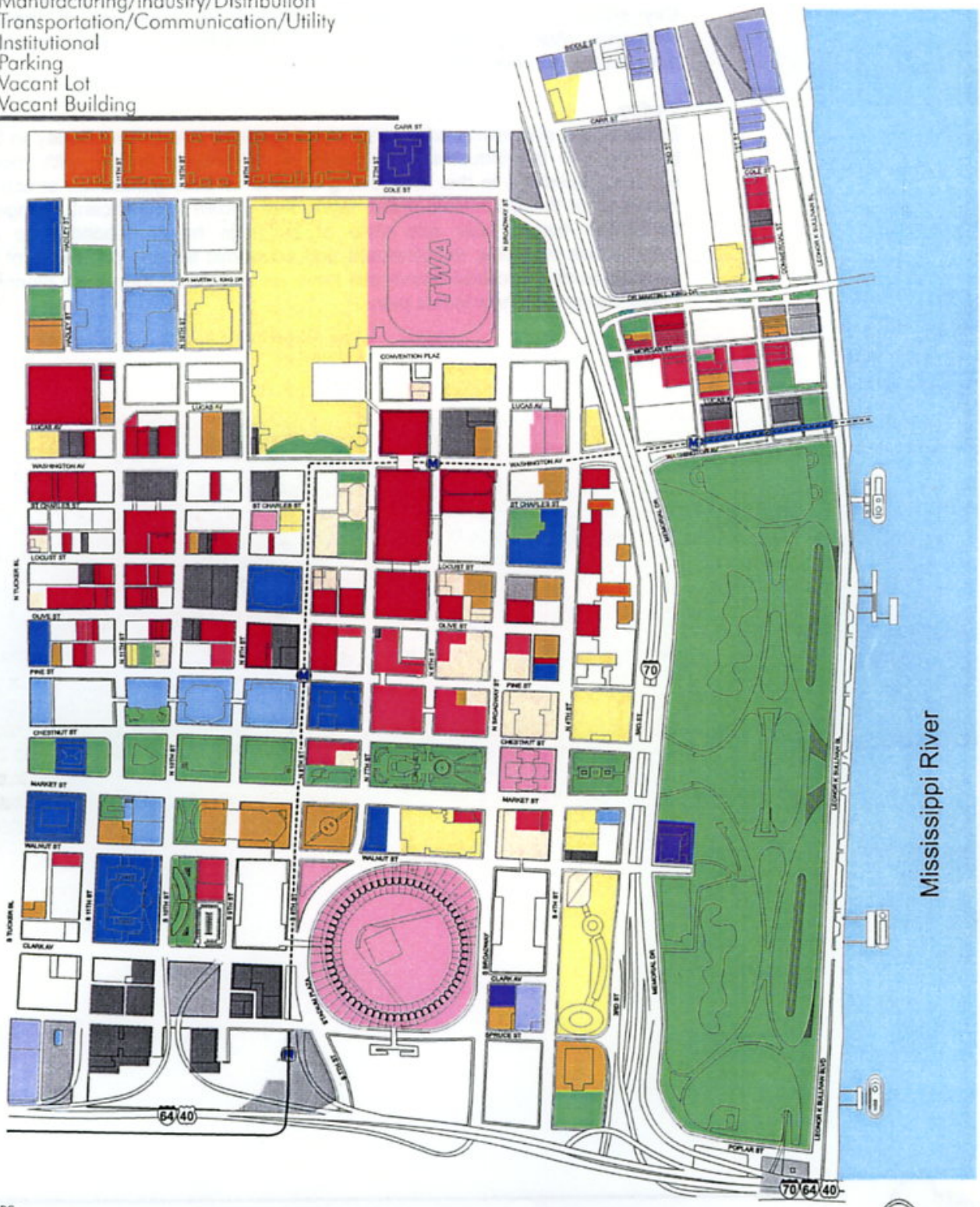
The presence of the Jefferson Memorial Arch Expansion Grounds has had the most major impact on St. Louis since its completion in 1968. The original proposal for a memorial to the Louisiana Purchase located on the riverfront was made in 1933. Land acquisition started in 1937. In 1935, the bond issue was passed for the City share and President Roosevelt ordered the expansion of the Jefferson Memorial. War delayed the process but, $30 million later, the Arch and the 80-acre expansion was completed in 1968.

Today

Some of the originating urban settlement patterns are evident today in Laclede's Landing and the industrial area south of the Poplar bridge, with most of the surviving buildings in this area being second or third generation structures. The evolution of the Downtown urban fabric has shown a significant change through time. The height, bulk and style of buildings have responded to changing construction methods, development and economic trends. Yet, many of the early developments described above still have an impact on the future planning of St. Louis, as we will show in this plan.

Existing Street Level Land Use

- Government
- Services
- Office
- Retail Trade
- Retail Trade - Eating/Drinking
- Entertainment/Recreation
- Multi-Family Residential
- Hotel/Convention
- Parks/Open Space
- Manufacturing/Industry/Distribution
- Transportation/Communication/Utility
- Institutional
- Parking
- Vacant Lot
- Vacant Building



Note:
Basemap provided by SLDC.

Downtown Now!

C. Land Use, Zoning and Regulatory Entities

Existing Ground Level Land Use

There is a total of 546 acres within the Downtown Core. Of this total, about 30% is taken up by local street and highway right-of-ways. The balance of this ground level land is comprised of 14 different land uses. These uses are broken down as follows:

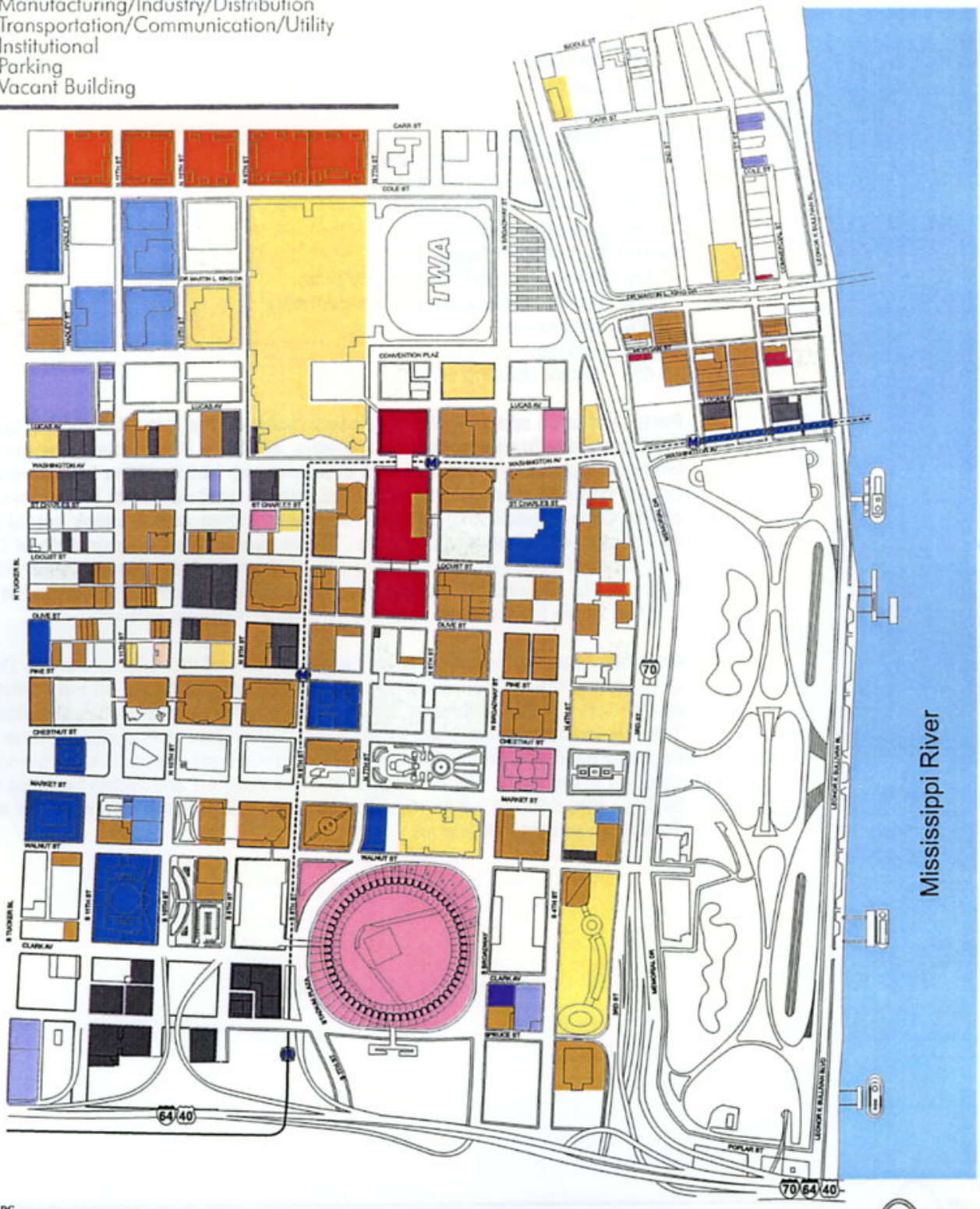
2.7%	Government
1.5%	Services
2.1%	Office
5.0%	Retail Trade
1.9%	Retail Trade: Eating and Drinking
6.2%	Entertainment/Recreation
2.4%	Multi-Family Residential
6.2%	Hotel/Convention
18.1%	Parks/Open Space
1.5%	Manufacturing/Industry/Distribution
2.5%	Transportation/Communication/Utility
0.6%	Institutional
14.3%	Parking
5.0%	Vacant Building or Lot

Parks and open space, including plazas, make up the largest portion of land use in the Core aside from streets and highways, at 18.1% of the total. The next highest land use includes parking lots and structures, at 14.3% of the total acreage. The largest concentrations of parking at the ground level occurs at the perimeter areas of the Core. Retail and services, including eating and drinking establishments, makes up 8.4% of uses in the Core. These uses primarily occur north of Chestnut, and south of Lucas Avenue west of I-70 and south of Dr. Martin Luther King Drive east of I-70. Ground level office uses are not significantly concentrated in any one location within the Core, nor are hotels or entertainment venues.

Currently housing makes up a very small portion of the total use in the Downtown Core, with 2.4% of the total land use. This occurs primarily on the northern edge of the Core, in the Columbus Square Neighborhood, and within Mansion House. The few manufacturing uses located within the Core are located on the extreme edges of the study area. Ground level vacancies are primarily concentrated at the Cupples Warehouse complex south of Clark Avenue and within the area bounded by Pine Street to the south, 8th Street to the east, Lucas Avenue to the north and Tucker Boulevard to the west.

Existing Second Floor Through Top Floor Land Use

- Government
- Services
- Office
- Retail Trade
- Retail Trade - Eating/Drinking
- Entertainment/Recreation
- Multi-Family Residential
- Hotel/Convention
- Parks/Open Space
- Manufacturing/Industry/Distribution
- Transportation/Communication/Utility
- Institutional
- Parking
- Vacant Building



Note:
Basemap provided by SLDC.

Downtown Now!

Existing Upper Level Land Use

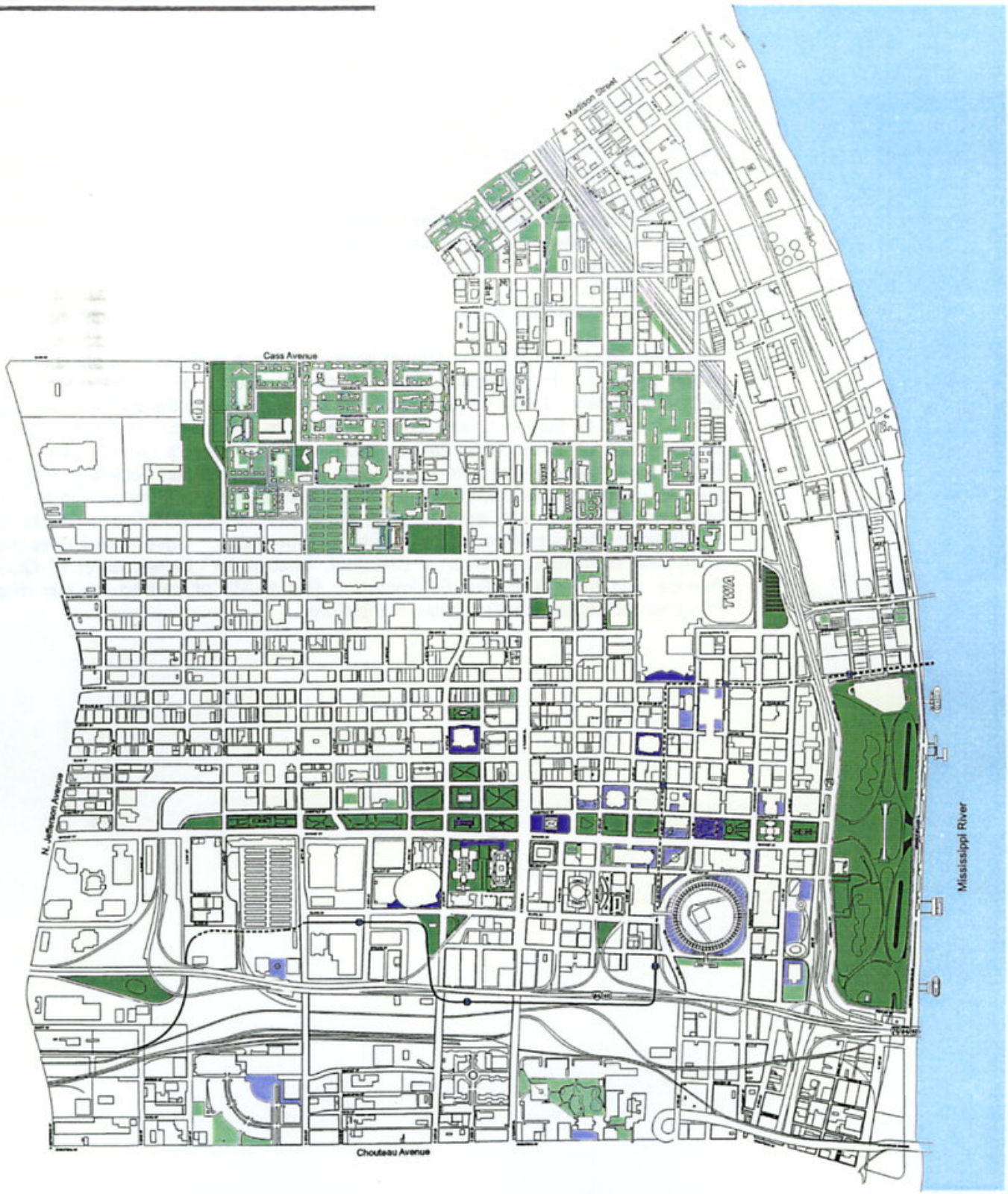
Upper level uses occur within 34% of the total land area in the Dowtnown Core. Those areas not mapped to the key are either open space or single level uses. Of the total upper level, uses are broken down as follows:

6.0% Government
25.3% Office
2.9% Retail Trade
0.2% Eating and Drinking
10.1% Entertainment/Recreation
6.8% Multi-Family Residential
18.6% Hotel/Convention
0.5% Parks/Open Space
2.9% Manufacturing/Industry/Distribution
4.2% Transportation/Communication/Utility
0.2% Institutional
15.4% Parking
6.9% Vacant Building or Lot

Obviously, the largest portion of upper level land use is comprised of office space. When reviewing the location of these upper level uses a 'central office core' becomes evident. This area is bounded by Walnut Street to the south, I-70 to the east, Tucker to the west and Lucas Avenue to the north. Another smaller concentration of these office uses is evident within Laclede's Landing. The next largest land use includes hotel space and related convention activities. Third is parking. The same concentrations of vacant levels evident on the ground floor is also evident on the upper level uses. A higher ratio of residential uses is evident, attributed to the overall reduction in total use acreage. Government uses are somewhat concentrated south of Chestnut, west of 10th Street, north of Clark Avenue and east of Tucker Boulevard. The 15.4% of parking on this map indicates parking structures located in the Core.

Existing Open Space

Public Open Space
Private Open Space
Public Plazas
Private Plazas



Note:
Basemap provided by SLDC.

Downtown Now!

Existing Open Space

Currently, there are approximately 200 acres of park and open space in the Prime Study Area of Downtown St. Louis, comprised of a combination of public park land, private park land and private plazas. Smaller plazas abut specific uses, and other parkland and open space occur as portions of corporate campuses and near north neighborhoods. This figure does not include any vacant lands that are not specifically used for formal open space. The extensive 75-acre Jefferson Memorial Expansion and Mall grounds dominate the Downtown and especially the riverfront, totaling 38% of all open space in the Prime Study Area.

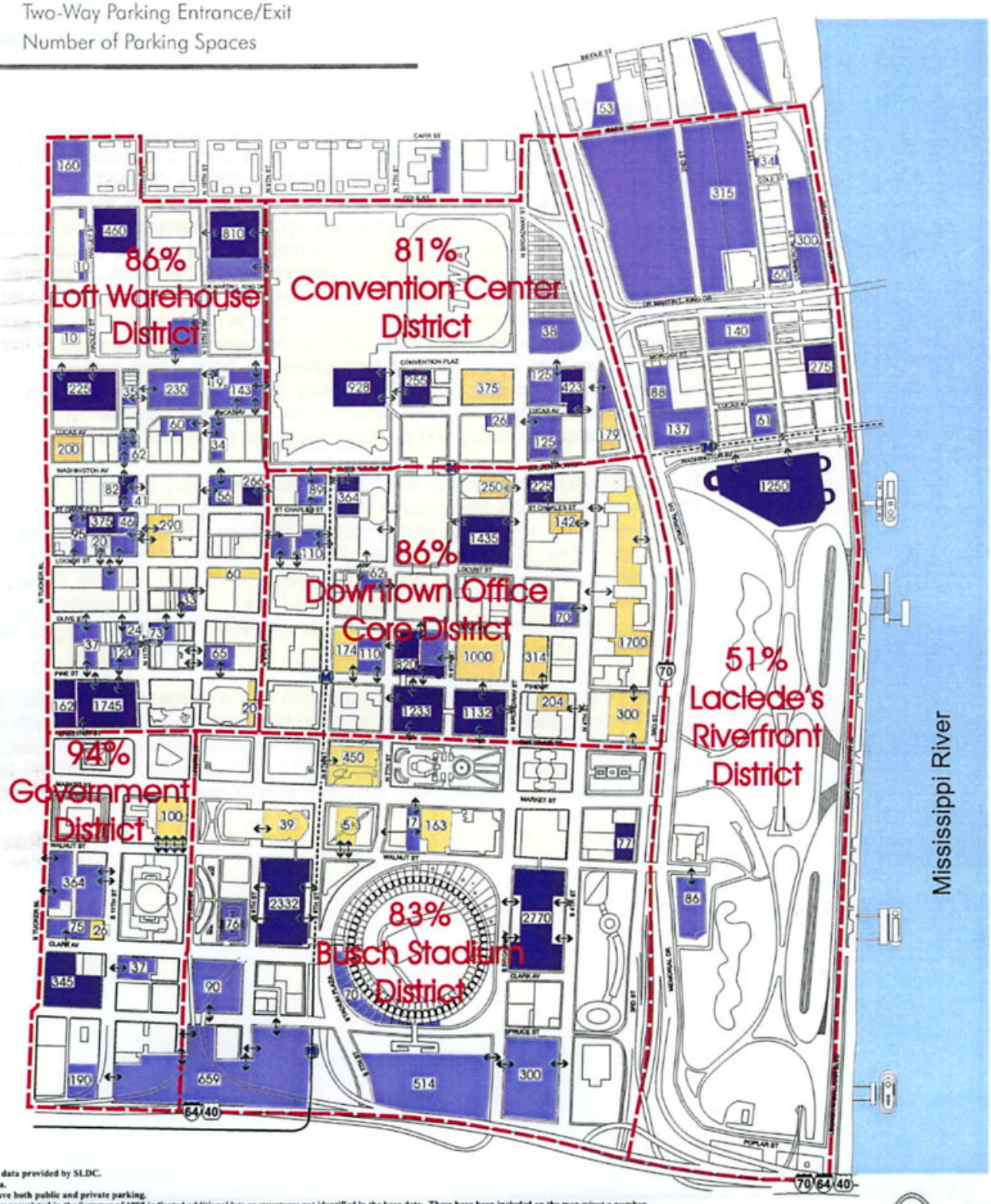
The mall and abutting open space account for approximately 30 additional acres of land. These are the primary, visually continuous spaces in Downtown. In any other Downtown environment, this amount of green space would be deemed extraordinary. However, the Arch Grounds are basically deemed unusable since the National Park Service restricts any sort of semi-active to active uses there. Most of the parks within the Downtown are not highly programmed and are passive in nature. The parks with the most programming would include Kiener plaza and the adjacent May amphitheater, where approximately 92 festivals occur throughout the year. During these festivals street closures occur to accommodate both festival venues and the attendees. Lunch hours in the summer months generate numerous office workers from adjacent buildings who take advantage of the open spaces, some with more shading than others, to have lunch outdoors. Another more active park includes Lucas Park, which has a public and a semi-private play facility for an adjacent daycare center. The additional City owned park lands, located between the library and the Mall, appear to be highly underutilized.

The hardscaped plazas which exist in the Downtown vary in size from a building setback area that has been paved (such as the plazas to the north of buildings located along the south side of the mall), to more intentional spaces (such as the Mercantile Bank Plaza located at 7th and Locust). Some of the private developments have provided soft green spaces, including Nations Bank's open space located at 10th and Market. Other open space within the Prime Study Area includes both plazas and green space for individual developments, as well as underutilized lands that are sodded.

Maintenance of publicly-owned spaces can be a huge task for local parks departments. Often parks and open space budgets seem to dwindle with yearly budget cuts. There does seem to be a need for additional funding to adequately maintain the large amount of park space in the Downtown. Due to the lack of appropriate maintenance, some of the City's spaces could become a liability.

Existing Parking Lots and Structures

- Parking Lots
- Parking Structures
- In-Building Parking Structures
- Parking District
- 85% Peak Weekday Occupancy
- → One-Way Parking Entrance/Exit
- ↔ Two-Way Parking Entrance/Exit
- [235] Number of Parking Spaces



Notes:
Basemap and base data provided by SLDC.
1996 and 1997 Data.
Some structures have both public and private parking.
A windshield survey completed in the Summer of 1998 indicated additional lots or structures not identified in the base data. These have been included on the map w/out a number.

Downtown Now!

Existing Parking Lots and Structures

Supply

Table II-2 below summarizes the off-street parking supply and utilization for the Downtown Core as measured in 1996. Spot checks made in 1998 at major garages in the Core area showed these occupancy figures to be correct. The roughly 30,000 spaces are, on average, 82% occupied at the time of peak utilization. That indicates that parking is overall nearly at practical capacity; specific locations within these downtown districts are at capacity. A breakdown of parking by District that identifies public and private spaces and utilization by Facility is included in Appendix G.

Table II-2
Parking Supply in the Downtown Core by District

District	Total Supply/Spaces	Utilization
Laclede's/Riverfront	2,799	51%
Convention Center	2,474	81%
Downtown Office Core	9,734	86%
Busch Stadium	7,552	83%
Loft Warehouse	6,068	86%
Government	1,137	94%
TOTAL	**29,764**	**82%**

Source: East-West Gateway Coordinating Council, 1996 and 1998)
Note: Some Districts may extend beyond the boundaries of the Downtown Core, however the above numbers reflect only those totals within a District that are within the Core.

Parking Rates and Time Limits

Current rates (based on a weighted average of price and spaces) for parking in lots and garages in selected downtown areas are shown below.

Table II-3
Parking Rates and Time Limits

Area	Early Bird	1st Hour	Daily	Evening/ Weekend	Monthly
Riverfront	$2.50	$1.50	$5.40	$4.30	$31.25
Office Core	$4.45	$1.90	$8.90	--	$85.00

Source: St. Louis Parking Company; TDA Inc.

Most lots and garages offer hourly, daily and monthly parking. Many also cater to special events at the stadium, convention center and arena charging form $5.00 to $12.00 for event parking. Most facilities also allow 24 hour parking, though some charge an additional fee approximately 50% more than daily rates.

No recent count of on-street parking was available. However, the East-West Gateway Coordinating Council's 1984 inventory found that on-street parking was less than 7% of the total. On-street share is probably slightly smaller now due to on-going displacement of curbside areas by fences surrounding vacant buildings.

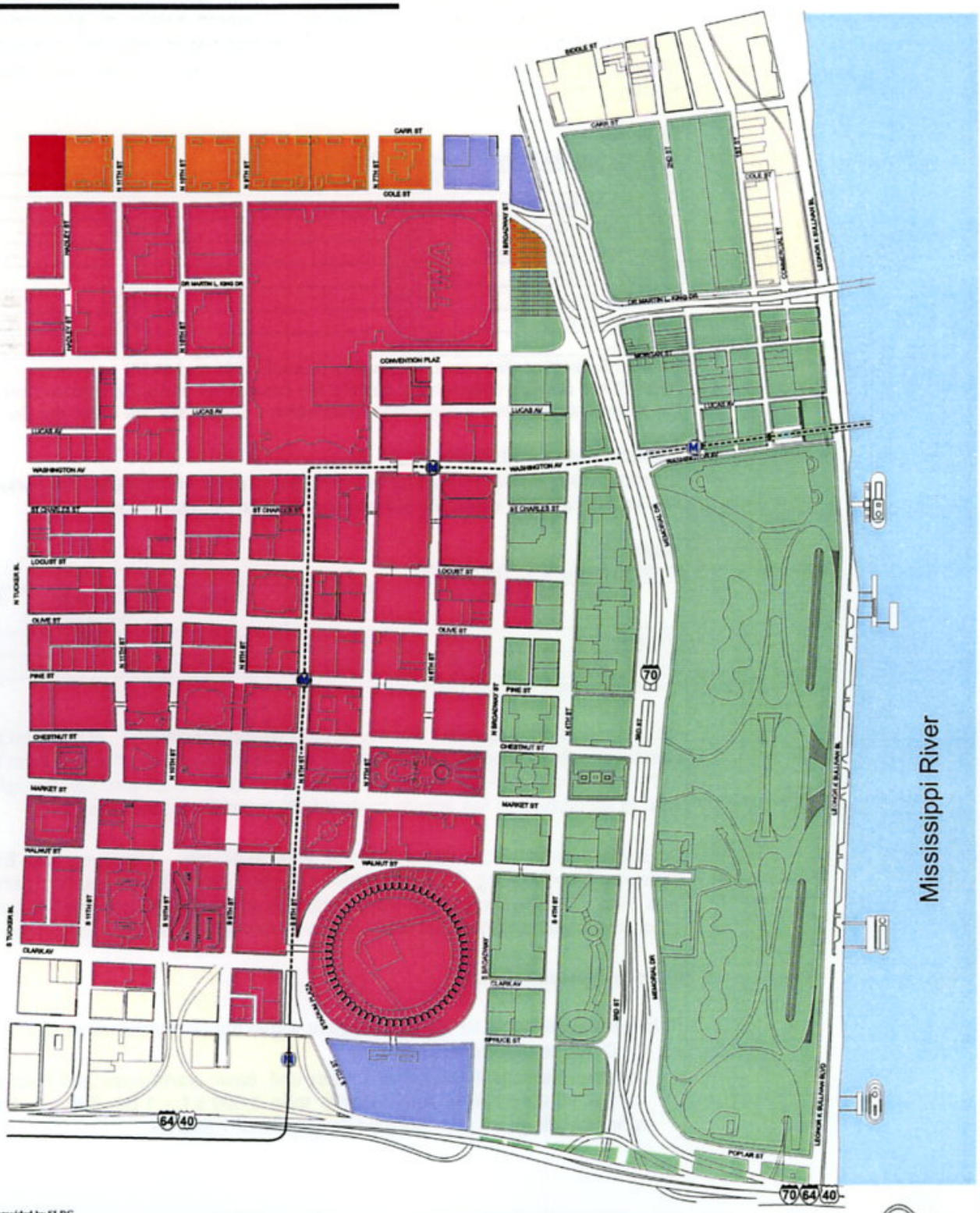
Parking Requirements

Parking requirements for Zoning Districts within the Downtown Core are as follows:

- CBD: No requirements
- All other districts: Residential - 1 per unit, basic warehouse and manufacturing - 1 per 10 employees, retail greater than 3,000 s.f. - 1 per 700 s.f., banks and office buildings - 1 per 1,250 s.f. in excess of 7,500 s.f.

Existing Zoning

- Multi-Family Residential
- Commercial
- Central Business
- Industrial
- Unrestricted
- Jefferson Memorial



Note:
Basemap and base data provided by SLDC.

Downtown Now!

Existing Zoning

Existing Zoning in the Downtown Core includes six districts: Multi-Family Residential, Commercial, Central Business, Industrial, Unrestricted and Jefferson Memorial.

The majority of the land is in the Central Business District category, which allows for a large variety of uses. Parking is not required, which is unusual for a Downtown. Volume calculations determine the heights of buildings. They are based on the dimensions of the footprint of a building 200 high. Building volume may not exceed 25% of this volume, and height can be increased as setbacks and stepbacks are provided. Lot area determines the number of residential units allowed.

The second largest district encompasses the Jefferson Memorial District, which allows the same uses, areas and heights as the Central Business District, but restricts the height of buildings so that they do not exceed a mean sea level elevation of 751 feet. No parking is required.

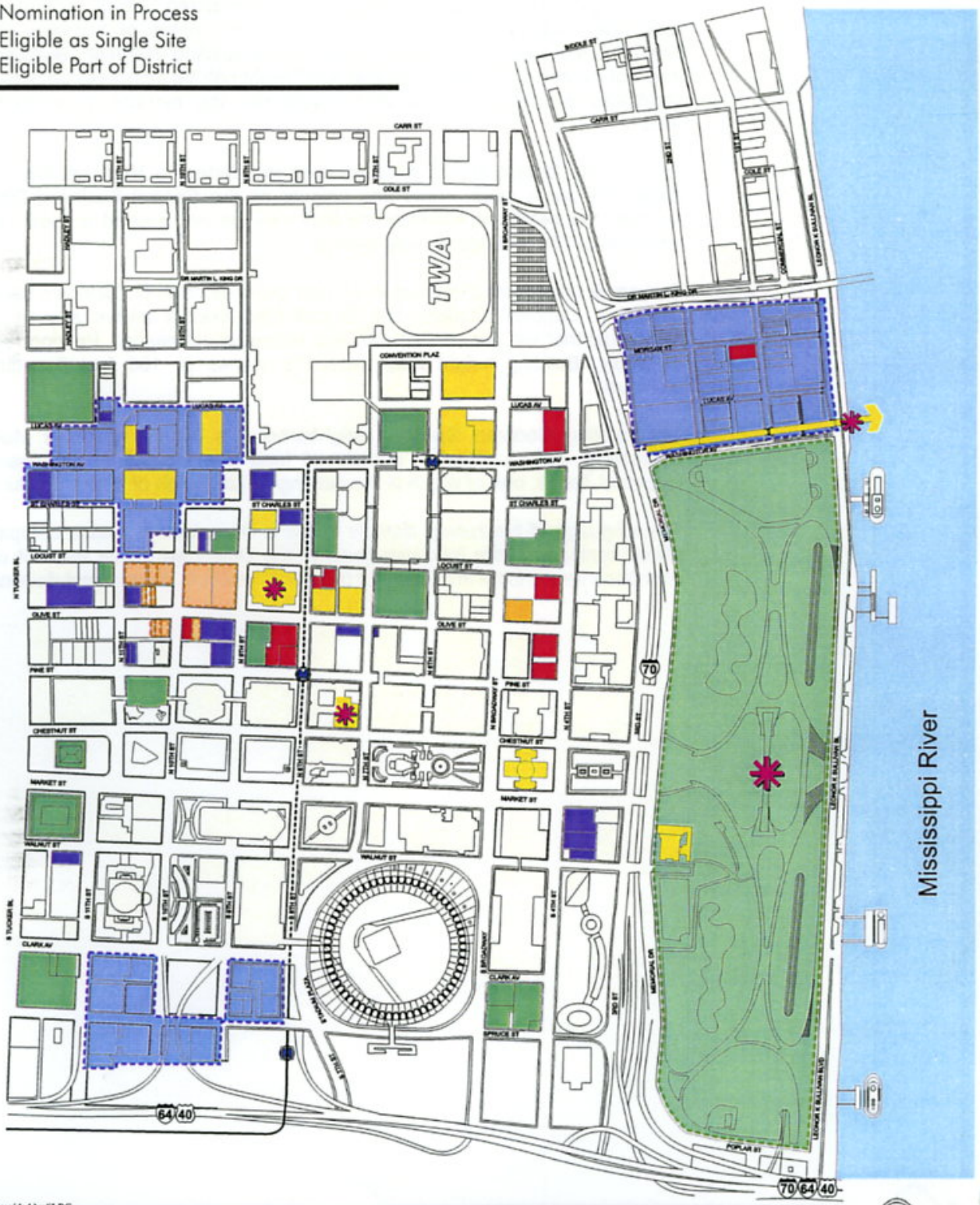
Two small Unrestricted Districts exist, one on lands north of Laclede's Landing and one near Cupples Station. The Unrestricted District allows any use, except residential that will not conflict with any nuisance ordinance. Parking regulations do apply. Building height may exceed 8 stories or 100 feet if setbacks are provided.

The existing Cochran Gardens neighborhood is located within a Multi-Family Residential district. Smaller parcels of land are located in Commercial and Industrial Zones, one of which is the parking lot just south of Busch stadium.

The language of the zoning districts needs a close look to assure compatibility of stated zoning with the land use goals in the Downtown. The ease of using the ordinance needs to be improved for the administrators, citizens and developers.

Historic Districts and Sites

- National Register of Historic Places
- City Landmark
- National Register of Historic Places & City Landmark
- National Historic District
- National Historic Site
- National Historic Landmark
- Nomination in Process
- Eligible as Single Site
- Eligible Part of District



Note:
Basemap and base data provided by SLDC.

Downtown Now!

Historic Districts and Sites

City of St. Louis Landmarks

St. Louis has a wealth of historic buildings, which contributes to its character and provide a link to its important past. In the City of St. Louis, a building or site may be designated for preservation as an historic district, landmark or landmark site if it:

- Has significant character or value as part of the development, heritage or cultural characteristics of the City, state or nation; or
- Is the site of a significant historic event; or
- Is the work of a master whose individual work has significantly influenced the development of the City, state or nation; or
- Contains elements of design detail materials or craftsmanship which represent a significant innovations; or
- Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of a neighborhood, community or the City; or
- Has yielded, or is likely to yield, archaeological artifacts important in prehistory or history.

The Commission on Heritage and Urban Design is charged with developing design and construction standards by which alterations or construction of improvements to exterior architectural features of designated buildings are reviewed. The Commission must review the proposed work for compliance with these standards and recommend approval before a permit can be issued. Proposed demolition of designated structures must also be reviewed by the Commission.

National Register of Historic Places

Individual buildings or districts may also be nominated and placed on the National Register of Historic Places. There are three such districts in the study area: Washington Avenue West of Tucker, Washington Avenue East of Tucker and Laclede's Landing. The individual buildings listed on the National Register are listed below.

National Historic Landmark

In addition, St. Louis has a very special place: a National Historic Site, the Jefferson Memorial Expansion Site with the Gateway Arch designated as a National Historic Landmark.

Financial Incentives

In September 1997, the State of Missouri approved tax credits for the rehabilitation of historic buildings. This has already spurred a wave of activity and rehabilitation projects. Tax credits are given for 25% of the building rehabilitation costs, which must be at least half the purchase price of the building to qualify. Buildings targeted for rehabilitation must meet the U.S. Secretary of the Interior's historic preservation standards reviewed by the Missouri Department of Natural Resources. Approval of the tax credits for National Register buildings comes from the State's Department of Economic Development.