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H3 Studio

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b. Public Workshops
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Vector Communications Corporation

C **Economic:**
Development Strategies Report and Appendices

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Bernardin, Lochmueller & Associates Report

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M3 Engineering Group

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A

Planning & Urban Design
H3 Studio

TAC Meeting 1 Presentation: May 10, 2013

TOD STATION AREA PLANNING
ARCH-LACLEDE'S STATION
& STADIUM STATION

TECHNICAL ADVISORY COMMITTEE MEETING 1

SAINT LOUIS DEVELOPMENT CORPORATION

THE CITY OF SAINT LOUIS

MAY 10, 2013

CONSULTANTS

H3 Studio :: Development Strategies :: **Bernardin, Lochmueller & Associates** :: Vector Communications :: M3 Engineering Group

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AGENDA

INTRODUCTION & BACKGROUND

TRANSIT ORIENTED DEVELOPMENT

ST. LOUIS TOD FRAMEWORK PLAN

OTHER PLANS & CURRENT PROJECTS

STATION AREAS ANALYSIS
& PLAN ALTERNATIVES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

BACKGROUND TO THE STUDY:
Regional Sustainability Plan

This project is part of a three-year, $4.7-million grant from HUD to develop a regional plan for sustainable development.

The St. Louis-area grant was announced in October 2010, with funding for planning running through December 2013. The $4.7-million award was the fourth-highest among the 45 regions that received funding from HUD; 225 grant applications were submitted.

GRANT ASSUMPTIONS

The grant is part of HUD's Sustainable Communities Initiative, an interagency collaboration of HUD, DOT & EPA which is currently funding planning efforts throughout the country. At the core of the planning effort are six Livability Principles

Livability Principle	Indicator
Provide more transportation choices	Percent of jobs and housing located within one-half mile of transit
Promote equitable, affordable housing	Percent of household income spent on housing and transportation
Enhance economic competitiveness	Percent of workforce living within a 30 minute or less commute from primary job centers
Support existing communities	Percent of transportation investments dedicated to enhancing accessibility of existing transportation system
Coordinate policies and leverage investment	Percent of transportation projects where more than one federal funding source is utilized
Value communities and neighborhoods	Percent of housing located in walkable neighborhoods with mixed use destinations located nearby

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

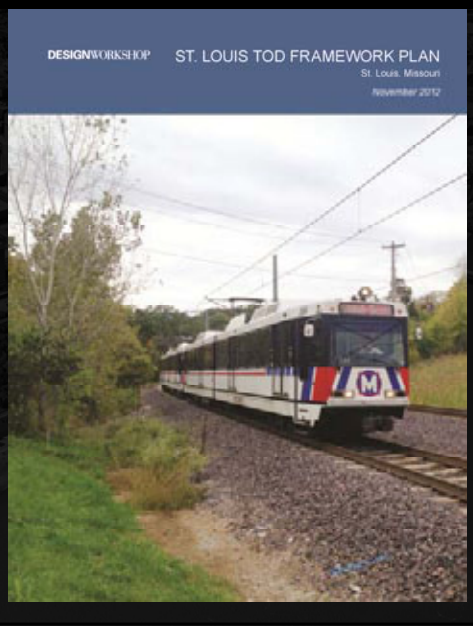
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

BACKGROUND TO THE STUDY:
Regional Sustainability Plan

ST. LOUIS TOD FRAMEWORK PLAN

East West Gateway Council of Governments and Metro along with many stakeholder organizations completed this project as part of the Regional TOD Study for the St. Louis Region in 2013

The Regional TOD Study provides a guide for the overall regional and for individual jurisdictions and stakeholders around the particular MetroLink stations, to move TOD forward over the next 3 decades. In addition, the study identifies a regional station typological system



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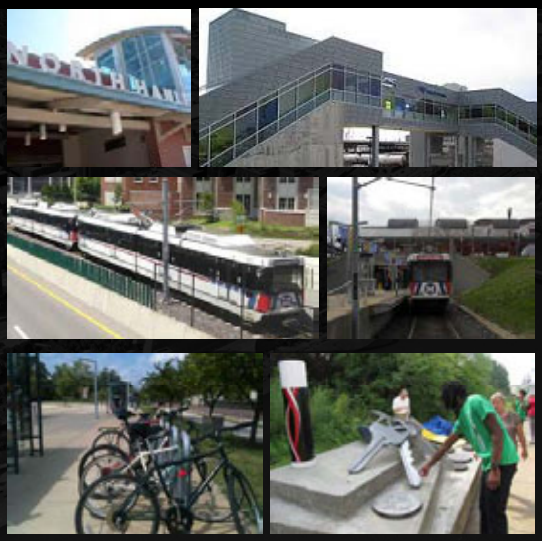
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PURPOSE OF THE STUDY

The purpose of this study is to assist the City of St. Louis, its neighborhoods, and developers **'create a vision and roadmap for how to encourage TOD in the St Louis region.'** and will include the **'development of Station Area Plan alternatives/options, community outreach, economic analysis, and refinement and finalization of the Station Area Plans'** for the two existing station complex's and one new.

1. Downtown Arch-Laclede's Landing Station and the Stadium Station
2. Forest Park-DeBaliviere/Delmar Stations
3. Two Stations on the N/S Alignment

Well-executed TOD will allow our region to improve mobility, create sustainable and livable communities and improve transportation options for the future.



The goal for these plans is to immediately leverage development along the route.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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SCOPE OF WORK

Existing Stations

A.1 Technical Advisory Committee Formation
A.2 Station Area Plan Alternatives
A.3 Community Outreach
A.4 Economic Analysis of Station Area Plans
A.5 Refinement of Station Area Plan Alternatives
- A5.1 Transportation Analysis of Alternatives
- A5.2 Stormwater and Environmental Planning Analysis
- A5.3 Presentation of Refinements to TAC

A.6 Preferred Station Area Plans
- A6.1 Recommended Changes to Comp Plan
- A6.2 Estimated Cost of Recommended Improvements
- A6.3 Recommendations Regarding Redevelopment Plans, Chapter 99, and Other Funding Tools.

A.7 Final Station Area Plans

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PROJECT SCHEDULE

THE FOLLOWING TASKS REPRESENT THE CONSULTANTS PROPOSED SCOPE OF WORK AND BASIC SCHEDULE.

6.0 MONTHS FROM START TO FINISH.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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COMMUNITY OUTREACH

Initial Open House – May 23, 2013
In the charrette-style open houses, the Consultant will invite stakeholders including property owners, business owners, and neighbors to learn about issues related to zoning, future land use, and potential enhancements to mass transit. Stakeholders can voice concerns and raise ideas for their vision of the future. The intent is to secure broader support for the process and ultimate selected alternative.

Final Open House – July 25, 2013
Consultant will present the preferred Station Area Plan and public can provide feedback concerning recommendations, transportation, aesthetic, and related improvements. Consultant will use feedback to create achievable implementation strategies and make any needed changes to the station area plans.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TECHNICAL ADVISORY COMMITTEE

Amos Harris – Mercantile Exchange / Spinaker St. Louis
Andrew Riganti – SLDC Commercial Dist. Manager 7
Brian Hall – CVC
Catherine Werner – City of St. Louis
Connie Tomasula – City of St. Louis PDA
Craig Heller – Loftworks
Dan Kaplan – Westin Hotel
Deanna Venker – MoDOT
Don Roe – City of St. Louis PDA
Emily Kochan – Laclede's Landing Merchant's Assoc.
Ethan Sargent – Central Parking
Garrick Hamilton – Koman Group
Gary Pohrer – St. Louis Parking
Hossein Afzalinia – Drury Development – CitiPark
James Buchanan – SLDC Commercial Dist. Manager 26
Jason Pollard – Hilton St. Louis Ballpark
Jeff Babinski – Lumiere
John Clark – Laclede's Landing Redevelopment Corp.
John Kohler – City of St. Louis
John Langa – Metro
Kasey Bergh – Nestle Purina
Kevin Kloster – Cupples Station
Kim Cella – CMT
Maggie Campbell – Partnership for Downtown St. Louis
Maggie Hales – CityArchRiver
Matt Schindler – Partnership for Downtown St. Louis
Melonde Colvin – SLDC Commercial Dist. Manager 5
Paul Hubbman – EWG
Rob Orr – SLDC
Ron Watermon – St. Louis Cardinals
Sandy Colvin – City of St. Louis NSO Ward 7
Scott Brooks – InterPark
Sharie Taylor – City of St. Louis NSO Ward 5
Stan Mulvihill – McCormack Baron
Susan Trautman – Great Rivers Greenway
Vince Miller - Drury

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PROJECT TEAM & ROLES

PROJECT LEAD: H3 Studio Inc.
Urban Design , Planning & Sustainability

- Station Area Plan Typologies
- Station Area Planning
- Land Use & Zoning
- Sustainability Planning

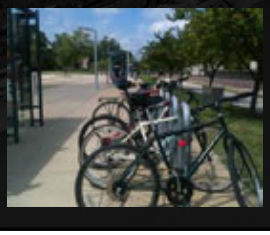
SUB-CONSULTANTS:

Economic Analysis & Planning
Development Strategies

Public Engagement and Outreach
Vector Communications Corporation

Transportation Planning & Engineering
Bernardin, Lochmueller & Associates

Stormwater/Environmental & Costing
M3 Engineering Group



TRANSIT ORIENTED DEVELOPMENT

- DEFINITION
- BENEFITS
- TRENDS
- STATIONS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
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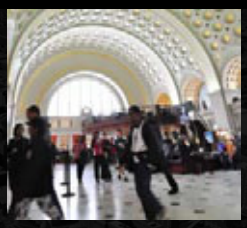
TRANSIT ORIENTED DEVELOPMENT

Transit Oriented Development (TOD) is compact, mixed-use development near transit facilities that promotes sustainable communities by providing people of all ages and incomes with improved access to transportation and housing choices, reduced transportation costs that reduce the negative impacts of automobile travel on the environment and the economy. (definition by HUD)

TOD brings together people, jobs, and services and is designed in a way that makes it efficient, safe, and convenient to travel on foot or by bicycle, transit, or car and to live convenient, affordable, pleasant lives—with places for our kids to play and for our parents to grow old comfortably.



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BENEFITS OF TRANSIT ORIENTED DEVELOPMENT

Transit-Oriented Development should:

- Create a compact development within an easy walk of public transit & with sufficient density to increase transit ridership
- Create active places & livable communities that service daily needs where people feel a sense of belonging and ownership.
- Encourage a variety of housing types near transit facilities available to a wide range of ages and incomes.
- Minimize traffic, focus on the pedestrian and maximize transportation choices
- Reduce auto dominated Land Uses
- Generate revenue for the public & private sectors
- Provide increased value for both new and existing development
- Improve the physical environment and connectivity, and create a sense of place

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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TRENDS FAVORING TRANSIT ORIENTED DEVELOPMENT

Overall there is an *increasing demand* for Walkable Transit-Orientated Development, due to:

Changing Demographics

- Aging Population
- Growth in households without children
- Changing preferences of Generation X and Y

Smaller Households & Demand for Greater Variety and Mix of Housing

Increased Value of Walkable Urban Environments

Increased Fuel Costs and Driving Costs

Increased Traffic Congestion

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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TRANSIT ORIENTED DEVELOPMENT STATION AREA PLANNING

Well planned station areas include the following 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 & Quality
- Connectivity
- Parking Strategy

A well defined Downtown station area is a unique and identifiable URBAN PLACE

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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TRANSIT ORIENTED DEVELOPMENT STATION AREA PLANNING

Well planned station areas could include the following HIGHLY DESIRABLE *but non essential* ATTRIBUTES:

- Supportive Commercial Uses
- Well-connected Fine Grained Street Network
- Traffic Calming Features
- No Dead Space or Facades
- Well-Articulated Blocks, Landmarks and Buildings
- Public Space, Parks and Amenities
- Attractive Transit Facilities
- Attractive and Safe Environment

SCENARIOS TO INCREASE RIDERSHIP

INCREASE RESIDENTIAL DEVELOPMENT

Based upon additional research, TOD-style development will yield a higher ridership capture than employment.

- ¼ Mile Radius from MetroLink: 10%-15% Capture Rate
- ½ Mile Radius from MetroLink: 5%-10% Capture Rate
- Greater than ½ Mile Radius: <2% Capture Rate

- A special capture rate for TOD was developed by Robert Cervero (UC-Berkeley) as part of the MetroLink MetroSouth Study in the mid-2000s. He estimated a 15 percent capture rate for TODs directly adjacent to the station (meaning within ¼ mile). The rate is predicated on the development attracting segments of the population that are predisposed to riding transit (essentially that's why they're relocating to TOD). This rate cannot be applied to typical residential uses.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT

TRANSIT SHEDS

OVERLAPPED TRANSIT SHEDS

Increased Intensities of residents and employees

Use Mix reflecting a Fine Grain, diverse blend of Land-Uses

Urban Form & Quality

Connectivity

Parking Strategy

WEIGHTED TRANSIT SHEDS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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WILSHIRE & VERMONT
Los Angeles, CA

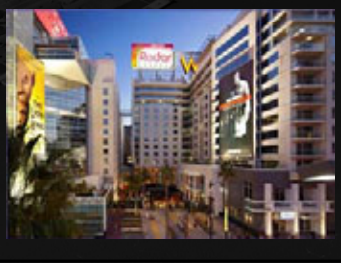
- Located in the district of Koreatown at the Wilshire/Vermont Station- Intersection of the Red & Purple Lines
- Selected by LA Metro to develop 7 acres (including an LA Unified School District middle school)
- Complex mixed-income, multi-family rental apartment and retail/office program
- Ground-floor shopping, dining, and retail
- 35,000 sf mixed-use building, 7 stories, 449 apartments
- 20% of units designated affordable
- Open courtyard area, outdoor recreation
- Subterranean parking
- Connected to bus plaza, major bus lines

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

HOLLYWOOD & VINE
Los Angeles, CA

- The central station of 3 subway stops in Hollywood- Hollywood Blvd on the Red Line
- Public/private partnership venture, including City of LA, Community Redevelopment Agency, Metro, and 2 development teams
- 4.6 acres of metro property
- Composed of 2 buildings:
  - The W Hotel and Residences
  - 1600 Vine Apartments
- Mixed-use, transit-oriented site
- Over 2,000,000 sq ft- 305 hotel rooms, 143 condos, 275 affordable apartments (20%)
- Ground floor retail, corner grocery
- 9 Metro Bus connections
- Constructed in 30 months



THE CARRUTH
Boston, MA

- Located in Boston's Dorchester neighborhood
- 0.8 Acre Site, completed in 2007
- Serviced by the RED Line and Ashmont-Mattapan High Speed Line
- Frames Peabody Square
- 6 story development
- 10,000 sf of ground floor neighborhood scale retail use
- 116 residential units (145 DU/Acre)
    - 74 affordable residential units
    - 42 market-rate condominiums
- 80 Parking spaces
- Adjacent to transit stop
- Connected to 8 bus lines

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

- OVERVIEW

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

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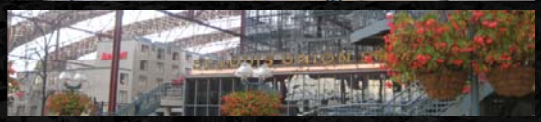
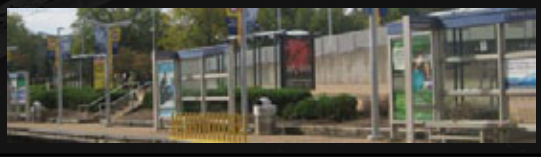


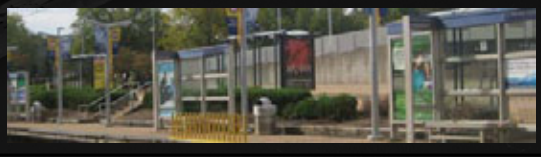


TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

- The Study Includes:
  - Regional Market Study – documents TOD potential at each station.
  - Site Analysis
  - Development Feasibility Analysis
  - Station Area Typologies
  - TOD Framework Masterplan
    - Analysis of all 37 stations
    - Recommendations and action steps for all 37 local jurisdictions
    - TOD Toolbox - Implementation tools for all or some stations within the system
  - Detailed Station Area Plans – for 5 MetroLink stations. To be completed in 2013.
    - Will be ready for entitlement proceedings and development negotiations.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

KEY GOALS OF THE TOD FRAMEWORK PLAN?

- Education Concerning TOD
- Explain concept of TOD to local leaders and general population about what TOD means for the St. Louis Region
- Develop a Regional Vision for TOD
- Outline Implementation Tools /Strategies
- Roadmap for TOD for Every Station
- Completion of Station Area Plans

HOW WILL THE TOD FRAMEWORK PLAN BE USED?

- Identification of Development Opportunities at Particular Stations
- Identification of Market Potential at Each Station
- Bike and Pedestrian Strategies for Each Station and Overall System
- Action Steps for Local Partners, Prioritized
- Implementation Tools for TOD

DOWNTOWN TYPOLOGY – Primary center of economic and cultural activity in any region. Dense mix of housing & employment types, retail and entertainment catered to region. Many transit modes.

MAJOR URBAN CENTER TYPOLOGY – mix of residential, employment, retail, and entertainment. Slightly lower densities. Draw residents from surrounding neighborhoods. Commuter hubs for larger region, multiple transit options. Many have historic character and street network.

NEIGHBORHOOD TYPOLOGY – Primarily residential areas well connected to local and regional transit network. Mix of housing and local serving retail. Commercial limited to small businesses or small-scale industry. Well connected street grid. Transit less of a focus; station may be at edge of two neighborhoods.

SUBURBAN TOWN CENTER TYPOLOGY – Mix of residential, employment, retail and entertainment. Origin and destination for commuters. Mix of transit types connected to regional transit network with high-frequency service. More recent development than in downtowns or urban centers. More single-use employment areas and residential neighborhoods.

CAMPUS / SPECIAL EVENT / SPECIAL PURPOSE TYPOLOGY – Single-use area focused around a major institution such as university or entertainment venue (stadium.) Transit stations not key focus of economic activity. Secondary transit service infrequent and focused only on stations. More recent development. Street grid probably less connected than in older neighborhoods.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

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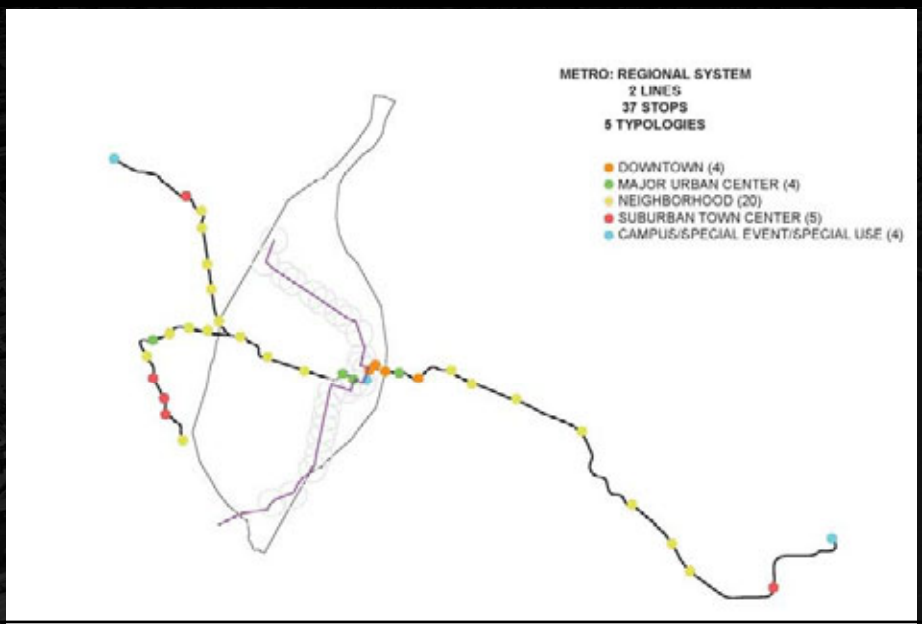

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

OVERVIEW AND CONTEXT

- In the heart of historic Downtown St. Louis
- First/last stop in the city to/from Illinois
- Gateway Arch & Jefferson National Expansion Memorial to south
- Laclede's Landing Historic District to north, 19th century warehouse & commercial buildings
- Casino, retail, and hotel uses further north

DENSITY

- 3.10 residential units per acre
- 2.02 employees per acre

Arch-Laclede's Landing TOD Action Plan

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

OVERVIEW AND CONTEXT

- Serves south Downtown at Busch Stadium
- Close to I-64, the Gateway Mall, Riverfront
- Surrounding uses:
  Parking garages & surface lots,
  Riverfront towers of retail/hotel/office (north)
- New developments:
  Ballpark Village development site
  Emerging mixed-use entertainment district (west)

DENSITY

- 3.25 residential units per acre
- 4.10 employees per acre

Stadium Station TOD Action Plan

OTHER PLANS & CURRENT PROJECTS

OTHER PLANS
- NORTHSIDE REGENERATION
- ST. LOUIS GATEWAY MALL MASTERPLAN
- RIVER LANDING
- CHOUTEAU'S LANDING
- DOWNTOWN STREETCAR

PROJECTS
- CITYARCHRIVER2015
- BALLPARK VILLAGE
- MERCANTILE EXCHANGE (MX) DISTRICT
- DRURY RENOVATION
- 8TH ST / OLIVE RENOVATIONS
- SLU LAW
- STREET IMPROVEMENTS

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LOOKING NORTHWEST

DOWNTOWN **PLANS & CURRENT PROJECTS**

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

OTHER PLANS

NORTHSIDE REGENERATION

- January 2009- $8 billion, 1,500 acre redevelopment plan
- Plan components:
  - General Analysis
  - New Development and Infrastructure Vision
  - Implementation Strategies
  - Economic Stimulus Projections
- July 2010- Circuit Court Judge Robert Dierker ruled the plans were too vague to qualify for TIF financing
- Late 2011- STL Board of Alderman approved the transfer of Bottle District site and TIF funds to NorthSide R. LLC
- April 2013- Missouri Supreme Court reverses TIF block
- Status- 75% of desired land acquired, stated dependency on extensive of Missouri Land Assemblage Tax Credit

ST. LOUIS GATEWAY MALL MASTER PLAN

- July 2009- Funded by Gateway Foundation
- Plan Components:

  Conceptual Framework
  - Structuring Elements, Circulation Proposal

  Detail Design Elements
  - Sustainable Strategies
  - Lighting, Materials, Style, Signage

  Implementation Strategies
  - Management, Funding
  - Maintenance, Staffing, Security
  - Programming

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

OTHER PLANS

RIVER LANDING

- Prepared by Greenberg Consultants and MVVA, Sponsored by City+Arch+River Foundation, GRG, SLDC
- Framework Plan components:
  - Parking garage proposal
  - Streetscape strategy
  - Transit and Access strategies
  - MLK Bridge Park proposal
  - Lighting, wayfinding strategies
  - Interim uses & Long-term redevelopment

CHOUTEAU'S LANDING

- 2008- Chivvis Development, 58 acre site
- Components:
  - General Site Analysis
  - Historic Fourth St. redevelopment vision
  - Chouteau's Landing Art Center (CLAC) vision
  - Streetscape Masterplan
- Last update: March 18, 2009
- Spring 2012: Powell Square building (proposed CLAC site) condemned
- Jan 2013: beginning of Powell Square building demolition

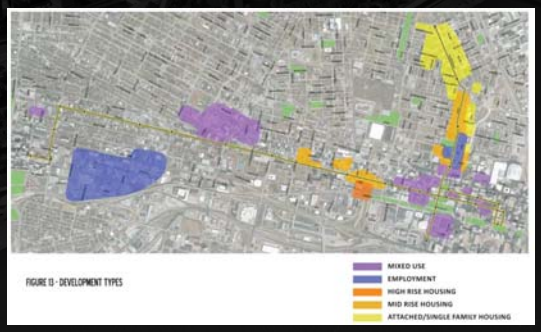
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

OTHER PLANS

DOWNTOWN STREETCAR

- The Partnership for Downtown St. Louis
- Feasibility Study (March 2013)
- Components:
  - Public Engagement, Ongoing Outreach
  - Market Analysis
  - Alignment
  - Traffic Impact Study
  - Environmental Impact Study
  - Ridership Forecast
  - Operations Plan, Costs
  - Development Opportunities
  - Streetscaping, Guideway, Stations, Vehicles
  - Operation and Maintenance Facility
  - Financial Plan
- Key Goals:
  - Support The Downtown Next 2020 Vision to improve Downtown's Accessibility
  - Conveniently connect jobs, residences, and major destinations
  - Catalyze economic development within corridors
  - Provide additional alternative transportation
  - Support Region's/City's Sustainability Initiatives
  - Promote an environment that will retain and attract new jobs and residents to the City



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

CURRENT PROJECTS

CITYARCHRIVER 2015

- International design competition (Dec 2009 - Sept 2010)
- Winning design: Michael Van Valkenburgh Assoc. team
  - Park Over the Highway (2013)
  - New entries, pathways. circulation
  - Expanded museum
  - Landscape improvements
  - New Riverfront
  - Kiener Plaza
  - Illinois Park
- Public-private partnership
  - $380 million project
  - >$325 million federal, local, private funds secured
  - Proposition P (April 2, 2013)
    - Portion of sales tax increase to provide $9.4 million a year

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

CURRENT PROJECTS

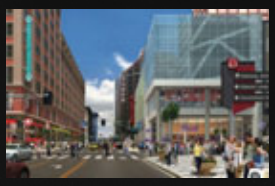
BALLPARK VILLAGE

- June 2012- St. Louis Cardinals & Cordish Companies
- Will be the first master planned and fully integrated sports-anchored development in the US
- Project Plan Components:
  Initial Development Project Phase Highlights
  - Retail & Entertainment
  - Infrastructure & Parking
  - Jobs & Visitation Estimates

  Concept Master Plan
  - Leasing Plan
  - Floor Plans, Cross Section of anchor Live! Space
  - Development Plan
  - Blight Analysis
  - Market Study, Economic Feasibility
  - Cost Benefit Analysis

MERCANTILE EXCHANGE (MX) DISTRICT

- Spinnaker St. Louis
- TOD Redevelopment focused around The Laurel building(Stix Baer and Fuller), MX Building (St. Louis Centre), and Railway Exchange Building
- National Blues Museum in progress
- MX Movies now open
- Collective, a boutique retail co-op features 46 vendors
- Streetscape Improvements



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

CURRENT PROJECTS

DRURY RENOVATION

- 6 parcel site at N 3rd St and Lucas Ave
- Currently surface parking
- No information given

8TH ST / OLIVE RENOVATIONS

- The Alexa or Chemical Building (17-story) at 777 Olive St.
- The Arcade Building (18-story) at 800-814 Olive St.

SLU LAW

- Building at 100 N Tucker Blvd (11 story)
- Joe and Loretta Scott Law Center:
  - 1,100 students, faculty, staff
  - Ground-floor auditorium
  - 3-story parking garage

STREET IMPROVEMENTS

- Washington Avenue East- PDSL, SLDC, HOK, Spinnaker
  - Between MX District and Arch grounds
  - To improve pedestrian experience, "Meander"
- 7th St-8th St Area

MULTI-MODAL TRANSPORTATION STUDY

NEW MISSISSIPPI RIVER BRIDGE

LOOKING SOUTHEAST

DOWNTOWN **PLANS & CURRENT PROJECTS**

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

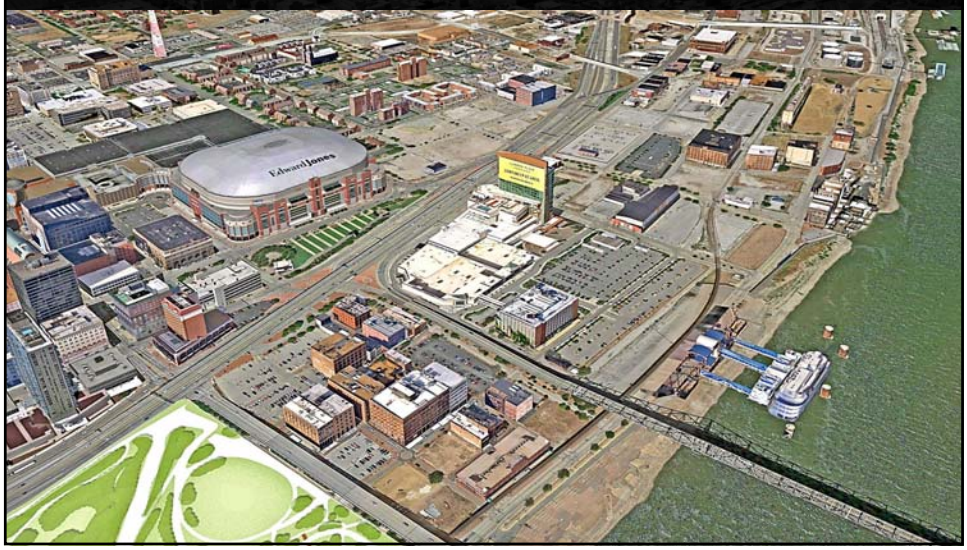
STATION AREA ANALYSIS & PLAN ALTERNATIVES

- ARCH-LACLEDE'S STATION
- STADIUM STATION

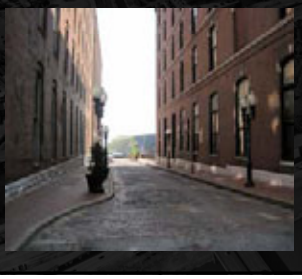
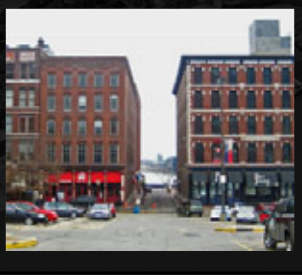
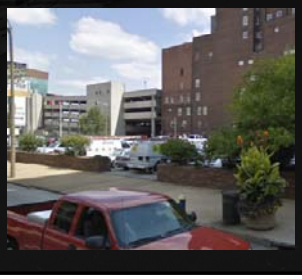
STATION AREA ANALYSIS
ARCH-LACLEDE'S STATION

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA ANALYSIS
Existing Conditions – NW



ARCH-LACLEDE'S STATION
EXISTING CONDITIONS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

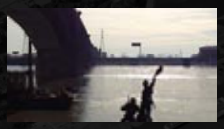
ARCH-LACLEDE'S STATION
TOD ACTION PLAN

TYPOLOGY CLASSIFICATION
- Downtown Typology

ECONOMIC ANALYSIS – 2010 - 2040
- 110 Additional Residential Units
- 345,102 Additional Commercial sq. ft.
  - Lodging
  - Dining
  - Entertainment
  - Employment

The ARCH-LACLEDE'S area is a primary regional center of economic, cultural, and entertainment activity. There is a dense mix of commercial, entertainment, tourist, and employment opportunities in the general vicinity of Laclede's Landing and the downtown area catering to the regional market. A range of transit modes, including rail and bus, also serve the station area.

The Arch-Laclede's area represents a major destination in the City of St Louis and will continue to serve as a Major Regional Destination for the foreseeable future.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

CURRENT RIDERSHIP

34,900 Monthly Boardings

- Average ridership for system
- 1,050 Weekday Daily Average
- 1,370 Weekend Daily Average

CURRENT DEVELOPMENT PATTERNS

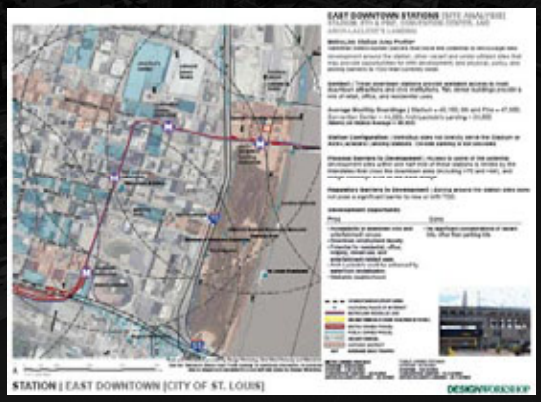
- Vibrant, historic mixed-used entertainment / tourist district
- Converted 19th century warehouses and commercial buildings with modern-day ground-floor retail, restaurants, bars, and entertainment uses
- Iconic waterfront
- Generally no residential or sizeable areas of office space, limiting its TOD potential

CURRENT DENSITIES

- Estimated Residential Density of 3.10 u/a
- Estimated Employment Density of 2.02 e/a

Average MetroLink Boarding Estimates - Arch-Laclede's Landing

		AVERAGE DAILY BOARDINGS	
	Total Monthly Boardings	Weekday	Weekend
MetroLink Station Average	36,500	1,360	830
Illinois Station Average	42,000	1,560	960
Arch-Laclede's MetroLink Station	34,900	1,050	1,370



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

CONNECTIVITY

- Separated from Downtown by I-70, but linked to I-55, I-64, I-44, (bi-state region)
- Eads and MLK Bridges
- Major access streets:
  Washington Ave (11,000 vehicle trips/day)
  North Broadway (10,000 trips/day)
- Significant difference in grade between train and surrounding land uses
- Zero bus routes directly serve the station (2 within walking distance)
- 79.5 mean Walk Score- Very walkable
- Crossing highway infrastructure and large parking lots can be challenging/dangerous
- Lack of designated bike facilities/passages
- Cobblestone can make walking/biking difficult

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

EXISTING ZONING AND ENTITLEMENT CONSIDERATIONS

- Jefferson Memorial (L) District
  - All uses allowed except: defined Heavy manufacturing and Industry
  - Building envelopes determined by a flexible "prism" w/ setback provisions
  - Maximum height = 571 ft.
  - Min. lot size: 100-250 sq. ft. / du
- Laclede's Landing Historic District
  - Some restrictions to maintain overall character
- Supports New or Infill TOD
  - No minimum parking requirements

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

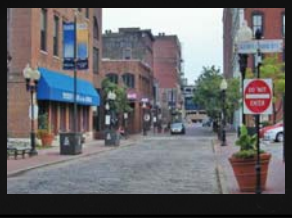
ACTION ITEMS

CITY OF ST. LOUIS

- Establish transit supportive zoning
  - 20 residential units per acre
  - 25 employees per acre
- Identify and develop the greenways components within Laclede's Landing
- prioritize public improvements such as streetscapes and open space amenities.
- Achieve Ped. Level of Service A or B
  - Traffic Calming measures
  - ADA accommodations
  - Road Diet

METRO

- Improve MetroBus service to A or B level of service
- Wayfinding & Signage are Critical due to elevated nature of the platform



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION TOD ACTION PLAN

OVERALL DEVELOPMENT STRATEGY

- Current surface lots represent key redevelopment parcels
- New and/or replacement parking facilities should be located in "wrap" buildings, the streets lined with retail, office, or other uses
  - (The current parking structure between the station and the Arch grounds divides the area with a visual & physical barrier)
  - Enhance retail viability via strolling

ARCH-LACLEDE'S STATION DEVELOPABLE LANDS ANALYSIS

	ACREAGE	SQUARE FOOTAGE
Total Developable Site Area	24	1,045,440
Less: Roads and Configuration at 20%	4.8	209,088
Less: Open Space and Drainage at 20%	4.8	209,088
Less: Surface Parking		0
Net Developable Area		627,264
Potential Developable SF at 0.25 FAR		156,816
Potential Developable SF at 0.5 FAR		313,632
Potential Developable SF at 1.0 FAR		627,264
Projected Commercial Market Demand		47,000
Projected Residential Market Demand (assuming average of 1,000 SF per unit)		171,000
Potential Real Estate Market Demand (2010 - 2040)		218,000

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA ANALYSIS
Existing Conditions – SE

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION – STATION AREA ANALYSIS

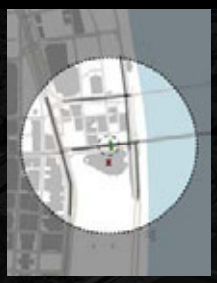
Intensity & Use Mix
- Intensity = Jobs + Residents: 26,374
- Use Mix = Jobs/Residents: 18.79

Urban Form & Quality
- Mean Block Size: 3 acres
- 4 Neighborhoods within ½ Mile of Station
- Access & Mobility:
  - 2 station entrances
  - Highway and bridge infrastructure are barriers
  - I-70 is challenging/dangerous to cross under
  - Parking lots and garages are not ped. friendly
  - Cobblestone can make walking/biking difficult

Connectivity
- 15 Bus Routes (12 within1/4 Mile; 0 in Laclede's Landing)
- Gateway Bike Master Plan
- St. Louis Riverfront Trail
- Bike St. Louis
- 79.5 Mean Walk Score- Very Walkable

Transit Function
- Station Orientation: Major Regional Destination
- Primarily a restaurant and entertainment district
- Lacks residential land uses and sizeable office spaces

Station Area


Barriers

Bike & Bus Routes

Station

Walk Score- Heatmap

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION - STATION AREA ANALYSIS

Station Type
- Station Organization:
  Above grade; center, double-sided platform

Development Opportunity
- Underutilized Land: 15.3 acres
- % of ¼ Miles Station Area: 6.1%
- Available Lots: 21
- Assessed Value of Underutilized Land: $6,236,800
- Assessed Value of Land in ¼ Mile Station Area: $135,941,230
- Desired Density for New Development:
  - 20 DU/acres, 25 Jobs/acre
  - Market-Driven FAR

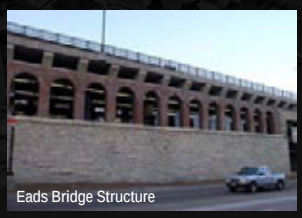
Potential Program
- Residential, office, lodging, mixed-use, entertainment

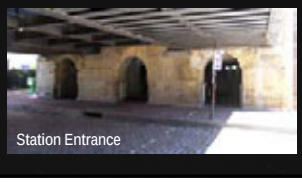
Spatial Type Classification
- Downtown

Vacant Lots

Zoning and Land Use

Station Platform


Eads Bridge Structure


Station Entrance

ARCH-LACLEDE'S STATION - STATION AREA ANALYSIS

- Residential and employment DENSITIES ARE WELL BELOW THE IDEAL RESIDENTIAL AND COMMERICAL DENSITIES for transit stations, but the station is primarily used for ENTERTAINMENT AND TOURISM
- The true PEDESTRIAN SHED IS HIGHLY LIMITED BY TOPOGRAPHY AND I-70.
- Connection of the ARCH GROUNDS supports connection between Laclede's Landing, the station, and the Arch.
- The station realistically SERVES 2 NEIGHBORHOODS AND THE ARCH GROUNDS
- Laclede's Landing HISTORIC DISTRICT HAS SMALL BLOCKS AND UNIQUE ARCHITECTURE, supports walkability and transit
- Surface and garage PARKING INTERRUPT OTHERWISE PEDESTRIAN FRIENDLY STREETS AND STREET CONNECTIVITY
- Station is physically and visibly SEPARATED FROM ADJACENT DISTRICTS.
- BIKE ROUTES ARE ACCESSIBLE, but topography poses challenges
- GREAT OPPORTUNITY for increased density and use mix EAST OF I-70.
- HIGH LAND VALUES encourage taller and more dense development

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
ARCH-LACLEDE'S STATION

1: REVITALIZED HISTORIC LACLEDE'S LANDING

2: RIVERFRONT MIXED-USE DISTRICT DISTRICT

3: RIVERFRONT REGENERATION

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.45-$1.60 per square foot
- Retail = $25.00 per square foot
- Office = $20.00 per square foot
- Parking = $1,500 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

DEVELOPMENT PROGRAM

- Residential 175 Units (1,000 S.F./Unit)
- Retail 50,000 S.F.
- Office 205,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of 70 – 600 to 685 spaces
  - North of MLK – 550 to 628 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

INFRASTRUCTURE IMPROVEMENTS

- Laclede's Landing Streetscape Projects (associated with CityArchRiver 2015)
- Enhanced Pedestrian & Streetscape improvements on Convention Plaza
- Streetscape Improvements on 1st Street, 2nd Street, Laclede's Landing Boulevard, Morgan Street, and Lucas Avenue
- New Public Park | Green Space under the MLK Bridge & spaces along the Riverfront
- Improvements to the Arch Grounds from the CityArchRiver 2015)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

KEY PROJECTS

- Revitalize the Laclede's Landing Historic District with new infill development & Located parking structures outside the district (to the north and west)
- Infill vacant | opportunity sites within the Laclede's Landing Historic District
- Connect the plaza entrance of the America's Center with Morgan Street
- Drury Hotel Expansion along North 3rd Street (with internal parking garage) & Redevelopment of Metro Building
- Add two (2) parking garages; One north of MLK & one west of I-70.

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District – NW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
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- Retail 50,000 S.F.
- Office 205,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of 70 – 600 to 685 spaces
  - North of MLK – 550 to 628 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 3.14
- Average Residential Density of 20.7 u/a
- Average 60 Emp/Acre (at 500 sf/emp)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

Laclede's Landing/Arch Station

Revitalized Laclede's Landing Historic District

- Residential = 175 units
- Retail = 50,000 sf
- Office = 205,000 sf renovation
- Hotel = 200 rooms
- Structured Parking = 1,313 spaces

Preliminary Financial Outcome

- Total Acreage = 8.42
- After Tax IRR without subsidies = 17.21%
- Land Residual Value @ 15% = $27.5M
- Land Residual Value @ 20% = $36.7
- Financial Gap = $8.7M

DEVELOPMENT STRATEGIES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

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 & Quality
  + Physical Features
  + Urban Design Quality
  - o Individual Perception & Experience
- o Connectivity
- o Parking Strategy
- o Other Highly Desirable Features

Mixed-Use
Commercial
Office
Open Space
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Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District – SE

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

ARCH-LACLEDE'S LANDING

2: Riverfront Mixed-Use District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

DEVELOPMENT PROGRAM

- Residential 300 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office 255,000 S.F. (Inc. Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of Lumiere – 1000 to 1142 spaces
  - North of Carr – 500 to 571 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

INFRASTRUCTURE IMPROVEMENTS

- Laclede's Landing Streetscape Projects (associated with CityArchRiver 2015)
- Pedestrian & Streetscape improvements on Convention Plaza & Carr Street connecting underneath Interstate 70
- Streetscape Improvements on 1st Street & 2nd Street (in Laclede's Landing)
- New Public Park | Green Spaces under the MLK Bridge, Adjacent to Lumiere Place & along the waterfront (with trail connections)
- Improvements to the Arch Grounds from the CityArchRiver 2015)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

KEY PROJECTS

- Unite the Laclede's Landing Historic District and Lumiere Place to create a Riverfront Mixed-Use District
- Infill vacant | opportunity sites & Surface Parking Lots within the Laclede's Landing Historic District & Lumiere Place
- Focus on 1st & 2nd Streets as mixed-use streets throughout riverfront district
- Drury Hotel Expansion along North 3rd Street (with internal parking garage) & Redevelopment of Metro Building
- Add two (3) parking garages; One north of Carr; one east of Lumiere; and one west of Interstate 70

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District – NW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
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  - North of Carr – 500 to 571 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 2.98
- Average Residential Density of 29.7 u/a
- Average 84 Emp/Acre (at 500 sf/emp)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

Laclede's Landing/Arch Station

Riverfront Mixed-Use District

- Residential = 300 units
- Retail = 250,000 sf
- Office = 255,000 sf renovation
- Hotel = 200 rooms
- Structured Parking = 1,713 spaces

Preliminary Financial Outcome

- Total Acreage = 10.74
- After Tax IRR without subsidies = 8.61%
- Land Residual Value @ 15% = $39.3M
- Land Residual Value @ 20% = $52.4
- Financial Gap = $33.9M

DEVELOPMENT STRATEGIES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

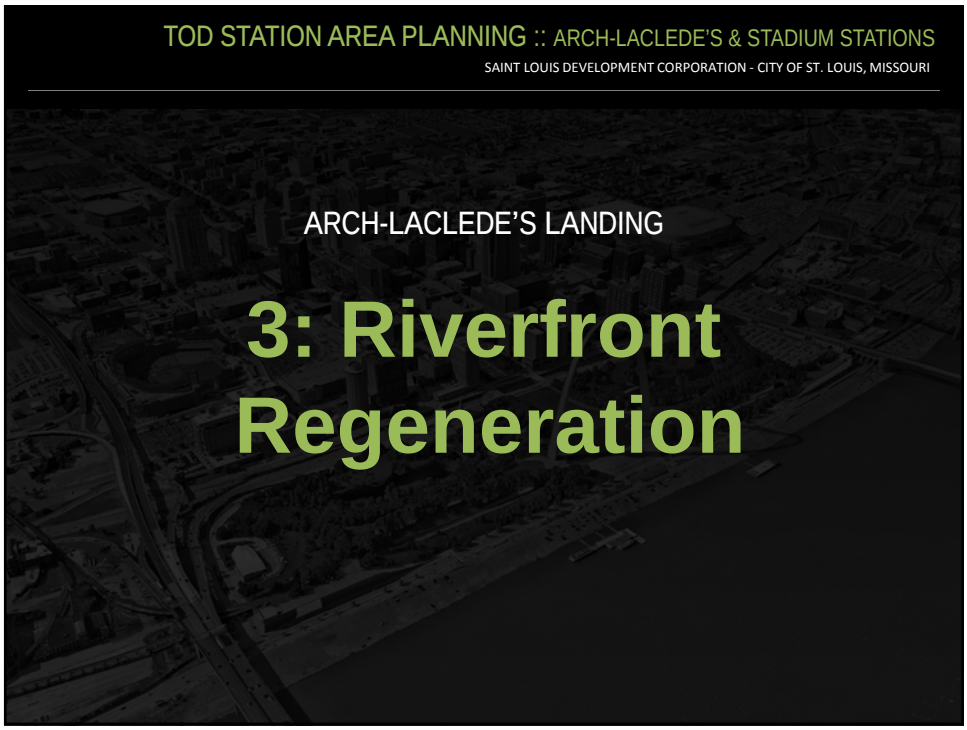
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

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 & Quality
  + Physical Features
  + Urban Design Quality
  + Individual Perception & Experience
o Connectivity
+ Parking Strategy
+ Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District – SE
Mixed-Use
Commercial
Office
Parking
Hotel
Open Space
Edward Jones


TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
ARCH-LACLEDE'S LANDING
3: Riverfront Regeneration

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

DEVELOPMENT PROGRAM

- **Residential** 800 Units (1,000 S.F./Unit)
- **Retail** 375,000-400,000 S.F.
- **Office** 405,000 S.F. (Renovation)
- **Hotels** (1) Total
- **Structured Parking** (3)
  - Carr (east) – 1082 to 1237 spaces
  - Carr (west) – 847 to 968 spaces
  - West of 70 – 600 to 685 spaces
- **Park & Open Space** Yes
- **Redevelopment of Existing** Yes

Mixed-Use | Parking | Prop. Downtown Streetcar
Commercial | Hotel | Interstate | Highway
Office | Street Improvements | N / S Metrolink Alignment
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

INFRASTRUCTURE IMPROVEMENTS

- Interstate 70 converted to an AT-GRADE boulevard from Washington north.
- Biddle & Carr Street Connection Projects & streetscape enhancements throughout
- Enhanced Pedestrian & Streetscape improvements on Convention Plaza, Broadway Street & 7th Street
- Streetscape Improvements on 1st Street, 2nd Street, Laclede's Landing Boulevard, Morgan Street, and Lucas Avenue
- New Public Park | Green Spaces under the MLK Bridge & Adjacent to Lumiere & Hotel which connect to the & lots of recreation opportunities.
- Improvements to the Arch Grounds from the CityArchRiver 2015)

Mixed-Use | Parking | Prop. Downtown Streetcar
Commercial | Hotel | Interstate | Highway
Office | Street Improvements | N / S Metrolink Alignment
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

KEY PROJECTS

- Unite the Laclede's Landing Historic District, Lumiere Place, and the Bottle District to establish an interconnected riverfront district Infill vacant | opportunity sites & Surface Parking Lots within the Laclede's Landing Historic District & Lumiere Place
- Focus on 1st, 2nd & Biddle Streets and Convention Plaza
- New Mixed-Use Office & Residential Neighborhood at the Bottle District
- Drury Hotel Expansion along North 3rd Street (with internal parking garage)
- Add two (3) parking garages; two north of Carr & west of Interstate 70
- Future Development opportunities

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration – NW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

DEVELOPMENT PROGRAM

- Residential 800 Units (1,000 S.F./Unit)
- Retail 375,000-400,000 S.F.
- Office 405,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - Carr (east) – 1082 to 1237 spaces
  - Carr (west) – 847 to 968 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 3.15
- Average Residential Density of 44.3 u/a
- Average 89 Emp/Acre (at 500 sf/emp)

Laclede's Landing/Arch Station

Riverfront Regeneration

- Residential = 800 units
- Retail = 400,000 sf
- Office = 405,000 sf renovation
- Hotel = 200 rooms
- Structured Parking = 2,205 spaces

Preliminary Financial Outcome

- Total Acreage = 18.04
- After Tax IRR without subsidies = 4.72%
- Land Residual Value @ 15% = $65.3M
- Land Residual Value @ 20% = $87.1
- Financial Gap = $67.3M

DEVELOPMENT STRATEGIES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

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 & Quality
  + Physical Features
  + Urban Design Quality
  + Individual Perception & Experience
+ Connectivity
+ Parking Strategy
+ Other Highly Desirable Features

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration – SE

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

- Residential 175 Units (1,000 S.F./Unit)
- Retail 50,000 S.F.
- Office 205,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of 70 – 600 to 685 spaces
  - North of MLK – 550 to 628 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

2: Riverfront Mixed-Use District

- Residential 300 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office 255,000 S.F. (Inc. Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - West of Lumiere – 1000 to 1142 spaces
  - North of Carr – 500 to 571 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

3: Riverfront Regeneration

- Residential 800 Units (1,000 S.F./Unit)
- Retail 375,000-400,000 S.F.
- Office 405,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - Carr (east) – 1082 to 1237 spaces
  - Carr (west) – 847 to 968 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
o Connectivity
o Parking Strategy
o **Other Highly Desirable Features**

2: Riverfront Mixed-Use District

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
+ Connectivity
+ Parking Strategy
+ **Other Highly Desirable Features**

3: Riverfront Regeneration

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
+ Connectivity
+ Parking Strategy
+ **Other Highly Desirable Features**

Conclusions

- Some public incentive will be necessary to catalyze each station area.
- However, certain public financing tools may not be available for each parcel within a station area (TIF, 353, etc.).
- A targeted strategy to individual projects is needed.

STATION AREA ANALYSIS & PLAN ALTERNATIVES

- ARCH-LACLEDE'S STATION
- STADIUM STATION

STATION AREA ANALYSIS
STADIUM STATION

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA ANALYSIS
Existing Conditions – NE

STADIUM STATION

EXISTING CONDITIONS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

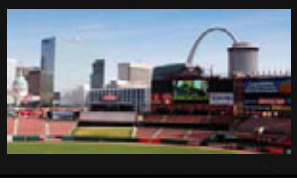
STADIUM STATION TOD ACTION PLAN

OVERVIEW AND CONTEXT

- Serves south Downtown at Busch Stadium
- Close to I-64, the Gateway Mall, Riverfront
- Surrounding uses:
  Parking garages & surface lots,
  Riverfront towers of retail/hotel/office (north)
- New developments:
  Ballpark Village development site
  Emerging mixed-use entertainment district (west)

DENSITY

- 3.25 residential units per acre
- 4.10 employees per acre



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

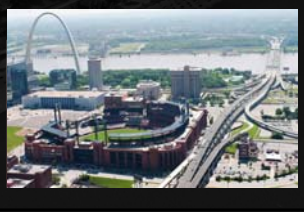
STADIUM STATION TOD ACTION PLAN

TYPOLOGY CLASSIFICATION
- Campus | Special Event | Special Purpose Station Type

ECONOMIC ANALYSIS – 2010 - 2040
- 110 Additional Residential units
- 345,102 Additional Commercial sq. ft.
  - Office
  - Entertainment

The STADIUM area is focused around a major venue, Busch Stadium. Any new developments in the station area will integrate planning for the stadium's use and consider how to leverage the stadium activity to drive retail, entertainment, and other land uses in the station area's vicinity.

The Stadium area represents a major destination in the City of St Louis and will continue to serve as a Major Regional Destination for the foreseeable future.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

CURRENT RIDERSHIP

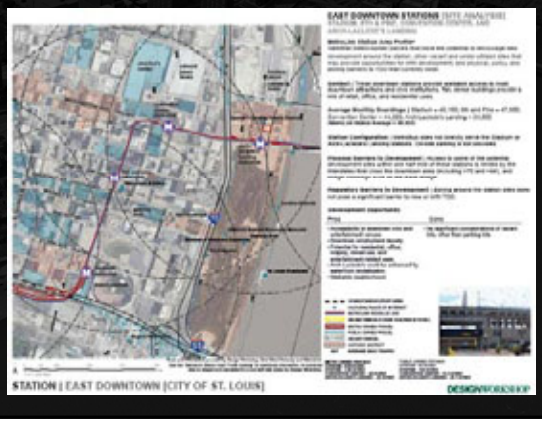
40,100 Monthly Boardings
- Above average ridership for MetroLink
- 1,290 Weekday Daily Average
- 1,380 Weekend Daily Average

CURRENT DEVELOPMENT PATTERNS
- Established character from historic civic buildings and city planning, towers of 20-40 stories downtown skyline, and surface/structured parking
- Focused on Busch Stadium and tourism, daily office and employment opportunities
- Parking areas separate the stadium Vacant land awaits the planned Ballpark Village mixed-use entertainment district

CURRENT DENSITIES
- Estimated Residential Density of 3.25 u/a
- Estimated Employment Density of 4.10 e/a

Average MetroLink Boarding Estimates - Stadium Station

		AVERAGE DAILY BOARDINGS	
	Total Monthly Boardings	Weekday	Weekend
MetroLink Station Average	36,500	1,360	830
Missouri Station Average	42,000	1,560	960
Stadium Metrolink Station	40,100	1,290	1,380



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

CONNECTIVITY

- Connected to:
  I-64 (90,000 vehicle trips/day)
  7th and 8th Streets (6,000 trips/day)
- Zero bus routes directly serve the station (13 within walking distance)
- 86 walk score- Very walkable
- Crossing highway infrastructure and large parking lots can be challenging/dangerous
- Lack of designated bike facilities/passages

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

EXISTING ZONING AND ENTITLEMENT CONSIDERATIONS

- North of I-64: Central Business District (I)
  - All uses allowed except: defined Heavy manufacturing and Industry
  - Building envelopes determined by a flexible "prism" w/ setback provisions
  - Supports new/infill TOD
- South of I-64:
  - Industrial District (J)
    - No mixed-use or residential
  - Unrestricted District (K)
    - No mixed-use or residential
  - Two-family Residential District (B)
    - Single and 2-family homes only
  - Supports industrial and business-focused TOD

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

ACTION ITEMS
CITY OF ST. LOUIS

- Establish transit supportive zoning
  - 20 residential units per acre
  - 25 employees per acres
- Implement bike routes and strategies from regional Bike Plan
- Prioritize Public Improvements in the area
- Achieve Pedestrian Level of Service A or B
  - Traffic Calming measures
  - ADA accommodations
  - Road Diet
- Sales Tax Reimbursement Agreement

METRO
- Improve MetroBus service to A or B level of service
- Include way-finding and signage

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION TOD ACTION PLAN

OVERALL DEVELOPMENT STRATEGY
- Current surface lots represent key redevelopment parcels
- Expand the energy created by the stadium to the south and south of Highway 40, an area containing several blocks of potential urban development
- Connect this area to the station and area north of the interstate
- Create a distinct, walkable, and compact sub-area that could include a mixture of residential, office, and entertainment uses

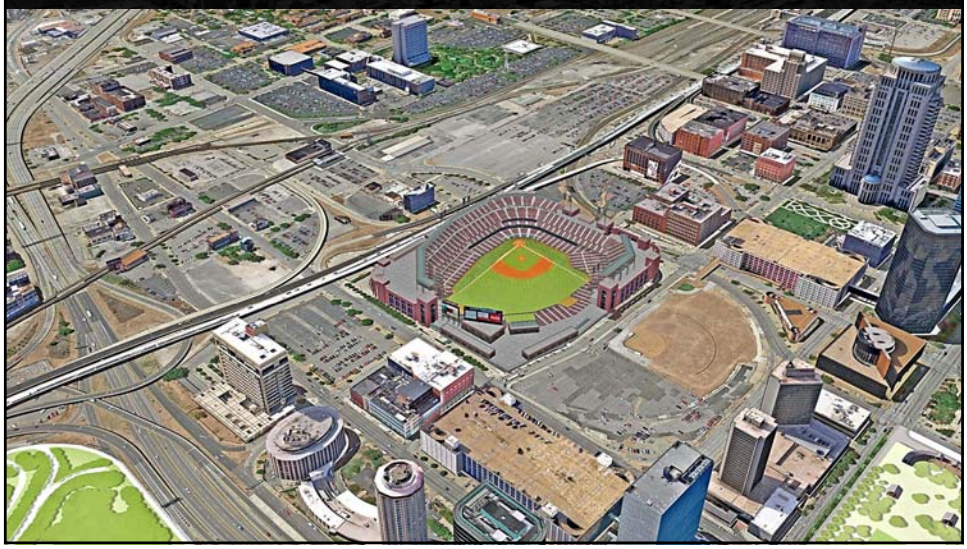
STADIUM STATION - DEVELOPABLE LANDS ANALYSIS

	ACREAGE	SQUARE FOOTAGE
Total Developable Site Area	44	1,916,640
Less: Roads and Configuration at 20%	8.8	383,328
Less: Open Space and Drainage at 20%	8.8	383,328
Less: Surface Parking		0
Net Developable Area		1,149,984
Potential Developable SF at 0.25 FAR		287,496
Potential Developable SF at 0.5 FAR		574,992
Potential Developable SF at 1.0 FAR		1,149,984
Projected Commercial Market Demand		345,000
Projected Residential Market Demand (assuming average of 1,000 SF per unit)		110,000
Potential Real Estate Market Demand (2010 - 2040)		455,000

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA ANALYSIS
Existing Conditions – SW



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION - STATION AREA ANALYSIS

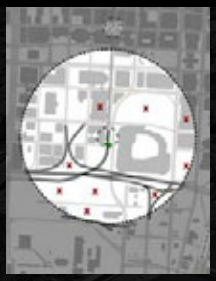
Intensity & Use Mix
- Intensity = Jobs + Residents: 34,426
- Use Mix = Jobs/Residents: 7.1

Urban Form & Quality
- Mean Block Size: 3.8 acres
- 3 Neighborhoods within ½ Mile of Station
- Access & Mobility:
  - 2 station entrances
  - Highway infrastructures are barriers
  - I-64 is challenging/dangerous to cross under
  - Parking lots and garages are not ped. friendly

Connectivity
- 18 Bus Routes (25 stops within ¼ mile including Civic Center MetroBus Center)
- Gateway Bike Master Plan
- Bike St. Louis
- Downtown Bicycle Station
- 82 Mean Walk Score- Very Walkable

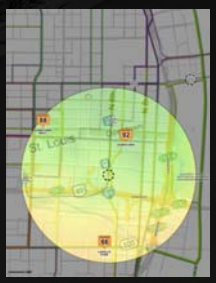
Transit Function
- Station Orientation: Major Regional Destination
- Lacks residential land uses and sizeable office spaces

Station Area



Barriers

Bike & Bus Routes



Walk Score- Heatmap

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION - STATION AREA ANALYSIS

Station Type

- Station Organization:
  Below grade; single-sided, side-by-side platforms

Development Opportunity

- Underutilized Land: 21.5 acres
- % of ¼ Miles Station Area: 8.6%
- Available Lots: 13
- Assessed Value of Underutilized Land: $9,375,871
- Assessed Value of Land in ¼ Mile Station Area: $211,361,611
- Desired Density for New Development:
  - 20 DU/acres, 25 Jobs/acre
  - Market-Driven FAR

Potential Program

- Residential, office, lodging, mixed-use, entertainment

Spatial Type Classification

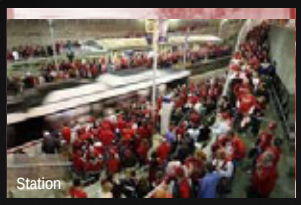
- Special District

Vacant Lots

Zoning and Land Use

Station

Station Detail



Station

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION - STATION AREA ANALYSIS

- Residential and employment DENSITIES ARE WELL BELOW THE IDEAL DENSITIES for transit stations
- ZONING south of I-64 doesn't support residential and mixed-use development.
- The station mainly serves as an ENTERTAINMENT DESTINATION with higher than average weekend boarding's.
- I-64 IS NOT A PEDESTRIAN FRIENDLY TRANSITION between Busch Stadium and land uses to the south.
- 3 surrounding DISTRICTS WITH DISTINCT CHARACTERISTICS
- Cupples Station HISTORIC DISTRICT HAS QUALITY LEGIBILITY, COHERENCE, AND CHARACTER
- Surface and garage PARKING DOES NOT UTILIZE COMPACT BLOCK STRUCTURE OR SUPPORT WALKABILITY.
- Immediate station area LACKS HUMAN SCALE AND PEDESTRIAN FRIENDLY GROUND FLOORS
- BUS ROUTES DO NOT SERVE THE STATION, but are walkable within ¾ mile.
- GREAT OPPORTUNITY for increased density and use mix because HIGH LAND VALUES AND ADJACENT CBD typologies support high density urban building form and transit ridership.

STATION AREA PLAN ALTERNATIVES
STADIUM STATION

1: ENHANCED STADIUM STATION CROSSING AREA

2: BUSCH STADIUM MIXED-USE DISTRICT

3: BUSCH VILLAGE SOUTH DISTRICT

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.45-$1.60 per square foot
- Retail = $25.00 per square foot
- Office = $20.00 per square foot
- Parking = $1,500 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

STADIUM STATION

1: Enhanced Stadium Station Crossing Area

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area

DEVELOPMENT PROGRAM

- Residential 150 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office NONE
- Hotels (1) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Enhanced Stadium Station Crossing Area

INFRASTRUCTURE IMPROVEMENTS

- Streetscape improvements along both Clark Avenue & 8th Street (including conversion of 8th Street to two-way traffic to Market Street.
- Close Stadium Plaza between Walnut & Clark Streets
- New Plaza area along west side of existing Busch Stadium
- New Plaza as part of Ballpark Village
- New Green Space | Open Space south of Busch Stadium (adjacent to existing entertainment venues)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Enhanced Stadium Station Crossing Area

- Focus improvements & enhancements around the existing Metrolink Station and along 8th Street & Clark Street
- New developments as part of Ballpark Village (fronting onto 8th Street & Clark Street)
- New Development across (west) from Busch Stadium (above existing Metrolink Line)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area – NE

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area

DEVELOPMENT PROGRAM

- Residential 150 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office NONE
- Hotels (1) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 1.38
- Average Residential Density of 12.0 u/a
- Average 40 Emp/Acre (at 500 sf/emp)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

Stadium Station

Enhanced Stadium Station Crossing Area

- Residential = 150 units
- Retail = 250,000 sf
- Office = 0 sf
- Hotel = 200 rooms
- Structured Parking = 0 spaces

Preliminary Financial Outcome

- Total Acreage = 12.5
- After Tax IRR without subsidies = 11.8%
- Land Residual Value @ 15% = $21.9M
- Land Residual Value @ 20% = $29.2M
- Financial Gap = $25.7M

DEVELOPMENT STRATEGIES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area

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 & Quality
  + Physical Features
  + Urban Design Quality
  o Individual Perception & Experience
o Connectivity
o Parking Strategy
o Other Highly Desirable Features

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area – SW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION

2: Busch Stadium Mixed-Use District

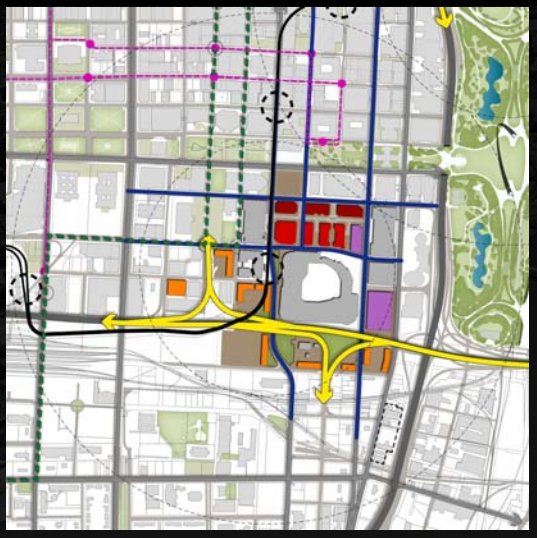
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium
Mixed-Use District

DEVELOPMENT PROGRAM

- Residential 300 Units (1,000 S.F./Unit)
- Retail 350,000 S.F.
- Office 630,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes



Mixed-Use
Commercial
Office
Open Space
Parking
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Street Improvements
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N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium
Mixed-Use District

INFRASTRUCTURE IMPROVEMENTS

- Reconfiguration & improvement of the Interstate 64 ramps (through Cupples; including conversion of 10th Street to two-way to Market Street)
- Streetscape improvements along both Clark Avenue & 8th Street (including conversion of 8th Street to two-way traffic to Market Street.
- Close Stadium Plaza between Walnut & Clark Streets; and reconnect 7th Street into Ballpark Village
- New Plaza area along west side of existing Busch Stadium
- New Green Space | Open Space south of Busch Stadium (adjacent to existing & new entertainment venues and mixed-use developments)

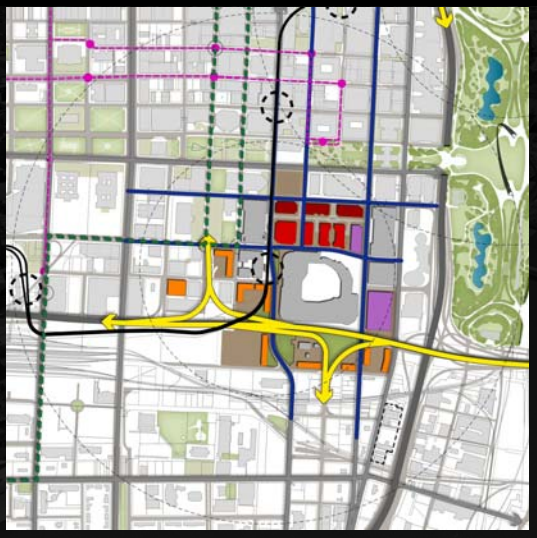
Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium Mixed-Use District

- Focus improvements & enhancements on the existing Metrolink Station & around the perimeter of Busch Stadium, establishing a Stadium District
- Full Development of Ballpark Village (fronting onto 8th Street, Clark Street & Broadway Street)
- Infill Development in Cupples Station Historic District & New sites established by infrastructure reconfiguration
- New Development across (west) from Busch Stadium (above existing Metrolink Line)
- New Mixed-Use Developments south of Busch Stadium
- Renovation of the General American Life Insurance Building



Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium Mixed-Use District – NE

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

2: Busch Stadium
Mixed-Use District

DEVELOPMENT PROGRAM

- Residential 300 Units (1,000 S.F./Unit)
- Retail 350,000 S.F.
- Office 630,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 2.27
- Average Residential Density of 17.1 u/a
- Average 112 Emp/Acre (at 500 sf/emp)

Stadium Station

Busch Entertainment District

- Residential = 300 units
- Retail = 350,000 sf
- Office = 630,000 sf
- Hotel = 400 rooms
- Structured Parking = 0 spaces

Preliminary Financial Outcome

- Total Acreage = 17.5
- After Tax IRR without subsidies = 9.6%
- Land Residual Value @ 15% = $59.3M
- Land Residual Value @ 20% = $79.0M
- Financial Gap = $38.1M

DEVELOPMENT STRATEGIES

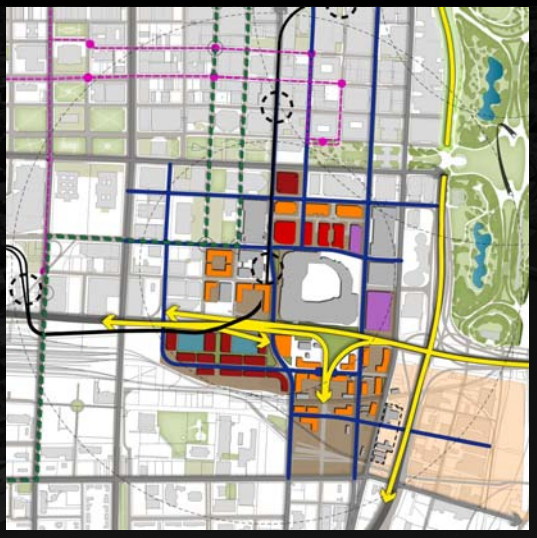
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium Mixed-Use District

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 & Quality
  + Physical Features
  + Urban Design Quality
  + Individual Perception & Experience
+ Connectivity
+ Parking Strategy
+ Other Highly Desirable Features



Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Busch Stadium Mixed-Use District – SW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

STADIUM STATION

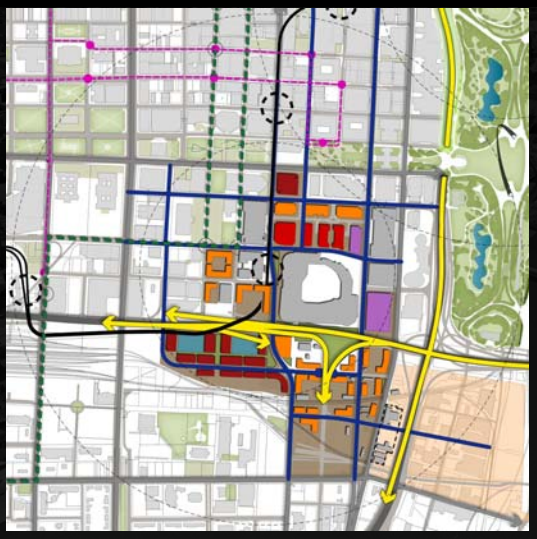
3: Busch Village South District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District

DEVELOPMENT PROGRAM

- Residential 800 Units (1,000 S.F./Unit)
- Retail 400,000 S.F.
- Office 830,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking (2)
  - South 40 (east) – 722 to 825 spaces
  - South 40 (west) – 869 to 993 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes



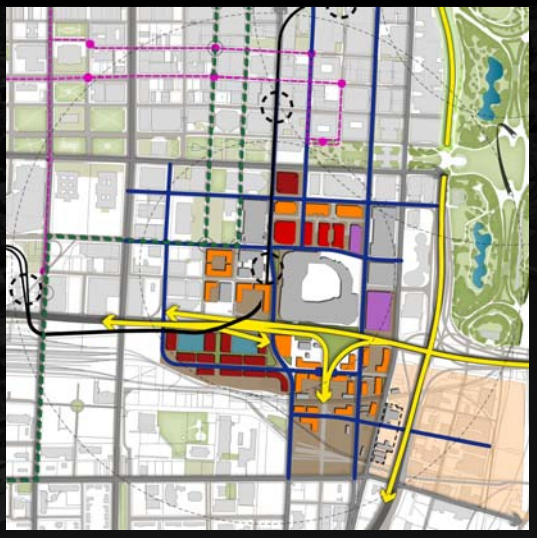
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District

INFRASTRUCTURE IMPROVEMENTS

- Remove & Reconfigure the Interstate 64 ramps (from Cupples & through Chouteau)
- Establish Cerra Street Tunnel under ramps
- Streetscape improvements along Clark Avenue, 11th Street, 8th Street, Walnut Street, Broadway & 4th S (inc. conversion of 8th Street to two-way traffic to Market Street)
- Connect Cerra Street to 11th Street
- Close Stadium Plaza between Walnut & Clark Streets; and reconnect 7th Street into Ballpark Village
- Re-Align Gratiot Street into Chouteau's Landing
- Improvements on Walnut Street (between City Hall & Arch Grounds)
- New Plaza area | Open Space along west side of existing Busch Stadium & adjacent to new mixed-use developments)



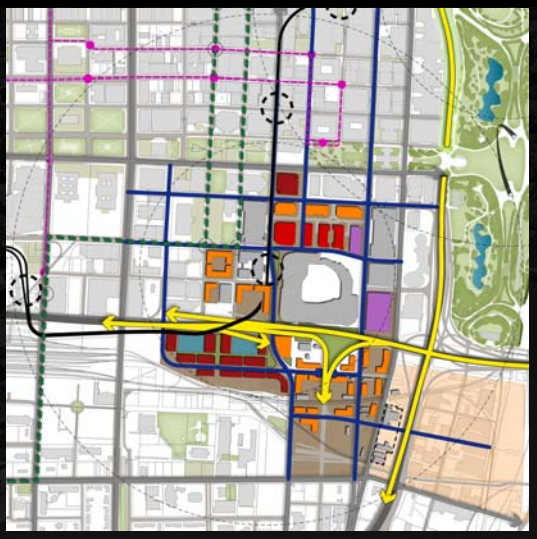
Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District

- Focus on establishing a Busch Village South District (south of 40) while improving & enhancing the existing Metrolink Station and perimeter of Busch Stadium
- Full Development of Ballpark Village (fronting onto 8th Street, Clark Street & Broadway Street)
- Establishment of New Mixed-Use Entertainment Area south of Busch Stadium
- Establishment of South 40 Office | Business Campus Area (along the new Cerra Street)
- Infill Development in Cupples Station Historic District & New sites established by infrastructure reconfiguration
- New Development across (west) from Busch Stadium (above existing Metrolink Line)
- New Developments south of Busch
- Renovation of the General American Life Insurance Building



Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District – NE

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District

DEVELOPMENT PROGRAM

- Residential 800 Units (1,000 S.F./Unit)
- Retail 400,000 S.F.
- Office 830,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking (2)
  - South 40 (east) – 722 to 825 spaces
  - South 40 (west) – 869 to 993 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

NEW DEVELOPMENT ESTIMATES

- Average FAR of 1.98
- Average Residential Density of 40.0 u/a
- Average 123 Emp/Acre (at 500 sf/emp)

Mixed-Use
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

Stadium Station

Alternative 3

- Residential = 800units
- Retail = 400,000 sf
- Office = 830,000 sf
- Hotel = 400 rooms
- Structured Parking = 1,818 spaces

Preliminary Financial Outcome

- Total Acreage = 20.0
- After Tax IRR without subsidies = 6.9%
- Land Residual Value @ 15% = $88.5M
- Land Residual Value @ 20% = $117.9M
- Financial Gap = $56.0M

DEVELOPMENT STRATEGIES

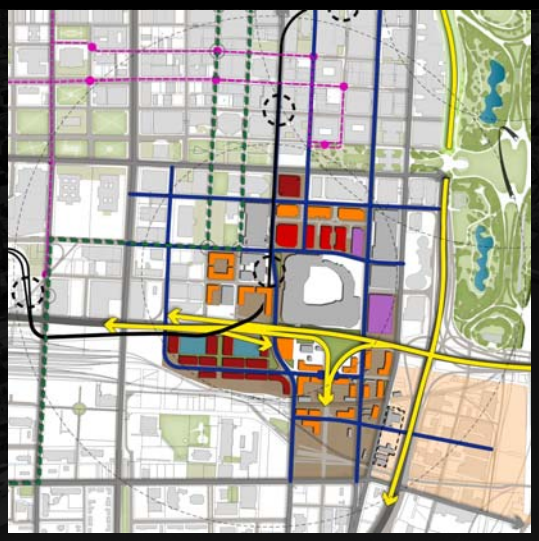
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District

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 & Quality
  + Physical Features
  + Urban Design Quality
  + Individual Perception & Experience
+ Connectivity
+ Parking Strategy
+ Other Highly Desirable Features



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Busch Village South District – SW

Mixed-Use
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- Residential 150 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office NONE
- Hotels (1) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

2: Busch Stadium Mixed-Use District

- Residential 300 Units (1,000 S.F./Unit)
- Retail 350,000 S.F.
- Office 630,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

3: Busch Village South District

- Residential 800 Units (1,000 S.F./Unit)
- Retail 400,000 S.F.
- Office 830,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking (2)
  - South 40 (east) – 722 to 825 spaces
  - South 40 (west) – 869 to 993 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- o Connectivity
- o Parking Strategy
- o Other Highly Desirable Features

2: Busch Stadium Mixed-Use District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

3: Busch Village South District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

Conclusions

- Some public incentive will be necessary to catalyze each station area.
- However, certain public financing tools may not be available for each parcel within a station area (TIF, 353, etc.).
- A targeted strategy to individual projects is needed.

DEVELOPMENT STRATEGIES

WORK-SESSION

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- Residential 150 Units (1,000 S.F./Unit)
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- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

2: Busch Stadium Mixed-Use District

- Residential 300 Units (1,000 S.F./Unit)
- Retail 350,000 S.F.
- Office 630,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking NONE
- Park & Open Space Yes
- Redevelopment of Existing Yes

3: Busch Village South District

- Residential 800 Units (1,000 S.F./Unit)
- Retail 400,000 S.F.
- Office 830,000 S.F. (Inc. Renovation)
- Hotels (2) Total
- Structured Parking (2)
  - South 40 (east) – 722 to 825 spaces
  - South 40 (west) – 869 to 993 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- o Connectivity
- o Parking Strategy
- o Other Highly Desirable Features

2: Busch Stadium Mixed-Use District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

3: Busch Village South District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

- Residential 175 Units (1,000 S.F./Unit)
- Retail 50,000 S.F.
- Office 205,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of 70 – 600 to 685 spaces
  - North of MLK – 550 to 628 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

2: Riverfront Mixed-Use District

- Residential 300 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office 255,000 S.F. (Inc. Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - West of Lumiere – 1000 to 1142 spaces
  - North of Carr – 500 to 571 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

3: Riverfront Regeneration

- Residential 800 Units (1,000 S.F./Unit)
- Retail 375,000-400,000 S.F.
- Office 405,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - Carr (east) – 1082 to 1237 spaces
  - Carr (west) – 847 to 968 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- o Connectivity
- o Parking Strategy
- o **Other Highly Desirable Features**

2: Riverfront Mixed-Use District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + **Other Highly Desirable Features**

3: Riverfront Regeneration

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + **Other Highly Desirable Features**

TAC Meeting 2 Presentation: June 6, 2013

TOD STATION AREA PLANNING
ARCH-LACLEDE'S STATION
& STADIUM STATION

TECHNICAL ADVISORY COMMITTEE MEETING 2

SAINT LOUIS DEVELOPMENT CORPORATION

THE CITY OF SAINT LOUIS

JUNE 6, 2013

CONSULTANTS

H3 Studio :: Development Strategies :: Bernardin, Lochmueller & Associates :: Vector Communications :: M3 Engineering Group

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TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

AGENDA

- *PURPOSE, SCOPE & SCHEDULE*
- *ARCH / LACLEDE'S STATION*
  - *WORK TO DATE*
  - *PREFERRED ALTERNATIVES*
- *STADIUM STATION*
  - *WORK TO DATE*
  - *PREFERRED ALTERNATIVES*

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

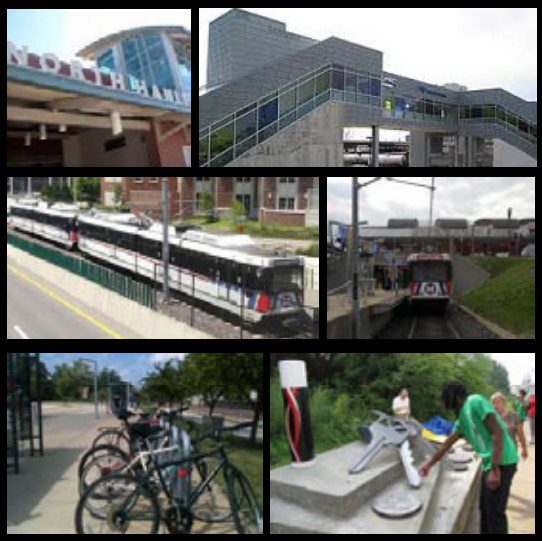
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PURPOSE OF THE STUDY

The purpose of this study is to assist the City of St. Louis, its neighborhoods, and developers 'create a vision and roadmap for how to encourage TOD in the St Louis region.' and will include the 'development of Station Area Plan alternatives/options, community outreach, economic analysis, and refinement and finalization of the Station Area Plans' for the two existing station complex's and one new.

1. Downtown Arch-Laclede's Landing Station and the Stadium Station
2. Forest Park-DeBaliviere/Delmar Stations
3. Two Stations on the N/S Alignment

Well-executed TOD will allow our region to improve mobility, create sustainable and livable communities and improve transportation options for the future.



The goal for these plans is to immediately leverage development along the route.

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

SCOPE OF WORK

Arch-Laclede's & Stadium Stations

- A.1 Technical Advisory Committee Formation
- A.2 Station Area Plan Alternatives
- A.3 Community Outreach
- A.4 Economic Analysis of Station Area Plans
- A.5 Refinement of Station Area Plan Alternatives
  - A5.1 Transportation Analysis of Alternatives
  - A5.2 Stormwater and Environmental Planning Analysis
  - A5.3 Presentation of Refinements to TAC
- A.6 Preferred Station Area Plans
  - A6.1 Recommended Changes to Comp Plan
  - A6.2 Estimated Cost of Recommended Improvements
  - A6.3 Recommendations Regarding Redevelopment Plans, Chapter 99, and Other Funding Tools.
- A.7 Final Station Area Plans

SCHEDULE

Arch-Laclede's & Stadium Stations

May 10 – TAC Meeting 1

May 23 – Public Meeting 1

June 6 – TAC Meeting 2

July 31 – Draft Report

September 1 – Final Report

ARCH-LACLEDE'S STATION

WORK TO DATE

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

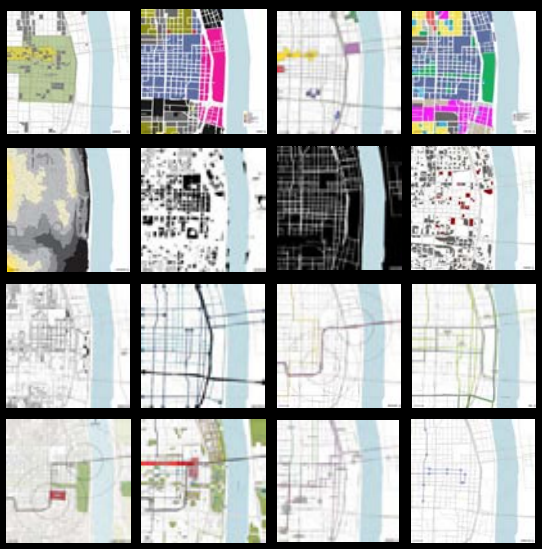
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives

Context Analysis

- Neighborhoods & Historic and Special Use Districts
- Zoning & Land Use
- Topography
- Buildings
- Blocks & Streets
- Transit – Metro, Bus, Bike, Sidewalk
- Parking
- Current Projects
- Amenities



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives

Transit Sheds

¼ Mile Transit Shed
½ Mile Transit Shed

- ¼ mile and ½ mile transit sheds have been modified based on accessibility and concentrations of likely transit users.
- Due to the close proximity between stations, the area is really one transit shed
- Different from a Station Area Plan: station area plan development serves as a catalyst to infill development in the transit shed.

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives

Transit Sheds

¼ Mile Transit Shed

- Heavily influenced by street layout and pedestrian conditions
- High transit capture rate relative to surrounding area

Limiting Boundaries

- Interstate 70
- Mississippi River
- Arch Grounds

Major Opportunities

- Underutilized Land
- River, Arch Grounds

- Population within Transit shed: 25
- Employment within Transit shed: 3,990
- Use Mix: 1:60
- Transit Capture Rate: 15%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives

Transit Sheds

½ Mile Transit Shed

- More influenced by proximity to station than pedestrian conditions
- Lower transit capture rate than quarter mile transitshed, ½ Mile is about as far as someone will walk to transit

Limiting Boundaries

- Interstate 70
- Mississippi River
- Arch Grounds
- Power station, large power lines

- Population within transitshed: 25
- Employment within transitshed: 4,073
- Use Mix: 1:63
- Transit Capture Rate: 10%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

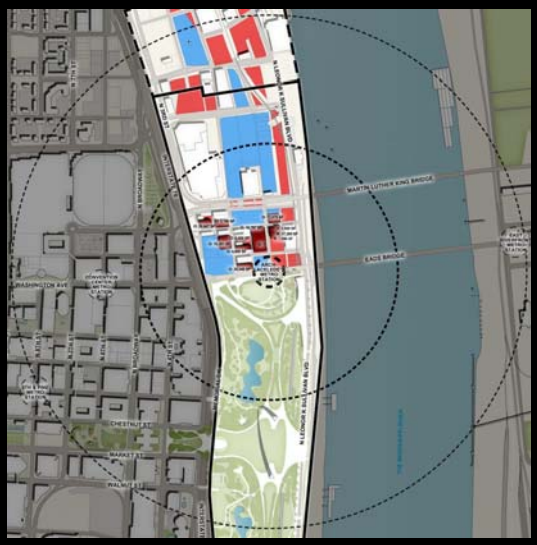
WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives

Vacancy

- Surface Parking
- Vacant Parcels
- Vacant Buildings

- Vacant Office Space…… 105,000 SF
- Vacant Retail Space… 25,000 SF



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

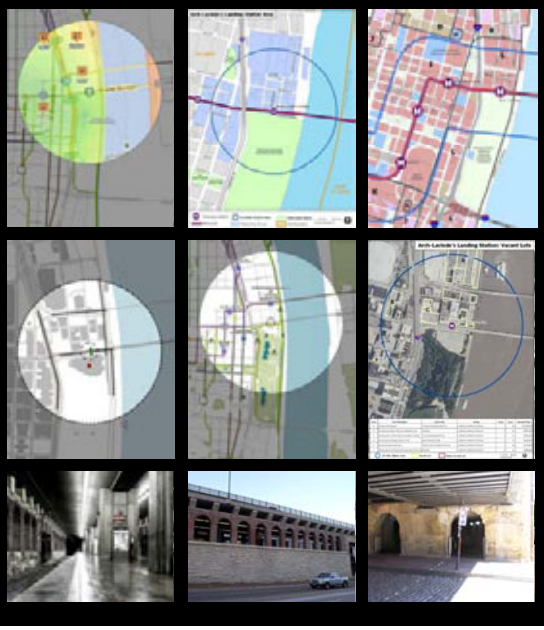
A.2 Station Area Plan Alternatives

Station Area Analysis

- Increased Intensities
- Use Mix
- Urban Form & Quality
- Connectivity
- Parking Strategy
- Other Highly Desirable Features

- Walkability
- Vacant Parcels
- Transit
- Redevelopment Parcels
- Parcel Area

- Issues & Opportunities



WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives – Economic Analysis

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.10-$1.15 per square foot
- Retail = $13.00 per square foot
- Office = $17.00 per square foot
- Parking = $1,000 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

Development Program

- Residential……...250 – 1,100 Units
- Retail……..50,000 – 200,000 S.F.
- Office……..200,000 – 400,000 S.F.
- Structured Parking……1,000 – 400,000 Spaces

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT STATION AREA PLANNING

Well planned station areas include the following 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 & Quality
  - Physical Features
  - Urban Design Quality
  - Individual Perception & Experience
- Connectivity
- Parking Strategy

A well defined station area is a unique and identifiable PLACE

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT
STATION AREA PLANNING

Well planned station areas could include the following HIGHLY DESIRABLE *but non essential* ATTRIBUTES:

- Supportive Commercial Uses
- Well- connected Fine Grained Street Network
- Traffic Calming Features
- No Dead Space or Facades
- Well-Articulated Blocks, Landmarks and Buildings
- Public Space, Parks and Amenities
- Attractive Transit Facilities

Attractive and Safe Environment

Street Furniture and Shelter; Signage; High-Quality Materials; Public Art; Water Features; Out-door dining; Underground utilities

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives
Station Area Analysis – Key Issues

- Pedestrian shed is limited due to Interstate 70 & topography
- Limited access for vehicles & circulation through the area
- Anticipated need for structured parking
- Elevated platform stations limits physical connections to station area
- High property values encourage taller & more dense development
- Lacks residential uses and sizeable office spaces
- Residential and employment densities are well below ideal
- Station is primarily used for tourism & entertainment

WORK TO DATE – Arch-Laclede's

A.2 Station Area Plan Alternatives
Station Area Analysis – Key Opportunities

- Great time to build on the CityArchRiver Project
- Abundance of surface parking lots and vacant land
- Strong connection to the regional trail network
- Lots of opportunity for views of the river
- Great historic character & identity already in place
- Shared economic opportunity with Arch tourism
- Synergy between the Landing & Lumiere Place

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION

STATION AREA PLAN ALTERNATIVES

STATION AREA PLAN ALTERNATIVES – Arch-Laclede's

A.2 Station Area Plan Alternatives – Urban Design & Planning Attributes

1: Revitalized Laclede's Landing Historic District

2: Riverfront Mixed-Use District

3: Riverfront Regeneration

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – Arch-Laclede's

A.2 Station Area Plan Alternatives – Development Program

1: Revitalized Laclede's Landing Historic District

- Residential 175 Units (1,000 S.F./Unit)
- Retail 50,000 S.F.
- Office 205,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (2)
  - West of 70 – 600 to 685 spaces
  - North of MLK – 550 to 628 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

2: Riverfront Mixed-Use District

- Residential 300 Units (1,000 S.F./Unit)
- Retail 250,000 S.F.
- Office 255,000 S.F. (Inc. Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - West of Lumiere – 1000 to 1142 spaces
  - North of Carr – 500 to 571 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

3: Riverfront Regeneration

- Residential 800 Units (1,000 S.F./Unit)
- Retail 375,000-400,000 S.F.
- Office 405,000 S.F. (Renovation)
- Hotels (1) Total
- Structured Parking (3)
  - Carr (east) – 1082 to 1237 spaces
  - Carr (west) – 847 to 968 spaces
  - West of 70 – 600 to 685 spaces
- Park & Open Space Yes
- Redevelopment of Existing Yes

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – Arch-Laclede's

A.2 Station Area Plan Alternatives – Economic Analysis

1: Revitalized Laclede's Landing Historic District

- Total Acreage = 8.42
- After Tax IRR without subsidies = 17.21%
- Land Residual Value @ 15% = $27.5 M
- Land Residual Value @ 20% = $36.7 M
- Financial Gap = $8.7M

2: Riverfront Mixed-Use District

- Total Acreage = 10.74
- After Tax IRR = 8.61%
- Land Residual Value @ 15% = $39.3 M
- Land Residual Value @ 20% = $52.4 M
- Financial Gap = $33.9M

3: Riverfront Regeneration

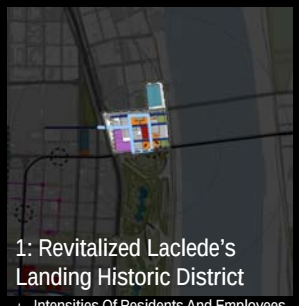
- Total Acreage = 18.04
- After Tax IRR = 4.72%
- Land Residual Value @ 15% = $65.3 M
- Land Residual Value @ 20% = $87.1 M
- Financial Gap = $67.3M

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – Arch-Laclede's

A.2 Station Area Plan Alternatives – Urban Design & Planning Attributes



1: Revitalized Laclede's Landing Historic District

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
o Connectivity
o Parking Strategy
o Other Highly Desirable Features

2: Riverfront Mixed-Use District

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
+ Connectivity
+ Parking Strategy
+ Other Highly Desirable Features

3: Riverfront Regeneration

+ Intensities Of Residents And Employees
+ Use Mix
+ Urban Form & Quality
+ Connectivity
+ Parking Strategy
+ Other Highly Desirable Features

ARCH-LACLEDE'S STATION

REFINEMENT OF STATION AREA PLAN ALTERNATIVES

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives

1: Revitalized Laclede's Landing Historic District

2: Riverfront Mixed-Use District

3: Riverfront Regeneration

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Development Program

- Residential 250 Units (1,000 SF/Unit)
- Retail 50,000 SF
- Office 200,000 SF (Renovation)
- Hotels None
- Structured Parking 1,000 Spaces
- Park & Open Space 60,000 SF
- Renovation YES

- Residential 350 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels None
- Structured Parking 3,000 Spaces
- Park & Open Space 270,000 SF
- Renovation YES

- Residential 1,100 Units (1,000 SF/Unit)
- Retail 200,000 SF
- Office 400,000 SF (Renovation)
- Hotels None
- Structured Parking 3,500 Spaces
- Park & Open Space 400,000 SF
- Renovation YES

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives

1: Revitalized Laclede's
Landing Historic District

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives

2: Riverfront Mixed-Use District

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives

3: Riverfront Regeneration

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Economic Analysis

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.10-$1.15 per square foot
- Retail = $13.00 per square foot
- Office = $17.00 per square foot
- Structured Parking = $1,000 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Economic Analysis

- Development Cost = $145M
- Development Value = $90M
- Funding Gap = $55M
- Return w/o Subsidy = 6.5%
- Return w/ Subsidy = 12%

- Development Cost = $240M
- Development Value = $145M
- Funding Gap = $95M
- Return w/o Subsidy = 5.5%
- Return w/ Subsidy = 11.5%

- Development Cost = $430M
- Development Value = $270M
- Funding Gap = $160M
- Return w/o Subsidy = 4%
- Return w/ Subsidy = 7.5%

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Transportation Infrastructure

Tier 1 Improvements
- Full streetscape overhaul
- Follow Great Streets guidelines and multi-modal planning practices to create complete streets

Tier 2 Improvements
- Major sidewalk improvements: widening, ADA accessibility, upgraded crosswalks
- Lighting improvements

Tier 3 Improvements
- Fill in gaps in pedestrian facilities
- Replace uneven and damaged sidewalks
- Make all sidewalks and crosswalks ADA accessible

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Urban Design & Planning Attributes

+++++ Intensity of Res. & Emp.	++++ Intensity of Res. & Emp.	+++++ Intensity of Res. & Emp.
++++ Use Mix	+++ Use Mix	++++ Use Mix
+++ Urban Form & Quality	++++ Urban Form & Quality	+++ Urban Form & Quality
++++ Connectivity	+++ Connectivity	++++ Connectivity
++++ Parking Strategy	+++ Parking Strategy	+++ Parking Strategy
++++ Other Highly Desirable Feat.	++++ Other Highly Desirable Feat.	++++ Other Highly Desirable Feat.

REFINEMENT OF STATION AREA ALTERNATIVES – Arch-Laclede's

A.5 Refinement of Station Area Plan Alternatives – Urban Design & Planning Attributes

1: Revitalized Laclede's Landing Historic District

2: Riverfront Mixed-Use District

3: Riverfront Regeneration

ARCH-LACLEDE'S STATION

PUBLIC MEETING 1 SUMMARY

PUBLIC MEETING 01 SUMMARY
May 23, 2013 at Confluence Prep. Academy

PRESENTATION & WORKSESSION

Participants were shown a brief presentation on each station area, then worked in a small group with a workboard presenting the three station area plan alternatives to give their comments, ideas, and suggestions.

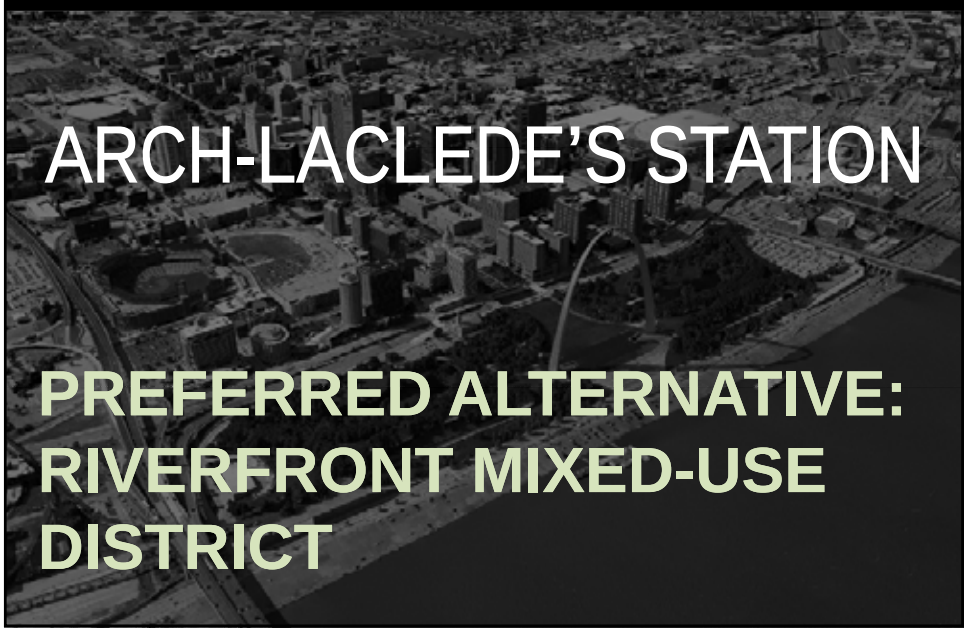
- Introduction & Background
- Transit Oriented Development
- St. Louis TOD Framework Plan
- Other Plans & Current Projects
- Arch-Laclede's Station Analysis
- Arch-Laclede's Station Plan Alternatives
- Arch-Laclede's Work-Session
- Stadium Station Analysis
- Stadium Station Plan Alternatives
- Stadium Station Work-Session

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PUBLIC MEETING 01 SUMMARY
May 23, 2013 at Confluence Prep. Academy

PUBLIC DISCUSSION

- Will there be enough parking, and how should parking be addressed in the plan?
- What about special event parking?
- The landing is empty during the week, so can there be new life | uses introduced?
- Are there opportunities for more open space and connections to the riverfront?
- What is the best way to use the underutilized parcels north of the Landing?
- How can we address the pedestrian wall created by Interstate 70, and which connections across Interstate 70 should we focus on in the plan?
- What height restrictions, if any, should be placed on the Landing area?



ARCH-LACLEDE'S STATION

PREFERRED ALTERNATIVE: RIVERFRONT MIXED-USE DISTRICT

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
- Residential 600 (1,000 S.F./Unit)
- Retail 150,000 S.F.
- Office 250,000 S.F.
- Hotels None
- Structured Parking 3,000 Spaces
- Park & Open Space 400,000 S.F.
- Vacancy 105,000 S.F. Office
  25,000 S.F. Retail

- Average FAR of 3.0 to 3.5
- Building Heights:
  - 6 (or greater) along Interstate 70
  - 6 – 8 in Laclede's Landing
  - 3 – 6 north of Laclede's Landing

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

- Unite the Laclede's Landing Historic District and Lumiere Place to create a Riverfront Mixed-Use District
- Infill vacant | opportunity sites & Surface Parking Lots
- Improve pedestrian connections to Convention Center and North Downtown from the Landing & Lumiere Place
- Focus on 1st & 2nd Streets as mixed-use streets throughout riverfront district
- Parking Structures at Morgan St & 3rd St, and north of Laclede's Landing to serve new developments in the station area
- Add new linear greenspace and trail connections along the riverfront edge
- New street between 2nd Street & Memorial Drive (South of Morgan Street)

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE – LOOKING NORTHWEST
ARCH-LACLEDE'S STATION AREA

Residential
Commercial
Office
Open Space
Parking
Hotel

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE – LOOKING SOUTHEAST

ARCH-LACLEDE'S STATION AREA

Residential
Commercial
Office
Open Space
Parking
Hotel

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE

ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM

PRELIMINARY FINANCIAL OUTCOMES

Model Assumptions

- New Residential = $1.10-$1.15 per S.F.
- Retail = $13.00 per S.F.
- Office = $17.00 per S.F.

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline
- Assumes varying range of infrastructure costs

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

- Total Acreage 27.4
- Development Cost .....$ 290 – 320 M
- Development Value.....$ 170 – 170 M
- Development Gap.....$ 120 – 150 M

- Return without Subsidy.....3.4 – 4.2 %
- Return with Subsidy.....3.8 – 4.6 %
- Land Residual Value @ 15%.....$ 30 M
- Land Residual Value @ 20%.....$ 40 M

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

Alternative 2 Comparison

	Minimal Infrastructure	Moderate Infrastructure	Full Infrastructure
Development Cost (in millions of $)	$290	$300	$320
Development Value (in millions of $)	$170	$170	$170
Financial Gap (in millions of $)	$120	$135	$150
Unsubsidized Return	4.2%	3.8%	3.4%
Subsidized Return	4.6%	4.2%	3.8%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

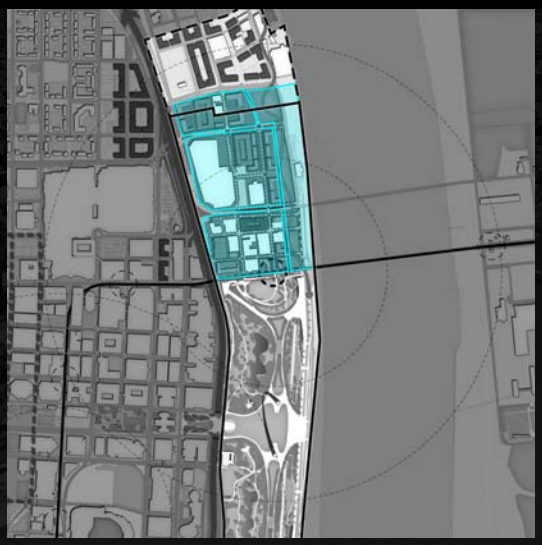
PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

Redevelopment Areas
- Laclede's Landing Historic District
- Lumiere Place
- Area North of Carr St
- Riverfront

Prior Use of Traditional Public Financing Tools
- TIF District
- Special Business Districts

Alternative Gap Financing Sources
- Private Grants
- Business Associations



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Street Improvements
- New sidewalks, 8-foot minimum width
- New curbs
- ADA-curb cuts
- Decorative pavement crosswalks
- Pedestrian lighting
- Street lighting
- Street trees, infill as necessary
- Underground utilities
- Street furniture
- Parallel parking

N 1st St.
N 2nd St.
Carr St.
Laclede's Landing Blvd.
Washington Ave.

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Improvements
Tier 2 Improvements
- New sidewalks, 6-foot minimum width
- ADA-curb cuts
- Street lighting
- Street trees, infill as necessary
- Parallel parking

Biddle St.
N 1st St.
N 2nd St.
Morgan St.
Lucas Ave.

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Improvements
Tier 2 Improvements
Tier 3 Improvements
- Infill gaps in existing sidewalks, 4-foot minimum width
- Repair damaged sidewalks as necessary
- ADA-curb cuts

Applies to all remaining streets

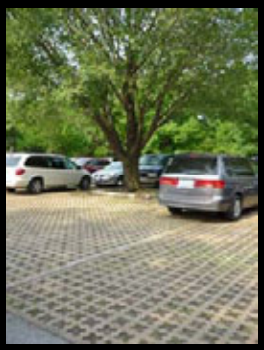
Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Existing Imperviousness
- ½ Mile Transit Shed
  95.3%

Existing Infrastructure
- Combined Sewer System
- Stormwater permitting by MSD

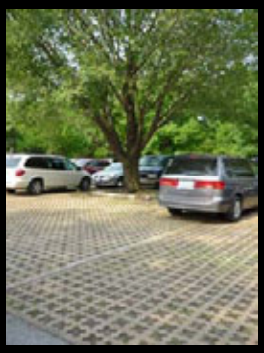


TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Applicable to Projects
- New Development
- Redevelopment that disturbs more than 1 acre
- Proposed stormwater runoff increase of over 2 cubic ft. per second
- Downstream stormwater problems (none currently existing)



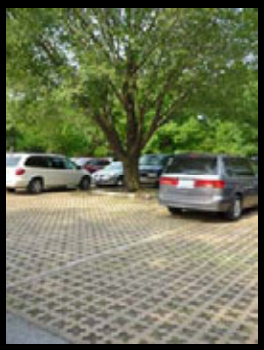
TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Best Management Practices
- Bioretention Facilities
  - Medians, in parking lots, bump outs, planter boxes, within public parks
- Permeable Pavement
  - Parking lots, sidewalks, driveways, alleys
- Rainwater Harvesting
  - New and existing buildings
- Green Roofs
  - New buildings
- Disconnection of Downspouts
  - Existing buildings
- Buffer Strips
  - New and existing streets & parking lots



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING

++**+++** 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 & Quality
++++**+** Physical Features
+++**++** Urban Design Quality
++**+++** Individual Perception & Experience

++**+++** Connectivity

++**+++** Parking Strategy

+++**++** Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING
REGULATORY FRAMEWORK
Existing Zoning Code

Central Business District I
Jefferson Memorial District L
Industrial J
Unrestricted K
Two Family B
Multi Family C
Multi Family D
Multi Family E

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
ARCH-LACLEDE'S STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING
REGULATORY FRAMEWORK
Existing Zoning Code

DRAFT FORM-BASED DISTRICT:
Building Envelope Standards

- Proposed Form-Based District
  - Urban General Type 2
  - Urban General Type 3

*Note: Potential Greenspace along Riverfront

Urban General Type 1
Urban General Type 2
Urban General Type 3

DRAFT FORM-BASED DISTRICT: *Building Envelope Standards*

- Urban General Type 2
  - Min. Building Height: 3 stories(?)
  - Max. Buildings Height: 24 stories
  - Setbacks: 0 ft.
  - Ground Floor Uses: Primary Retail, Secondary Retail & Office Uses
  - Upper Floor Uses: Office & Residential
  - Building Types:
    - High-Rise Residential Building
    - Commercial Block Building
    - Podium Building
    - Flex Building
    - Liner Building

Urban General Type 1
Urban General Type 2
Urban General Type 3

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

DRAFT FORM-BASED DISTRICT: *Building Envelope Standards*

- Urban General Type 2
- Urban General Type 3
  - Min. Building Height: 3 stories(?)
  - Max. Buildings Height: 12 stories
  - Setback: 0 ft.
  - Ground Floor Uses: Primary Retail, Secondary Retail, Residential & Office
  - Upper Floor Uses: Office & Residential
  - Building Types:
    - Rowhouse & Courttyard, Rowhouse
    - Stacked Flats
    - Courtyard Building
    - High-Rise Residential Building
    - Commercial Block Building
    - Flex Building
    - Liner Building

Urban General Type 1
Urban General Type 2
Urban General Type 3

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE

ARCH-LACLEDE'S STATION AREA

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

HANDOUT

RIVERFRONT MIXED-USE DISTRICT

DEVELOPMENT PROGRAM

Residential: 600 Units (1,000 S.F./Unit)
Retail: 150,000 S.F.
Office: 250,000 S.F.
Hotels: None
Structured Parking: 3,000 Spaces
Park & Open Space: 400,000 S.F.
Building Height: 3 - 8 Stories

URBAN DESIGN & PLANNING ATTRIBUTES

++++ Intensities Of Residents And Employees
++++ Use Mix
++++ Urban Form & Quality
++++ Connectivity
++++ Parking Strategy
++++ Other Highly Desirable Features

ENVIRONMENTAL BEST MANAGEMENT PRACTICES

Bioretention Facilities
Permeable Pavement
Rainwater Harvesting
Green Roofs
Disconnection of Downspouts
Buffer Strips

REGULATORY FRAMEWORK - FORM BASED DISTRICT

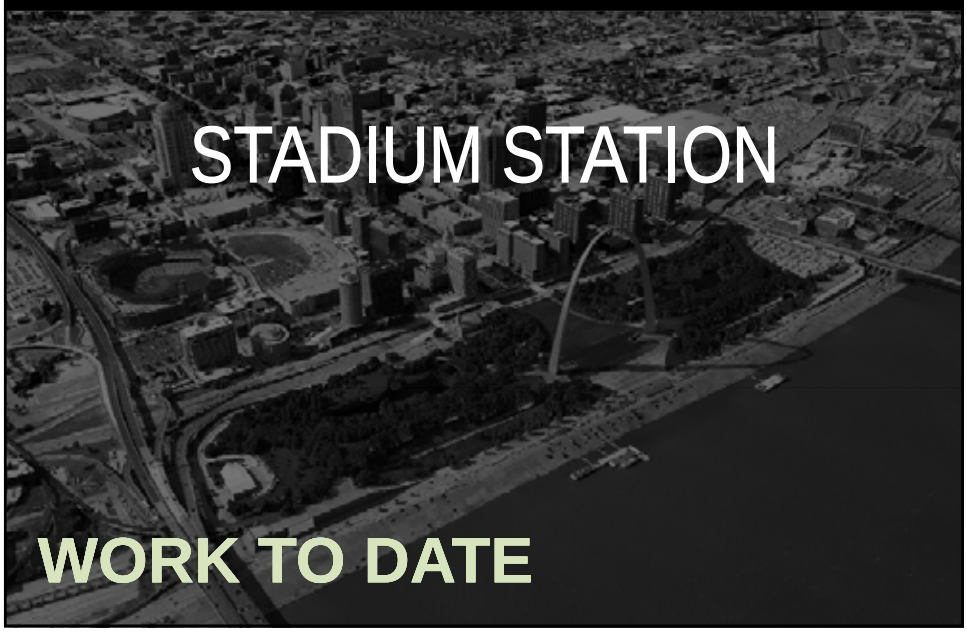
Urban General Type 2 (Medium Orange)

Urban General Type 3 (Light Orange)

H3 STUDIO

TOD STATION AREA PREFERRED PLAN

ARCH-LACLEDE'S STATION AREA



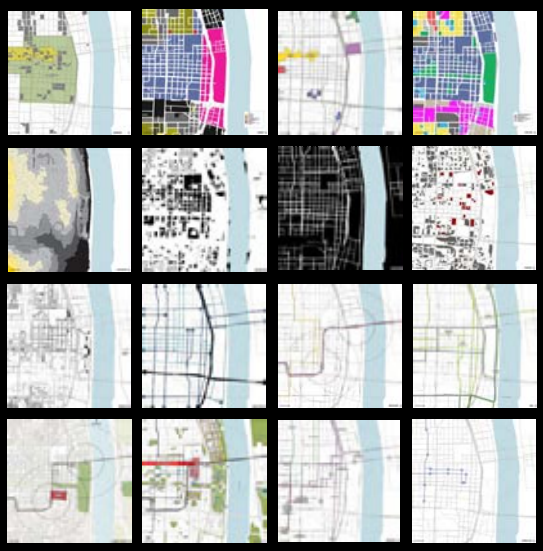
TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives

Context Analysis

- Neighborhoods & Historic and Special Use Districts
- Zoning & Land Use
- Topography
- Buildings
- Blocks & Streets
- Transit – Metro, Bus, Bike, Sidewalk
- Parking
- Current Projects
- Amenities



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives

Transit Sheds

¼ Mile Transit Shed
½ Mile Transit Shed

- ¼ mile and ½ mile transit sheds have been modified based on accessibility and concentrations of likely transit users.
- Due to the close proximity between stations, the area is really one transit shed
- Different from a Station Area Plan: station area plan development serves as a catalyst to infill development in the transit shed.

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives

Transit Sheds

¼ Mile Transit Shed

- Heavily influenced by street layout and pedestrian conditions
- High transit capture rate relative to surrounding area

Limiting Boundaries

- Interstate 64 and ramps
- Railroad Viaducts
- Tucker Blvd width, Memorial Dr traffic

Major Opportunities

- Ballpark Village, Clark Ave Sports Corridor
- Underutilized Land South of I-64
- Two-Way Traffic on Walnut St

- Population within Transit shed: 852
- Employment within Transit shed: 6,022
- Use Mix: 7
- Transit Capture Rate: 15%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives

Transit Sheds

½ Mile Transit Shed

- More influenced by proximity to station than pedestrian conditions
- Lower transit capture rate than quarter mile transitshed, ½ Mile is about as far as someone will walk to transit

Limiting Boundaries

- Proximity to other stations
- Railroad Viaducts
- Memorial Dr

- Population within transitshed: 860
- Employment within transitshed: 8,546
- Use Mix: 10
- Transit Capture Rate: 10%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

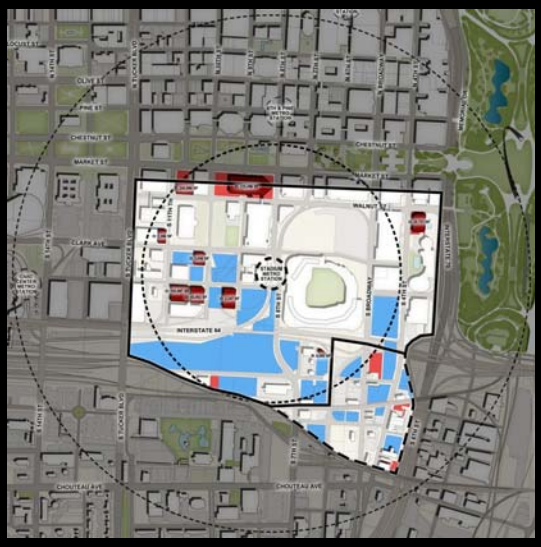
WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives

Vacancy

- Surface Parking
- Vacant Parcels
- Vacant Buildings

- Vacant Office Space…… 70,000 SF
- Vacant Retail Space… 5,000 SF



WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives – Economic Analysis

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.45-$1.60 per square foot
- Retail = $25.00 per square foot
- Office = $20.00 per square foot
- Parking = $1,500 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Varied absorption rates for each scenario

Development Program

- Residential……...8150 – 800 Units
- Retail……..250,000 – 400,000 S.F.
- Office……..0 – 830,000 S.F.
- Structured Parking……0 – 993 Spaces

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

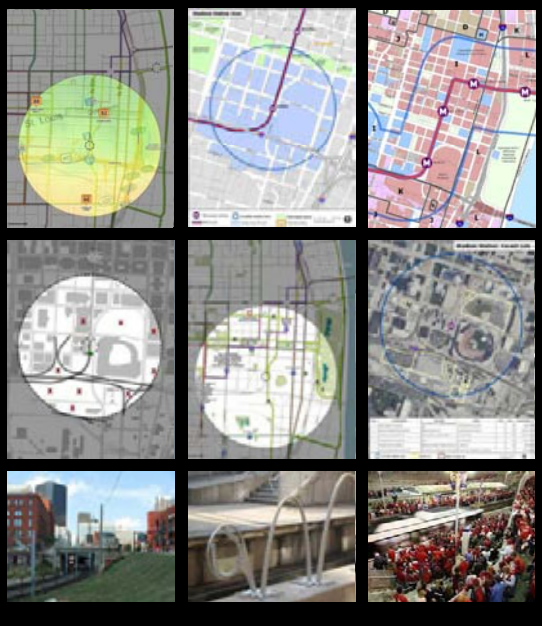
A.2 Station Area Plan Alternatives

Station Area Analysis

- Increased Intensities
- Use Mix
- Urban Form & Quality
- Connectivity
- Parking Replacement Strategies
- Other Highly Desirable Features

- Walkability
- Vacant Parcels
- Transit
- Redevelopment Parcels
- Parcel Area

- Issues & Opportunities



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

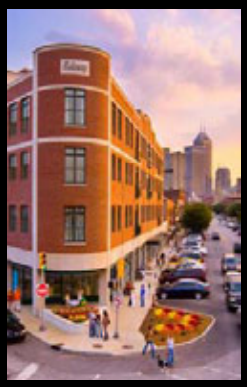
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT
STATION AREA PLANNING

Well planned station areas include the following 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 & Quality
  - Physical Features
  - Urban Design Ouality
  - Individual Perception & Experience
- Connectivity
- Parking Strategy

A well defined station area is a unique and identifiable PLACE



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT
STATION AREA PLANNING

Well planned station areas could include the following HIGHLY DESIRABLE *but non essential* ATTRIBUTES:

- Supportive Commercial Uses
- Well- connected Fine Grained Street Network
- Traffic Calming Features
- No Dead Space or Facades
- Well-Articulated Blocks, Landmarks and Buildings
- Public Space, Parks and Amenities
- Attractive Transit Facilities

Attractive and Safe Environment

Street Furniture and Shelter; Signage; High-Quality Materials; Public Art; Water Features; Out-door dining; Underground utilities

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives
Station Area Analysis – Key Issues

- Pedestrian shed is limited (south) due to rail & utility infrastructure
- Limited east-west circulation south of Busch Stadium
- Limited pedestrian connections north-south near the stadium
- Development near Busch Stadium limited due to road infrastructure
- Anticipated need for structured parking
- Residential and employment densities are well below ideal
- Lacks residential uses throughout the area
- Station is used primarily for special events (gameday)

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK TO DATE – Stadium

A.2 Station Area Plan Alternatives
Station Area Analysis – Key Opportunities

- Abundance of surface parking lots and vacant land
- Immediate proximity to the Central Business District
- Busch Stadium has well established character
- Station area is the main entrance for many visitors to Busch Stadium
- Great opportunity to connect to the Chouteau Greenway
- Opportunity to leverage future Ballpark Village Development
- Close proximity to the Cupples District

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – Stadium

A.2 Station Area Plan Alternatives – Urban Design & Planning Attributes

1: Enhanced Stadium Station Crossing Area

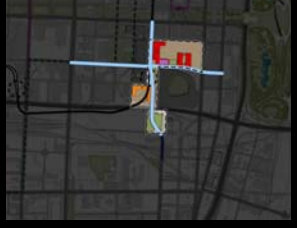
2: Busch Stadium Mixed-Use District

3: Busch Village South District

STATION AREA PLAN ALTERNATIVES – Stadium

A.2 Station Area Plan Alternatives – Development Program

1: Enhanced Stadium Station Crossing Area



- Residential 300 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels (1) Total (250,000 estimated)
- Structured Parking None
- Park & Open Space 25,000 SF
- Renovation YES

2: Cupples | Ballpark District

- Residential 450 Units (1,000 SF/Unit)
- Retail 250,000 SF
- Office 650,000 SF (Renovation)
- Hotels (2) Total (600,000 estimated)
- Structured Parking 1,800 Spaces
- Park & Open Space 70,000 SF
- Renovation YES

3: Busch Village South District

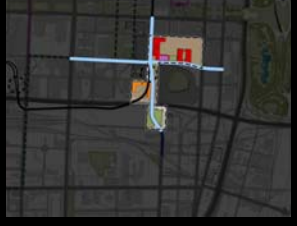
- Residential 950 Units (1,000 SF/Unit)
- Retail 400,000 SF
- Office 850,000 SF (Renovation)
- Hotels (1) Total (450,000 estimated)
- Structured Parking 5,000 Spaces
- Park & Open Space 125,000 SF
- Renovation YES

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – Stadium

A.2 Station Area Plan Alternatives – Economic Analysis

1: Enhanced Stadium Station Crossing Area



- Total Acreage = 12.5
- After Tax IRR without subsidies = 11.8 %
- Land Residual Value @ 15% = $21.9 M
- Land Residual Value @ 20% = $29.2 M
- Financial Gap = $25.7 M

2: Cupples | Ballpark District

- Total Acreage = 17.5
- After Tax IRR = 9.6%
- Land Residual Value @ 15% = $59.3 M
- Land Residual Value @ 20% = $79.0 M
- Financial Gap = $38.1 M

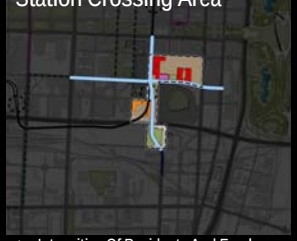
3: Busch Village South District

- Total Acreage = 20.0
- After Tax IRR = 6.9%
- Land Residual Value @ 15% = $88.5 M
- Land Residual Value @ 20% = $117.9 M
- Financial Gap = $56.0 M

STATION AREA PLAN ALTERNATIVES – Stadium

A.2 Station Area Plan Alternatives – Urban Design & Planning Attributes

1: Enhanced Stadium Station Crossing Area



- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- o Connectivity
- o Parking Strategy
- o Other Highly Desirable Features

2: Cupples | Ballpark District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

3: Busch Village South District

- + Intensities Of Residents And Employees
- + Use Mix
- + Urban Form & Quality
- + Connectivity
- + Parking Strategy
- + Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION

REFINEMENT OF STATION AREA PLAN ALTERNATIVES

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives

1: Enhanced Stadium Station Crossing Area

2: Cupples | Ballpark District

3: Cupples, Ballpark, Chouteau Mixed-Use District

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

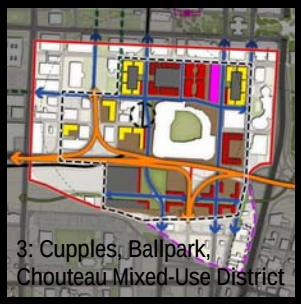
A.5 Refinement of Station Area Plan Alternatives – Development Program

1: Enhanced Stadium Station Crossing Area

- Residential 300 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels (1) Total (250,000 estimated)
- Structured Parking None
- Park & Open Space 25,000 SF
- Renovation YES

2: Cupples | Ballpark District

- Residential 450 Units (1,000 SF/Unit)
- Retail 250,000 SF
- Office 650,000 SF (Renovation)
- Hotels (2) Total (600,000 estimated)
- Structured Parking 1,800 Spaces
- Park & Open Space 70,000 SF
- Renovation YES



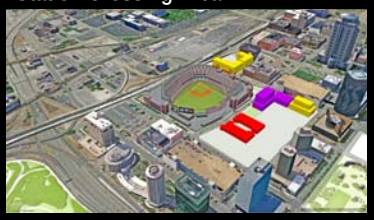
3: Cupples, Ballpark, Chouteau Mixed-Use District

- Residential 950 Units (1,000 SF/Unit)
- Retail 400,000 SF
- Office 850,000 SF (Renovation)
- Hotels (1) Total (450,000 estimated)
- Structured Parking 5,000 Spaces
- Park & Open Space 125,000 SF
- Renovation YES

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives

1: Enhanced Stadium Station Crossing Area



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives

2: Cupples | Ballpark District

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives

3: Cupples, Ballpark, Chouteau Mixed-Use District

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives – Economic Analysis

Model Assumptions

Rents per Unit or Square Foot

- Residential = $1.15-$1.25 per square foot
- Retail = $15.00 per square foot
- Office = $18.00 per square foot
- Structured Parking = $1,000 per space per year

Other Assumptions

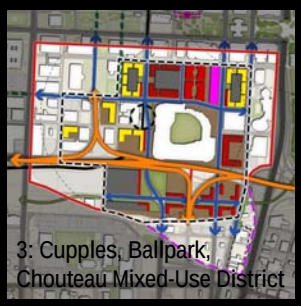
- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives – Economic Analysis

- Development Cost = $145M
- Development Value = $115M
- Funding Gap = $30M
- Return w/o Subsidy = 4%
- Return w/ Subsidy = 9%

- Development Cost = $395M
- Development Value = $355M
- Funding Gap = $40M
- Return w/o Subsidy = 3%
- Return w/ Subsidy = 7.5%



- Development Cost = $605M
- Development Value = $450M
- Funding Gap = $155M
- Return w/o Subsidy = 1.5%
- Return w/ Subsidy = 5%

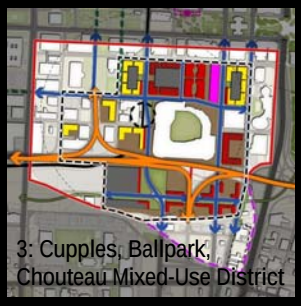
TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives – Transportation Infrastructure

Tier 1 Improvements
- Full streetscape overhaul
- Follow Great Streets guidelines and multi-modal planning practices to create complete streets

Tier 2 Improvements
- Major sidewalk improvements: widening, ADA accessibility, upgraded crosswalks
- Lighting improvements



Tier 3 Improvements
- Fill in gaps in pedestrian facilities
- Replace uneven and damaged sidewalks
- Make all sidewalks and crosswalks ADA accessible

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

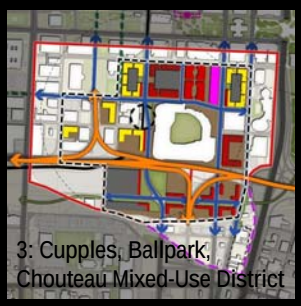
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives – Urban Design & Planning Attributes

+++++ Intensity of Res. & Emp.
+++++ Use Mix
++++++ Urban Form & Quality
+++++ Connectivity
+++++ Parking Strategy
+++++ Other Highly Desirable Feat.

++++++ Intensity of Res. & Emp.
+++++ Use Mix
+++++++ Urban Form & Quality
++++++ Connectivity
+++++ Parking Strategy
+++++ Other Highly Desirable Feat.



+++++ Intensity of Res. & Emp.
++++++ Use Mix
+++++++ Urban Form & Quality
+++++ Connectivity
+++++++ Parking Strategy
+++++++ Other Highly Desirable Feat.

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

REFINEMENT OF STATION AREA ALTERNATIVES – Stadium

A.5 Refinement of Station Area Plan Alternatives – Urban Design & Planning Attributes

1: Enhanced Stadium
Station Crossing Area

2: Cupples | Ballpark District

3: Cupples, Ballpark,
Chouteau Mixed-Use District

STADIUM STATION

PUBLIC MEETING 1 SUMMARY

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PUBLIC MEETING 01 SUMMARY

May 23, 2013 at Confluence Prep. Academy

PRESENTATION & WORKSESSION

Participants were shown a brief presentation on each station areas, the worked in a small group with a workboard presenting the three station area plan alternatives to give their comments, ideas, and suggestions.

- Introduction & Background
- Transit Oriented Development
- St. Louis TOD Framework Plan
- Other Plans & Current Projects
- Arch-Laclede's Station Analysis
- Arch-Laclede's Station Plan Alternatives
- Arch-Laclede's Work-Session
- Stadium Station Analysis
- Stadium Station Plan Alternatives
- Stadium Station Work-Session

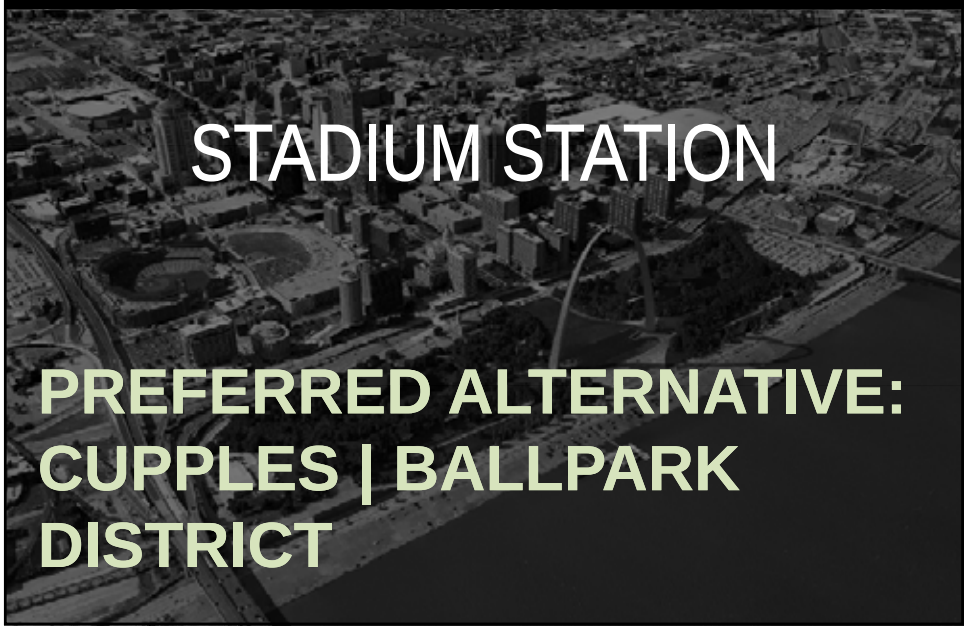
PUBLIC MEETING 01 SUMMARY

May 23, 2013 at Confluence Prep. Academy

PUBLIC FEEDBACK FROM DISCUSSIONS

- Is there a greater demand for residential uses in the area, and how can we maximize?
- Are there opportunities for affordable and for-sale housing in the area?
- What is a realistic amount of office space that can be expected near the Stadium?
- What is the reality of development south of Interstate 64?
- What is the best option for the Ballpark Village development?
- Should the greenway & lake project be incorporated into the plan?

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI



STADIUM STATION

PREFERRED ALTERNATIVE: CUPPLES | BALLPARK DISTRICT

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
- Residential 800 (1,000 S.F./Unit)
- Retail 250,000 S.F.
- New Office 650,000 S.F.
- Renovated Office 200,000 S.F.
- Hotels (2) Total (600,000 S.F. estimated)
- Structured Parking None
- Park & Open Space 70,000 S.F.
- Vacancy 200,000 S.F. Office

- Average FAR of 3.5 to 4.0
- Building Heights:
  - 6 (or greater) along Market Street
  - 3 (or greater) in BPV (south)
  - 6 – 8 in Couples District
  - 6 – 8 east of Stadium

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

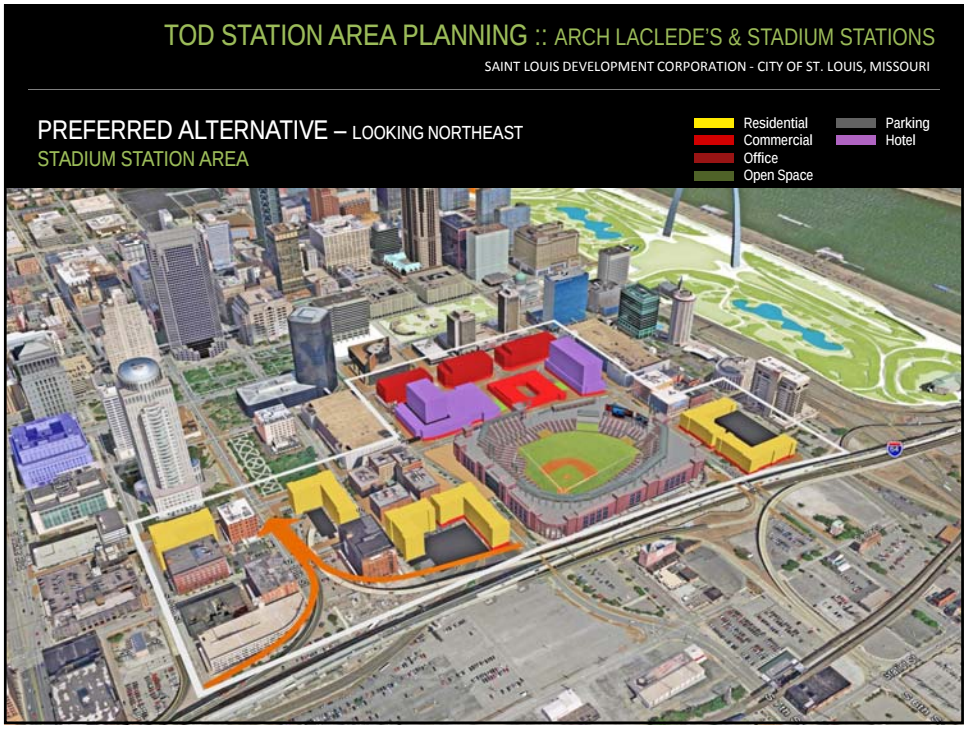
TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

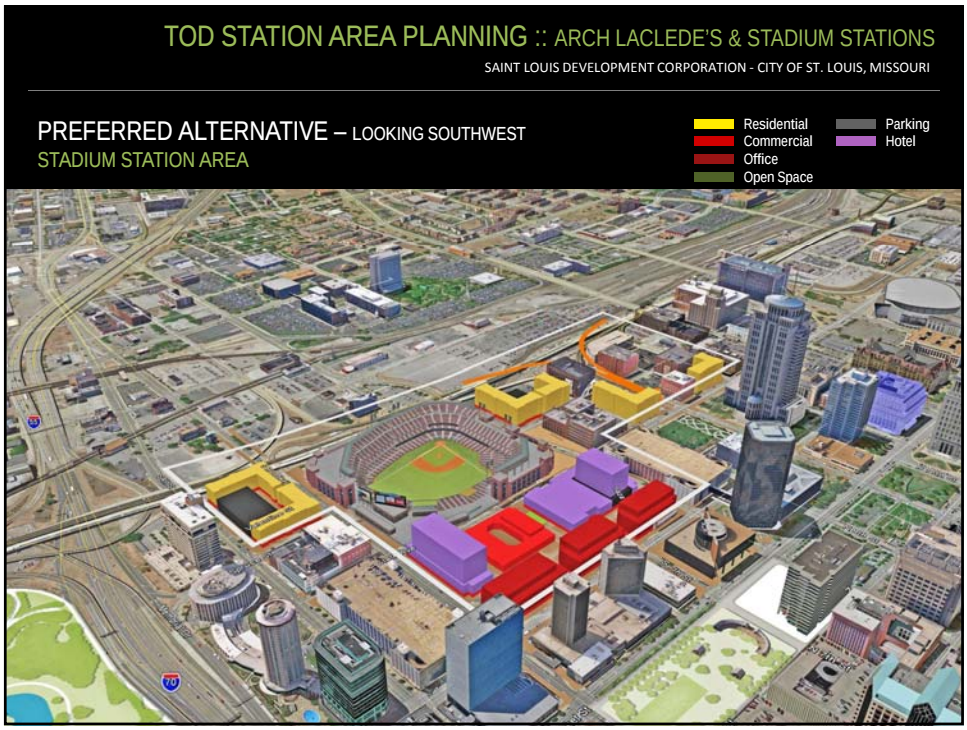
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

- Focus improvements & enhancements around the perimeter of Busch Stadium, establishing and uniting the Cupples Historic District and Busch Stadium
- Full Development of Ballpark Village (fronting onto 8th Street, Clark Street, Broadway Street & Walnut Street)
- Infill Development in Cupples Station Historic District & New sites established by infrastructure reconfiguration
- New Development both east & west of Busch Stadium
- Reconfiguration of the ramps from Interstate 64 into the Cupples District

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment


TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
PREFERRED ALTERNATIVE – LOOKING NORTHEAST
STADIUM STATION AREA
Residential
Commercial
Office
Open Space
Parking
Hotel


TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
PREFERRED ALTERNATIVE – LOOKING SOUTHWEST
STADIUM STATION AREA
Residential
Commercial
Office
Open Space
Parking
Hotel

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
Model Assumptions
- New Residential = $1.15-$1.25 per S.F.
- Retail = $15.00 per S.F.
- Office = $18.00 per S.F.

Other Assumptions
- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline
- Assumes varying range of infrastructure costs

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

- Total Acreage ……68.2
- Development Cost ……$ 470 – 530 M
- Development Value……$ 380 – 380 M
- Development Gap……$ 90 – 150 M

- Return without Subsidy……3.8 – 4.9 %
- Return with Subsidy……4.0 – 5.0 %
- Land Residual Value @ 15%……$ 65 M
- Land Residual Value @ 20%……$ 85 M

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

Stadium Station			
	Minimal Infrastructure	Moderate Infrastructure	Full Infrastructure
Development Cost (in millions of $)	$470	$500	$530
Development Value (in millions of $)	$380	$380	$380
Financial Gap (in millions of $)	$90	$120	$150
Unsubsidized Return	4.9%	4.3%	3.8%
Subsidized Return	5.0%	4.5%	4.0%

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

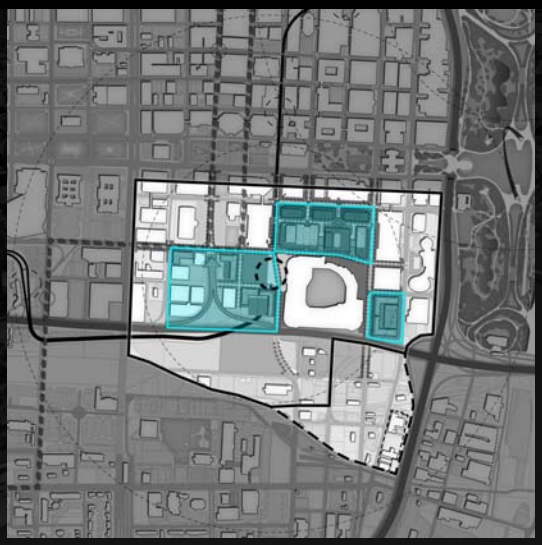
PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES

Redevelopment Areas
- Ballpark Village
- Cupples District
- East of Stadium Site

Prior Use of Traditional Public Financing Tools
- TIF District
- Special Business Districts

Alternative Gap Financing Sources
- Private Grants
- Business Associations



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Street Improvements
- New sidewalks, 8-foot minimum width
- New curbs
- ADA-curb cuts
- Decorative pavement crosswalks
- Pedestrian lighting
- Street lighting
- Street trees, infill as necessary
- Underground utilities
- Street furniture
- Parallel parking

7th St.
8th St.
Clark Ave.
S Broadway

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

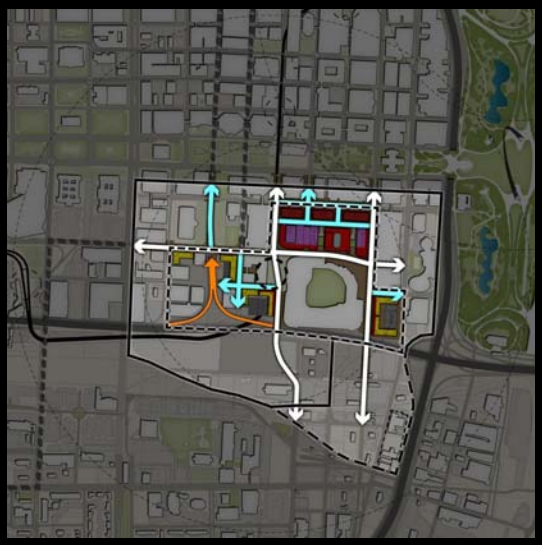
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Improvements
Tier 2 Improvements
- New sidewalks, 6-foot minimum width
- ADA-curb cuts
- Street lighting
- Street trees, infill as necessary
- Parallel parking

Walnut St.
Spruce St.
S 9th St.
S 10th St.



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

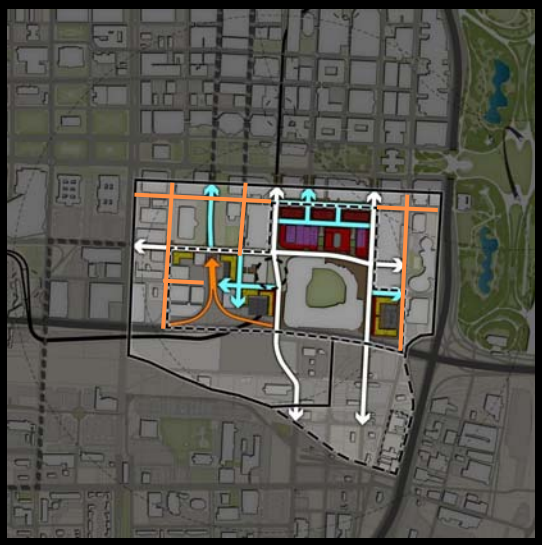
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS

Tier 1 Improvements
Tier 2 Improvements
Tier 3 Improvements
- Infill gaps in existing sidewalks, 4-foot minimum width
- Repair damaged sidewalks as necessary
- ADA-curb cuts

Applies to all remaining streets



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

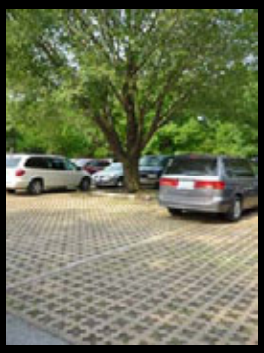
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Existing Imperviousness
- ½ Mile Transit Shed
  95.3%

Existing Infrastructure
- Combined Sewer System
- Stormwater permitting by MSD



PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Applicable to Projects

- New Development
- Redevelopment that disturbs more than 1 acre
- Proposed stormwater runoff increase of over 2 cubic ft. per second
- Downstream stormwater problems (none currently existing)

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS

Best Management Practices

- Bioretention Facilities
  - Medians, in parking lots, bump outs, planter boxes, within public parks
- Permeable Pavement
  - Parking lots, sidewalks, driveways, alleys
- Rainwater Harvesting
  - New and existing buildings
- Green Roofs
  - New buildings
- Disconnection of Downspouts
  - Existing buildings
- Buffer Strips
  - New and existing streets and parking lots

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING

++**+++** 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 & Quality
++**+++** Physical Features
+**++++** Urban Design Quality
++++**+** Individual Perception & Experience

++**+++** Connectivity

+++**++** Parking Strategy

+++**++** Other Highly Desirable Features

Residential
Commercial
Office
Open Space
Parking
Hotel
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

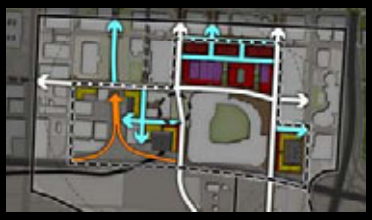
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

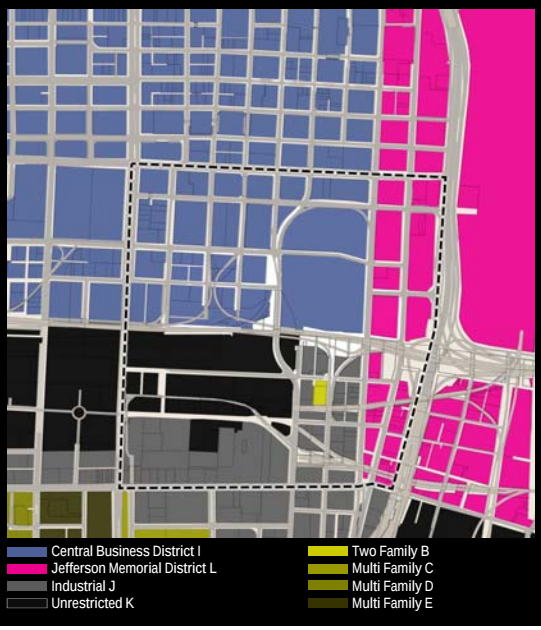


TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING
REGULATORY FRAMEWORK
Existing Zoning Code

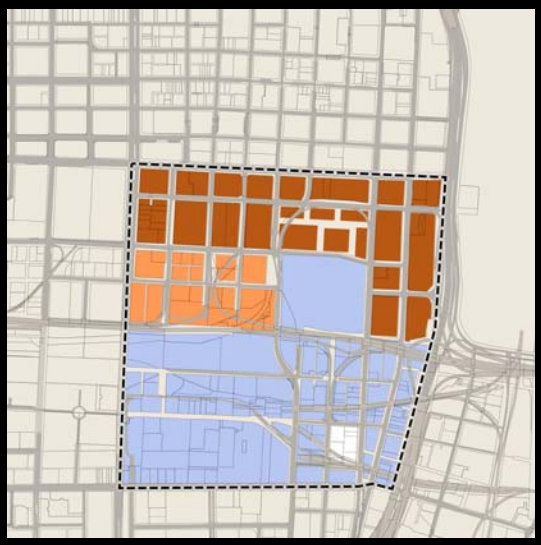


PREFERRED ALTERNATIVE
STADIUM STATION AREA

DEVELOPMENT PROGRAM
PRELIMINARY FINANCIAL OUTCOMES
PUBLIC IMPROVEMENTS
ENVIRONMENTAL IMPACTS
URBAN DESIGN + PLANNING
REGULATORY FRAMEWORK
Existing Zoning Code

DRAFT FORM-BASED DISTRICT:
Building Envelope Standards

- Proposed Form-Based Code
  - Urban General Type 1
  - Urban General Type 3
  - Campus Type



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

DRAFT FORM-BASED DISTRICT:
Building Envelope Standards

- Urban General Type 1
  - Min. Building Height: 6 stories (?)
  - Max. Buildings Height: Unlimited (with 751' limitation along Arch Grounds)
  - Setback: 0 ft. (6 Story Setback along Clark Street & Market Street)
  - Ground Floor Uses: Primary Retail, Secondary Retail & Office
  - Upper Floor Uses: Office & Residential
  - Building Types:
    - High-Rise Residential Building
    - Podium Building
    - Commercial Block Building
    - Flex Building
    - Liner Building

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

DRAFT FORM-BASED DISTRICT: *Building Envelope Standards*

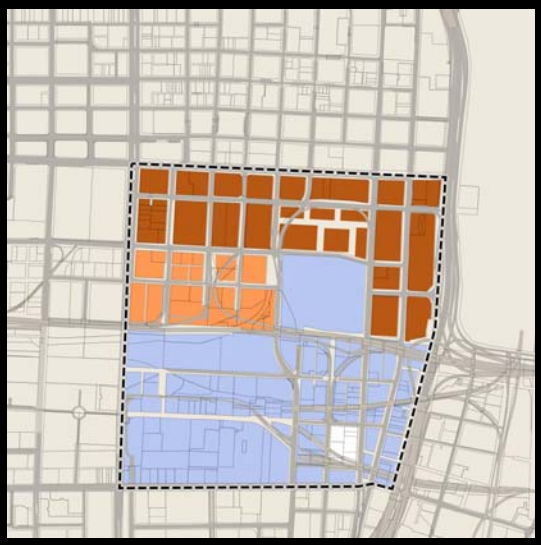
- Urban General Type 1
- Urban General Type 3
  - Min. Building Height: 3 stories (?)
  - Max. Buildings Height: 12 stories
  - Setback: 0 ft. (6 Story Setback along Clark Street)
  - Ground Floor Uses: Primary Retail, Secondary Retail, Residential & Office
  - Upper Floor Uses: Office & Residential
  - Building Types:
    - High-Rise Residential Building
    - Commercial Block Building
    - Flex Building
    - Liner Building

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

DRAFT FORM-BASED DISTRICT: *Building Envelope Standards*

- Urban General Type 1
- Urban General Type 3
- Campus Type
  - Min. Building Height: 3 stories (?)
  - Max. Buildings Height: 12 stories
  - Setback: 0 ft. min., 30 ft. max
  - Ground Floor Uses: Office, Residential, Primary Retail, Secondary Retail, Sp.
  - Upper Floor Uses: Office, Residential, Sp.
  - Building Types:
    - Institutional Building
    - High Rise Residential Building
    - Commercial Block Building
    - Flex Building
    - Live/Work Units
    - Liner Building



TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

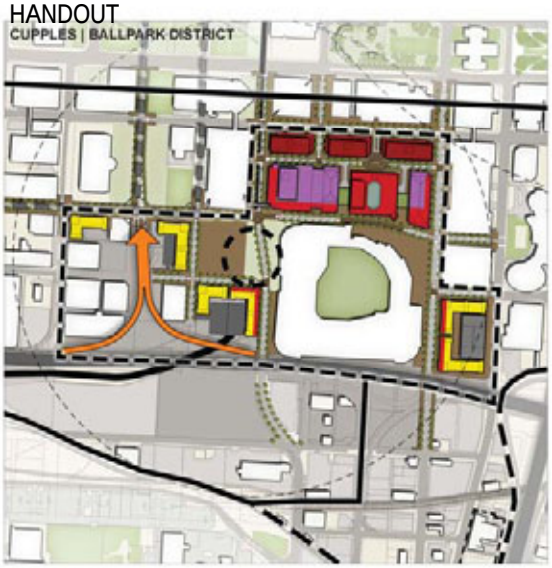
PREFERRED ALTERNATIVE

STADIUM STATION AREA

TOD STATION AREA PLANNING :: ARCH LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

HANDOUT



DEVELOPMENT PROGRAM

Residential: 800 Units (1,000 S.F./Unit)
Retail: 250,000 S.F.
Office: 650,000 S.F.
Hotels: (2) Total (600,000 S.F. estimated)
Structured Parking: 1,800 Spaces
Park & Open Space: 70,000 S.F.
Building Height: 2 - 15 Stories

URBAN DESIGN & PLANNING ATTRIBUTES

- Intensities Of Residents And Employees
- Use Mix
- Urban Form & Quality
- Connectivity
- Parking Strategy
- Other Highly Desirable Features

ENVIRONMENTAL BEST MANAGEMENT PRACTICES

Bioretention Facilities	Green Roofs
Permeable Pavement	Disconnection of Downspouts
Rainwater Harvesting	Buffer Strips

REGULATORY FRAMEWORK - FORM BASED DISTRICT

Urban General Type 1 (Dark Orange)

Urban General Type 2 (Light Orange)

Campus Type (Light Blue)

H3 STUDIO

TOD STATION AREA PREFERRED PLAN

Public Workshop Presentation: May 23, 2013

TOD STATION AREA PLANNING
ARCH-LACLEDE'S STATION
& STADIUM STATION

PUBLIC WORKSHOP 1

SAINT LOUIS DEVELOPMENT CORPORATION

THE CITY OF SAINT LOUIS

MAY 23, 2013

CONSULTANTS

H3 Studio :: Development Strategies :: **Bernardin, Lochmueller & Associates** :: Vector Communications :: M3 Engineering Group

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TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

AGENDA

- *INTRODUCTION & BACKGROUND*
- *TRANSIT ORIENTED DEVELOPMENT*
- *ST. LOUIS TOD FRAMEWORK PLAN*
- *OTHER PLANS & CURRENT PROJECTS*
- *STATION AREAS ANALYSIS & PLAN ALTERNATIVES*
- *WORKSESSION*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

BACKGROUND TO THE STUDY:
Regional Sustainability Plan

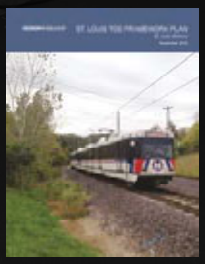
This project is part of a three-year, $4.7-million grant from HUD to develop a regional plan for sustainable development.

The St. Louis-area grant was announced in October 2010, with funding for planning running through December 2013. The $4.7-million award was the fourth-highest among the 45 regions that received funding from HUD; 225 grant applications were submitted.

GRANT ASSUMPTIONS

The grant is part of HUD's Sustainable Communities Initiative, an interagency collaboration of HUD, DOT & EPA which is currently funding planning efforts throughout the country. At the core of the planning effort are six Livability Principles

Livability Principle	Indicator
Provide more transportation choices	Percent of jobs and housing located within one-half mile of transit
Promote equitable, affordable housing	Percent of household income spent on housing and transportation
Enhance economic competitiveness	Percent of workforce living within a 30 minute or less commute from primary job centers
Support existing communities	Percent of transportation investments dedicated to enhancing accessibility of existing transportation system
Coordinate policies and leverage investment	Percent of transportation projects where more than one federal funding source is utilized
Value communities and neighborhoods	Percent of housing located in walkable neighborhoods with mixed use destinations located nearby



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PURPOSE OF THE STUDY

The purpose of this study is to assist the City of St. Louis, its neighborhoods, and developers 'create a vision and roadmap for how to encourage TOD in the St Louis region.' and will include the 'development of Station Area Plan alternatives/options, community outreach, economic analysis, finalization of the Station Area Plans' for the following station areas:

1. Downtown Arch-Laclede's Landing Station and the Stadium Station
2. Forest Park-DeBaliviere/Delmar Stations
3. Two Stations on the N/S Alignment

Well-executed TOD will allow our region to improve mobility, create sustainable and livable communities and improve transportation options for the future.

The goal for these plans is to immediately leverage development along the route.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

SCOPE OF WORK

Existing Stations

A.1 Technical Advisory Committee Formation
A.2 Station Area Plan Alternatives
A.3 Community Outreach
A.4 Economic Analysis of Station Area Plans
A.5 Refinement of Station Area Plan Alternatives
- A5.1 Transportation Analysis of Alternatives
- A5.2 Stormwater and Environmental Planning Analysis
- A5.3 Presentation of Refinements to TAC

A.6 Preferred Station Area Plans
- A6.1 Recommended Changes to Comp Plan
- A6.2 Estimated Cost of Recommended Improvements
- A6.3 Recommendations Regarding Redevelopment Plans, Chapter 99, and Other Funding Tools.

A.7 Final Station Area Plans

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

PROJECT SCHEDULE

THE FOLLOWING TASKS REPRESENT THE CONSULTANTS PROPOSED SCOPE OF WORK AND BASIC SCHEDULE.

6.0 MONTHS FROM START TO FINISH.

COMMUNITY OUTREACH

Initial Open House – May 23, 2013
In the charrette-style open houses, the Consultant will invite stakeholders including property owners, business owners, and neighbors to learn about issues related to zoning, future land use, and potential enhancements to mass transit. Stakeholders can voice concerns and raise ideas for their vision of the future. The intent is to secure broader support for the process and ultimate selected alternative.

Final Open House – July 25, 2013
Consultant will present the preferred Station Area Plan and public can provide feedback concerning recommendations, transportation, aesthetic, and related improvements. Consultant will use feedback to create achievable implementation strategies and make any needed changes to the station area plans.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TECHNICAL ADVISORY COMMITTEE

Amos Harris – Mercantile Exchange / Spinaker St. Louis
Andrew Riganti – SLDC Commercial Dist. Manager 7
Brian Hall – CVC
Catherine Werner – City of St. Louis
Connie Tomasula – City of St. Louis PDA
Craig Heller – Loftworks
Dan Kaplan – Westin Hotel
Deanna Venker – MoDOT
Don Roe – City of St. Louis PDA
Emily Kochan – Laclede's Landing Merchant's Assoc.
Ethan Sargent – Central Parking
Garrick Hamilton – Koman Group
Gary Pohrer – St. Louis Parking
Hossein Afzalinia – Drury Development – CitiPark
James Buchanan – SLDC Commercial Dist. Manager 26
Jason Pollard – Hilton St. Louis Ballpark
Jeff Babinski – Lumiere
John Clark – Laclede's Landing Redevelopment Corp.
John Kohler – City of St. Louis
John Langa – Metro
Kasey Bergh – Nestle Purina
Kevin Kloster – Cupples Station
Kim Cella – CMT
Maggie Campbell – Partnership for Downtown St. Louis
Maggie Hales – CityArchRiver
Matt Schindler – Partnership for Downtown St. Louis
Melonde Colvin – SLDC Commercial Dist. Manager 5
Paul Hubbman – EWG
Rob Orr – SLDC
Ron Watermon – St. Louis Cardinals
Sandy Colvin – City of St. Louis NSO Ward 7
Scott Brooks – InterPark
Sharie Taylor – City of St. Louis NSO Ward 5
Stan Mulvihill – McCormack Baron
Susan Trautman – Great Rivers Greenway
Vince Miller - Drury

PROJECT TEAM & ROLES

PROJECT LEAD: H3 Studio Inc.
Urban Design , Planning & Sustainability

- Station Area Plan Typologies
- Station Area Planning
- Land Use & Zoning
- Sustainability Planning

SUB-CONSULTANTS:

Economic Analysis & Planning
Development Strategies

Public Engagement and Outreach
Vector Communications Corporation

Transportation Planning & Engineering
Bernardin, Lochmueller & Associates

Stormwater/Environmental & Costing
M3 Engineering Group

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT

- DEFINITION
- BENEFITS
- TRENDS
- STATIONS

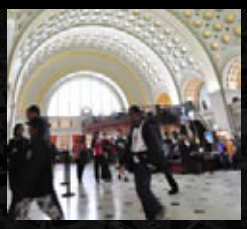
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT

Transit Oriented Development (TOD) is compact, mixed-use development near transit facilities that promotes sustainable communities by providing people of all ages and incomes with improved access to transportation and housing choices, reduced transportation costs that reduce the negative impacts of automobile travel on the environment and the economy. (definition by HUD)

TOD brings together people, jobs, and services and is designed in a way that makes it efficient, safe, and convenient to travel on foot or by bicycle, transit, or car and to live convenient, affordable, pleasant lives—with places for our kids to play and for our parents to grow old comfortably.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

BENEFITS OF TRANSIT ORIENTED DEVELOPMENT

Transit-Oriented Development should:

- Create a compact development within an easy walk of public transit & with sufficient density to increase transit ridership
- Create active places & livable communities that service daily needs where people feel a sense of belonging and ownership.
- Encourage a variety of housing types near transit facilities available to a wide range of ages and incomes.
- Minimize traffic, focus on the pedestrian and maximize transportation choices
- Reduce auto dominated Land Uses
- Generate revenue for the public & private sectors
- Provide increased value for both new and existing development
- Improve the physical environment and connectivity, and create a sense of place

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRENDS FAVORING TRANSIT ORIENTED DEVELOPMENT

Overall there is an *increasing demand* for Walkable Transit-Orientated Development, due to:

Changing Demographics
- Aging Population
- Growth in households without children
- Changing preferences of Generation X and Y

Smaller Households & Demand for Greater Variety and Mix of Housing

Increased Value of Walkable Urban Environments

Increased Fuel Costs and Driving Costs

Increased Traffic Congestion

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

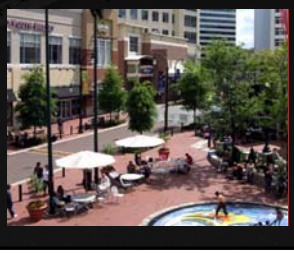
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT STATION AREA PLANNING

Well planned station areas include the following 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 & Quality
- Connectivity
- Parking Strategy

A well defined Downtown station area is a unique and identifiable URBAN PLACE



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

TRANSIT ORIENTED DEVELOPMENT
STATION AREA PLANNING

Well planned station areas could include the following HIGHLY DESIRABLE *but non essential* ATTRIBUTES:

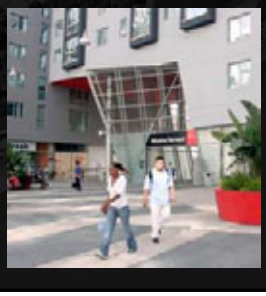
- Supportive Commercial Uses
- Well- connected Fine Grained Street Network
- Traffic Calming Features
- No Dead Space or Facades
- Well-Articulated Blocks, Landmarks and Buildings
- Public Space, Parks and Amenities
- Attractive Transit Facilities
- Attractive and Safe Environment
  Street Furniture and Shelter; Signage; High-Quality Materials; Public Art; Water Features; Out-door dining; Underground utilities

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WILSHIRE & VERMONT
Los Angeles, CA

- Located in the district of Koreatown at the Wilshire/Vermont Station- Intersection of the Red & Purple Lines
- Selected by LA Metro to develop 7 acres (including an LA Unified School District middle school)
- Complex mixed-income, multi-family rental apartment and retail/office program
- Ground-floor shopping, dining, and retail
- 35,000 sf mixed-use building, 7 stories, 449 apartments
- 20% of units designated affordable
- Open courtyard area, outdoor recreation
- Subterranean parking
- Connected to bus plaza, major bus lines



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

HOLLYWOOD & VINE
Los Angeles, CA

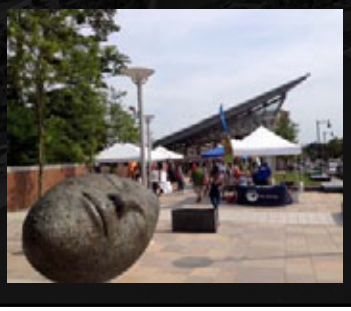
- The central station of 3 subway stops in Hollywood- Hollywood Blvd on the Red Line
- Public/private partnership venture, including City of LA, Community Redevelopment Agency, Metro, and 2 development teams
- 4.6 acres of metro property
- Composed of 2 buildings:
  - The W Hotel and Residences
  - 1600 Vine Apartments
- Mixed-use, transit-oriented site
- Over 2,000,000 sq ft- 305 hotel rooms, 143 condos, 275 affordable apartments (20%)
- Ground floor retail, corner grocery
- 9 Metro Bus connections
- Constructed in 30 months

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

THE CARRUTH
Boston, MA

- Located in Boston's Dorchester neighborhood
- 0.8 Acre Site, completed in 2007
- Serviced by the RED Line and Ashmont-Mattapan High Speed Line
- Frames Peabody Square
- 6 story development
- 10,000 sf of ground floor neighborhood scale retail use
- 116 residential units (145 DU/Acre)
  - 74 affordable residential units
  - 42 market-rate condominiums
- 80 Parking spaces
- Adjacent to transit stop
- Connected to 8 bus lines



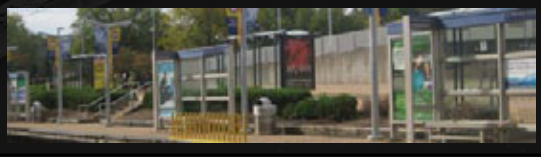
RELEVANT PLANS & CURRENT PROJECTS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

East West Gateway Council of Governments and Metro along with many stakeholder organizations completed this project as part of the Regional TOD Study for the St. Louis Region in 2012

The Regional TOD Study provides a guide for the overall regional and for individual jurisdictions and stakeholders around the particular MetroLink stations, to move TOD forward over the next 3 decades.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN

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The Regional TOD Study provides a guide for the overall regional and for individual jurisdictions and stakeholders around the particular MetroLink stations, to move TOD forward over the next 3 decades.

DOWNTOWN TYPOLOGY – Primary center of economic and cultural activity in any region. Dense mix of housing & employment types, retail and entertainment catered to region. Many transit modes.

MAJOR URBAN CENTER TYPOLOGY – mix of residential, employment, retail, and entertainment. Slightly lower densities. Draw residents from surrounding neighborhoods. Commuter hubs for larger region, multiple transit options. Many have historic character and street network.

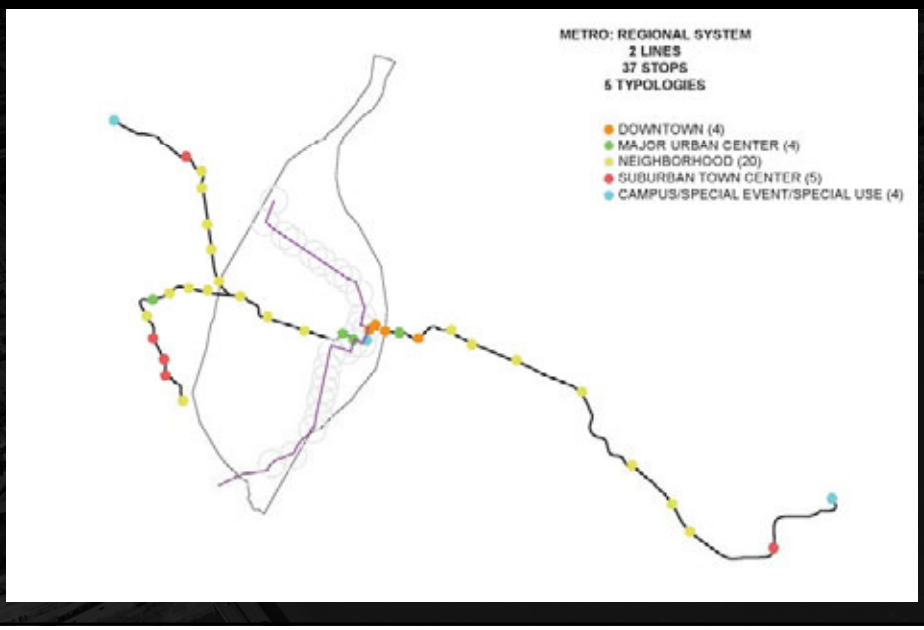
NEIGHBORHOOD TYPOLOGY – Primarily residential areas well connected to local and regional transit network. Mix of housing and local serving retail. Commercial limited to small businesses or small-scale industry. Well connected street grid. Transit less of a focus; station may be at edge of two neighborhoods.

SUBURBAN TOWN CENTER TYPOLOGY – Mix of residential, employment, retail and entertainment. Origin and destination for commuters. Mix of transit types connected to regional transit network with high-frequency service. More recent development than in downtowns or urban centers. More single-use employment areas and residential neighborhoods.

CAMPUS / SPECIAL EVENT / SPECIAL PURPOSE TYPOLOGY – Single-use area focused around a major institution such as university or entertainment venue (stadium.) Transit stations not key focus of economic activity. Secondary transit service infrequent and focused only on stations. More recent development. Street grid probably less connected than in older neighborhoods.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

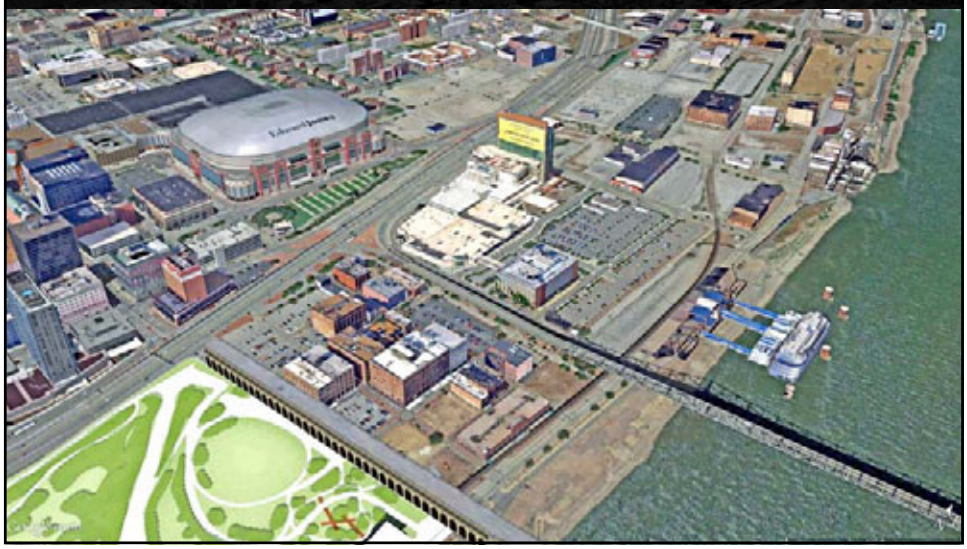
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION
TOD ACTION PLAN - LOOKING NORTHWEST (EXISTING CONDITIONS)



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

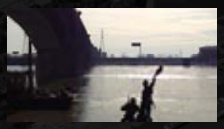
ST. LOUIS TOD FRAMEWORK PLAN
ARCH-LACLEDE'S STATION

KEY CHARACTERISTICS

- 34,900 Monthly Boardings
  - Average ridership for system
  - 1,050 Weekday Daily Average
  - 1,370 Weekend Daily Average
- 15 Bus Routes (12 within1/4 Mile; 0 in Laclede's Landing)
- Mean WalkScore of 79.5
- Primarily used for entertainment & tourism
- Surface and garage parking disrupt otherwise pedestrian-friendly streets and street connectivity
- Some zoning restrictions in Laclede's Landing Historic District

The ARCH-LACLEDE'S area is a primary regional center of economic, cultural, and entertainment activity. There is a dense mix of commercial, entertainment, tourist, and employment opportunities in the general vicinity of Laclede's Landing and the downtown area catering to the regional market. A range of transit modes, including rail and bus, also serve the station area.

The Arch-Laclede's area represents a major destination in the City of St Louis and will continue to serve as a Major Regional Destination for the foreseeable future.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN
ARCH-LACLEDE'S STATION

TYPOLOGY CLASSIFICATION

- Downtown Typology

FUTURE MARKET DEMAND – 2010 – 2040

- 110 Residential Units
- 345,102 Commercial sq. ft.
  - Lodging
  - Dining
  - Entertainment
  - Employment

DENSITY

- 3.10 residential units per acre
- 2.02 employees per acre

The ARCH-LACLEDE'S area is a primary regional center of economic, cultural, and entertainment activity. There is a dense mix of commercial, entertainment, tourist, and employment opportunities in the general vicinity of Laclede's Landing and the downtown area catering to the regional market. A range of transit modes, including rail and bus, also serve the station area.

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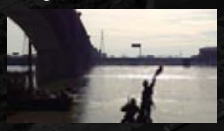


TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN
ARCH-LACLEDE'S STATION

ACTION ITEMS

CITY OF ST. LOUIS

- Establish transit supportive zoning
  - 20 residential units per acre
  - 25 employees per acre
- Identify and develop the greenways components within Laclede's Landing
- prioritize public improvements such as streetscapes and open space amenities.
- Achieve Ped. Level of Service A or B
  - Traffic Calming measures
  - ADA accommodations
  - Road Diet

METRO

- Improve MetroBus service to A or B level of service
- Wayfinding & Signage are Critical due to elevated nature of the platform

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION
TOD ACTION PLAN - LOOKING NORTHEAST (EXISTING CONDITIONS)

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

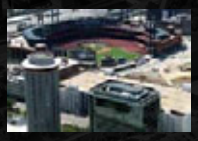
ST. LOUIS TOD FRAMEWORK PLAN
STADIUM STATION

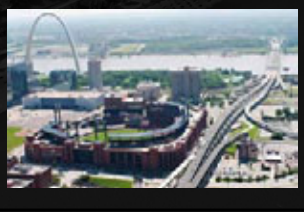
KEY CHARACTERISTICS

- 40,100 Monthly Boardings
  - Above average ridership for MetroLink
  - 1,290 Weekday daily average
  - 1,380 Weekend daily Average
- 18 Bus Routes (25 stops within ¼ mile including Civic Center MetroBus Center)
- Mean WalkScore of 82
- Primarily an entertainment destination
- Surface and garage parking disrupt otherwise pedestrian-friendly streets and street connectivity
- Most zoning south of I-64 does not support residential and mixed-use development

The STADIUM area is focused around a major venue, Busch Stadium. Any new developments in the station area will integrate planning for the stadium's use and consider how to leverage the stadium activity to drive retail, entertainment, and other land uses in the station area's vicinity.

The Stadium area represents a major destination in the City of St Louis and will continue to serve as a Major Regional Destination for the foreseeable future.





TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN
STADIUM STATION

TYPOLOGY CLASSIFICATION

- Campus | Special Event | Special Purpose Station Type

FUTURE MARKET DEMAND – 2010-2040

- 110 residential units
- 345,102 Commercial sq. ft.
  - Office
  - Entertainment

DENSITY

- 3.25 residential units per acre
- 4.10 employees per acre

The STADIUM area is focused around a major venue, Busch Stadium. Any new developments in the station area will integrate planning for the stadium's use and consider how to leverage the stadium activity to drive retail, entertainment, and other land uses in the station area's vicinity.

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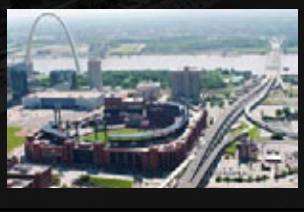
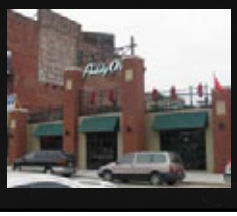



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ST. LOUIS TOD FRAMEWORK PLAN
STADIUM STATION

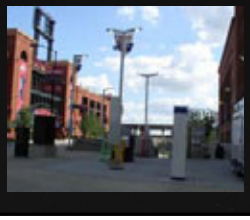
ACTION ITEMS

CITY OF ST. LOUIS

- Establish transit supportive zoning
  - 20 residential units per acre
  - 25 employees per acres
- Implement bike routes and strategies from regional Bike Plan
- Prioritize Public Improvements in the area
- Achieve Pedestrian Level of Service A or B
  - Traffic Calming measures
  - ADA accommodations
  - Road Diet
- Sales Tax Reimbursement Agreement

METRO

- Improve MetroBus service to A or B level of service
- Include way-finding and signage

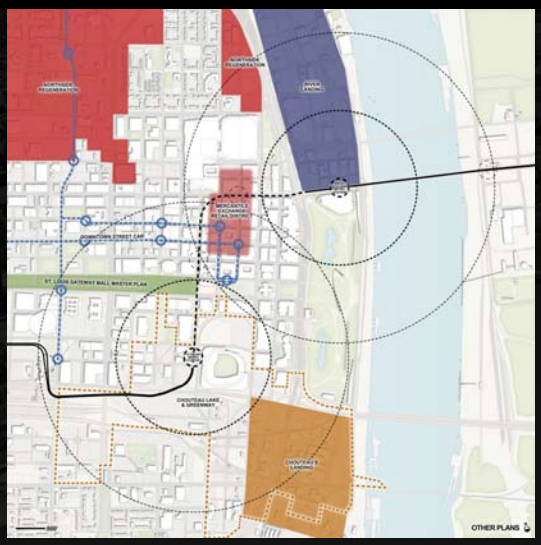


TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

RELEVANT PLANS

- RIVER LANDING
- DOWNTOWN NEXT (by 2020)
  - 7,500 new residents
  - 5,000 new residential units
  - 17,000 new jobs
  - 2 million sf of increased office space
  - 200,000 sf new retail
- MULTI-MODAL TRANSPORTATION STUDY
- NORTHSIDE REGENERATION
- ST. LOUIS GATEWAY MALL MASTERPLAN
- CHOUTEAU'S LANDING
- CHOUTEAU LAKE & GREENWAY
- DOWNTOWN STREETCAR
- MX EXCHANGE RETAIL DISTRICT PLAN



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

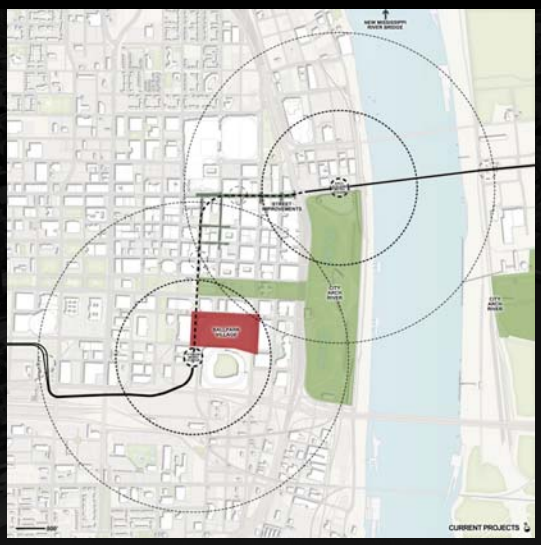
CURRENT PROJECTS

CITYARCHRIVER 2015
- Park Grounds Renovation (Entrance relocation)
- Vacation of Washington Avenue (near Eads Bridge)
- Street & Connectivity Improvements (under I-70)

BALLPARK VILLAGE
- Phase 1.0: Under Construction

STREET IMPROVEMENTS
- Washington Avenue (in the MX Exchange District)
- 7th St-8th Streets in the CBD
- 2nd Street (from Morgan Street to Washington Avenue)

NEW MISSISSIPPI RIVER BRIDGE
- Under Construction



STATION AREAS ANALYSIS & PLAN ALTERNATIVES

- ARCH-LACLEDE'S STATION
- STADIUM STATION

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION STATION AREA ANALYSIS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

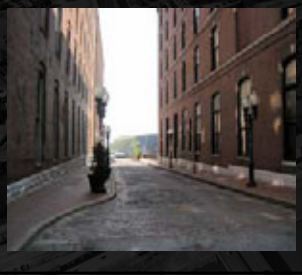
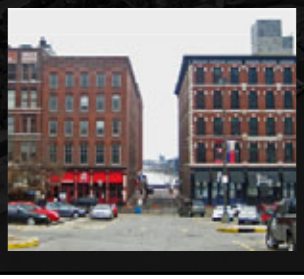
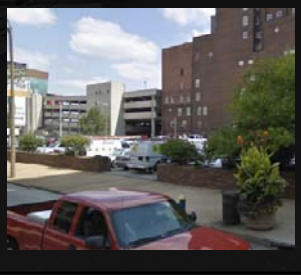
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION
TOD ACTION PLAN - LOOKING SOUTHEAST (EXISTING CONDITIONS)

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION
EXISTING CONDITIONS PHOTOGRAPHS

ARCH-LACLEDE'S STATION

PROJECT ASSUMPTIONS

- The planning horizon for this study is 10, 20, and 30 years, respectively.
- Metro facilities at both stations will be upgraded and improved.
- The CityArchRiver Project will be completed as planned, along with all improvements; including the removal of the parking structure.
- Phase 1.0 of Ballpark Village will be completed, as planned.
- ¼ mile and ½ mile transit sheds have been modified based on accessibility and concentrations of likely transit users.
- A % of Vacant office and retail within the ¼ and ½ mile transit sheds are assumed to have been renovated in all plan alternatives.
- The Cupples Building #9 will be demolished.

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION

MARKET ASSUMPTIONS

Rents per Unit or Square Foot

- Residential = $1.10-$1.15 per square foot
- Retail = $13.00 per square foot
- Office = $17.00 per square foot
- Structured Parking = $1,000 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION PLAN ALTERNATIVES
Transit Sheds

- ¼ Mile Transit Shed
- ½ Mile Transit Shed

- ¼ mile and ½ mile transit sheds have been modified based on accessibility

- Proximity of adjacent stations and barriers such as I-70 and the Mississippi River constrain the transit sheds to north and south rather than east and west

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION PLAN ALTERNATIVES
Transit Sheds – ¼ MILE

- Influenced by street layout and pedestrian conditions
- Higher transit capture rate relative to surrounding area
- Population within the transit shed: 25
- Employment within the transit shed: 3,990
- Use Mix: 160
- Transit Catchment Rate: 15%

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION PLAN ALTERNATIVES

Transit Sheds – ½ MILE

- Lower transit capture rate than quarter mile transit shed
- ½ Mile is about as far as someone will walk to transit
- Population within the transit shed: 25
- Employment within the transit shed: 4,073
- Use Mix: 163
- Transit Capture Rate: 10%

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION PLAN ALTERNATIVES

Opportunities

- 3rd Street Streetscape Project
- Sullivan Blvd Enhancements
- Arch Garage Removal
- Cobblestone Resetting
- Development Opportunities to North/Northwest

Transportation Improvements

- Follow Great Streets guidelines to create complete streets
- Replace uneven and damaged sidewalks
- Make all sidewalks and crosswalks ADA compliant

- Connect Sullivan Blvd to North Riverfront Trail
- Extend Lucas Ave west to 3rd St
- Emphasize 2nd St as a primary north-south pedestrian axis
- Create east-west connections along Convention Plaza & Carr

ARCH-LACLEDE'S STATION

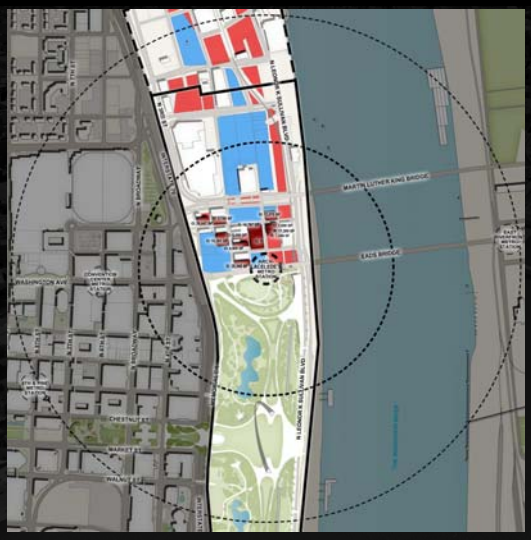
Vacancy: Buildings & Parcels

- Vacant Parcels
- Vacant Buildings
- Surface Parking

Within ½ Mile Transit Shed

- Vacant Office Space…… 105,000 SF
- Vacant Retail Space… 25,000 SF

Lots of Surface Parking Lots within the Laclede's Landing Historic District; as well as in Lumiere Place, and the properties north of Carr Street.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION

KEY ISSUES

- Pedestrian shed is limited due to Interstate 70 & topography
- Limited access for vehicles & circulation through the area
- Anticipated need for structured parking
- Elevated platform stations limits physical connections to station area
- High property values encourage taller & more dense development
- Lacks residential uses and sizeable office spaces
- Residential and employment densities are well below ideal
- Station is primarily used for tourism & entertainment

ARCH-LACLEDE'S STATION

KEY OPPORTUNITIES

- Great time to build on the CityArchRiver Project
- Abundance of surface parking lots and vacant land
- Strong connection to the regional trail network
- Lots of opportunity for views of the river
- Great historic character & identity already in place
- Shared economic opportunity with Arch tourism
- Synergy between the Landing & Lumiere Place

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION PLAN ALTERNATIVES

1. Revitalized Historic Laclede's Landing
2. Riverfront Mixed-Use District
3. Riverfront Regeneration

ARCH-LACLEDE'S STATION

1: Revitalized Laclede's Landing Historic District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Revitalized Laclede's Landing Historic District

DEVELOPMENT PROGRAM

- Residential 250 Units (1,000 SF/Unit)
- Retail 50,000 SF
- Office 200,000 SF (Renovation)
- Hotels None
- Structured Parking 1,000 Spaces
- Park & Open Space 60,000 SF
- Renovation YES

NEW DEVELOPMENT ESTIMATES

- Building Heights 4 to 5 Stories
- Average FAR of 2.62
- Estimated Affordable Housing Units = 0

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

KEY PROJECTS

- Revitalize the Laclede's Landing Historic District
- Infill vacant | opportunity sites within the Laclede's Landing Historic District with mixed-use buildings (including residential with ground floor retail)
- Connect the plaza entrance of the America's Center with Morgan Street (and the Laclede's Landing Historic District) through pedestrian enhanced streetscapes
- Parking Structure at the intersection of Morgan Street & Third Street

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Revitalized Laclede's Landing Historic District

INFRASTRUCTURE IMPROVEMENTS

- Laclede's Landing Streetscape Projects (associated with CityArchRiver 2015)
- Enhanced Pedestrian & Streetscape improvements on Convention Plaza
- Streetscape Improvements on 1st Street, 2nd Street, Laclede's Landing Boulevard, Morgan Street, and Lucas Avenue
- New Public Park | Green Space under the MLK Bridge & spaces along the Riverfront
- Improvements to the Arch Grounds from the CityArchRiver 2015)

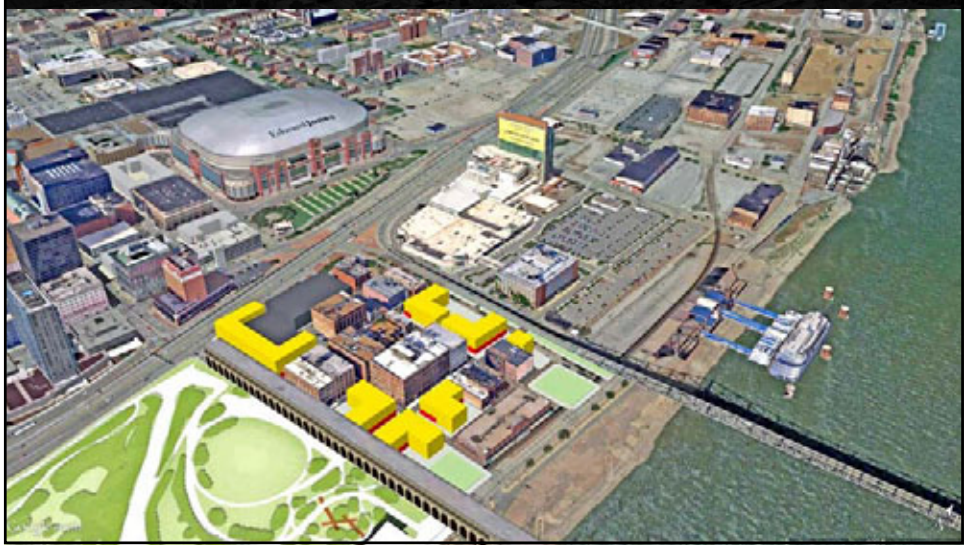
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES - LOOKING NORTHWEST

1: Revitalized Laclede's Landing Historic District

Residential
Commercial
Office
Parking
Hotel
Open Space



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHEAST

1: Revitalized Laclede's Landing Historic District

Residential
Commercial
Office
Parking
Hotel
Open Space

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $145M
- Development Value = $90M
- Development Gap = $55M

- Return without Subsidy = 6.5%
- Return with Subsidy = 12%
  - Estimated Subsidies Available = $40M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Revitalized Laclede's Landing Historic District

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 & Quality
+++ Physical Features
+++ Urban Design Quality
++++ Individual Perception & Experience

++++ Connectivity

++++ Parking Strategy

++++ Other Highly Desirable Features

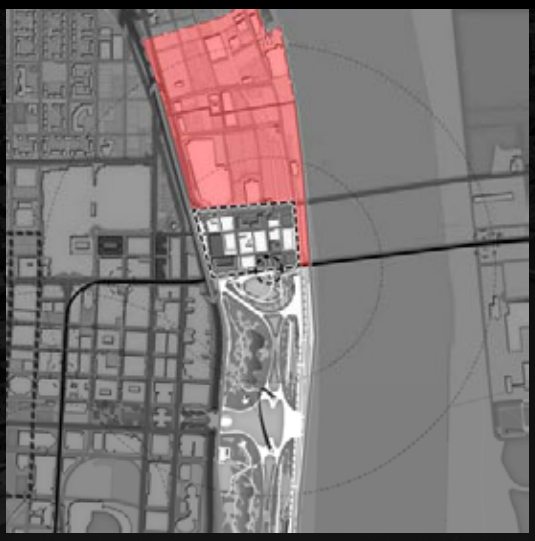
Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

STATION AREA PLAN ALTERNATIVES

1: Revitalized Laclede's Landing Historic District

IMPLICATIONS

- As part of this option, there would be strong, centralized redevelopment and infill around the metrolink station
- As part of this option, there would be NO new development in the area north of Carr Street and the Landing
- As part of this option, there would be limited development program based on available infill sites in Laclede's Landing
- As part of this option, there would be NO new major riverfront connections to the station area
- As part of this option, there would be a limited increase in ridership



ARCH-LACLEDE'S STATION

2: Riverfront Mixed-Use District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

DEVELOPMENT PROGRAM

- Residential 350 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels None
- Structured Parking 3,000 Spaces
- Park & Open Space 270,000 SF
- Renovation YES

NEW DEVELOPMENT ESTIMATES

- Building Heights 3 to 8 Stories (typ 6)
- Average FAR of 3.03
- Estimated Affordable Housing Units = 0

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

KEY PROJECTS

- Unite the Laclede's Landing Historic District and Lumiere Place to create a Riverfront Mixed-Use District
- Infill vacant | opportunity sites & Surface Parking Lots within the Laclede's Landing Historic District & Lumiere Place
- Improve pedestrian connections to Convention Center and North Downtown from the Landing & Lumiere Place
- Focus on 1st & 2nd Streets as mixed-use streets throughout riverfront district
- Parking Structure at the intersection of Morgan Street & Third Street
- Add major parking garage in the Lumiere Place area to serve new development & replace surface parking lots

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

INFRASTRUCTURE IMPROVEMENTS

- Laclede's Landing Streetscape Projects (associated with CityArchRiver 2015)
- Pedestrian & Streetscape improvements on Convention Plaza & Carr Street connecting underneath Interstate 70
- Streetscape Improvements and improved circulation on 1st Street & 2nd Street (in Laclede's Landing & Lumiere PLace)
- New Public Park | Green Spaces under the MLK Bridge, Adjacent to Lumiere Place & along the waterfront (with trail connections)
- Improvements to the Arch Grounds from the CityArchRiver 2015)

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES - LOOKING NORTHWEST
2: Riverfront Mixed-Use District

Residential
Commercial
Office
Parking
Hotel
Open Space

STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHEAST

2: Riverfront Mixed-Use District

Residential
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $240M
- Development Value = $145M
- Development Gap = $95M

- Return without Subsidy = 5.5%
- Return with Subsidy = 11.5%
  - Estimated Subsidies Available = $60M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

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 & Quality
+ Physical Features
++ Urban Design Quality
+++ Individual Perception & Experience

+++ Connectivity

+++ Parking Strategy

++ Other Highly Desirable Features

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

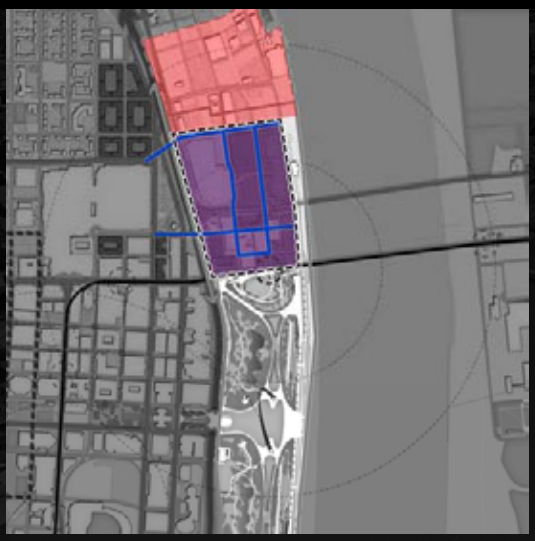
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Riverfront Mixed-Use District

IMPLICATIONS

- As part of this option, there would be synergy established between Laclede's Landing & Lumiere Place
- As part of this option, there would be NO new development in the area north of Carr Street and Lumiere Place
- As part of this option, there would be limited development program for infill within the Laclede's Landing
- As part of this option, there would be increased access, circulation, and parking throughout the Landing and Lumiere Place
- As part of this option, there would be a moderate increase in ridership



ARCH-LACLEDE'S STATION

3: Riverfront Regeneration

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

KEY PROJECTS

- Unite the Laclede's Landing Historic District, Lumiere Place, and the area north of Carr to establish an interconnected riverfront district
- Infill vacant | opportunity sites & Surface Parking Lots within the Laclede's Landing Historic District & Lumiere Place
- Focus on 1st, 2nd & Biddle Street, Carr Street and Convention Plaza as safe connections
- Add New Residential Development in the area north of Carr Street & connect to future Bottle District Development
- Parking Structure at the intersection of Morgan Street & Third Street
- Add major parking garage north of Lumiere Place area to serve new development & replace surface parking lots

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

DEVELOPMENT PROGRAM

- Residential 1,100 Units (1,000 SF/Unit)
- Retail 200,000 SF
- Office 400,000 SF (Renovation)
- Hotels None
- Structured Parking 3,500 Spaces
- Park & Open Space 400,000 SF
- Renovation YES

NEW DEVELOPMENT ESTIMATES

- Building Heights 3 to 10 Stories
- Average FAR of 2.62
- Estimated Affordable Housing Units = 330

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

INFRASTRUCTURE IMPROVEMENTS

- Biddle & Carr Street Connection Projects & streetscape enhancements to establish new entry to the area
- Enhanced Pedestrian & Streetscape improvements on Convention Plaza
- Streetscape Improvements on 1st Street, 2nd Street & Morgan Street in the Landing
- New Public Park | Green Spaces under the MLK Bridge & Adjacent to Lumiere & Hotel which connect to the & lots of recreation opportunities along riverfront with great connections to the riverfront trail
- Improvements to the Arch Grounds from the CityArchRiver 2015)

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING NORTHWEST
3: Riverfront Regeneration
Residential
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHEAST
3: Riverfront Regeneration
Residential
Commercial
Office
Parking
Hotel
Open Space

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $430M
- Development Value = $270M
- Development Gap = $160M

- Return without Subsidy = 4%
- Return with Subsidy = 7.5%
  - Estimated Subsidies Available = $90M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

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 & Quality
++++ Physical Features
+++ Urban Design Quality
+++ Individual Perception & Experience

++++ Connectivity

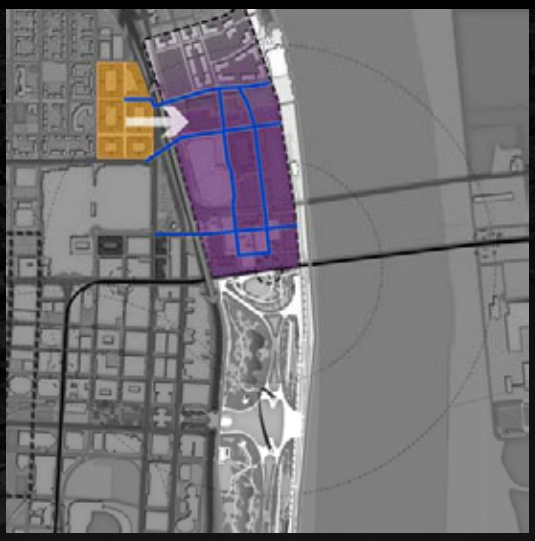
+++ Parking Strategy

++++ Other Highly Desirable Features

STATION AREA PLAN ALTERNATIVES
3: Riverfront Regeneration

IMPLICATIONS

- As part of this option, there would be concentrated development and synergy established between Laclede's Landing , Lumiere Place & the Area north of Carr Street
- As part of this option, there would be the future possibility of connecting west across Interstate 70 to new dvpt in the Bottle District
- As part of this option, there would be limited development program for infill within the Laclede's Landing
- As part of this option, there would be increased access, circulation, and parking throughout the station area
- As part of this option, there would be a large increase in ridership



ARCH-LACLEDE'S STATION PLAN ALTERNATIVES

SUMMARY

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

- Residential 250 Units (1,000 SF/Unit)
- Retail 50,000 SF
- Office 200,000 SF (Renovation)
- Hotels None
- Structured Parking 1,000 Spaces
- Park & Open Space 60,000 SF
- Renovation YES

2: Riverfront Mixed-Use District

- Residential 350 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels None
- Structured Parking 3,000 Spaces
- Park & Open Space 270,000 SF
- Renovation YES

3: Riverfront Regeneration

- Residential 1,100 Units (1,000 SF/Unit)
- Retail 200,000 SF
- Office 400,000 SF (Renovation)
- Hotels None
- Structured Parking 3,500 Spaces
- Park & Open Space 400,000 SF
- Renovation YES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District

- Development Cost = $145M
- Development Value = $90M
- Funding Gap = $55M
- Return w/o Subsidy = 6.5%
- Return w/ Subsidy = 12%

2: Riverfront Mixed-Use District

- Development Cost = $240M
- Development Value = $145M
- Funding Gap = $95M
- Return w/o Subsidy = 5.5%
- Return w/ Subsidy = 11.5%

3: Riverfront Regeneration

- Development Cost = $430M
- Development Value = $270M
- Funding Gap = $160M
- Return w/o Subsidy = 4%
- Return w/ Subsidy = 7.5%

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

MARKET CONCLUSIONS

- Demographic forecasts show the increasing importance of dense, urban development as an attractive option to singles and seniors
- Nearby new commercial developments and park amenities strengthen the Landing's economic opportunities
- Catalytic nature of TOD development has been shown to raise nearby property values → Higher rents in the areas adjacent to the station could be possible *if it is developed correctly*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – ARCH-LACLEDE'S LANDING

1: Revitalized Laclede's Landing Historic District	2: Riverfront Mixed-Use District	3: Riverfront Regeneration
++++++ Intensity of Res. & Emp.	+++++ Intensity of Res. & Emp.	+++++ Intensity of Res. & Emp.
+++++ Use Mix	+++++ Use Mix	++++ Use Mix
+++++ Urban Form & Quality	++++ Urban Form & Quality	+++ Urban Form & Quality
++++ Connectivity	+++++ Connectivity	++++ Connectivity
++++ Parking Strategy	+++++ Parking Strategy	+++ Parking Strategy
++++ Other Highly Desirable Feat.	++++ Other Highly Desirable Feat.	++++ Other Highly Desirable Feat.

ARCH-LACLEDE'S STATION

WORK-SESSION (15 MINUTES)

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK SESSION TASKS:

1. Review the Alternatives and indicate your comments, ideas, and suggestions about ...
   - Development Program
   - Development Strategy
   - Infrastructure Improvements
2. Draw it and see if it works!

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

ARCH-LACLEDE'S STATION

KEYPAD POLLING

STATION AREA PLAN ALTERNATIVES
KEYPAD POLLING QUESTIONS

- HOW IMPORTANT IS STRUCTURED PARKING WITHIN THE HISTORIC DISTRICT?
- HOW SUPPORTIVE ARE YOU OF USING PUBLIC FUNDS TO ATTRACT REDEVELOPMENT?
- HOW IMPORTANT IS THE LINEAR PARK AND OPEN SPACE ALONG THE RIVERFRONT?
- HOW IMPORTANT IS IT THAT BUILDINGS BE A RANGE OF HEIGHTS BETWEEN THREE (3) AND SIX (6) STORIES?
- HOW IMPORTANT IS THE ADDITION OF NEW RESIDENTIAL UNITS INTO THE STATION AREA?
- HOW IMPORTANT IS IT TO IMPROVE 1ST AND 2ND STREETS THROUGHOUT THE STATION AREA?
- HOW IMPORTANT IS IT TO PROVIDE STRUCTURED PARKING FOR VISITORS & STAFF TO THE ARCH GROUNDS?
- HOW IMPORTANT IS IT TO SPREAD NEW DEVELOPMENT THROUGHOUT LACLEDE'S LANDING & LUMIERE?
- HOW IMPORTANT IS IT TO FOCUS NEW DEVELOPMENT WITHIN THE HISTORIC LACLEDE'S LANDING DISTRICT?
- HOW IMPORTANT IS PROVIDING HOUSING FOR ALL PEOPLE OF ALL ECONOMIC BACKGROUNDS?
- HOW IMPORTANT IS A CONNECTION TO THE NORTH RIVERFRONT TRAIL NETWORK?
- HOW IMPORTANT IS IT THAT BUILDINGS BE A MIX OF HEIGHTS GREATER THAN SIX (6) STORIES?

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION
STATION AREA ANALYSIS

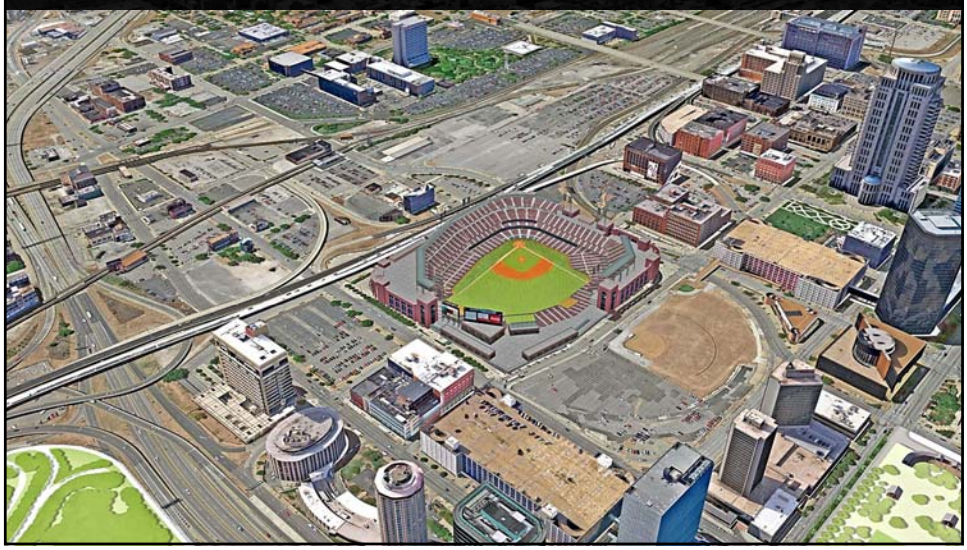
STADIUM STATION

PROJECT ASSUMPTIONS

- The planning horizon for this study is 10, 20, and 30 years, respectively.
- Metro facilities at both stations will be upgraded and improved.
- The CityArchRiver Project will be completed as planned, along with all improvements; including the removal of the parking structure.
- Phase 1.0 of Ballpark Village will be completed, as planned.
- ¼ mile and ½ mile transit sheds have been modified based on accessibility and concentrations of likely transit users.
- A % of Vacant office and retail within the ¼ and ½ mile transit sheds are assumed to have been renovated in all plan alternatives.
- The Cupples Building #9 will be demolished.

STADIUM STATION

TOD ACTION PLAN - LOOKING SOUTHWEST (EXISTING CONDITIONS)



STADIUM STATION
EXISTING CONDITIONS PHOTOGRAPHS

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION

KEY ISSUES

- Pedestrian shed is limited (south) due to rail & utility infrastructure
- Limited east-west circulation south of Busch Stadium
- Limited pedestrian connections north south near the stadium
- Development near Busch Stadium limited due to road infrastructure
- Anticipated need for structured parking
- Residential and employment densities are well below ideal
- Lacks residential uses throughout the area
- Station is used primarily for special events (gameday)

STADIUM STATION

KEY OPPORTUNITIES

- Abundance of surface parking lots and vacant land
- Immediate proximity to the Central Business District
- Busch Stadium has well established character
- Station area is the main entrance for many visitors to Busch Stadium
- Great opportunity to connect to the Chouteau Greenway
- Opportunity to leverage future Ballpark Village Development
- Close proximity to the Cupples District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION

MARKET ASSUMPTIONS

Rents per Unit or Square Foot

- Residential = $1.15-$1.25 per square foot
- Retail = $15.00 per square foot
- Office = $18.00 per square foot
- Structured Parking = $1,000 per space per year

Other Assumptions

- Assumes sale of all development components in year 30
- Modest inflation/growth rates
- Assumes development phased over a specific development timeline

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION PLAN ALTERNATIVES
Transit Sheds

- ¼ Mile Transit Shed
- ½ Mile Transit Shed

- ¼ mile and ½ mile transit sheds have been modified based on accessibility

- Proximity of adjacent stations and physical barriers (railroads and interstate) limit the transit sheds to areas significantly smaller than the ¼ and ½ mile radii

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION PLAN ALTERNATIVES
Transit Sheds – ¼ MILE

- Heavily influenced by street layout and pedestrian conditions

- High transit capture rate relative to surrounding area

- Population within the transit shed: 852

- Employment within the transit shed: 6,022

- Use Mix: 7

- Transit Catchment Rate: 15%

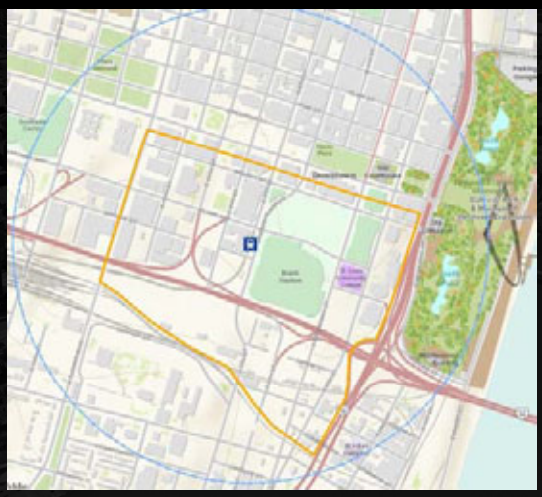
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION
PLAN ALTERNATIVES

Transit Sheds – ½ MILE

- Lower transit capture rate than quarter mile transit shed
- ½ Mile is about as far as someone will walk to transit
- Population within the transit shed: 860
- Employment within the transit shed: 8,546
- Use Mix: 10
- Transit Capture Rate: 10%



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION
PLAN ALTERNATIVES

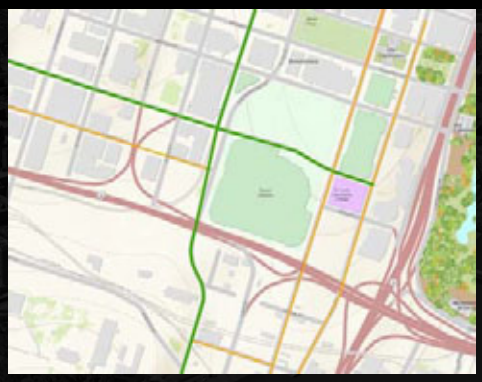
Opportunities

- Ballpark Village
- Underutilized Land South of I-64
- Two-Way Traffic on Walnut St

Transportation Improvements

- Follow Great Streets guidelines to create complete streets
- Replace uneven and damaged sidewalks
- Make all sidewalks and crosswalks ADA compliant

- Reimagine Clark Ave as a pedestrian-oriented sports corridor
- Update Spruce St as a neighorhood street within Cupples Station
- Seek opportunities for an east-west connection south of Stadium



STADIUM STATION

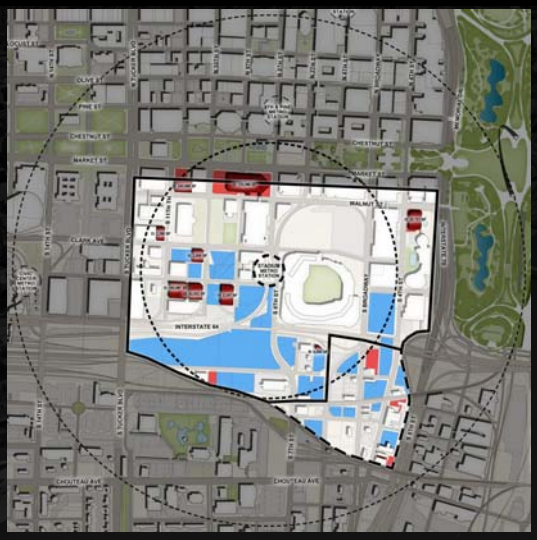
Vacancy: Buildings & Parcels

- Vacant Parcels
- Vacant Buildings
- Surface Parking

Within ½ Mile Transit Shed

- Vacant Office Space..... 70,000 SF
- Vacant Retail Space... 5,000 SF

Lots of Surface Parking Lots in Cupples Station and the area south of Interstate 64.



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION PLAN ALTERNATIVES

1. Enhanced Stadium Station Crossing Area
2. Busch Stadium Mixed-Use District
3. Busch Village South District

STADIUM STATION

1: Enhanced Stadium Station Crossing Area

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

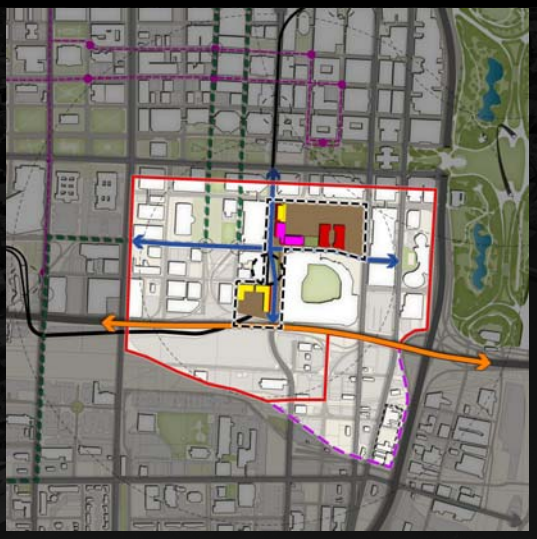
1: Enhanced Stadium Station Crossing Area

DEVELOPMENT PROGRAM

- Residential 300 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels (1) Total (250,000 estimated)
- Structured Parking None
- Park & Open Space 25,000 SF
- Renovation YES

NEW DEVELOPMENT ESTIMATES

- Building Heights 2 to 10 Stories (7-8 typ)
- Average FAR of 2.05
- Estimated Affordable Housing Units = 0



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Enhanced Stadium Station Crossing Area

KEY PROJECTS

- Focus improvements & enhancements around the existing Metrolink Station and along 8th Street & Clark Street
- Concentrate development on the blocks north and south of the station along 8th Street
- New commercial & mixed-use developments as part of Ballpark Village (fronting onto 8th Street & Clark Street)
- New Mixed-Use Development across (west) from Busch Stadium (above existing Metrolink Line)

Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

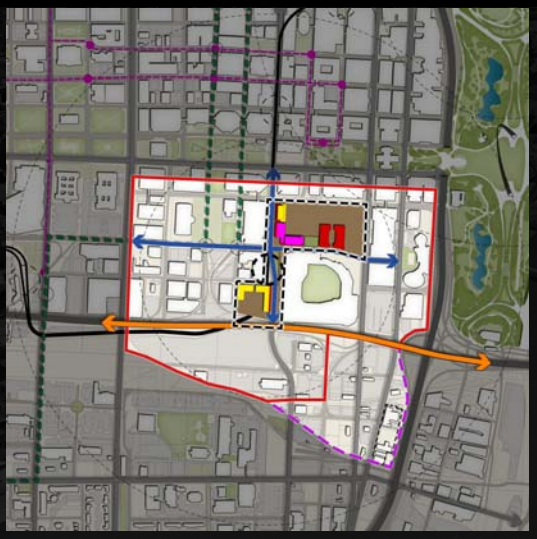
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
1: Enhanced Stadium Station Crossing Area

INFRASTRUCTURE IMPROVEMENTS

- Streetscape improvements along both Clark Avenue & 8th Street (including conversion of 8th Street to two-way traffic to Market Street.
- Close Stadium Plaza between Walnut & Clark Streets
- New Plaza along west side of existing Busch Stadium & New Plaza as part of Ballpark Village



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING NORTHWEST
1: Enhanced Stadium Station Crossing Area
Residential
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHEAST
1: Enhanced Stadium Station Crossing Area
Residential
Commercial
Office
Parking
Hotel
Open Space

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $145M
- Development Value = $115M
- Development Gap = $30M

- Return without Subsidy = 4%
- Return with Subsidy = 9%
  - Estimated Subsidies Available = $50M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area

ESSENTIAL ATTRIBUTES

+++++ Increased Intensities of residents and employees

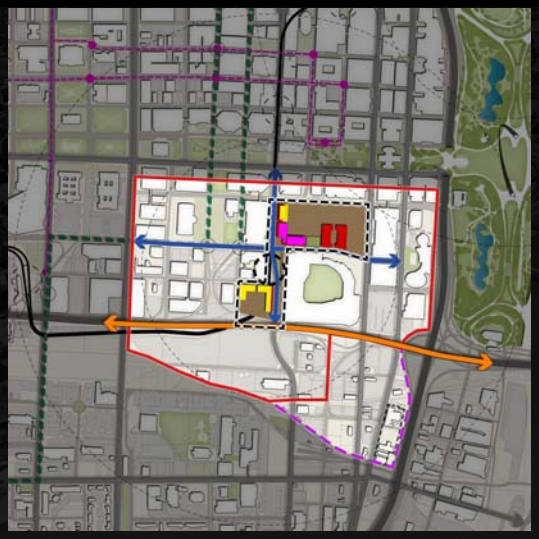
+++++ Use Mix reflecting a Fine Grain, diverse blend of Land-Uses including retail, office, residential, and public space

+++++ Urban Form & Quality
++++ Physical Features
++++ Urban Design Quality
++++ Individual Perception & Experience

+++++ Connectivity

+++++ Parking Strategy

+++++ Other Highly Desirable Features



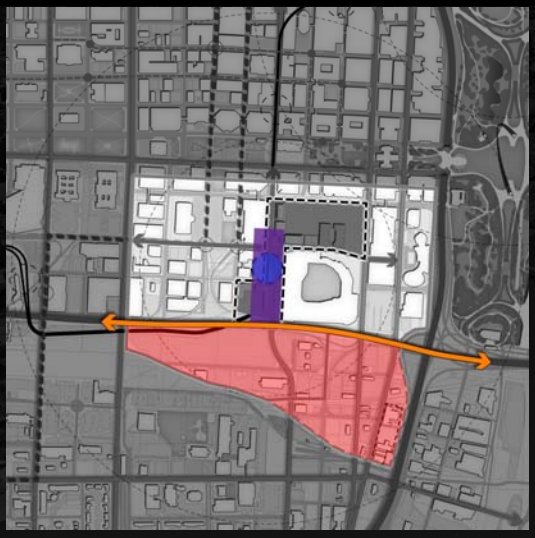
Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

STATION AREA PLAN ALTERNATIVES

1: Enhanced Stadium Station Crossing Area

IMPLICATIONS

- As part of this option, there would be NO new development south of I64
- As part of this option, there would be NO increased connectivity through the station area
- As part of this option, there would be limited development of Ballpark Village (focused on near the station & stadium)
- As part of this option, there would be limited increase in ridership



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STADIUM STATION

2: Cupples | Ballpark District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

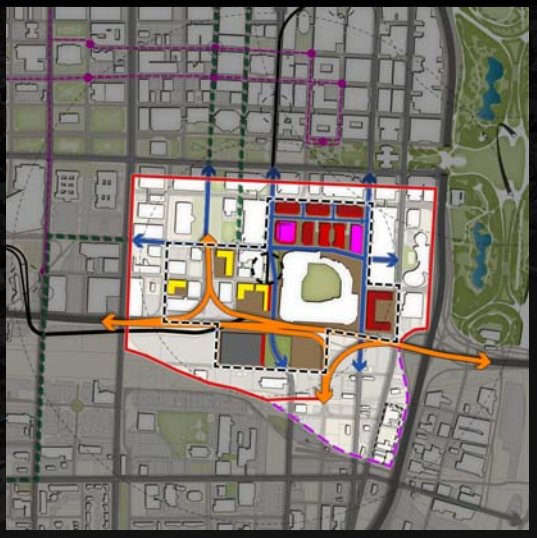
STATION AREA PLAN ALTERNATIVES
2: Cupples | Ballpark District

DEVELOPMENT PROGRAM

- **Residential** 450 Units (1,000 SF/Unit)
- **Retail** 250,000 SF
- **Office** 650,000 SF (Renovation)
- **Hotels** (2) Total (600,000 estimated)
- **Structured Parking** 1,800 Spaces
- **Park & Open Space** 70,000 SF
- **Renovation** YES

NEW DEVELOPMENT ESTIMATES

- **Building Heights** 2 to 10 Stories (4, 7-8 typ)
- Average FAR of 3.70
- Estimated Affordable Housing Units = 110



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

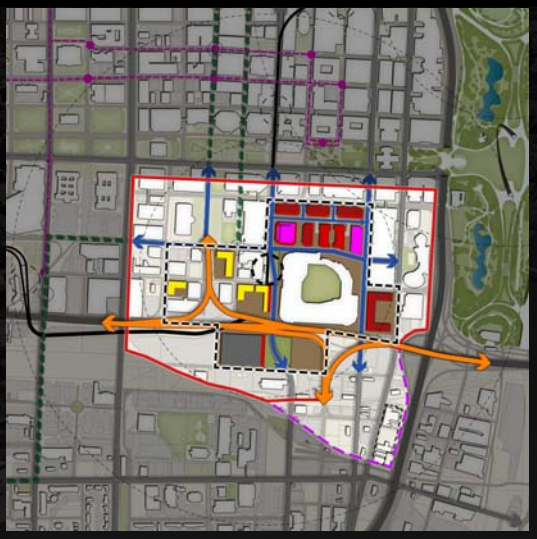
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Cupples | Ballpark District

KEY PROJECTS

- Focus improvements & enhancements around the perimeter of Busch Stadium, establishing and uniting the Cupples Historic District and Busch Stadium
- Full Development of Ballpark Village (fronting onto 8th Street, Clark Street, Broadway Street & Walnut Street)
- Infill Development in Cupples Station Historic District & New sites established by infrastructure reconfiguration
- New Development both east & west of Busch Stadium
- New Development & Parking Structure south of interstate 64 along 8th Street



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

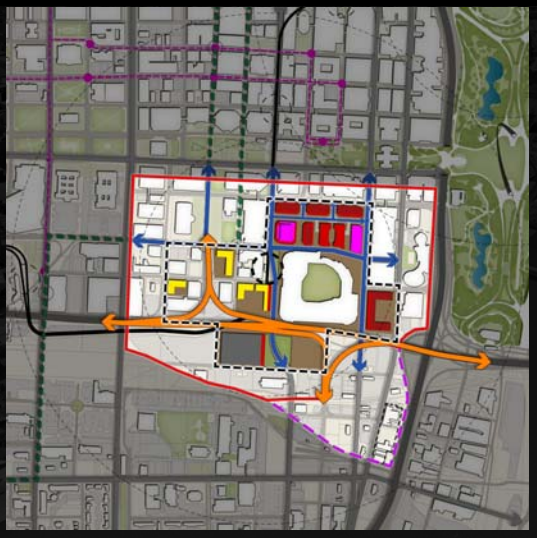
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Cupples | Ballpark District

INFRASTRUCTURE IMPROVEMENTS

- Reconfiguration & improvement of the Interstate 64 ramps (through Cupples; including conversion of 10th Street to two-way to Market Street)
- Streetscape improvements along both Clark Avenue & 8th Street (including conversion of 8th Street to two-way traffic to Market Street
- Streetscape improvements to Broadway Street from Cerre Street to Market Street
- Close Stadium Plaza between Walnut & Clark Streets; and add new street east-west through Ballpark Village.
- New Plaza area along west side of existing Busch Stadium; and New Green Space | Open Space south of Busch Stadium (adjacent to existing & new entertainment venues and parking structure)



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES - LOOKING NORTHEAST
2: Cupples | Ballpark District

Residential
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHWEST

2: Cupples | Ballpark District

Residential
Commercial
Office
Parking
Hotel
Open Space

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $395M
- Development Value = $355M
- Development Gap = $40M

- Return without Subsidy = 3%
- Return with Subsidy = 7.5%
- Estimated Subsidies Available = $140M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Cupples | Ballpark District

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 & Quality
++++ Physical Features
+++++ Urban Design Quality
++++ Individual Perception & Experience

++++ Connectivity

+++++ Parking Strategy

+++++ Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
2: Cupples | Ballpark District

IMPLICATIONS

- As part of this option, there would be limited new development south of I64
- As part of this option, there would be new synergy between Cupples Station & Ballpark Village
- As part of this option, there would be NO increased connectivity through the station area
- As part of this option, there would be an enhanced entrance into Downtown with new development in the Cupples area
- As part of this option, there would be a full redevelopment of Ballpark Village
- As part of this option, there would be a moderate increase in ridership

STADIUM STATION

3: Cupples, Ballpark, Chouteau Mixed-Use District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES

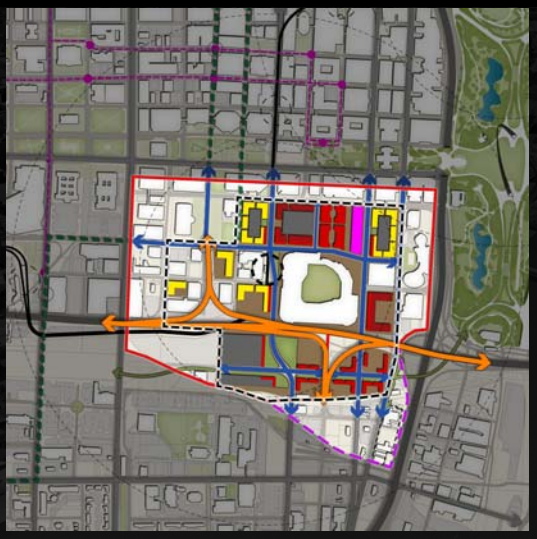
3: Cupples, Ballpark, Chouteau Mixed-Use District

DEVELOPMENT PROGRAM

- Residential 950 Units (1,000 SF/Unit)
- Retail 400,000 SF
- Office 850,000 SF (Renovation)
- Hotels (1) Total (450,000 estimated)
- Structured Parking 5,000 Spaces
- Park & Open Space 125,000 SF
- Renovation YES

NEW DEVELOPMENT ESTIMATES

- Building Heights 1 to 10 Stories (1, 5-8 typ)
- Average FAR of 2.92
- Estimated Affordable Housing Units = 280



Residential
Commercial
Office
Open Space
Parking
Hotel
Street Improvements
Prop. Downtown Streetcar
Interstate | Highway
N / S Metrolink Alignment

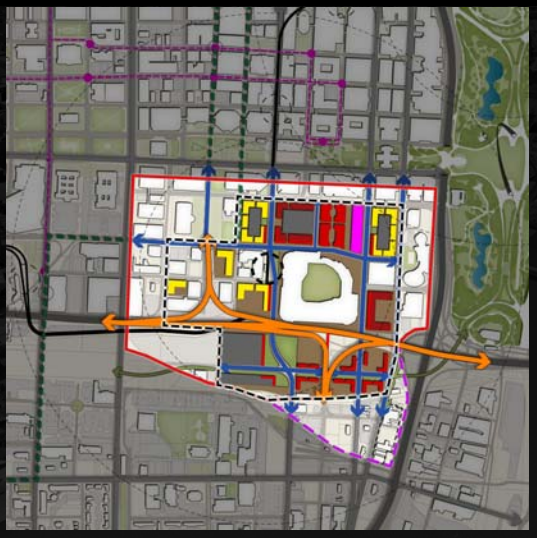
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Cupples, Ballpark, Chouteau Mixed-Use District

KEY PROJECTS

- Focus on uniting the Cupples District, Ballpark Village, and new development south in the Chouteau area
- Modified Development of Ballpark Village (fronting onto 8th Street & Clark Street)
- Establishment of New Mixed-Use Entertainment Area in the Chouteau area, south of Busch Stadium
- Infill Development in Cupples Station Historic District & New sites established by infrastructure reconfiguration
- Redevelop the existing East & West Stadium Parking Structures into Mixed-Use



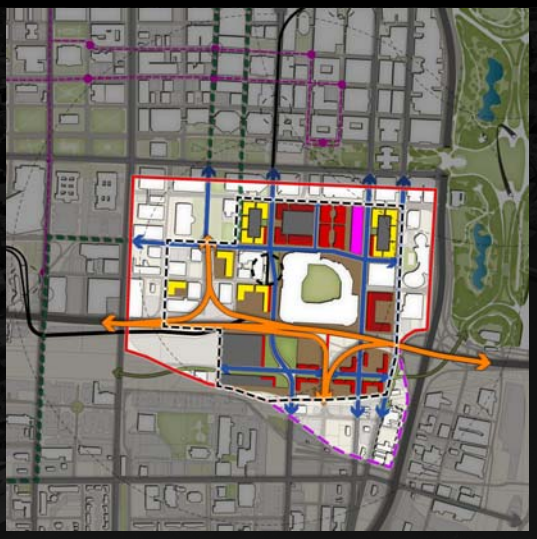
TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

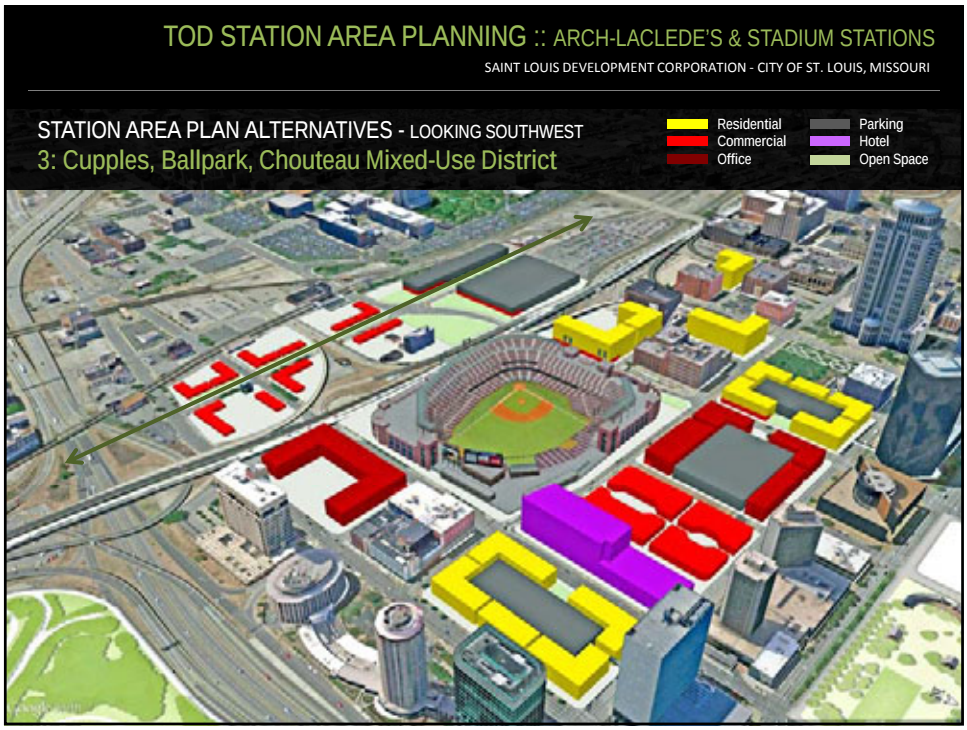
STATION AREA PLAN ALTERNATIVES
3: Cupples, Ballpark, Chouteau Mixed-Use District

INFRASTRUCTURE IMPROVEMENTS

- Reconfiguration & improvement of the Interstate 64 ramps (through Cupples; including conversion of 10th Street to two-way to Market Street)
- Streetscape improvements along both Clark Avenue, 8th Street, Broadway Street, & 4th Street (including conversion of 8th Street to two-way traffic to Market Street
- Close Stadium Plaza between Walnut & Clark Streets; and add new north-south street through the modified Ballpark Village.
- Provide east-west connector tunnel on Cerre
- New Plaza area along west side of existing Busch Stadium
- New Green Space | Open Space south of Busch Stadium (connecting to the future Chouteau Greenway & new plaza spaces)



TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING NORTHEAST
3: Cupples, Ballpark, Chouteau Mixed-Use District
Residential
Commercial
Office
Parking
Hotel
Open Space


TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
STATION AREA PLAN ALTERNATIVES - LOOKING SOUTHWEST
3: Cupples, Ballpark, Chouteau Mixed-Use District
Residential
Commercial
Office
Parking
Hotel
Open Space

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

MARKET CONCLUSIONS

Preliminary Financial Outcome

- Development Cost = $605M
- Development Value = $450M
- Development Gap = $155M

- Return without Subsidy = 1.5%
- Return with Subsidy = 5%
  - Estimated Subsidies Available = $165M*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Cupples, Ballpark, Chouteau Mixed-Use District

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 & Quality
+++ Physical Features
++++ Urban Design Quality
++ Individual Perception & Experience

+++++ Connectivity

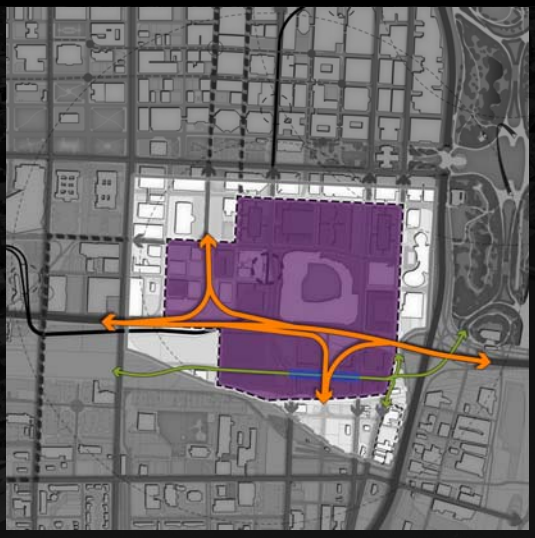
++++ Parking Strategy

++++ Other Highly Desirable Features

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
3: Cupples, Ballpark, Chouteau Mixed-Use District



IMPLICATIONS

- As part of this option, there would be lots of new development and pedestrian & bicycle connectivity south of I64
- As part of this option, there would be lots of increased connectivity south of I64
- As part of this option, there would be new synergy between Cupples Station, Ballpark Village, and the Chouteau area
- As part of this option, there would be a full modified Ballpark Village & redevelopment of the existing garage
- As part of this option, there would be a large increase in ridership

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- Residential 300 Units (1,000 SF/Unit)
- Retail 150,000 SF
- Office 250,000 SF (Renovation)
- Hotels (1) Total (250,000 estimated)
- Structured Parking None
- Park & Open Space 25,000 SF
- Renovation YES

2: Cupples | Ballpark District

- Residential 450 Units (1,000 SF/Unit)
- Retail 250,000 SF
- Office 650,000 SF (Renovation)
- Hotels (2) Total (600,000 estimated)
- Structured Parking 1,800 Spaces
- Park & Open Space 70,000 SF
- Renovation YES

3: Cupples, Ballpark, Chouteau Mixed-Use District

- Residential 950 Units (1,000 SF/Unit)
- Retail 400,000 SF
- Office 850,000 SF (Renovation)
- Hotels (1) Total (450,000 estimated)
- Structured Parking 5,000 Spaces
- Park & Open Space 125,000 SF
- Renovation YES

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

- Development Cost = $145M
- Development Value = $115M
- Funding Gap = $30M
- Return w/o Subsidy = 4%
- Return w/ Subsidy = 9%

2: Cupples | Ballpark District

- Development Cost = $395M
- Development Value = $355M
- Funding Gap = $40M
- Return w/o Subsidy = 3%
- Return w/ Subsidy = 7.5%

3: Cupples, Ballpark, Chouteau Mixed-Use District

- Development Cost = $605M
- Development Value = $450M
- Funding Gap = $155M
- Return w/o Subsidy = 1.5%
- Return w/ Subsidy = 5%

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS

SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES – STADIUM STATION

1: Enhanced Stadium Station Crossing Area

++++++ Intensity of Res. & Emp.
++++++ Use Mix
+++++ Urban Form & Quality
+++++ Connectivity
+++++ Parking Strategy
+++++ Other Highly Desirable Feat.

2: Cupples | Ballpark District

++++++ Intensity of Res. & Emp.
++++++ Use Mix
+++++ Urban Form & Quality
++++++ Connectivity
++++++ Parking Strategy
++++++ Other Highly Desirable Feat.

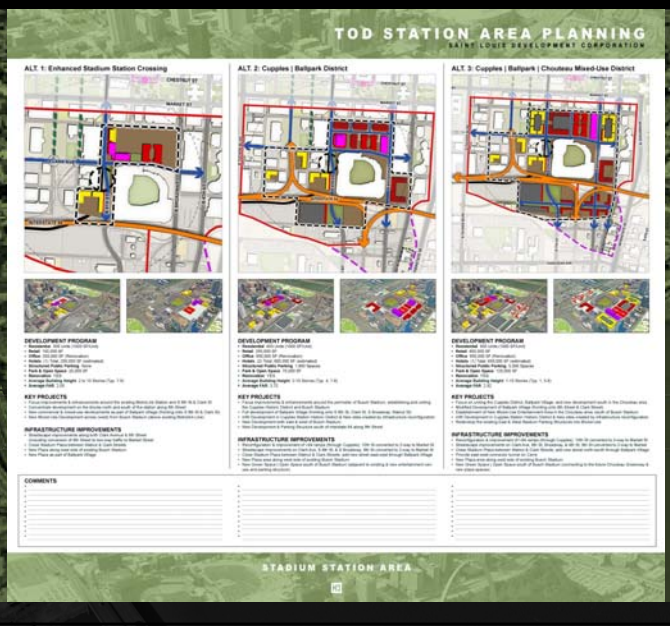
3: Cupples, Ballpark, Chouteau Mixed-Use District

+++++ Intensity of Res. & Emp.
++++++ Use Mix
+++++ Urban Form & Quality
+++++ Connectivity
+++++ Parking Strategy
+++++ Other Highly Desirable Feat.

STADIUM STATION

WORK-SESSION (15 MINUTES)

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI



STATION AREA PLAN ALTERNATIVES – STADIUM STATION

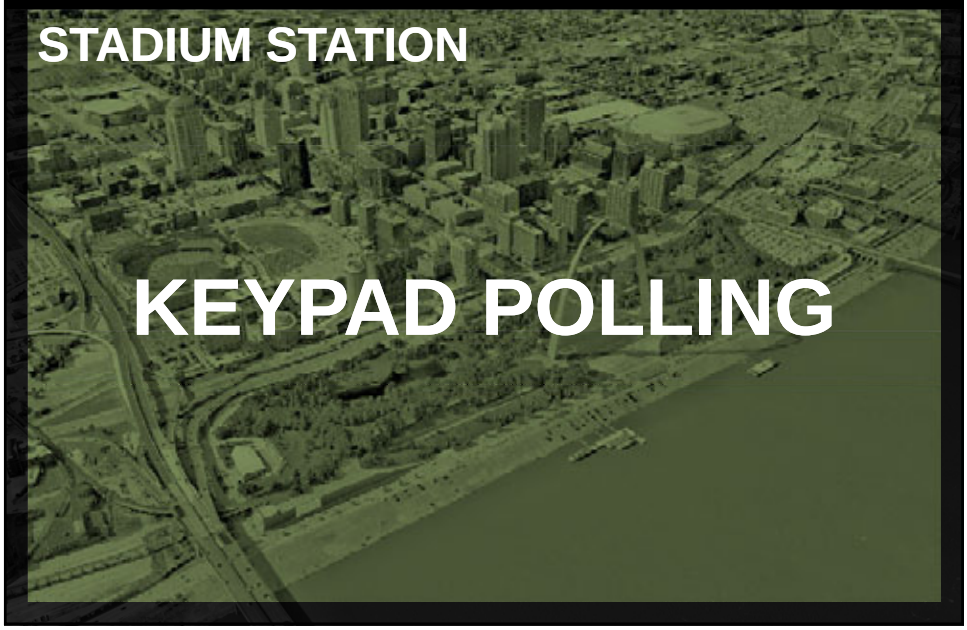
MARKET CONCLUSIONS

- The Stadium Station area has ample room for new development that could attract various types of uses
- The development of Ballpark Village will help transform the area from a sports-event focused area to a year-round entertainment, office, and residential area
- Catalytic nature of TOD development has been shown to raise property values → Higher rents in the areas adjacent to the station could be possible *if it is developed correctly*

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

WORK SESSION TASKS:

1. Review the Alternatives and indicate your comments, ideas, and suggestions about …
   - Development Program
   - Development Strategy
   - Infrastructure Improvements
2. Draw it and see if it works!



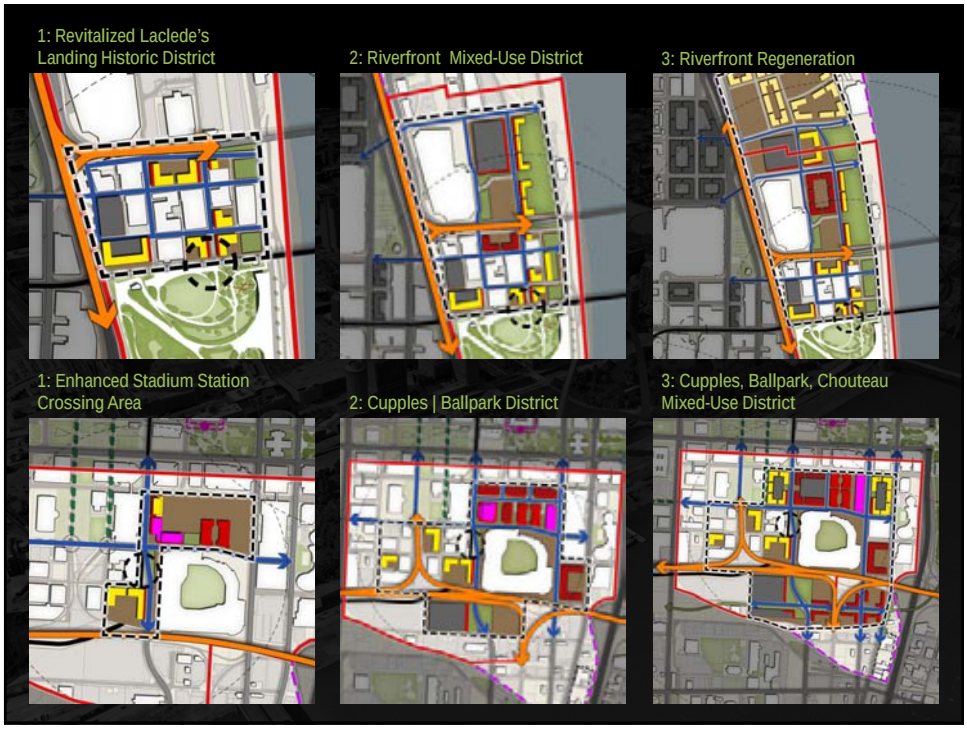
STADIUM STATION

KEYPAD POLLING

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI

STATION AREA PLAN ALTERNATIVES
KEYPAD POLLING QUESTIONS

- HOW IMPORTANT ARE STREET IMPROVEMENTS TO CLARK AVENUE AND 7TH STREET?
- HOW IMPORTANT IS STRUCTURED PARKING IN THE AREA SOUTH OF INTERSTATE 64?
- HOW IMPORTANT IS INFILL AND REDEVELOPMENT OF THE CUPPLES STATION HISTORIC DISTRICT?
- HOW IMPORTANT IS IT TO INCREASE CONNECTIVITY FROM EAST TO WEST IN THE AREA SOUTH OF INTERSTATE 64?
- HOW IMPORTANT IS THE ADDITION OF NEW RESIDENTIAL UNITS INTO THE STATION AREA?
- HOW IMPORTANT IS THE ADDITION OF NEW OFFICE SPACE INTO THE STATION AREA?
- HOW IMPORTANT IS NEW DEVELOPMENT SOUTH OF INTERSTATE 64?
- HOW SUPPORTIVE ARE YOU OF USING PUBLIC FUNDS TO ATTRACT REDEVELOPMENT?
- HOW IMPORTANT IS IT TO FOCUS NEW DEVELOPMENT WITHIN THE BALLPARK VILLAGE AREA?
- HOW IMPORTANT IS PROVIDING HOUSING FOR ALL PEOPLE OF ALL ECONOMIC BACKGROUNDS?
- HOW IMPORTANT ARE NEW HOTELS AND LODGING OPPORTUNITIES IN THE STATION AREA?
- HOW IMPORTANT IS THE CHOUTEAU GREENWAY TRAIL CONNECTION THROUGH THE STATION AREA?


1: Revitalized Laclede's Landing Historic District
2: Riverfront Mixed-Use District
3: Riverfront Regeneration
1: Enhanced Stadium Station Crossing Area
2: Cupples | Ballpark District
3: Cupples, Ballpark, Chouteau Mixed-Use District

TOD STATION AREA PLANNING :: ARCH-LACLEDE'S & STADIUM STATIONS
SAINT LOUIS DEVELOPMENT CORPORATION - CITY OF ST. LOUIS, MISSOURI
NEXT PUBLIC MEETING:
JULY 25, 2013
THANK YOU!!!
www.stlouis-mo.gov/sldc/documents/Station-Area-Planning.cfm

B

Public Engagement
Vector Communications Corporation

VECTOR
COMMUNICATIONS℠

Public Engagement Report for Transit-Oriented Development Station Plan Arch-Laclede's Landing & Stadium Stations

Submitted:
August 26, 2013

PUBLIC ENGAGEMENT PROCESS

Sponsored by the City of St. Louis through the St. Louis Development Corporation (SLDC), the Transit Oriented Development Station Area Plans project, is a six-month process to create transit oriented development plans for MetroLink station areas including: Delmar Loop/Forest Park-DeBaliviere; Arch-Laclede's Landing; and Stadium. This process is part of the OneSTL – Regional Plan for Sustainability, a three-year initiative led by East West Gateway Council of Governments, to prepare a regional sustainability plan for the bi-state metropolitan St. Louis area.

As part of the process, the planning team engaged key stakeholders and the public to gain their insights during the plan development process. The purpose of community engagement is to ensure that the public and all interested stakeholders are actively engaged in the development of the station area plans; are fully aware of the planning and decision-making process; and to educate and initiate support on the recommended alternatives. Between May and July 2013, the planning team conducted twelve stakeholder interviews, hosted one interactive public work session, and two technical advisory committee meetings.

Public Work Session Summary

One public work session was held for the downtown station areas, Arch-Laclede's Landing and Stadium on Thursday May 23, 2010 at Confluence Preparatory Academy. This work session invited participants to review three development plan options for each station area and to provide feedback and ask questions. Advance notice of the work session was provided via post card mailer to residents and businesses within a quarter mile (786 pieces), door-to-door flyer delivery to residents and businesses within a half mile (1,600 pieces), emailed flyer to database, social media posts to Facebook and Twitter, community newsletter and website post via Partnership for Downtown St. Louis.

In all, there were nine participants in the interactive work session. During the meeting, the team presented the draft plan alternatives and facilitated participants in a work session where they provided feedback directly on printed plan diagrams at each table. To conclude the session, attendees participated in a keypad polling exercise to identify desired features, like linear parks along the riverfront, building heights, affordable housing and structured parking.

Four comment forms were submitted. The following is a summary of responses.

All of the respondents indicated that they work in or near the station area. One respondent self-identified as an area resident.

Seventy-five percent of respondents indicated that they ride MetroLink on special

occasions; while one rides monthly.

Respondents were split 50/50 when asked how they heard about the meeting. Two heard about the meeting via social media and two via email.

On a scale of 1 to 5, respondents indicated the meeting was informative (1.5), helpful (1.25), prepared (1.25), well planned (1.25), and worth their time (1.5).

When asked what would make this project a success, one respondent said, "Provide feedback through various media." Additional comments were that "there should be lighting on the MLK Bridge."

Because so few community members participated, the project scope was revised to remove the second public meeting and replace the meeting with additional stakeholder interviews.

STAKEHOLDER INPUT

Vector Communications conducted twelve stakeholder interviews with various stakeholders who represent various interests within the within the Downtown – Arch-Laclede's Landing and Stadium station areas. These interviews offered key stakeholders the opportunity to envision the area's future with added developments supported by the nearby transit stop. Stakeholders also provided ideas for evaluating the new developments.

The interview findings have been summarized and are presented on the subsequent pages. The complete transcripts are located in the appendices following this summary.

Methodology

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 each stakeholder were developed to provoke thought about the current needs that exist within the station area and how effectively the proposed plans could address those needs. The discussions focused on the benefits, challenges, opportunities and threats to implement the proposed plans. Stakeholders were also asked about their overall vision for these future developments. These face-to-face interactions not only facilitated meaningful dialogue, but also provided the interviewer an opportunity to update stakeholders on the plan as it developed with feedback from the team, technical advisory committee, stakeholders, and the public.

Below is a list of the stakeholders interviewed.

Downtown Station Area

1. Ron Watermon (STL Cardinals)
2. Alderwoman Phyllis Young (7th Ward)
3. Gary Pohrer (STL Parking)
4. John Clark (Laclede's Landing CID)
5. Garrick Hamilton (Koman Group)
6. Deanna Venker (Missouri Department of Transportation)
7. Maggie Hales (CAR 2015)
8. Susan Troutman (Great Rivers Greenway)
9. Matt Schindler (Partnership for Downtown St. Louis)
10. Earline Bell (Downtown Residents Association)
11. Jayson Pollard (Hilton at the Ballpark)
12. Kim Cella (CMT)

SUMMARY OF MAJOR THEMES

DOWNTOWN – ARCH-LACLEDE'S LANDING AND STADIUM STATION AREAS

Question 1 – Overall Impressions of Plan Direction

What are your initial thoughts about this direction for the plan? Does it plan for new developments as you would see them?

- Plan is inline with current vision for area
- Answers the need for more residential density
- Takes advantage of the views – river and ballpark
- Focuses on pedestrian experience and not just parking

Overall, respondents were positive about the direction of the draft plans. Particularly In Laclede's Landing, stakeholders considered the plan to be inline with existing formal or informal strategies to increase residential density and extend green space on the riverfront. This plan is timely as it is more likely to move forward due to the momentum from nearby developments, like the Arch-Riverfront renovation project, high speed fiber optic installation in Laclede's Landing, reconstruction of sidewalks and streets to meet ADA requirements, the Trestle Greenway project, and the new Mississippi River Bridge.

At the stadium station, stakeholders expressed a desire to increase density around the station and ballpark. Comments were clear that prioritization would be key as many of the plan components would need to overcome challenging approval processes – i.e. relocating I-64 on and off ramps at 10th street, building over/under highway infrastructure or railway tracks. In addition, stakeholders were concerned that the plan

should not include the area south of I-64, which could leave a gap in connectivity with the southern neighborhoods.

Question 2 – Benefits of Plan As Presented

How can new developments around these MetroLink station be a benefit to visitors, employers/institutions, employees, and residents?

- Increased residential density downtown leads to business development
- Improved walkability and accessibility – GRG trails and improved streetscapes
- Builds off momentum from Arch-Riverfront renovation (CAR 2015)
- Reestablishes Laclede's Landing from party central to mixed office, residential and entertainment district
- Provides a catalyst for other development projects to re-engage

Stakeholders were clear that the planned developments would be a great benefit to downtown. The most often identified benefit was new residential developments. New residential would help stabilize downtown St. Louis overall and leverage assets like views of the river and ballpark. Stakeholders were hopeful that the station area developments could entice visitors and residents to be "car-free" in downtown St. Louis. Additional benefits include improvements to walkability and accessibility throughout the station areas, via GRG trails, improved street grid, streetscapes, and pedestrian focused ground floor spaces.

Overall, stakeholders were confident about the planned developments and how they could improve the station area's unique experiences for pedestrians, residents, and visitors. They were also optimistic about the plan's potential to fill a development gap between projects to the North and South of the station area. These projects include the Arch-Riverfront renovation by CAR 2015 to the south, and the new Mississippi River Bridge and Trestle Greenway to the North. Stakeholders were also optimistic that these station area plans could catalyze and accelerate other planned projects like Chouteau Lake and Ballpark Village Phase II.

Question 3 – Challenges of Plan As Presented

How can new developments around these MetroLink stations be a challenge for visitors, employers/institutions, employees, and residents?

- Connecting to surrounding neighborhoods – i.e. crossing highways into the south from the Stadium station and into downtown from Arch-Laclede's Landing
- Including enough parking, while promoting transit
- Balancing increased density/congestion with pedestrian and car traffic
- Mixing residential and entertainment venues within close proximity

- Maximizing development potential and attracting developers
- Accounting for actual demand in housing and hotel rooms

Stakeholders identified a few key challenges that could come as a result of the planned developments. One main challenge would be mixing residential and entertainment in the same vicinity. In both station areas, the key plan components include residential mixed in with entertainment and nightlife. Stakeholders were concerned that residents would be less likely to live in an area that caters to loud after-hours bars and rowdy patrons. In the Arch-Laclede's Landing station area, stakeholders were cognizant that high-rise buildings would need to be staggered in height to allow for more views – especially not to block the Four Seasons Hotel views.

In the Stadium station area, some stakeholders pointed out the difficulty of walking from the train station through the district, especially to get to the east side of the ballpark. It was stated that there would need to be a very unique and engaging pedestrian experience – outside of game days – to make people feel comfortable enough to walk from the stadium station to anything along S. Broadway. In addition, the high-rise residential tower at the corner of Broadway and Clark Ave. was identified as a challenge because it would take away from the "magic" of being at the ballpark by blocking views of the Old Court House and Arch as the fans look out of the park. and looking out of the park toward the Old Court House and Arch.

Most stakeholders welcomed new high-rise residential in both station areas and identified a need for form-based zoning codes that maximize development potential and guide developers to create a cohesive community. For instance, stakeholders were concerned about the height and character of new buildings within the station areas, particularly near the stadium station. This area is known for brick historic buildings, less than twelve stories tall. Stakeholders grappled with the idea of building higher than twelve stories, or using more modern facades. However, they were clear that taller buildings were needed in the station areas to take advantage of views and natural light. Additional concerns were ensuring that the city does not overbuild both housing and hotel rooms. Another concern was how to balance traffic and parking needs with transit-focused developments, in a city that currently defaults toward driving.

Question 4 – Businesses and Amenities

What types of new businesses or amenities would you envision around this station? Any planned new developments of which you are aware?

- Resident focused businesses, i.e. grocers, convenience, drug store, dry cleaners, clothing retail, lifestyle retail
- Tourist focused businesses, i.e. restaurants, entertainment
- High-tech businesses in Laclede's Landing – due to new fiber optics
- Amenities – bathrooms, rest stops, food, and safety

Planned residential developments spurred suggestions of resident-focused businesses in both station areas. Resident-focused businesses such as convenience stores, dry cleaners, small grocers, clothing retailer, lifestyle retailers and restaurants were some suggestions. In addition, stakeholders were interested in businesses and amenities that cater to visiting tourist in both station areas. Amenities like bathrooms, benches, casual and fine dining, way finding, universal design, public art, parking and lighting were all suggested for these areas. In the Arch-Laclede's Landing station area, various stakeholders are working together to coordinate way finding between the roadways, bridges, MetroLink station and Arch-Riverfront. It will be important for any form-based code to include way finding as part of the overall strategy in the station area.

Question 5 – Housing Types

What types of housing *(condos, apartments, how many stories tall)* would you envision around this station?

- Market rate condominiums and apartments
- Mixed developments with condos and apartments – i.e. affordable options
- Increased building heights to take advantage of views
- Mixed use buildings with pedestrian level retail

Stakeholders were clear that the market should dictate the type of housing options presented in the station areas. Some suggested types would be high-end condominiums and apartments with the best views of the river and ballpark. These developments could be mixed use buildings with market rate apartments and condominiums; however, stakeholders expressed apprehension about building stable residential communities. Some also indicated that the market has changed due to the most recent housing crisis, causing older homeowners to reconsider their purchasing choices. It was indicated that these homeowners would prefer more affordable housing options with downtown amenities. Overall, stakeholders were adamant that bringing new residents into downtown is most important to the success of transit-oriented developments and would have the biggest impact.

Question 6 – Evaluation Criteria

What should the team consider when evaluating a Transit Oriented Development plan for this area?

- Engaging property owners in planned development areas
- Leveraging residential demand with market constraints
- Evaluating funding priorities, political support, and impact vs. effort
- Accounting for development pressures from additional projects moving forward – i.e. Trestle, Mississippi River Bridge, Arch-Riverfront renovation, fiber optic

installation and pending property acquisition with potential new residential units in Laclede's Landing
- Pending sale of Lumiere Casino
- Tying all of the plans together in a strategic manner

To evaluate the development plans, stakeholders overwhelmingly mentioned that property owners will need to be convinced of the feasibility of the plan and be heavily engaged in the implementation process. For instance, the Stadium station area plan currently indicates new building structures on parking lots currently under long-term lease by the St. Louis Cardinals. While a representative from the organization has been engaged in the planning process, it is pertinent to have further discussions regarding the organization's intentions for potential development on these parcels. For the Arch-Laclede's Landing station area, the parking lot currently adjacent to the Lumiere Casino and owned by Pinnacle Entertainment will be a key parcel to implementation efforts. This was identified as a particular challenge as the property is currently up for sale and new owners will need to be engaged in the process going forward. In addition, Pinnacle Entertainment has been slightly engaged in the planning process, but has yet to express the organization's standing in regard to the draft plans as presented.

Ultimately, stakeholders want to see a clear evaluation of potential funding sources, political support for the plans, complimentary developments, and market opportunities. In all, the evaluative criterion identified by these stakeholders has been built into the planning process and will be taken into account to finalize and implement the plans.

Question 7 – Make You A Commuter

If it's not already, what could make this station and MetroLink part of your commute?

- Increased connectivity to other parts of the region
- Improved safety and pedestrian experience
- Make MetroLink irresistible – ease of navigating, improved experience, best option for key destinations

The stakeholders interviewed were comprised of mostly occasional transit riders. However when asked, most stakeholders stated that they would gladly ride MetroLink if there was more connectivity within the region to get them to their destinations. Providing a built up environment around the stations would entice these stakeholders to ride more frequently. The number on priority would be to enhance the feeling of safety for riders getting to and at each station.

Question 8 - Vision

What is your vision for this area of downtown in the next 10 to 20 years? What will the

news say about Arch-Laclede's Landing or the Stadium area in 10 to 20 years

- Everyone wants to live on the downtown waterfront and now they can .
- Downtown St. Louis is a livable community where businesses, tourist, and residents mix and mingle.
- You can live "car-free" in downtown.

In both station areas, stakeholders envisioned a more resident friendly area with amenities for tourist and visitors. These station areas would highlight and take advantage of the "under-leveraged" river views and ballpark experience. The developed areas would also entice both young and elder residents who want to live a "car-free" lifestyle in an urban environment. Once implemented, the area would attract businesses, especially those that promote healthy urban living for its customers and employees

A full record of Downtown station areas – Arch-Laclede's Landing and Stadium stakeholder comments is attached as Appendix A.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #1
June 2013

1. **Initial Thoughts:**
    a. *More development West and North.* Doesn't seem to leverage west of the station and north as much as we would like.
    b. *Enhance Garage Area.* Now that the bridge is down, could do something with the street level, particularly on 8th Street side I would look at what I could do with retail and restaurant.
    c. *Views from hotel.* There is a hotel across the street, has a lot of long term potential. Great view of the stadium. Think about the pedestrian experience.
    d. *Could there be retail?* We have 3 million-plus fans a year come to the ballpark. Ballpark Village (BPV) will bring even more. When people exit MetroLink station, think of creating something similar to the Treasurer's garage across from City Hall where there is retail on the first floor.
    e. *Interstate a challenge.* Challenge for all three is the interstate as you head south.

2. **Benefits:**
    a. *Benefits everyone.* Could drive even more visitors to the games and that would be great. We think just by having more people living around here would probably increase the number of our season ticket holders because residents would be so close by.
    b. *Environment.* I like green space on the south side.

3. **Challenges:**
    a. *Interstate barrier.* Interstate is a psychological barrier from a land mass standpoint. As you head south, it's probably so high up not a visual barrier and pretty well lit.
    b. *Removal of parking spaces*. All of these developments – any removal of parking will have to be replaced with parking nearby or you could undermine existing businesses. Lots of workers park in service lots so will need to replace it.
    c. *Cardinals Surface Parking*. We will have 650 surface spaces come on line in a few weeks. This will be enough to support development coming in, but not future developments beyond it. The key for developers trying to make a new development work is

to figure out how to pay for parking. This will be the constant battle – balancing vehicles versus pedestrians and then versus transit. More density encourages more use of transit and better headways.

d. *Fluctuations in density*. On game day, MetroLink runs the most with full trains. This is not true on the off days.

e. *Numerous civic challenges.* Crime, public safety, basic infrastructure.

4. Types of Businesses or Amenities:

a. *What's missing?* What will the market support? How will it get paid for?

b. *Uniformity of look* . Clayton not perfect but you can tell it has a clear thought in terms of look. The little things can have a big impact.

c. *Sidewalks, streetlights.* Streetcars to have stuff that is visible. Art. City Garden was awesome – we should build off that.

d. *Underground infrastructure* . The world is all about how fast is your Internet. When tearing up streets, we should be put in pipeline/fiber for the future. It is about locating businesses in the future where it's fun, I can find a good workforce and how fast is the Internet.

5. Types of Housing:

a. *Owner occupied and rental.* As many floors as possible. If market could support ten-story high-rise, it would indicate health of downtown. Residential would keep people here all the time. You have to build a neighborhood. That's what we're trying to build a neighborhood anchored by a ballpark. Our goal is to get people here all year round.

6. Evaluation Criteria:

a. *Office space.* Opportunity for some higher end residential and Class A office space when economy recovers.

b. *New Construction.* Ballpark Village (BPV) will allow for a new level of construction that currently does not exist downtown.

c. *Focus to the west.* Is it because of ramps there? That highway would conceivably be the same sort of obstruction to the south but there are plans for south of the ballpark.

d. *Closing stadium plaza thoughts?* Don't know. BPV is thinking for a period of time, an outdoor area. Right now 7th Street dead ends at Walnut. Bringing it down to Clark could work depending on type of development. Problem with Clark is that it becomes narrower

and more for pedestrians. It will be closed on game days. Thus, really will be driven by what is the development.

e. *Busch Plaza. No* one at Cardinals is married to Busch Plaza *(see attached Phase 1 site plan picture)* and the parking to the left of it at this point so TOD planners could use it for something. I envision the eastern side as residential, office space to the north or west. The street that currently ends north of the site could continue south through Busch Plaza if planners wanted to use it.

f. *Anything we do in BPV will only enhance TOD*. The philosophy for the Village is pedestrian and creating a sense of place. What will be unique for STL is our use of the second and third story of buildings. We will do what people haven't done before. We will see the Cardinal Nation building with 324 seats on the third level and the interior of the BPV is the edge of the giant sunroof. It will have a retractable glass canopy. Inside that marketplace is tiered development at second and third level –i.e. cowboy bar on second level. It will be interesting to see how popular or not it will be.

7. Making Station and MetroLink Part of Commute:

a. I have rode MetroLink many times, but not practical when I have my 3-year-old son with me.

8. Vision:

a. *The future is just getting better.* More investment is happening.

b. *Ballpark Village.* Within 10 years fully develop BPV as a mixed-use neighborhood with housing and offices.

c. *Office Building.* We would have the First Class A office building since 1989 when the One Metropolitan Square building opened.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #2
June 2013

1. **Initial Thoughts:**
    a. *With the refinement of the numbers the plan is looking better*
    b. *Parking mixed residential is the vision.* People are starting to look at new development pitches
    c. *The building heights are fine in a general sense*
    d. *At the end of 2nd street small residential is too small.* The green space at the end of 2nd street was going to be residential (800 LK Sullivan)

2. **Benefits:**
    a. *Development Plan is inline with current visions.* The plan is no different than what we have been trying to do. Most of this development has been on the books for years. Things change, the last 5 to 6 years every thing came to a stand still.
    b. *Increased residential, will tame party atmosphere.* We need the residential to start taming the animal a little bit with the entertainment scene. It changes a little more each year.

3. **Challenges:**
    a. *St. Louis Parking will be a challenge.* The parking lot owners are steadfast not to have street level retail in their garage space.
    b. *The green space is not the highest best use of the property*. That space should be better used as high-end residential. In the City of Portland the bike path along the Columbia River meanders on floating docks out into the water (Columbia River is heavy duty like the Mississippi with barge traffic) it goes out and stays out for a while then comes in on the other side of a large development.
    c. *GRG would not be willing to turn green space that they own into residential.*
    d. *The timing could be an issue*. If this doesn't start happening in the next 5 to 6 years this will be an issue. This should have been done years ago – the riverfront property should be done right away.
    e. *Inaccurate residential number.* I don't know where you will get 200,00 sf of office – that's what down here now. If residential went to 500-600 units the potential for office space is maybe between 50 – 100,000 sf.
    f. *Politically people have to get behind the plans* . SLDC and the Mayor's office need to endear the plan, enough talk and planning – it's time to pitch dirt.

4. **Types of Businesses or Amenities:**
    a. *Support for residential*. After residential comes then small grocery, cleaners, and other amenities that residents need near their homes.
    b. *No current business type trend in Laclede's Landing.* There aren't any trends of businesses coming now, but that could really change when the fiber optics go into the street.
    c. *Mix of businesses.* There are a lot of engineering companies, but there is a real mix of businesses in the area.

5. **Types of Housing:**
    a. *More apartments versus condos.* The trend now looks like more apartments rather than condos are in demand. High-end residential probably makes sense to be mixed rental and condos – which could be a challenge for residential real estate.
    b. *High-end property could work.* Right over the trestle – the previous plans for residential had triple pane glass and sound proofing at 800 Lenore K. Sullivan. GRG just acquired the land north of the landing- SLDC owns the land east of the Sligo and that could remain green space or high-end residential. At one point the casino had plans for new residential along 2nd street.

6. **Evaluation Criteria:**
    a. *New sidewalks and fiber optics.* There are all new ADA-compliant sidewalks, new streets, and fiber network going in the street starting in September.
    b. *Condense the timeline*. It should take advantage of momentum from redeveloping the arch grounds.
    c. *Metro Moving Office.* Metro is looking at moving their offices from the Landing. That building is poised to become about 75 units residential if the developer with a bid for it is able to complete the transaction and move forward.
    d. Potential Development Projects in the works (at some point over last 6 years):
        i. 30 units in building next to Joey B's -700 N. 2nd Heartbreakers on the first floor.
        ii. The open lot at the Switzer building was another 100 – 125 new units – 600 N. 1st new construction – project halted when the economy halted.
        iii. 700 N. 1st open lot could be new construct 30 – 40 units.
        iv. 800 N. Lenore K. Sullivan currently has green space in the plans that was going to be a building and the economy hit – that was going to be 60 units residential.

v. South of Heartbreakers is empty with infrastructure already. That building is ready to go with potentially 70 units. The infrastructure includes a fire system, air conditioning, and sewer hook up, it's all in.

vi. St. John's bank owns the building next to Eads Bridge at 1st Street and Lucas their plan was on file and it halted with the economy.

e. *Potential total new units.* There is a potential in the Landing for 500 new units of residential.

f. *Misidentified parking garage.* 700 block of LK Sullivan between Lucas and Morgan is on the plan as green space but is actually a garage Riverfront Garage owned by St. Louis Parking.

g. *Green space owned by Phyllis Cherrick.* Could be green space as currently on the plan or developed into new residential – she doesn't have any current plans for it or any vision for the land. It should be residential or green space – right next to the Eads bridge on LK Sullivan.

h. *St. Louis Parking won't budge.* It could be a fight with St. Louis Parking at the parking lot – Jack Pohrer and his brothers own the company and say it will remain ground floor parking.

i. *Craig Heller has a contract on Metro's Building.* The Switzer site is up for sale with no for sale sign – owned by St. John's Bank. We just have to get moving. If Heller gets into Metro he will also do the other buildings on 2nd street because his partner owns the other buildings. He wants to build critical mass and not just do one thing.

j. *CAR discussion should be bigger part of this conversation.* If they are spending $500 million on arch grounds and other areas it should spark and move this thing faster than the 25 years someone said.

k. *Parking garage at 3rd and Lucas.* When they destroy the parking garage and it's moved at the corner of 3rd and Lucas – City Park where Drury owns it. They want to see it as both parking and residential but the city wants to move faster so they are mandating 5-6 stories of parking. Their second choice is the lot reconfigured- the third/fourth choice to put a massive parking building that's tall in front of the river blocking views.

l. *Lumiere Casino is currently up for sale.*

7. **Making Station and MetroLink Part of Commute:**

a. I ride sometimes and would ride more if it was out in St. Charles County where I live.

8. **Vision:**

a. Residential – Finally the St. Louis Riverfront has Residential

9. ***Additional Comments:***

   a. I think people currently use metro for big time events, some workers use it for commuting but not a lot. The MetroLink is very safe and clean, the extension should have been better spent putting fingers into lower income areas. To make it go out West where a lot of people live would have made it bigger. Way back when St. Charles County was afraid of it, but that may have changed. Portland, Seattle, and East coast they build a stop and the development happens. Here people think, poor black people will come and steal shit – its part of the community fabric and maybe it's changing. At the Hanley stop near Brentwood they put a fence up that prevents people from getting to shops – that's unheard of. I thought MetroLink was supposed to blend the community, but it hasn't it's added to the division.

   b. The developers who were going to do the high-end residential, built the building behind Straubs in Clayton, the casino was a minor partner.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #3
June 2013

1. **Initial Thoughts:**
    a. *Laclede Landing Station.* Needs more residential spaces particularly condos. TOD around that station should have a historical theme and be somewhat consistent with existing structures.
    b. *Stadium Station.* Alternative 2 would work best.

2. **Benefits:**
    a. *Greater density* would be beneficial for the downtown area.
    b. *Livelier, vibrant downtown*. If TOD can attract more people, more residents, it would make for a livelier downtown, making our downtown more enjoyable.
    c. *Stronger, more stable downtown*. New development could help strengthen and stabilize the area.

3. **Challenges:**
    a. *Safety and security for residents.* If there is too much loitering at the MetroLink stations, such as what occurs near Union Station, residents may not feel safe and secure. Security will be key, such as well-lit stations with a police presence.
    b. *Residential amenities and services.* If station development includes housing, especially the Laclede Landing station, there needs to be more amenities and services for residents, like grocery stores, hardware or home goods stores (small scale), clothes cleaners, etc. e.g. downtown Culinaria.

4. **Types of Businesses or Amenities:**
    a. *For Laclede's Station TOD.* Condos, retail boutiques, and residential amenities – such as a grocery store.
    b. *For Stadium Station TOD*. new development needs to complement, not compete with, existing businesses. For example, no more bars needed, there are enough, especially with development of Ballpark Village.
    c. *Small-scale office space*. affordable, small-scale office space.
    d. *Children's activities and/or childcare services*. A play area for families with children and possibly day care services, another service for people who live near the stations. Play area has to be designed to deter loitering.

5. **Types of Housing:**
    a. *Condominiums (esp. for Laclede Station).* Condos would attract a more stable, long term resident and the landing could offer unique views of the River. There would need to be greater security, due to the late night crowd on the Landing.

6. **Evaluation Criteria:**
    a. Feasibility.
    b. Historical nature of the area (esp. Laclede's Landing).
    c. Parking facilities. Allow for some surface parking, as most people prefer surface lots instead of garages. Lighting and safety is key for parking facilities, esp. garages. Garages could be made more attractive and professional looking (but parking fees should not be so expensive that they discourage use).
    d. Landscaping and beautification. Vacant and underutilized lots should at least be turned into attractive green space with landscaping. Consider that what people see in their surroundings is part of their experience.

7. **Making Station and MetroLink Part of Commute:**
    a. *Safe and secure, discourage loitering.*

8. **Vision:**
    a. *Collaborative – great for all.* Politicians, business people, and residents need to work together, and be willing to compromise, in order to create something that is good for the City.
    b. Active, lively downtown. More retail, boutiques, greater density, more people and more activity.
    c. *Economically thriving*. A City that attracts new companies; more businesses make St. Louis their headquarters.

9. **Additional Comment:**
    a. Choteau Lake project should be revived. It will be great asset for downtown.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #4
July 2013

1. **Initial Thoughts:**
    a. *Money is needed.* They are on track but money is needed.
    b. *What is priority?* There have been a lot of plans for downtown.
    c. *More residential areas.* I like the ideas, like residential in Laclede's Landing. Would like to see more residential around the stadium. Huge miss if no residential around the stadium in ballpark village.
    d. *The Westin.* The Westin hotel building is missing on the ballpark map.
    e. *Focus North.* Going south of I-64 is too early for this plan. Focusing north of the highway is the best option right now.
    f. *Campus style form based code is fine.*
    g. *Skywalk* across stadium since the west Garage is now gone.
    h. *Map doesn't clearly show 10th street on-ramp*.

2. **Benefits:**
    a. *Need for residential areas.* There is a bad need for residential in the landing, which will help all businesses, restaurants. It will bring life to that area.
    b. *GRG's Trail Plan.* GRG's trail plan could connect the landing back to the river. North has a lot of activity with the new bridge that makes solidifying the Landing more critical. It's a unique area that is the only remaining historical area in St. Louis - the rest of the arch is cleared. This would help to bolster what is happening north.
    c. *Fill in lots with structures.* Filling in the parking lots with real structures (near the casino) will make a big difference.
    d. *Green space is effective.* Flooding covers a lot of that space in front of the Landing, so having green space in that area helps bolster the use of that with the flooding issues It seems the simplest way to make it active without the flooding issues. With more dams up north on the river it just gets faster down stream in St. Louis and beyond.
    e. *The stadium area needs bigger vision.* It has potential and needs more vision for what happens at Ballpark village. The aim is too low. It could do well with residential and office
    f. *Development started in BPV will spur development in other areas*.
    g. Class A office in-fill. Maybe get a tenant for General American Building – class A space

3. **Challenges:**
    a. *Stadium is a nice walk-able area.* It would be a very vibrant place to be. Its not a very open space and focusing on BPV and parking lot could build momentum.
    b. *I-70 at Laclede's Landing needs to come out.* It becomes a boulevard all of the elevated lanes come out. It kills all traffic from walking and biking to the landing
    c. *Prioritize efforts*. Building over the MetroLink tracks nearest the station would be a very big feat. The focus should be BPV and the parking lot next to TUMS building

4. **Types of Businesses or Amenities:**
    a. *Stadium.*
        i. New class a office in BPV and parking lot (Tums) – some businesses out there want new buildings and structures
        ii. More office towers, residential condos, apartments retail great – no more entertainment needed (bull-riding especially)
        iii. New buildings
        iv. More restaurants south of Market street – which can serve as a barrier
        v. Walgreens, CVS, convenience
        vi. Jos. A Bank
        vii. Step down from a department store
    b. *Landing.*
        i. More restaurants instead of bars
        ii. Residential type service businesses
        iii. TJ Maxx to fill Macy's – Where do business men go to shop for new dress shirts?

5. **Types of Housing:**
    a. *Stadium.* Condos. Apartments (New)
    b. *Landing.* Very tall to capture the views. Need people 24 hours (22 stories is fine)
        i. Metro building becoming residential is good.
        ii. It should get away from being just a bar area.
        iii. Will BPV take some of the tourism from the landing – landing needs to bolster their holdings with more residential and office to overlook the river, balconies overlooking the river, sit on a deck look at river and eat lunch. Have to build high enough to see over train and tracks.

6. **Evaluation Criteria:**
    a. *Landing.* Restrict "crappy" parking garage installation. Change the facades to be nicer and make first floor retail. Make recommendations on the priorities – that is a good step and much needed – With a logical plan make it better for implementation
    b. *The new ramps off 64*. will be a challenge to gain approvals and to build
    c. *Stadium.* Raise the vision for BPV. The parking lot landscaping is too permanent so push the development and go 12 stories high, not 6.
    d. *Getting around the stadium from MetroLink to the Tums building is a tough walk*.
    e. *Closing streets and changing street grid*. The biggest factor is what happens to Broadway and Fourth Street to calm traffic and when the bridge opens and Memorial is closed, how does that affect Broadway and 4th street? People jaywalk all the time and it's not safe. The pedestrian treatments on Broadway are a good idea. Reducing lanes and adding bump outs to the road is a good next step or could be included. Get rid of some of the surface lots
    f. Want to be sure Cordish realizes the value of transit for BPV.
    g. *SLU*. Has popped our rental rates. Most downtowns have a hospital or university, but we have neither on a good scale. SLU coming will really help… May be too much for student housing in the landing – want higher-end.

7. **Making Station and MetroLink Part of Commute:**
    a. *Commute is too long.*
    b. *It does relieve congestion.*

8. **Vision:**
    a. *20,000 residents downtown by 2020.* Partnership has more demand than places to put them in downtown. There is pent up demand for new downtown residential. There are at least 1,000 potential residential units that could go into BPV one condo tower and two apartment towers.
    b. *Grow companies.* Major St. Louis Corporation puts a stake downtown and show their commitment to the core of the city –name on the building. We are growing our small companies.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #5
July 2013

1. **Initial Thoughts:**
    a. *Conducting similar study in 2014*. GRG is launching a similar study in 2014 spurred by the passage of Prop P.
    b. *Residential is an important part*. All of this is a mix of what we are interested in seeing happen in these areas.
    c. *Residential Tower at corner of Broadway and 4th must be removed.* With the residential tower there, you took out the view of the courthouse and the arch. That is the angle that is often on television and would detract from the magic of the stadium. As a cardinal fan the view of the old courthouse and arch is the magic.
    d. *Missed expectation.* This just creates more high-rises. We were expecting to see more park space in BPV. Bier garden with more gathering space for before and after games. More density balanced with views and open space.
    e. *Always glad to see spaces filled in and alive again.* Residential is on point – want to pull residential back west of BPV with some park space. Don't let people feel they are living in an office park. There is no community built into the environment.
    f. *I'm mostly comfortable with this.* There is a trajectory for this to happen in the next 5 years.

2. **Benefits:**
    a. *By activating the waterfront it will shift perspectives of the waterfront.*
    b. *Momentum to reactivate dormant or lagging planned developments.* Implementing this plan could help speed up BPV phase II and Chouteau Lake project**. With more residents in the area, Chouteau Lake makes more sense.**

3. **Challenges:**
    a. *Lumiere Casino ownership in flux*. It would be difficult to redevelop Pinnacle's land because it is all in flux due to the sale.
    b. Pinnacle is not thinking residential.

4. **Types of Businesses or Amenities:**

a. *Transition.* Need a transition from nightlife to more family oriented businesses and restaurants.
b. *Security and safety – actual and perception*.
c. *Foods, safety, restrooms, water, rest areas.*
d. *Resident-based amenities*. There will need to be residential based amenities – drug stores, food, and etc. access.

5. **Types of Housing:**
   a. *Mix affordable and high-end*. In Chattanooga, TN. There is a mix of high-end condos with affordable apartments. There is a nice mix for all kinds of people to live there. This plan would work better if it does not become completely gentrified.
   b. *North End of Landing.* There are really commanding views of the river over the levee wall and that should be leveraged highly.

6. **Evaluation Criteria:**
   a. *Review previous GRG trail plan.* River Landing (Greenbergh Study 2013 Jan/Feb) was driven by GRG desire to connect riverfront trail
   b. *Trestle and Mississippi River Bridge.* Will make this part of the city more accessible. It puts pressure on Laclede's from both ends, arch and trestle area.
   c. *No development pressure for Stadium developments.* BPV and CAR – but not a big pressure point to push developments.
   d. *New green corridor development*. They are working on land acquisition and site control for a green corridor from MLK to Riverfront Trail. Interested in redeveloping parkland.
   e. *Choteau Lake.* Issue with Choteau Lake is with the property owners adjacent to the property. We are working in the Cortex area to connect into a greenway into Chouteau lake west. We are unclear about how to make the connections in that area.
   f. *This is a transient place and to support residential will be tough.* For us we need movement south of I-64 to make the lake a more viable option. The issue in that area is property ownership. The rail tracks also cut off Chouteau Lake from the south. Goal is to have mix of residential, restaurants, and office and have to draw people in from the south into the area. We have to leverage assets and building a land bridge over the interstate would be really challenging and we would have to invest in a planning study and that's not currently on the radar.

7. **Making Station and MetroLink Part of Commute:**
   a. *MetroLink does not connect to everywhere I need to go.*

8. **Vision:**

a. *Laclede's.*

i. Like other waterfronts where people go, "Wow! Cool! I want to be there and be a part of it!" – Like the City Museum, that was built out of nothing.

b. *Stadium.*

i. *Longer-range vision.* People could live and be happy with residential in the area. Imagine residential overlooking Chouteau Lake and in an urban downtown setting.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #6
July 2013

1. **Initial Thoughts:**
    a. *Stadium Station.* I like the idea of more residential. My concern about residential is that there is often a conflict between residential and stadium activities because of congestion. It is just a matter of how successful do you want the development to be over the long term? If you are going to have development, will the station be able to accommodate the load that you expect the route to carry? This is currently a narrow route.
    b. *I am glad the stations are there. Here is the opportunity to build further.*

2. **Benefits:**
    a. *More activity breeds a better experience.* Most of the stations are kind of lonely at certain times of day. If there is more going on around the station, it is a more inviting stop for people to get off and do things. That is particularly important for people coming in from the County or Illinois so they don't feel like they are getting off in no-mans land. Activity around the station creates a better experience for riding the train.
    b. *Improved way finding.* Ballpark Village should really be on a map, and any other merchant could help sponsor a "find me here" map in relation to the station to increase their business.

3. **Challenges:**
    a. *Stadium Station improvements needed.* The station is crowded due to how the crowd disperses to the train. That problem would need to be dealt with. The staircase is very steep on the ballpark station, only comes up one side. You can only go one direction so more access would be needed.

4. **Types of Businesses or Amenities:**
    a. *Ballpark Village is the biggest amenity*..
    b. *Hotels must be easily accessibly from the station.* You have the Westin hotel there. Both access and possibility of another hotel are important.
    c. *More signage.* Hotels should be noted on maps. Right now, people drag suitcases around downtown looking for a hotel.
    d. *Convenience stores – easy access.* Establishments could include dry cleaning, coffee houses, and services for people living in the buildings. The more amenities you put in the more successful it will be. You have to

drive somewhere now for dry-cleaning unless you call a business that can pick it up at your door. You can go the Westin for coffee, but there is nowhere else to go for early morning coffee that I'm aware of.

5. **Types of Housing:**
    - **a.** *Taller buildings around stadium*. I don't want a high rise, but not 2 stories tall either. I envision whatever the market will allow. No preference, as long as it is more than two stories, but not more than 8 or 10 stories. If some buildings turn from residential to office towers, I would not be upset.
    - **b.** *Stick with historic relevance in Laclede's Landing*. Make the building level similar to what is down there already. If you build high rises, put them up closer to the highway to maintain the view of the river. Vancouver and other places build so that retail has balconies that come over other buildings so everybody has a view.

6. **Evaluation Criteria:**
    - ***a.*** *If we build it, they will come.*
    - **b.** *Maintain downtown's core attractiveness.* You are looking at building right around each transit station, but don't want them to be so different that they suck the power and interest out of the downtown core.
    - **c.** *Stations should not be separate or distinct from the rest of the neighborhoods.* The concern that people have with Ballpark Village is, "Will it integrate or be it's own island?" You can create a development with amenities and streetscapes that has it's own identity but also ties-in to downtown.
    - ***d.*** *Provide signage and maps.*
    - ***e.*** *Take advantage of the river views as an asset.*
    - ***f.*** *Stadium Station will change drastically.* That area will change dramatically in 20 years with Ballpark Village. New opportunities for development provide a synergy for Ballpark Village and extending southward.

7. **Making Station and MetroLink Part of Commute:**
    - **a.** *I do use the MetroLink.* The stadium station is the closest to my house. Laclede's Landing I can get to by going down Wharf street easily. These are the two I would use, as well as 14th street.

8. **Vision:**
    - **a.** *Laclede's Station is a great place to live with great views.*
    - **b.** *Stadium Station.* Investments spur greater investments in downtown south.

Transit Oriented Development
Downtown Station Area Plans
Stakeholder Interview #7
July 2013

1. **Initial Thoughts:**
   a. *Traffic.* The traffic flow is the top thing for me. Figuring out how to deal with it. I went to the Chelsea soccer game and it took an hour and half to get out. Even though you want dense environment, how do you move past traffic at peak times? Not on a regular evening, but on a special event night at Ballpark Village. This is where MoDOT & Metro are focusing. Some items got changed on the roadway plans. My question is how do you get people out?
   b. *Parcel to the West.* This is a residential community. If you are going to put piers there it is right over top of the Metro station. MODOT will take years to approve that. It kills the view unless it is low to the ground. All three initial plans have that at that location. There will be significant plans as to how to build over top of the rail line.
   c. *Don't get rid of entrance and exit ramps.* Merging at one location is okay (as long as you can get people out at peak time).
   d. *Density.* I like adding density. Residential next to the highway may be interesting, but Cupple's is right next to a highway too. You want density. People love being in creative spaces, like brick and wood beam buildings. The problem is they also still like access to natural light. If you look around, buildings on Washington have natural light, and gaps between buildings. If you load up with high-rises, like the Westin, or our building, you could have issues with light. You start to feel like you are in a box. There needs to be a balance.
   e. *I'm upset about losing Cupple's* - but hopefully the infill that replaces it will be good. Hopefully they are not putting a park there, unless it is an architectural park and features that give people a reason to be there in evening. The Courthouse has event space.

2. **Benefits:**
   - *You want more people going to dinner and lunch.* With residential it becomes a 24-hour space. There will be improvements in crime rates, and property values. People are watching out for their neighbors.
   - *It's symbiotic.* Increased density and users. More people going to dinner.

3. **Challenges:**
   - *Traffic surrounding special events.* The roads must have the ability to withstand high/peak traffic density during events.

- *Planned Development*. I would hate to negatively impact residential communities with unsustainable, 20-story modern buildings. You can place too much down there in terms of users. A 20-story residential complex would not get filled. Vertical growth beyond current plains would be uncharacteristic and not be wise.

4. **Types of Businesses or Amenities:**
    - *Developments that would do well are supporters of entertainment*. But they have to sustain clients during non-event nights. The Flying Saucer does well already. On days there is not a Cardinals game they have trivia and brewery nights.
    - *Destination type locations*. I.e. Pi, unique restaurants, another baseball amenity.

5. **Types of Housing:**
    - *Nobody's going to do condos for the next 5-10 years.*
    - *Apartments.* Should be consistent with the levels of other Central Business District apartments. That would be appropriate. Doesn't have to be too high-end. Can be simple. Consistent with established Infrastructure. I don't think building larger there will be financeable.

6. **Evaluation Criteria:**
    - *No planned developments that I'm aware of.* unless you count taking down Cupples 7.
    - *Branding – create a sense of place.* Something we've been doing and would love to have SLDC buy-in (the alderman is in favor) is branding this area, not just Ballpark Village. A brand for south of Market Street would be fantastic. Property owners would contribute to mechanisms that create a sense of place. Branding on poles and much more like that. Consistent lighting and signs, and replacing cobra headlights with historic lighting. Branding is a consolidated planning tool for way finding, signs, lights, and other public amenities. Even having benches that look the same works. Buy-in from big guys like the Cardinals is important. It creates a sense of place. Way finding is a huge deal and can be accomplished with signs.
    - *Alternate Transit.* I support the efforts of city on alternate transit in addition to rail lines and buses. We've developed a large support of cycling on Cupple's. We did that before Pedal the Cause was there. We have bike lockers and showers. We found an area that was not marketable and dedicated it to people who want to cycle to work. I don't think protected bike lanes are the way to go, but roads with consistent pavement and space are important. I can never take my eyes off the road because so many roads are deteriorating.

- *Parking.* Depending on what comes in, parking is already pretty well addressed. Garage on treasurer's Cupples 7 property is under-used. It is sufficient to handle a substantial amount of growth. If you add a 32-story building, there will be more parking needed.
- *A parking lot is a loss of density.* How it is planned now is good. I agree that parking in a central business district like downtown St. Louis does not need to be as apparent as a suburban area.

7. Making Station and MetroLink Part of Commute:

- *In general there needs to be more stations in the areas where I travel.* We do not have the infrastructure in place right now. Larger plan for more access, to different destinations. In St. Louis, all the great and different neighborhoods are the biggest attraction. One day you can be downtown, one day on Cherokee street. It has great character.
- *Walkability.* Getting to locations that are more walkable to existing destinations. If you are downtown, Forest Park and the medical district are easy to get to, as well as the loop, the airport, and Clayton. West County does not have access points.

8. Vision:

- *Sustained activity & calculated redevelopment in Downtown area.*
- The businesses that moved in 20 years ago are still here and love it!
- Restaurants, residents.
- *A Whole Life in City Limits.* It would be great if residents of downtown apartments moved in during their late 20s, got married, moved to the West End, had a family, became empty nesters, and then moved back to downtown.

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #8
July 2013

1. **Initial Thoughts:**
    a. *Connection.* It's important to emphasize the connection between Laclede's and Arch grounds.
    b. *How does market demand play a part in these plans?* I'm more skeptical about the demand. If the price is not right then developers won't build it and people won't pay the prices. We currently have too many office buildings that are empty and there are many empty apartments in downtown.
    c. *Housing.* For a lot of empty nesters we would like the energy efficient – pre-fab/modular high quality type housing that is more affordable – high cost luxury new construction condos isn't quite the way to go – with the recession and mortgage bust people aren't investing in their homes as much as more.

2. **Benefits:**
    a. *A benefit will be that our project will help spur development north.*
    b. *Environmental benefits*. Removing the garage improves the environmental due to reducing water run off and carbon sequestration (air quality). There are also health benefits for citizens who walk more and have cleaner air if there are less cars polluting the air.
    c. *Removing the Arch*-ground garage. It will also increase transit ridership because the station then becomes more visible.

3. **Challenges:**
    a. *Laclede's*
        i. *Cobblestones cause issues with walking and driving.*
        ii. *Universal design is very important and really needs to be implemented here – way beyond wheelchairs.*
        iii. *We need to be multi-generational focused.*
    b. *Stadium*
        i. *BPV.* Don't think phase 2 of BPV will really happen as fast as people think.
        ii. The entrance to the park grounds on the Walnut Street is really critical. I don't have an opinion of two-way streets. With the new west entrance along Walnut, this will be a new way for people to

come into the park.

iii. Stadium east becomes an important garage. Cars off Poplar are going up Walnut.

iv. BPV is planning for 6 million visitors per year

4. **Types of Businesses or Amenities:**
   - **a.** *Laclede's*
     - i. *Grocer, food, & dining.* Carry-out sandwiches (focus for tourists) There's revenue to obtain in earned income on the grounds but there is a great opportunity to provide great visitor amenities – options/choices are important to bring in more people
     - ii. *Restrooms.* We are trying to figure out how to get more restrooms in the area – amenities in Laclede's could help with that – could have some like the ones in San Francisco that look like telephone booths

5. **Types of Housing:**
   - ***a.*** *Should include housing in the area.*

6. **Evaluation Criteria:**
   - **a.** *Parking & Traffic.* Where to put parking at the Arch is up to SLDC. We don't direct that part of it. The parking study said we should have 440 to the North and 460 West.
   - **b.** *Arch-ground amenities.* Currently the Arch café is going to be very much inside the museum and they haven't signed off on a new café closer to the entrance.
   - **c.** *North Arch grounds.* The vehicular traffic area will never go away because that North area is ripe for programming and it is needed for drop off tents, food, people, etc.
   - **d.** *Way finding coordination.* We're coordinating with lots of partners on way finding and signage – bi-state, CVC, national park service, GRG, CAR 2015 – we're all looking at everyone's way-finding program in progress so they all coordinate. Everyone's won't completely match but the most important thing is that the icons and logos are the same so people aren't confused. We are developing a clear plan for where the signs will be handed off – parking to street to Laclede's landing to park, etc. No one currently owns it we're just committed to work together. It will be important for any signage recommendation to be considerate of what the partners are doing. We have to provide a great pedestrian experience
   - **e.** *Lenore K. Sullivan (LKS) Elevation.* Elevation of LKS is being raised 2.5 feet at the center at the grand staircase with a gradual slope down on either side to reduce the number of flooding days each year.

f. *Lumiere.* There is a lot that can be done in the Lumiere area and GRG is working with the citizen's advisory group.
g. *Programming.* There are limited things we can do for programming within the national park. For example, summer concerts. However for the north gateway area where the garage is currently, we can have more flexibility to do more programming type things. These aren't set in stone, but ideas. We are putting out RFQ for a business plan/programming study. The GRG space that falls in the Landing will be part of the study for what programming could be done in that area. It depends on what do people want to do, what we can do, and what doesn't exist just 6 blocks away (like a movie theatre that would compete with other things).

7. **New Developments**
   a. *We still have a vehicular drop off area on Washington. Otherwise it is all gone for traffic.*

8. **Making Station and MetroLink Part of Commute:**

9. **Vision:**
   a. *This is really exciting. The area will continue to develop North as CAR 2015 will be a catalyst for additional development projects.*

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #9
July 2013

1. **Initial Thoughts:**
   - **a.** *Stadium*
     - *i.* *The plan is dead on.* Especially with the redevelopment of BPV phase II. *BPV.* Area is key and needs to happen for perception wise.
     - **ii.** *Need to have conversations with Cardinals about Parking lots.*
     - **iii.** *Label the streets on the maps.*
     - **iv.** *Going South.* I like the effort to go south. It's tough with the highway being there. That area is more campus like or big box feel rather than small shops. The businesses are really trying to develop along 8th street.
     - **v.** *There is absolutely no money available to relocate ramps right now.*
   - b. *Laclede*
     - i. *This is the right area to focus on.* Convention station would pull from the west of the map and Laclede's would pull people in that area.
     - ii. *Green Space.* It can capture flooding.
     - iii. *Mixed use is perfect.*
     - iv. *Working with casino owners could be a challenge with pending sale and out of town owners.*
2. **Benefits:**
   - **a.** *Laclede's:*
     - i. *7,24,365.* This plan starts to create the 7 day 24 hour 365 atmosphere and it brings a lot more vibrancy.
     - ii. The green space would pull residents down and some visitors with the arch grounds being so close.
     - iii. *Nice mixed use of retail to support the residential.* Building in more density always creates more problems, but that comes with the territory.
     - iv. *Leverage the views.* Having good views of river and arch grounds is key, but could pose a problem.
   - **b.** *Stadium:*
     - i. *BPV* needs to be finished. It's an expectation that is currently looked on as a failure and it needs to happen to rebuild trust - Infill.

ii. Cupple's development is starting but its just difficult dealing with old structures. Infill is good – lots of buildings in need of repair.
iii. *Visual Appeal & Walkability.* Creating spaces on the streets that currently exist that are visually appealing, create more safety.

3. **Challenges:**
   a. *Stadium:*
      i. *Will be challenge building over MetroLink and the ramp*. We don't like building under or over our infrastructure because it is almost impossible to maintain. We usually own our property and lease it out for green space and the like. Hard infrastructure is a challenge.
      ii. *Moving ramps*. Cost issue, access justification report and environmental work to move them and its very costly – actual construction
      iii. *Current leases with the cardinals*. That will be a big challenge – there is no reason to put out a plan if it's not doable. One strategy could be to secure it or similar amount of spots in any new parking structures to replace what is lost.
      iv. *Closing Memorial and Lenore K. Sullivan.* Would push traffic to Broadway and 4th. That would make the street more vibrant, but that also would mean construction would not be able to close down a lane of traffic, instead they would need to build scaffolding along the sidewalk and not impede traffic.
   b. *Laclede's:*
      i. *Zoning.* Will be an issue with it being a historic district. New development would need to keep in tact with the existing structures. Something new and shiny would not be the best look for the area.
      ii. *Residential Mix.* 3 am bars and residential mix. A good mix would be to keep bars on one street (like 2nd) and residential on another street. On 1st street with the residential where are people parking there is no parking structure represented on the plan and no on-street parking really exists.
      iii. *Lumiere.* Redeveloping Lumiere lots could be a challenge just because of getting the casino partners to make a decision quickly. Things move very slowly on their end. Would the retail facing the casino add to or detract from what's happening at the casino?

4. **Types of Businesses or Amenities:**
   a. *Convenience.* Downtown Walgreens or CVS – especially at the corner of Washington and Memorial.
   b. *Quick bite or eating establishments that stay open a little later if the market allows.*

c. *Things to support residential life like more unique, boutique businesses*. Not necessarily local or national chain businesses. There needs to be a balance.
d. Laclede's if higher end residential then higher end eateries and amenities make sense
e. *Stadium needs a little higher end type businesses.*

5. **Types of Housing:**
   a. *Market Rate.* Needs a mix and take advantage of the views to the arch grounds and river – maybe some penthouses that then have a mix down with condos. Some additional apartments
   b. *Stadium.* If I look out my window what view do I get from the Cupple's buildings? The high-end residential are the ones fronting the ballpark, especially if the interstate ramp is going in right next to the building. Maybe at least one residential tower in BPV. Views and residential would help support BPV to run 24/7. Could move the Cupple's residential to the BPV tower. It isn't as high-end and there is no residential up flow/down flow to keep the people on that side of the street for any retail, except for game days.

6. **Evaluation Criteria:**
   a. *Parking.* Conversations need to happen with the Cardinals about their long-term leased parking lot. They have 100-year leases. VIP parking lot : 8th and I-64 under highway and a little north fronts MetroLink track; other lot is south of stadium in front of Paddy O's – VIP and players lot. Area under I-64 is long term lease with cardinals as well as the lot across from Tums building 4th and Broadway – box tickets go there
   b. *Air Rights.* MoDOT owns air rights over I-70 and I-64 because of elevated highway – in their foot print – GRG was looking at building over or under on and off ramps near I-64 and working with MoDOT for these options.
   c. Reduce dead zones. Remove the ability of "urban outdoorsmen" (homeless) to live in the nooks and cranny areas. Create a sense of place and a walking area. Define the walk able paths that are lit and include artistic welcoming cultural and visually appealing space.
   d. *Current plans in Laclede's for a plaza area in front of Nelly's school building*. Plans include reconnecting Lucas and Morgan Street. Goal is creating walk path. Looking at moving access from downtown to Morgan Street, which is more ADA compliant and walk able. This is already a plan and construction starts in a couple weeks. Job will be complete by July 2015. The goal was creating connectivity at Washington & Memorial to straighten it out so people can visually see the park and go their Abna may be the firm that has it. Finish Washington Ave streetscape from 7th to Memorial.

e. *10th Street Ramps.* There is absolutely no money for the ramps right now. If the ramps happen how do you access the ramp area to get to the parking area underneath I-64. Currently a street is where the new on/off ramp would go and building the new ramp would take that access away. How would people get back their for parking? Some of the parking garages access fronts that street and the street dead ends back there. 10th. In general, the ramps aren't needed. It's a lot of work environmentally and a lot of money to move them one street over. There is current access and this wouldn't improve access just change it. It would also cause 10th street to become two way and improvements would be needed along 10th street. Otherwise everyone would need to make a right turn coming off the ramp.

7. **Making Station and MetroLink Part of Commute:**
   a.
8. **Vision:**
   a. Vibrant, walkable area that is safe and interesting to be a part of the atmosphere

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #10
August 2013

1. **Initial Thoughts:**
    - The Cardinals ballpark is a powerhouse on its own and will continue to have momentum
    - Hilton, 360 and Ballpark Village makes this momentum stronger
    - Would like to keep Ballpark Village buildings lower to not obstruct views into ballpark
    - Doing this plan would be great for the city, more bodies downtown means more revenue for services, businesses
    - This would increase visitors in the area
    - Hotel – unless Hilton owned it – I'd hate to see it and it depends on the brand – obviously no one wants to see more competition
    - Both of these areas are close to the hotel and would be nice to have as attractions

2. **Benefits:**
    - Life and energy in the area
    - A whole other reason to stay downtown
    - On Laclede's Landing bringing in more residential helps revitalize the entire north portion
    - This improves transit experience because of more people and accessibility
    -
3. **Challenges:**
    - Being clear on type of audience we are trying to attract to the "new" Laclede's Landing
    - Blocking views from the Hilton

4. **Types of Businesses or Amenities:**
    - Shopping – not enough in the city of St. Louis – especially in Laclede's landing – clothing, shoes,
    - Gym, bike shop

5. **Types of Housing:**
    - BPV residential would be prime real estate – could be overwhelming with 82 games a year – there would be interested people who want to be part of the excitement – would it block the view from the stadium

- Just a matter of what is the demand – the city needs people and new residential offerings would bring them

6. **Evaluation Criteria:**
    - Accessibility from the highway and MetroLink
    - Timeliness of development
    - Incremental phased development to give people a reason to stay downtown for shopping, eating, family experience – not just the drinkers
    - Connection to other parts of the downtown

7. **Making Station and MetroLink Part of Commute:**
    - Needs to run more consistently to get to places west more efficiently

8. **Vision:**
    - More people
    - Safety
    - Residents
    - Tourist
    - More attractions – more things to do downtown (city museum, arch, Budweiser tour)

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #11
August 2013

1. **Initial Thoughts:**
    - Why not more retail in Laclede's landing. There aren't enough retail options now. Souvenir shops, arts projects, outdoor vendors – need to be more vibrant
    - Needs more greenery – downtown residents love a mix of urbanism and green spaces
    - Needs to be Pet-friendly and welcoming of all generations, all walks of life
    - More people staying on the waterfront – need to make the riverfront cleaner – beautification projects – artistic (MAC, RAC would be on board) many local artist live downtown and residents could have a project to improve the arch grounds
    - Residents are big on urban organic things (not many residents go to blues festival) need more family friendly concerts
    - Should be more family oriented
    - Need draws that make this city a more international
    - Builds on what we have – use the water because it brings serenity

2. **Benefits:**
    - Will generate jobs for residents of the city – need jobs program for residents
    - More guides on the riverfront – increased security
    - Could initiate a City Ambassadors program for young people to have employment – tour guides – like Virginia Beach
    - This would bring more vibrancy to the stadium area – more residents

3. **Challenges:**
    - Attracting more big names for retail – Downtown could do well with an upscale outlet mall/stores – Nordstrom Rack, Off 5th Ave, DSW, Apple Store - especially in Ballpark Village
    - Changing perception and fear of using MetroLink - have to keep MetroLink stations clean and safe

4. **Types of Businesses or Amenities:**
    - DSW, Off 5th Ave, Nordstrom Rack, Target, Home Goods

- Duplicate something like City Garden – play fountains, statues
- Want signage and words like Inspiration as an art instillation to draw people into certain areas – especially around the Metro stops
- More educational institutions in downtown
- More museums and galleries – especially around the MetroLink stations – give people a reason to come down on MetroLink – Art museum extension program
- More street vendors – popcorn, nuts and peanut shops
- Boutiques and stores, ice cream shops, American grab foods
- Need another medical facility like the urgent care and clinic
- More things for the kids – dance studio downtown
- Why not 3 city museums in downtown – something for everybody
- Need another hotel in Laclede's Landing
- Why not bring back a concert venue in the Landing – Like Mississippi nights
- Restaurants – more fast food where people can take the family and not spend a lot of money - More seafood places along the river – oyster bars
- Organic bakery – Open market in an old vacant building (like San Francisco) could foster small enterprises and businesses
- More nightlife - Sports bars
- Need more big companies in the IT field
- More grocery stores – Whole Foods, Trader Joes, organic
- Nursery market for flowers, fresh cuts, plants –
- mini massage shops, shoes,
- PF Changs, Boston Market, pizzeria's, ESPN sports bar – especially in BPV
- Brooks Brothers in downtown, Nike
- Need more international flavor for stores – Asian, African, etc.
- More wall murals on the buildings – related to history and culture
- More bike-friendly shops, structured activities for physical activity, man made beach – make all amenities seasonal for all seasons
- More fun activities that can go all year round – Ferris Wheel
- More fun events programmed throughout the whole year
- More event space for people to rent for event
- Expanded aquarium to get people to come visit – partner with the City Museum
- Needs more parking and safety
- Bike races on downtown, more walk-a-thons on the river, man made beach

5. **Types of Housing:**
    - Want modern and contemporary buildings – we have enough historic buildings – people are looking for the new, bright buildings

- Leave Laclede's landing more historical but build it up
- Take advantage of the views
- Luxury housing would work in Laclede's Landing with upscale restaurants and boutiques

6. **Evaluation Criteria:**
    - Want more green space – trees and landscaping to make the pedestrian walking experience good
    - Way finding is getting better with the convention center signs but we need more
    - Keep price of transit affordable
    - Include some affordable housing in the plan to build in diversity
    - There are a number of projects happening now – Arcade, Roberts Tower, Webster University going into the Arcade, some artists lofts in Arcade, need Craft alliance in downtown
    - Need Children's Museum in downtown like Chicago or
    - Need more diversity of food in downtown – Greek, Indian, something for everybody
    - All of these plans need to be linked with the other – via MetroLink, a shuttle
    - What is going on with the Western edge of downtown at Jefferson
    - New owners of Orpheum theatre wants to sell – that should be purchased and made into a working theater – Jazz and Blues clubs and performers
    - Jobs, something for everybody

7. **Making Station and MetroLink Part of Commute:**
    - Making more things to do and participate in near MetroLink I would take it more often

8. **Vision:**
    - St. Louis is a more international city – there are people from all ethnicities, people live and tour in the area
    - There are more conventions, residents

Transit Oriented Development
Downtown Station Area Plan
Stakeholder Interview #12
August 6, 2013

- **Initial Thoughts:**
  - Potential for the Laclede's Landing is great because of CAR 2015
  - Our goal is to see higher density (right size density for each of the stations)
  - Can the market bear another 1800 units in Ballpark Village and Laclede's Landing?
  - We are excited to see more residential around the stations which adds to a 24 hour transit area
  - The density in the plan is good
  - The heights of 3+ stories are good
  - A Boutique hotel near the stadium would be an interesting component to add to the downtown area – there are a number of chain hotels

9. **Benefits:**
   - Mixed- use is important and brings a 24 hour atmosphere in the area to generate life of the street
   - There aren't a lot of residential in the Cupples area already so more residential could bring a new atmosphere for that area "ballpark living"
   - It will be key to tie this project into the new arch grounds
   - It will all be new in Laclede's landing when its all done
   - It's a multimodal development and can be marketed as such
   - Great access to the highway
   - Would tie in with BRT
   - Will provide more "show me" type examples of things working

10. **Challenges:**
    - Funding – how will these projects get off the ground – how will the city focus resources
    - What tools will the City put in place to help move these forward – to entice developers – market to new people and developers
    - Can the market bear 1800 new residential
    - Developers and Lenders have to think outside of the box to get TOD done. There is no cookie cutter solution. We need to market the transit stop and surrounding land as an asset.

- St. Louis is a slow growth market

11. Types of Businesses or Amenities:

- Destination retail and amenities – no more really needed to be centered around the Cardinals
- Riders want more convenience – coffee, news, small snacks
- Capture people for the work day and come early for the game
- Transit riders need a dry cleaners, day care – basic things you don't have to drive to – Grocer/small market

12. Types of Housing:

- Mixed use

13. Evaluation Criteria:

- Tie projects together – pedestrian and bicycle access
- Cross use marketing materials
- Leverage the other developments going on with CAR 2015

14. Making Station and MetroLink Part of Commute:

- Good dining for lunch
- Good retail for lunch hour or after work
- Transit friendly conveniences during the daytime

15. Vision:

- People can live, work and plan near MetroLink and the system continues to grow

C

Economic Development Strategies

TRANSIT ORIENTED DEVELOPMENT FEASIBILITY ANALYSIS FOR

STADIUM & LACLEDE'S LANDING/ARCH STATIONS

TASK A6, A6.3, AND A7 DELIVERABLE ITEMS

AUGUST 27, 2013

PREPARED FOR

ST. LOUIS DEVELOPMENT CORPORATION

DEVELOPMENT STRATEGIES®
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DEVELOPMENT STRATEGIES®
guiding effective decisions in
real estate, community, and economic development

August 27, 2013

Ms. Amy Lampe
St. Louis Development Corporation
1520 Market Street, Suite 2000
St. Louis, Missouri 63103

RE: Feasibility Analysis of the Transit Oriented Development Plans for the Stadium and Laclede's Landing/Arch Stations

Dear Ms. Lampe:

Development Strategies is pleased to submit this economic feasibility of the various Transit Oriented Development (TOD) plans for the Stadium and Laclede's Landing/Arch station areas as part of the greater TOD planning process for the City and region.

As the City and the region seek out ways to capitalize on existing light-rail transit infrastructure, a careful analysis of potential development that could occur at key station locations is critical to understanding the market opportunities and potential redevelopment barriers. This study examines multiple redevelopment scenarios for the Stadium and Laclede's Landing/Arch stations located in the City of St. Louis.

Overall, both station areas are prime urban locations for specific types of redevelopment given their locations in Downtown St. Louis. However, these urban locations present unique redevelopment challenges including, but not limited to, poor infrastructure conditions, high acquisition costs, demolition costs, and remediation costs.

Development Strategies appreciates the opportunity to assist you with this analysis. Should you or your associates have any questions about the following study, please call. We will be glad to hear from you.

Yours very truly,

Robert Lewis
Principal

Katie Medlin
Associate

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TASK A5: STATION AREA PLAN ALTERNATIVES

GENERAL ECONOMIC & SITE CONDITIONS

Stadium Station

The Stadium station is located immediately adjacent to Busch Stadium and the Cupples Station Complex near the southern edge of downtown St. Louis. While the station is located near some significant office development, it is primarily used for transportation to and from baseball games in the spring and summer.

Over the past decade, the area surrounding the Stadium station has changed dramatically. Many of the Cupples Station buildings were renovated to house hotels, office space, and residential units. A new Busch stadium was constructed immediately adjacent to the station and opened in 2006. The first phase of Ballpark Village, an entertainment and dining complex located immediately north of the stadium, is scheduled to open in spring 2014.

While the station is located next to one of the region's strongest attractions, there has been little investment in dense, new development aside from Ballpark Village. Many large surface parking lots are within ¼ mile of the station. The area to the south of Interstate 64 contains many bars and restaurants that only operate during the baseball season.

To build on the viability of the area, the redevelopment must focus on significant, dense, mutli-use development within ¼ mile of the station. To that end, we have identified the properties immediately adjacent to the MetroLink line, the Cupples 7 property, and the parking lot immediately east of the ballpark as prime opportunities for development. While the area is well-known as a baseball destination, it is assumed that the opening of Ballpark Village will attract visitors outside of baseball game days. It should be noted, however, that no formal market study was conducted to verify the suggested development programs, but they are consistent with broader urban neighborhood improvements taking place in St. Louis and similar cities.

Laclede's Landing/Arch Station

The Laclede's Landing/Arch station is located within the Eads Bridge structure immediately north of the Arch grounds. To the north of the station, Laclede's Landing features historic warehouse buildings and cobblestone streets. The Lumiere Place Casino is located to the north of Laclede's Landing. The Mississippi River is located immediately to the east of Laclede's Landing. Interstate 70, located immediately to the west of Laclede's Landing, creates a significant physical and visual barrier to the rest of downtown St. Louis to the west.

Approximately 30 years ago, many of the buildings in Laclede's Landing were renovated to house restaurants, bars, offices, and residential units. While the area thrived initially, new development in the region, a perception of violence, and other problems have deterred visitors to Laclede's Landing over the past decade.

Over the past few years, City+Arch+River 2015 spearheaded an initiative to improve the Gateway Arch grounds and the neighborhoods immediately adjacent to the grounds. Laclede's Landing will play a significant role as a nearby dining and entertainment option as well as a location for dedicated parking for the Gateway Arch.

Despite the marked decline of Laclede's Landing in the past, recent announcements show that local developers have a renewed interest in opportunities at Laclede's Landing. One proposed project includes a mixed-use residential tower with both retail and parking garage components. Other developers have expressed a wish to redevelop key buildings into residential multi-family development. The local merchants association has expressed a desire to transition the neighborhood to more residential uses and is actively investigating the creation of a redevelopment corporation to help foster residential development in the area.

To begin to redevelop the area, there must be a focus on creating a desirable residential neighborhood. The negative consequences of conflicting uses—namely 3AM liquor licenses—must be minimized or eliminated to attract new residents to the area. Efforts to improve the pedestrian and vehicular access to Laclede's Landing from both downtown St. Louis and the Arch grounds must occur to change the general perception of Laclede's Landing as a dangerous, out-of-the way area.

While much of the issues with development in Laclede's Landing relate to existing impressions of the area, there are key opportunities for redevelopment that must be addressed. A redevelopment project that would include residential units, retail, and structured parking has been announced for the Drury-owned parcel located at 3rd Street and the Eads Bridge. This project would represent the first significant investment in Laclede's Landing in many decades and would likely spur additional development. It should be noted, however, that no formal market study was conducted to verify the suggested development programs, but they are consistent with broader urban neighborhood improvements taking place in St. Louis and similar cities.

EXISTING REDEVELOPMENT AREAS & OTHER SUBSIDIES

Stadium Station

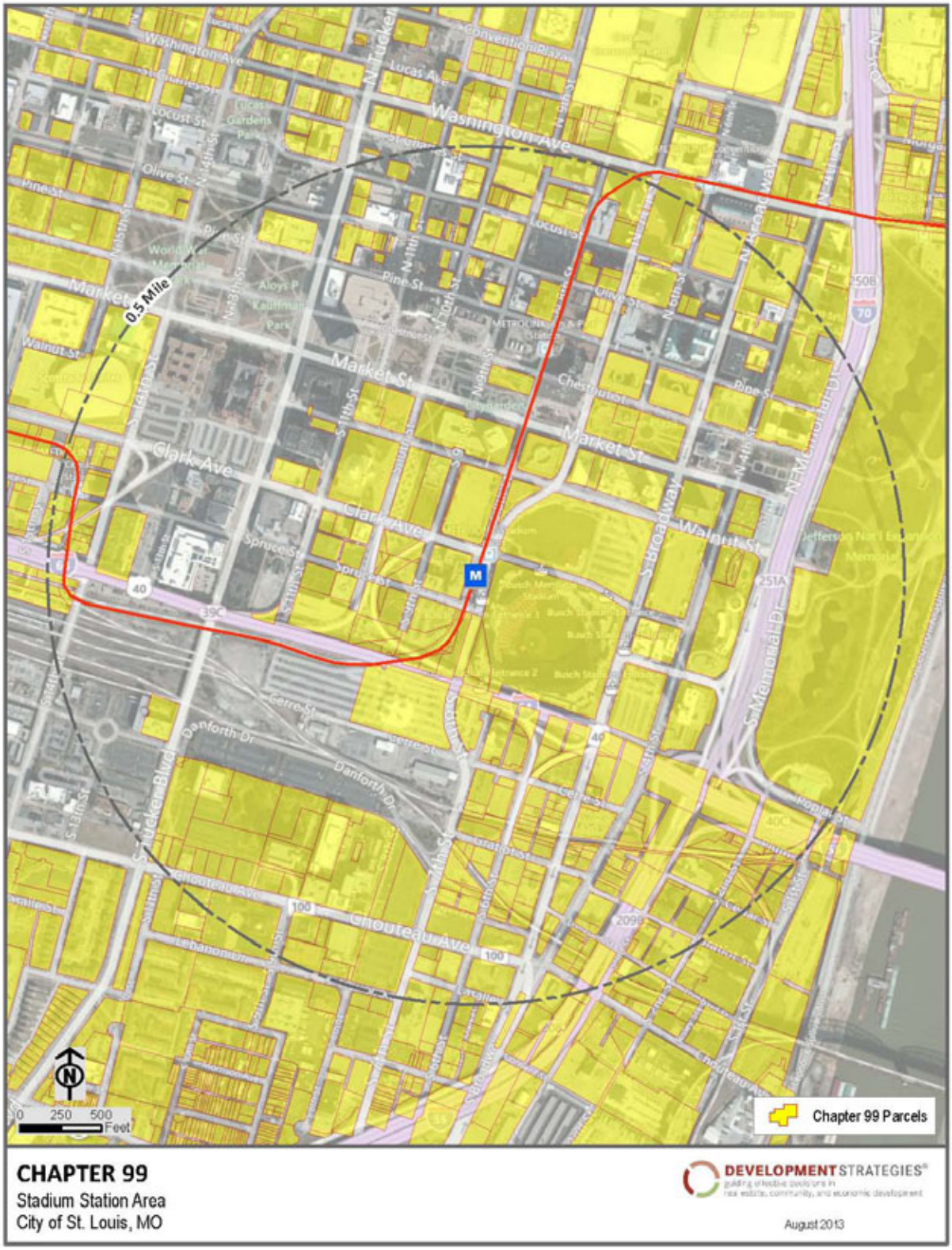
As noted above, the Stadium Station area has seen some substantial redevelopment over the past decade, and significant development is presently occurring at Ballpark Village. Within a ½ mile of the station, individual developers have undertook substantial renovation or new construction projects that have begun to redefine the area around Busch Stadium as more than just a game-day destination. While this development has occurred relatively close to the Stadium station itself—especially the construction of the new Busch Stadium—redevelopment opportunities adjacent to the station remain.

Historically, the parcels within ½ mile of the Stadium MetroLink station were primarily commercial warehouses, industrial concerns, or train yards. Because of this history, the renovation of existing warehouse or industrial buildings for other uses presents unique challenges to a developer looking to redevelop the area for office, hotel, or residential uses. Vacant parcels that are prime locations for new construction are often contaminated with toxic chemicals from prior industrial uses and are in need of remediation. To adequately redevelop existing buildings and vacant parcels near the Stadium station, the City has assisted developers through the use of various redevelopment programs that provide some funds to cover these additional costs. The following table lists the known TIF, MoDESA, CID, and Chapter 100 areas within a ½ mile of the Stadium Station.

Stadium Station Existing Redevelopment Program Areas				
Project Name	**Project Initiation**	**Project Duration**	**Project Details**	**General Location**
Ballpark Village TIF	2012	23 years	Collects incremental real property and economic activity taxes. Property is currently under construction.	Bordered by Walnut Street, Broadway, Clark Avenue, and 8th Street.
Ballpark Village MoDESA	2012	20 years	Allows for the capture of incremental state sales taxes and income taxes	Bordered by Walnut Street, Broadway, Clark Avenue, and 8th Street.
Cupples Station TIF	2005	23 years	Collects incremental real property and economic activity taxes from approximately 45 businesses and 37 parcels.	Generally in the Cupples Station complex to the west of Busch Stadium
Ballpark Lofts TIF	2007	23 years	Collects incremental real property and economic activity taxes from approximately 45 businesses and 37 parcels.	Generally in the Cupples Station complex to the west of Busch Stadium
Downtown CID[1]	2000	Renewable	Collects revenues from a special assessment levied on real property.	Generally bordered by Interstate 70, Interstate 64, 18th Street, and Cole Avenue.
Stadium South Chapter 100	Unknown	Variable	Allows for property tax abatement through the municipality.	Scattered sites to the south of Interstate 64. Generally bounded by Chouteau, Interstate 55, and the Purina Complex.

The following graphic general details the properties included in each program. The Appendix contains a detailed listing of the parcels already under one or more public financing programs within ½ mile of the Stadium station.

[1] http://www.downtownstl.org/DowntownCID.aspx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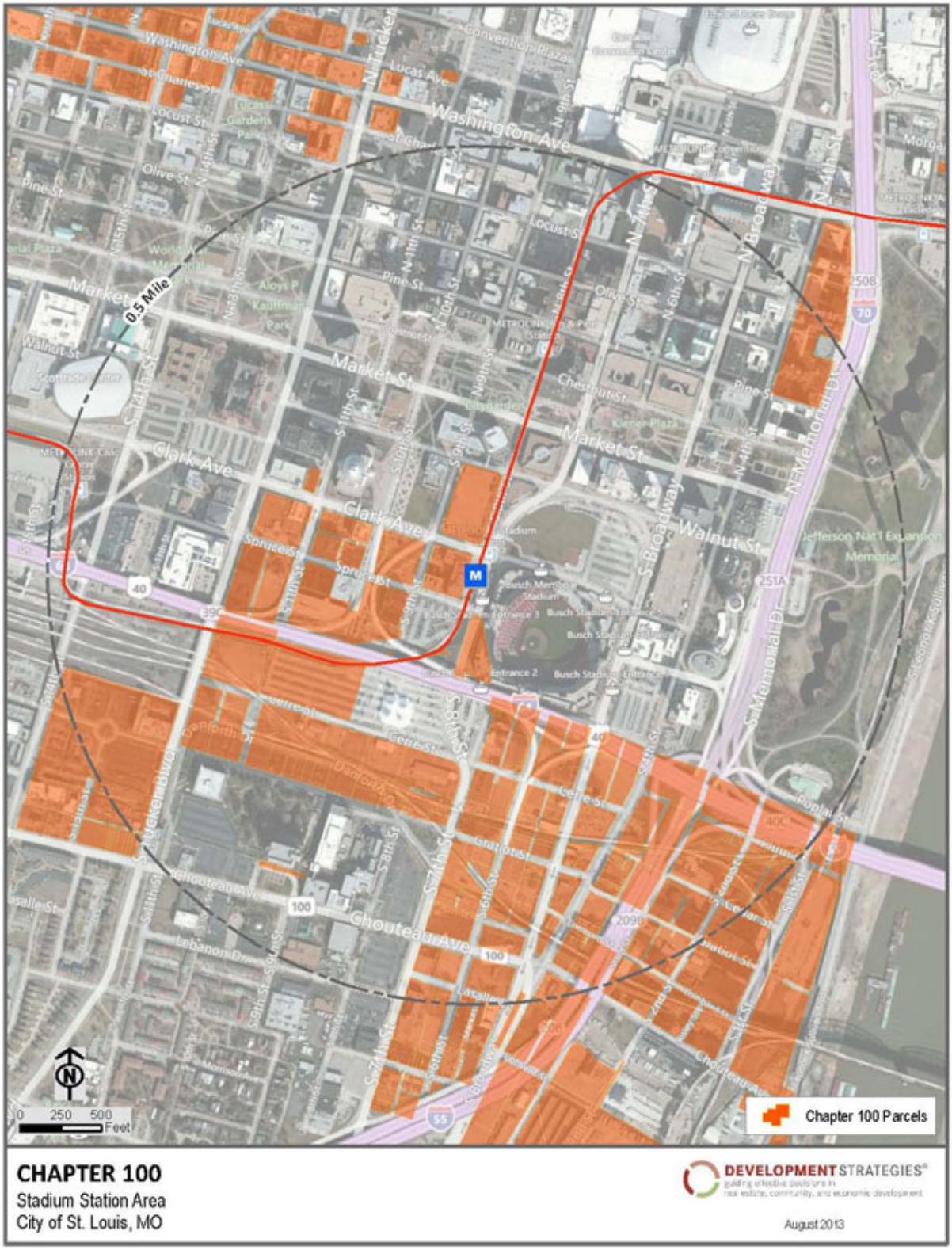
Market St
Clark Ave
Walnut St
Chouteau Ave
Danforth Dr
S Broadway
N Broadway
S Memorial Dr
N Tucker
S Tucker Blvd
0.5 Mile
0 250 500 Feet
Chapter 99 Parcels
CHAPTER 99
Stadium Station Area
City of St. Louis, MO
DEVELOPMENT STRATEGIES
August 2013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Stadium Station Area
City of St. Louis, MO
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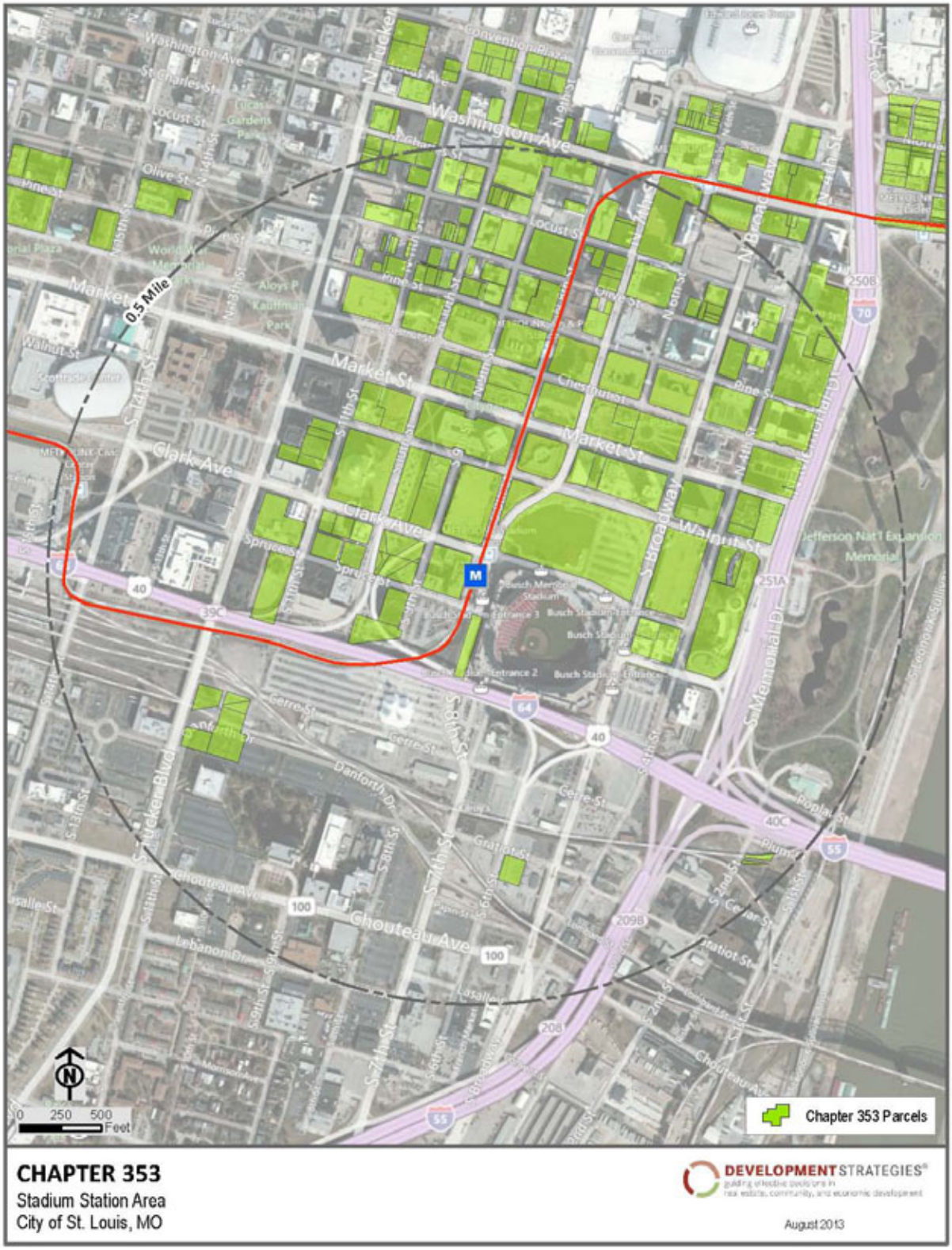
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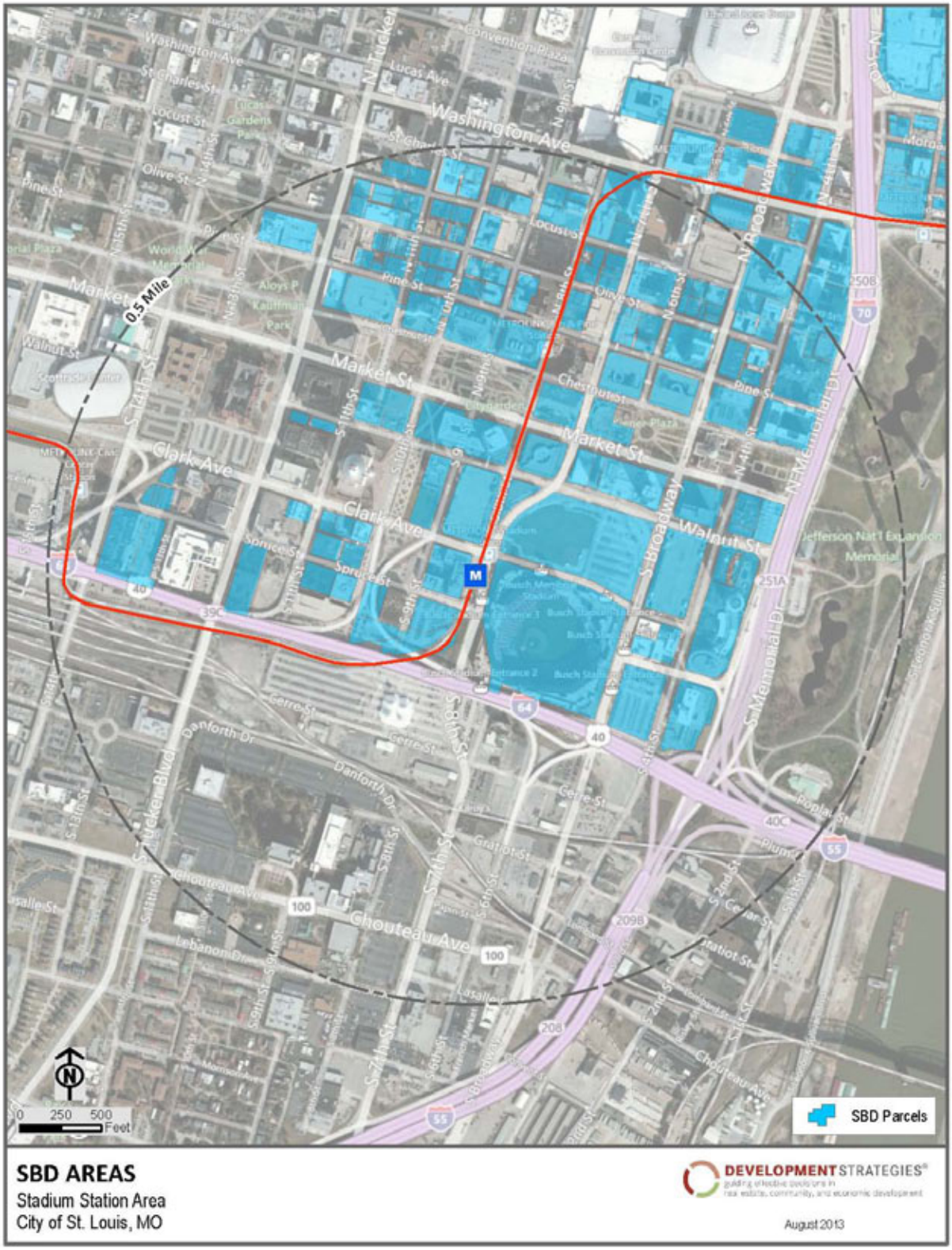
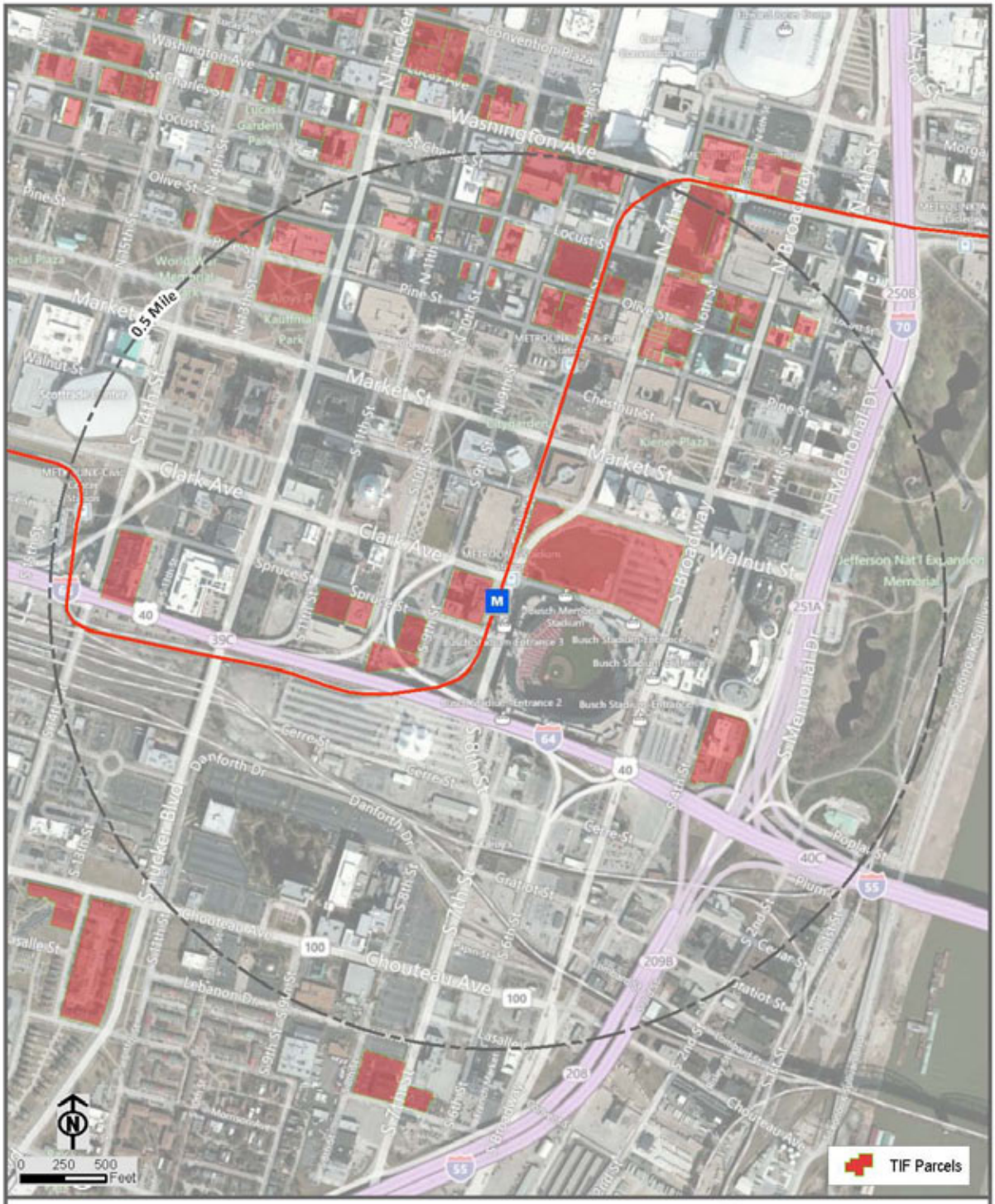
DEVELOPMENT STRATEGIES
August 2013



SBD AREAS
Stadium Station Area
City of St. Louis, MO

DEVELOPMENT STRATEGIES®
August 2013



TIF AREAS
Stadium Station Area
City of St. Louis, MO

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August 2013

Laclede's Landing/Arch Station

The Laclede's Landing neighborhood—or "The Landing"—first experienced a substantial rebirth approximately 30 years ago through the renovation of the historic river-adjacent warehouse buildings into a restaurant, bar, and club destination. Since that time, the Landing has slowly declined as new developments opened in the City.

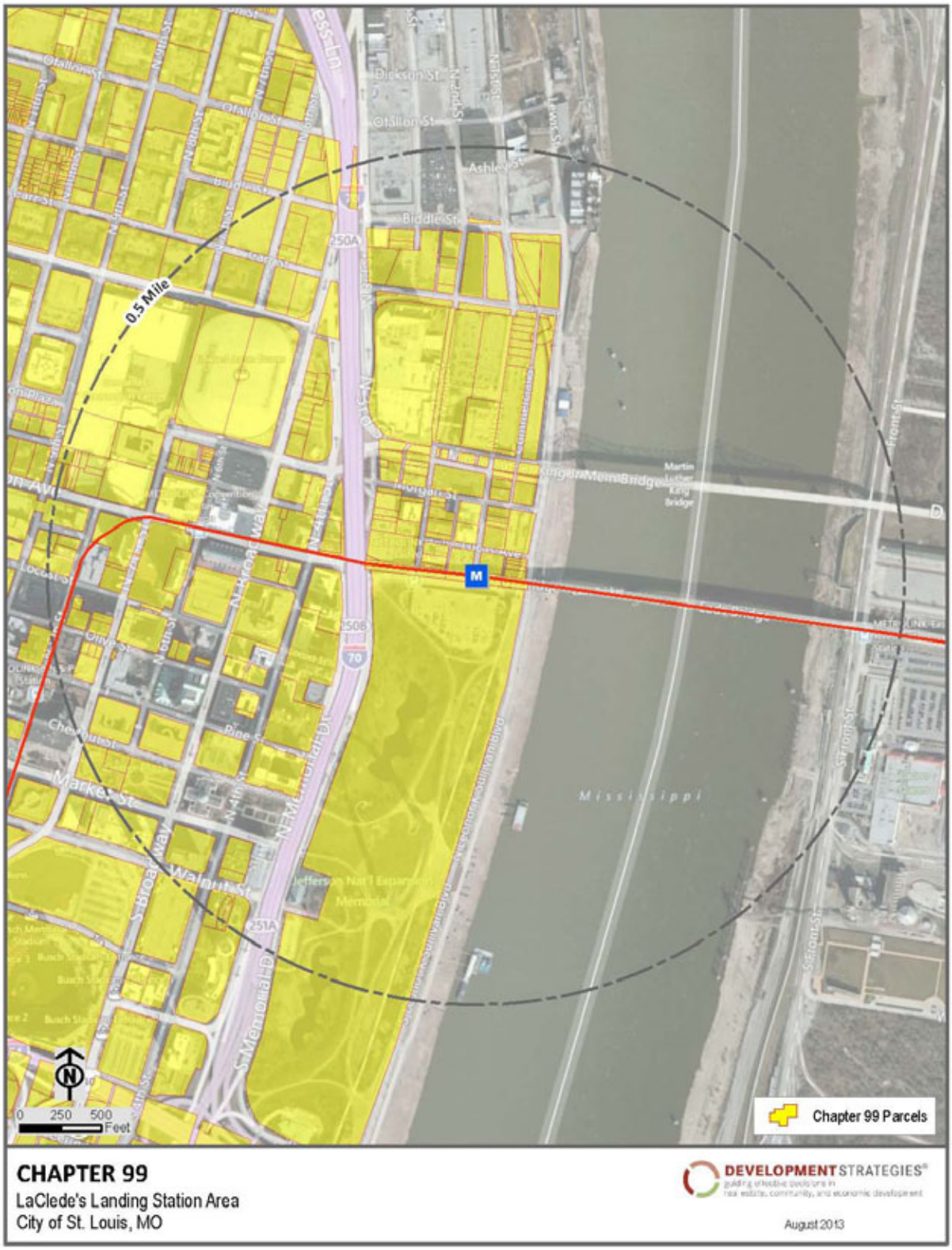
Over the past 30 years, many of the buildings within a ½ mile of the Laclede's Landing/Arch station were renovated. The majority of these developers utilized tax abatement or other incentive programs to complete each project. Because much of the redevelopment in the Landing occurred more than 15 years ago, most of the programs utilized have expired. Recently, leadership in the Landing and some other developers have sought to introduce new property types into the area and are investigating the use of specific programs to kick-off the redevelopment.

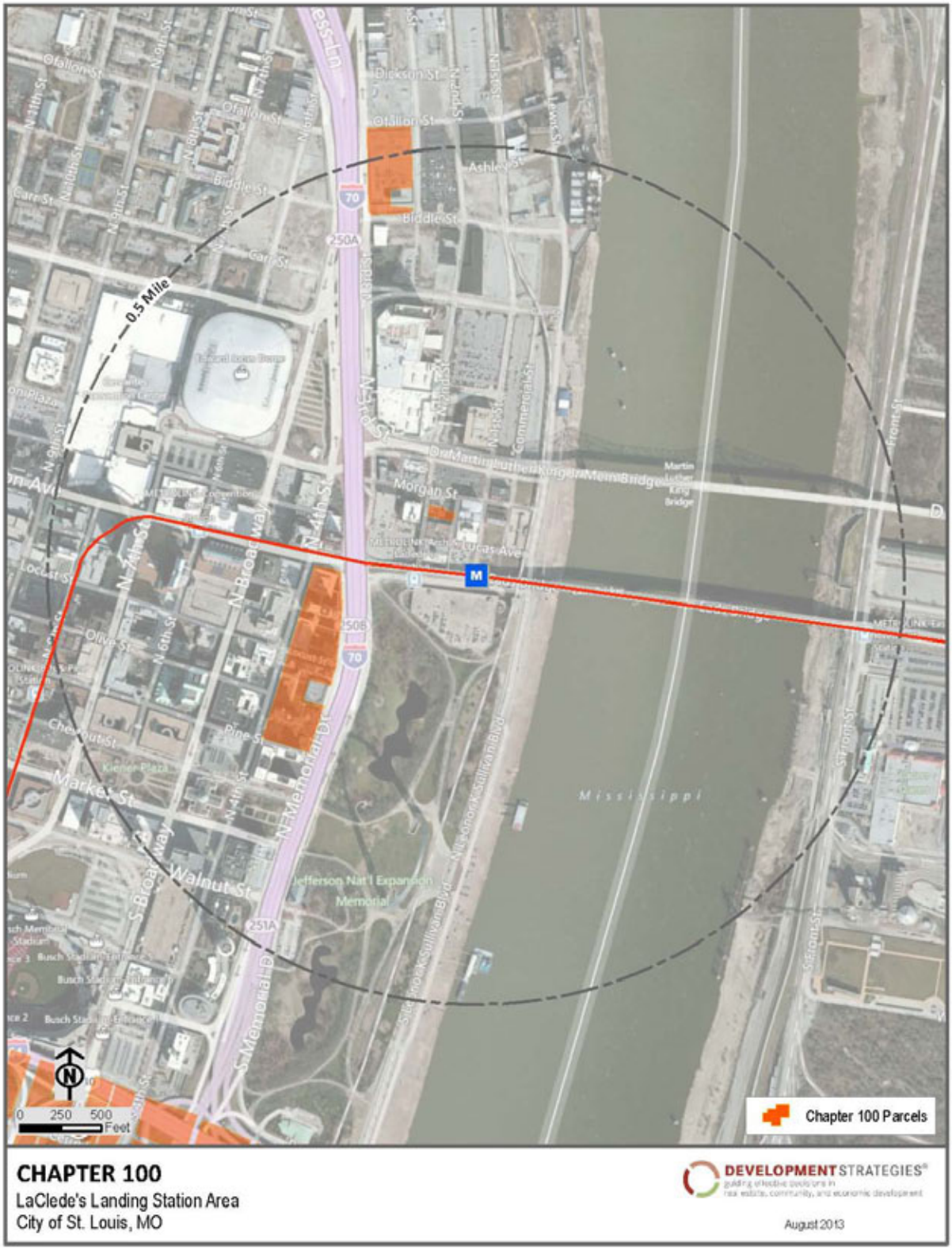
Despite its rehabilitation in the early 1980s, the Landing suffers from outdated infrastructure, poor pedestrian access, and many buildings in various states of disrepair. Because of the state of the neighborhood, it is difficult for current land owners to attract tenants willing to pay high rents, and vacancies are relatively high. Due to the extraordinary costs associated with the renovation or repair of the existing urban fabric, many developers are reluctant to invest in projects in the Landing without some form of financing to fill the gap. The following table lists the known TIF, CID, and Chapter 100, areas within a ½ mile of the Laclede's Landing/Arch Station.

Laclede's Landing/Arch Station Existing Redevelopment Program Areas				
Project Name	**Program Initiation**	**Program Duration**	**Project Details**	**General Location**
Bottle District TIF	2005	23 years	Collects incremental real property and economic activity taxes. No significant development has occurred at this time.	Generally located to the north of the Edward Jones Dome
Laclede's Landing CID	2008	Renewable (First term ends 2038)	Collects revenues from a special sales tax.	Area bounded by the Mississippi River, the Eads Bridge, Third Street, and Dr. Martin Luther King Blvd.
Switzer Building TIF	Terminated 2010	23 years	Not applicable	Not applicable
Sky Wheel TIF	2009	23 years	Collects incremental real property and economic activity taxes.	Bounded by Laclede's Landing Boulevard on the north, Lenore K. Sullivan on the east, Morgan Street on the south, and Commercial Street on the west.
Greeley Building Chapter 100	Unknown	Variable	Allows for property tax abatement through the municipality.	Laclede's Landing
Cherrick Building Chapter 100	Unknown	Variable	Allows for property tax abatement through the municipality.	Laclede's Landing
Levee Building Chapter 100	Unknown	Variable	Allows for property tax abatement through the municipality.	Laclede's Landing
Laclede's Landing Chapter 353	2008	25 years	Allows for property tax abatement.	Laclede's Landing

In addition to the programs listed above, numerous individual residences have utilized the Chapter 99 tax abatement program. The following graphic general details the properties included in each program. The

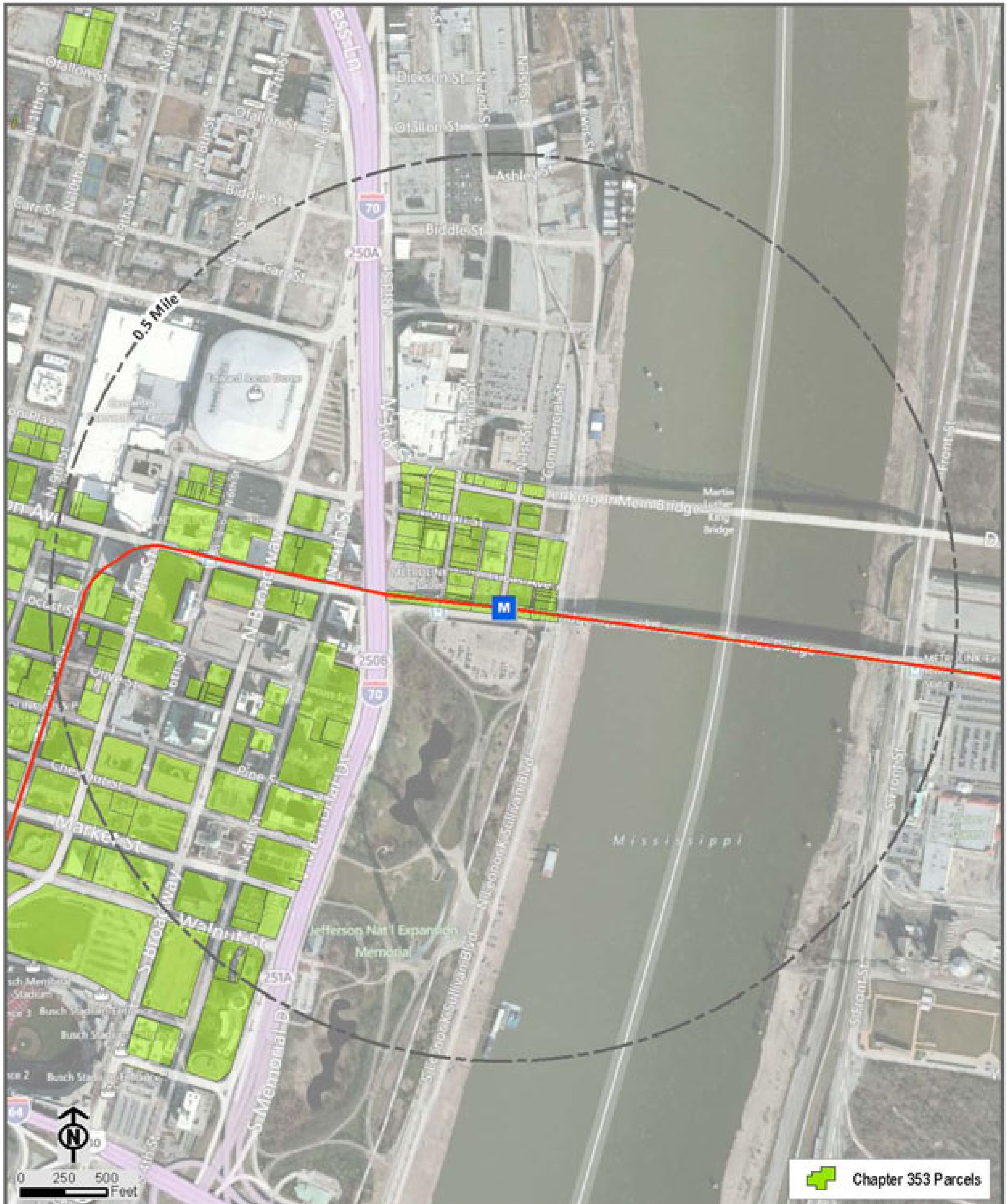
Appendix contains a detailed listing of the parcels already under one or more public financing programs within ½ mile of the Laclede's Landing/Arch station.





CHAPTER 100
LaClede's Landing Station Area
City of St. Louis, MO

DEVELOPMENT STRATEGIES®
August 2013

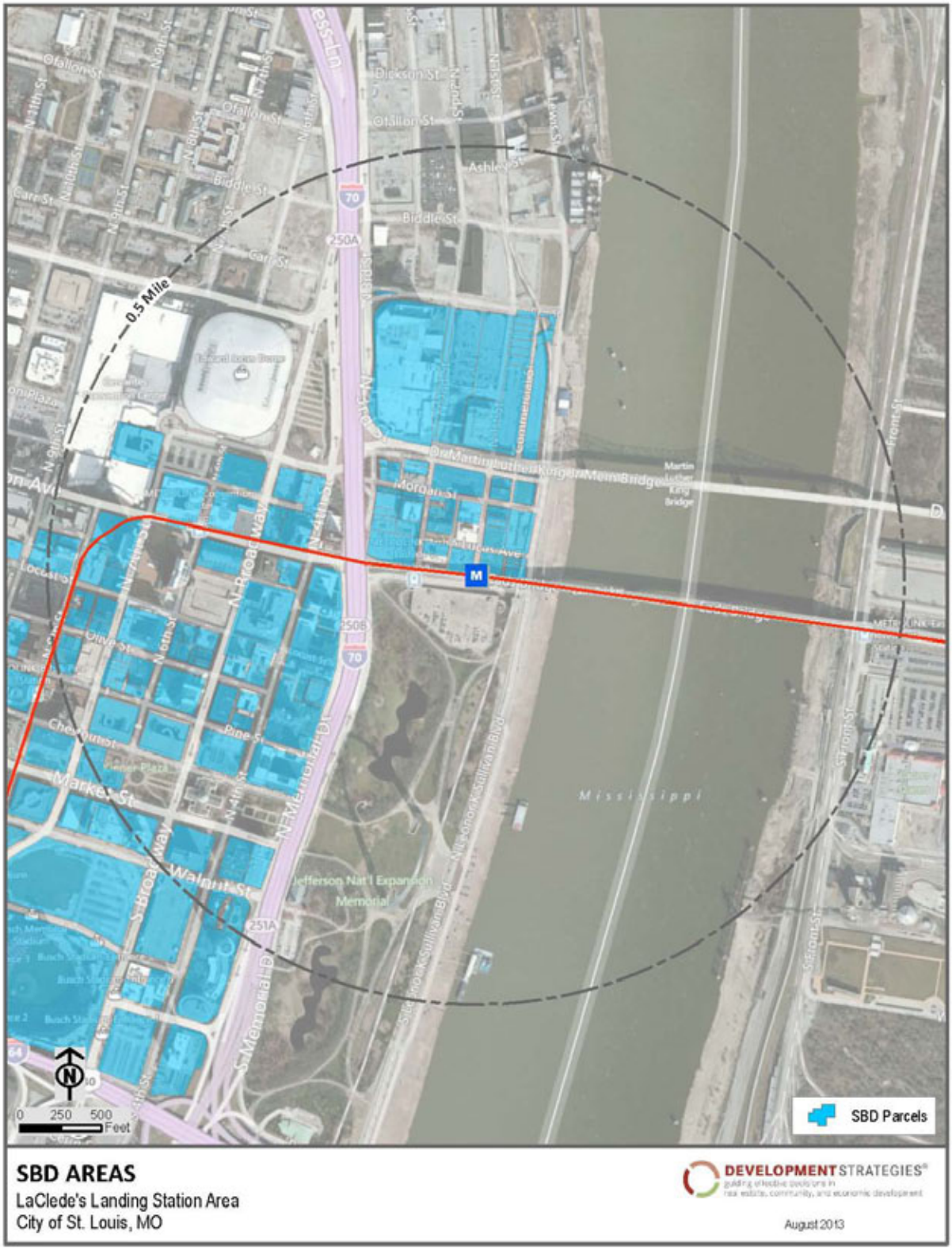


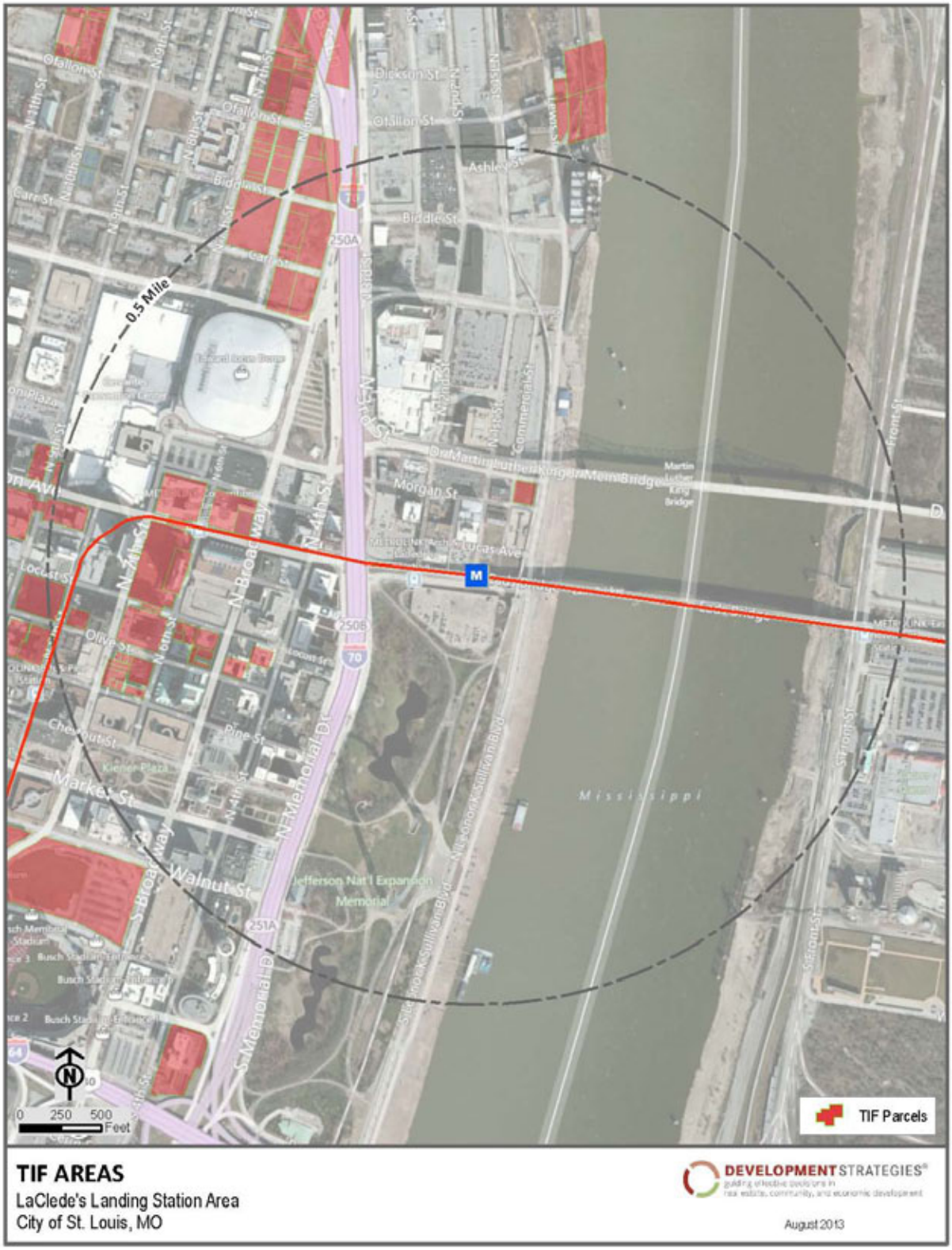
CHAPTER 353

LaClede's Landing Station Area
City of St. Louis, MO

DEVELOPMENT STRATEGIES®
guiding effective decisions in real estate, community, and economic development

August 2013


0.5 Mile
SBD Parcels
0 250 500 Feet
Mississippi
Market St
Walnut St
N Memorial Dr
S Memorial Dr
N Broadway
S Broadway
Biddle St
Ashley St
Dickson St
Gamble St
Olive St
Pine St
Chestnut St
Front St
Martin Luther King Bridge
Jefferson Nat'l Expansion Memorial
Stadium
SBD AREAS
LaClede's Landing Station Area
City of St. Louis, MO
DEVELOPMENT STRATEGIES®
August 2013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ALTERNATIVE & PREFERRED STATION AREA PLANS

Stadium Station

Three development scenarios were created to analyze the effect of creating various levels of mixed-use development near the station. Alternative 1 represents the findings of previous market studies with some small adjustments. Alternative 2 expanded the development program significantly to create a denser, more urban development. Alternative 3 represents the ideal development scenario if the market were able to support it. Again, based on existing market data, the Stadium station does not support this level of development at this time. The following table details the three suggested development alternatives that were analyzed in the model:

Stadium Station Alternative Plans			
	Scenario 1	**Scenario 2**	**Scenario 3**
Market Rate Residential (units)	150	300	800
Retail (sf)	250,000	350,000	400,000
Office (sf)	0	630,000	830,000
Hotel (rooms)	200	400	400
Structured Parking (spaces)	0	0	1,818

After review by the Technical Assistance Committee (TAC) and public input, a preferred plan for the Stadium station was developed. This plan recommends the continued development of Ballpark Village and infill development at the property adjacent to the MetroLink station, the parking lot to the east of the stadium, and the Cupples 7 site.

Stadium Station Preferred Plan	
	Preferred
Market Rate Residential (units)	800
Retail (sf)	250,000
Office (sf)	200,000
Hotel (rooms)	400
Structured Parking (spaces)	1,800

Laclede's Landing/Arch Station

Three development scenarios were created to analyze the effect of creating various levels of mixed-use development near the Laclede's Landing/Arch station. Alternative 1 represents the findings of previous market studies with some small adjustments. Alternative 2 expanded the development program significantly to create a denser, more urban development. Alternative 3 represents the ideal development scenario if the market were able to support it. Again, based on existing market data, the Stadium station does not support this level of development at this time. The following table details the three suggested development alternatives that were analyzed in the model:

Laclede's Landing/Arch Station Alternative Plans			
	Scenario 1	**Scenario 2**	**Scenario 3**
Market Rate Residential (units)	175	300	800
Retail (sf)	50,000	250,000	400,000
Office (sf)	205,000	255,000	405,000
Hotel (rooms)	200	200	200
Structured Parking (spaces)	1,313	1,713	2,205

After review by the Technical Assistance Committee (TAC) and public input, a preferred plan for the Laclede's Landing/Arch station was developed. This plan recommends the development of vacant parcels in Laclede's Landing be developed in the near term. Thereafter, it is hoped that development will occur north of the MLK Bridge to the east of the casino.

Laclede's Landing/Arch Station Preferred Plan	
	Preferred
Market Rate Residential (units)	480
Affordable Residential (units)	120
Renovated Retail	25,000
Retail (sf)	150,000
Renovated Office (sf)	105,000
Office (sf)	250,000
Structured Parking (spaces)	3,000

MODEL ASSUMPTIONS: SUBSIDIES & DEVELOPMENT GAPS

General Public Assistance for Redevelopment

While it is most desirable for development to occur entirely within the private market, public assistance is often required to redevelop urban areas to overcome higher land acquisition prices, demolition, infrastructure improvements, and cleanup. Because TOD is intended to increase density around a station area, it can be assumed that a quality development will in turn increase demand for an area. If this were to occur, the economic forces could overcome the higher costs associated with redevelopment in the future.

At this time, the City of St. Louis has an array of development tools to help offset some costs. Tax Increment Financing, a tool that allows a developer to collect incremental real property and economic activity tax revenue, is a popular way to finance property acquisition, infrastructure improvements, and renovation costs in the city. Other tools, such as Community Improvement Districts, allow for a developer to generate funds for area amenities or other programs. A complete listing of possible incentive tools is included in the Appendix.

Gap financing can come from private sources as well.[2] It should be noted that competition for these limited resources is great. The following lists potential sources of gap financing:

- Business Community
- Community-Based Organizations
- Developers
- Financial Institutions
- Philanthropic Organizations

In addition to tools geared towards property redevelopment, the City offers some assistance to small business owners in the form of grants, tax credits, and other specialized programs. In order to entice businesses into each station area, it is critical that these programs be marketed towards the business community.

Stadium Station

The Stadium station area is already in the midst of substantial redevelopment at Ballpark Village. However, this development required significant public subsidy. Ideally, Ballpark Village will attract more users and command higher rents from future tenants, attracting new developers. However, it is likely that subsequent development in the near term will require some sort of assistance to be achieved. Therefore, it is necessary to find some sort of financing –be it public or private—to fill the gap and entice development.

The following table details the estimated funding gap and the amount of public financing available for each development scenario.

Estimated Funding Gap: Stadium Station				
	Scenario 1	**Scenario 2**	**Scenario 3**	**Preferred**
Development Cost	$147.0 million	$393.7 million	$608.1 million	$579.3 million
Development Value	$115.2 million	$354.4 million	$450.3 million	$394.8 million
Funding Gap	$31.8 million	$39.3 million	$157.8 million	$184.5 million
Available Public Subsidy	$52.3 million	$134.0 million	$165.4 million	$140.6 million

[2] http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000KiJOMEA3

In general, the available public subsidies would fill any financing gaps for the alternative scenarios. The estimated costs in the preferred scenario include associated public infrastructure costs that outstrip the estimated available subsidies. Under the preferred scenario, it would be necessary for developers to seek private gap financing.

Laclede's Landing/Arch Station

The Laclede's Landing/Arch station has utilized redevelopment programs in the past to great success. However, a lack of upkeep and "freshness" led to the Landing's decline over the past few decades as evidenced by vacant buildings, a perception of crime, and the movement of nightlife to other parts of the City. To truly be revitalized, the City must commit some public funds to kick-start redevelopment or new construction in the area.

The following table details the estimated funding gap and the amount of public financing available for each development scenario.

Estimated Funding Gap: Laclede's Landing/Arch Station				
	Scenario 1	**Scenario 2**	**Scenario 3**	**Preferred**
Development Cost	$142.4 million	$240.8 million	$426.5 million	$142.4 million
Development Value	$88.6 million	$145.5 million	$267.8 million	$88.6 million
Funding Gap	$53.8 million	$95.3 million	$158.7 million	$53.8 million
Available Public Subsidy	$39.4 million	$59.1 million	$88.7 million	$39.4 million

In general, the available public subsidies would fill any financing gaps. However, developers should be encouraged to seek a diversity of public and private gap financing sources.

MODEL OUTCOMES

Stadium Station

It should be noted that while the economic projections below estimate the potential returns of the suggested redevelopment plan, no significant market analysis has been performed to estimate the actual demand for these development configurations.

Estimated Financial Returns: Stadium Station				
	Scenario 1	**Scenario 2**	**Scenario 3**	**Preferred**
Return Without Gap Financing	3.9%	2.9%	1.7%	3.8%
Return With Gap Financing	8.7%	7.7%	4.7%	4.4%
Land Residual Value @ 15%	$24.9 million	$59.5 million	$71.8 million	$24.9 million
Land Residual Value @ 20%	$33.2 million	$79.3 million	$95.7 million	$33.2 million

With the development gap filled, the proposed TOD alternative and preferred plans at the Stadium Station do not achieve an acceptable return for a developer. Again, demand for the area must increase significantly and rents must be much higher to achieve rents that would attract development.

For the full economic analysis of each alternative, please see the excel models included with the final deliverable package.

Laclede's Landing/Arch Station

It should be noted that while the economic projections below estimate the potential returns of the suggested redevelopment plan, no significant market analysis has been performed to estimate the actual demand for these development configurations.

Estimated Financial Returns: Laclede's Landing/Arch Station				
	Scenario 1	**Scenario 2**	**Scenario 3**	**Preferred**
Return Without Gap Financing	6.5%	5.5%	4.1%	6.5%
Return With Gap Financing	12.1%	11.4%	7.4%	12.1%
Land Residual Value @ 15%	$14.4 million	$22.9 million	$37.4 million	$14.4 million
Land Residual Value @ 20%	$19.2 million	$30.6 million	$49.8 million	$19.2 million

With the development gap filled, the proposed TOD alternative and preferred plans at the Stadium Station do not achieve an acceptable return for a developer. Again, demand for the area must increase significantly and rents must be much higher to achieve rents that would attract development.

For the full economic analysis of each alternative, please see the excel models included with the final deliverables package.

TASK A6.3: RECOMMENDATIONS REGARDING REDEVELOPMENT PLANS, CHAPTER 99, OTHER FUNDING TOOLS, AND PLAN IMPLEMENTATION

GENERAL IMPLEMENTATION PLAN RECOMMENDATIONS

Overall Development Implementation

This requires taking all the plans "on the road" as presentations to and conversations with all such organizations, public and private, including to professional associations that represent components of the real estate development industry (e.g., Urban Land Institute, Board of Realtors, American Institute of Architects, American Planning Association, Associated General Contractors, and so on). The City of St. Louis should prepare presentation materials along with ideas for implementation (discussed further, below) and should schedule meetings as soon as, and as often as, possible. A result of this widespread policy recognition will, and should, be creation of appropriate partnerships to implement prioritized parts of each plan. Almost certainly, the City and Metro should be partners around all three stations. The City and Metro can take it upon themselves to initiate formal partnership discussions with others and to draft memoranda of understanding that will lead, as soon as possible, to formal development agreements and/or requests for proposals to developers and master developers.

Especially for the City and Metro, each should identify resources that will be offered to the prioritized redevelopment projects. Money, access to and preparation of applications for various governmental and foundations grants, incentive programs and their creation/management, fast-track permitting, political advocacy, staff support and expedited reviews, etc., should all be offered as part of a package to entice the private market and land owners to move quickly toward plan implementation.

Phase 1: Organization

The City—and the region—must organize itself to identify and promote TOD development. To that end, we recommend the following structure to ensure that TOD is promoted at all levels:

1. Convene a regional task force that identifies and promotes TOD opportunities on a region-wide basis throughout St. Louis, St. Louis County, and St. Clair County. The group will be tasked with recommending prime areas for TOD on a regional level.
2. This group should include representatives from Metro, local governments, East West Gateway, RCGA, APA, Trailnet, and others.
3. Convene a City-wide task force that focuses on TOD opportunities throughout the City. The group will identify the key stations—or future stations—where TOD should occur and promote the adoption of policies that promote sustainable development at each identified area.
4. This group should be composed of representatives from the Board of Aldermen, large institutions (Washington University, St. Louis University, BJC, etc.), and Metro. Ideally, similar groups will be formed in St. Louis County and St. Clair County to promote TOD within their jurisdictions.
5. Form a station area-specific group for each station identified as having the potential for TOD in the City. This group will focus on attracting development and enhancing TOD at the station level.
6. Each station-specific group should include representatives from Metro, neighborhood organizations, the board of aldermen, nearby land owners, business owners, and local developers.
7. Formally adopt the station area plans as part of the City's Strategic Land Use Plan. To succeed as TOD, the City of St. Louis—and all City departments, commissions, boards, etc., involved with redevelopment—must fully back the preferred plan for each station. The station area plan for each station should be fully adopted by the City and/or appropriate departments, commissions, and boards, and efforts must be made to instill the importance of working towards the plan in all levels of City government. Strong leadership is key to ensuring that the vision remains intact.
8. This adoption process should continue beyond the City's governance and regulatory boundaries. Metro should adopt the plans as official policy. The Partnership for Downtown St. Louis should adopt the two downtown plans and integrate them with its Downtown Next plan and funding priorities. Great Rivers Greenway should adopt all or parts of the plans as appropriate to its mission in these areas. Trailnet might adopt the policies. Citizens for Modern Transit should do the same. Even key institutions with important interests in the station areas should adopt the plans as part of their real estate and related missions: the Laclede's Landing CID, for example. All these organizations should buy in to the plans and, in an effort to move quickly, absorb such plans into their own missions and plans.
9. Adopt the recommended Form Based Code.
10. Dedicate a staff member—or create a new position—as the TOD project lead within SLDC. This individual should be capable of developing a marketing program for the general station area and key

development parcels within it, promoting the plan for each station area, building relationships with key individuals or groups, assisting in land acquisition, implementing specific projects, and assisting individual developers with public subsidy programs. In addition, this individual should work closely with the TOD specialist at Metro.

Phase 2: Investment & Risk Mitigation

Several issues exist in each station area that must be addressed by the City and mitigated to reduce developer risk and encourage investment. Meetings with several developers and key institutions at each station area confirmed these issues. The following is a general list that the City must be addressed at all station areas where TOD is desired.

1. The City must show that it is committed to creating opportunities for TOD at each of the identified station areas by targeting some of its resources on those areas. To that end, SLDC must work with the City Streets Department, Forestry, and St. Louis Metropolitan Police Department to invest in key roadway improvements, add additional vegetation, and improve safety within each station area.
2. Acquire properties when available. If possible, target available funds from the general fund, CDBG, etc. to purchase market rate properties. This activity requires all City departments to commit to the project or grant/foundation support.
3. Require existing property owners within the station areas to meet minimum City guidelines regarding building maintenance.
4. Invest in a marketing strategy for each station area and develop materials to promote TOD to both local and out-of-town developers.
5. Create a master development organization for each station area. Because some redevelopment corporations are already in existence at some station areas, the City must work with these existing groups to either amend existing redevelopment agreements or extract undeveloped parcels from existing redevelopment agreements.

Phase 3: Project Initiation

1. Convene a Developer's Forum—beginning with local developers and perhaps expanding to out-of-towners—to showcase each station area. The local developers can be shown opportunities in the course of a day. Out of towners should be lodged overnight with their forum extending over two days with all expenses paid. The forum should include site tours, discussions about the opportunities in each area, sessions delving into the current and estimated financial data, and explanations of the plans and why they will succeed as TOD. These forums should be held annually. As the targeted station areas fulfill their plans, efforts should shift to other station areas.

2. Develop an easily accessible development prospectus that details key financial and population demographics, basic development parameters, available financial incentives by parcel, and suggested future land use.
3. Streamline permitting processes and give timeline estimates to potential developers.
4. With the coalition team, issue RFPs or RFQs for key project components within each station area. .
5. Focus the initial RPF processes on the amount of developable residential and commercial property as defined in the market analysis for the St. Louis TID Framework Plan. Then, if market conditions are favorable, foster additional development per the station area plan.
6. Continue to remain an active, ongoing partner with the development team. Require that the City have a financial interest in the success of any public/private partnership.

AREA-SPECIFIC RECOMMENDATIONS

Stadium Station Area

Much of the identified redevelopment to occur in or around the stadium station will be completed as part of the Ballpark Village development. However, certain key issues remain in the area and must be addressed by the City to ensure that future phases Ballpark Village and other development will occur in the future. The following list details the key outcomes of those conversations:

1. The parking lot to the south of the Tums building seems ripe for development given its location near the stadium and highway.
2. The current TOD plan may inhibit views towards the stadium from elsewhere in downtown. The building occupied by Mike Shannon's restaurant and bar could be eliminated to serve as a park-like connector from Kiener plaza to the Ballpark Village development.
3. The Stadium East and West garages are somewhat unsightly and are inactive at the ground floor level.
4. Metro is willing to work with any partner to create development around and above the station, assuming that it is financially feasible to do so. It should be noted that this type of development will be complicated due to requirements for maintenance access and other FTA studies.
5. The park at 900 Walnut may also be a good redevelopment site. However, the parcel on the west side of the block is owned by the federal government.

While some of these issues are beyond the City's control, the City can play a key role in kickstarting activity in the area. We recommend that the following activities commence in October 2013:

1. Focus initial efforts on achieving the market-supported development recommended in the St. Louis TOD Framework Plan.

Development Recommendations: Stadium Station Area			
Station Area	**St. Louis TOD Framework Plan Market-Based Projections**	**H3 Team Development Concepts**	**Excess Above Market**
Stadium	110 res. units 345,102 s.f. new comm. 0 s.f. renovated comm. 0 hotels	800 new res. units 900,000 s.f. new comm. 200,000 s.f. renovated comm. Two 400-room hotels	690 new res. units 554,898 s.f. comm. 200,000 s.f. renovated comm. Two 400-room hotels

1. Discuss possible development or joint venture opportunities with the owners of the parking lot to the south of the Tums Building. Secure property if possible.

2. SLDC must offer ongoing support for the Ballpark Village Development. While the area has been granted the use of a TIF, CID and TDD, other programs and assistance from SLDC remains. In fact, SLDC has a great opportunity to showcase the development activity occurring in the City, the commitment that the City has made to Ballpark Village, and the chance to market the Village to potential developers or tenants. To that end, SLDC should work with Cordish—the master developer—to attract additional new construction projects and quality tenants to existing developers, brokers, site selectors, and individual businesses. SLDC should also tap into their existing relationships with the development community to "get the word out" about the exciting opportunities at Ballpark Village.
3. Beyond marketing and the securing of tenants, SLDC may help facilitate the use of other incentive programs for businesses that may wish to lease space in Ballpark Village. In tandem with the greater general marketing efforts, the City should put together a package that describes other incentives like the Revolving Loan Fund, Small Business Association (SBA) loans, Local Development Company (LDC) loans, and Urban Enterprise Loans. In addition to marketing materials, SLDC should designate one of its employees as the main liaison to a potential new business. This person would help determine which programs are best for a particular business and help them navigate the application process.

Laclede's Landing/Arch Station Area

While the Landing was redeveloped in the 1980s to much fanfare, the area has declined over the past decade. The development of the Lumiere Place Casino and hotels has not brought a substantial increase in visitors to the area.

The consulting team has had multiple discussions with key parties—including Metro, local business owners, and local developers—to uncover opportunities and barriers to redevelopment within each station area and understand possible solutions to those problems. The following list details the key outcomes of those conversations:

1. There has been an uptick in violence in the area that deters out-of-town and local visitors.
2. The 3 a.m. liquor license that applies to many bars and restaurants in the area effectively prohibits the construction of any significant residential development due to the noise created by bar patrons early in the morning.
3. The highway overpass presents a significant barrier to pedestrian who would otherwise come to the Landing from downtown due to the noise, exhaust fumes, and darkness of the area.
4. The parking requirements for the Arch grounds are not yet resolved. The National Parks Service is currently holding a design competition for approximately 480 parking spaces to be located in the Landing. Three developers have submitted plans and a project will be selected in July 2013.
5. While the Landing has a CID and a business association, there is no cohesive group that is actively promoting redevelopment or other improvements in the area.
6. Recently, it was announced that the Lawrence Group and Drury hotels were considering the construction of a mixed-use building to go on the corner of Memorial Drive and the Eads Bridge. The development

would include residential units, ground-floor retail space, and parking garages. The developers have submitted a parking garage design to the NPS for consideration as part of their competition process.

While some of these issues are beyond the City's control, the City can play a key role in cleaning up the Landing and providing for future development in the area. We recommend that the following activities commence in October 2013:

1. Focus initial efforts on achieving the market-supported development recommended in the St. Louis TOD Framework Plan.

Development Recommendations: Stadium Station Area			
Station Area	**St. Louis TOD Framework Plan** **Market-Based Projections**	**H3 Team** **Development Concepts**	**Excess Above Market**
Laclede's Landing/ Arch	110 res. units 345,102 s.f. 0 s.f. renovated comm.	600 new res. units 400,000 s.f. new comm. 130,000 s.f. renovated comm.	490 new res. units 54,898 new s.f. comm. 130,000 s.f. renovated comm.

2. Work with the St. Louis Police Department and business owners to curb violence or other undesirable activities. Similar to the recent issues on Washington Avenue, the City must show an immediate concerted effort to clean up the area. Police or other security should be visible at all times of day both in the Landing and at parking lots along Leonor K. Sullivan Boulevard. Bar or restaurant owners—especially those with 3 a.m. liquor licenses—must be made responsible for violence or other issues with their patrons at closing.
3. SLDC, the City Streets Department, MoDOT, and any other willing participant must invest in improving the pedestrian experience to the Landing from downtown. While the proposed infrastructure changes will reorient streets and provide better vehicular activity, it is crucial that serious considerations is given to lighting, noise reduction, and wayfinding to enhance the sense of safety at the 'front door' to the Landing.
4. While the NPS has yet to make a decision regarding dedicated parking for the Arch grounds, the Lawrence Group and Drury Hotels has proposed to construct a substantial mixed-use building at the front door to the Landing. This represents a major new investment in the heart of the Landing, and the City must find ways to support the project.
5. While the CID and the business association are a good start, there must be a dedicated group focused on the long-term vision for the Landing.

Long-term Action Plan

1. If the City supports the goal to transform the Landing from an entertainment area to a mixed-use residential neighborhood, safety and nuisance issues must be addressed. Again, the City must engage in an ongoing effort to curb violence in the area.
2. In addition to this, the City should consider modifying or eliminating the use of 3 a.m. liquor licenses so that the area becomes attractive to additional residents over time. This may take the form of 3 a.m. liquor licenses being granted to business owners in certain areas or a requirement that certain noise, safety and other considerations be addressed at all times.

USE STRATEGY

Stadium Station

The preferred plan for the Stadium Station creates a mixed-use destination that features significant entertainment, office, and hotel components. In order to catalyze the redevelopment of the station area, it is recommended a three-stage approach be taken.

First, the City must work with the owners of the parcel to the west of the MetroLink line and the parking lot immediately east of Busch Stadium to investigate future development possibility. The City should continue to support the developers of Ballpark Village to ensure that subsequent phases move forward.

At the second stage of redevelopment, the City should focus on promoting ongoing development at Ballpark Village and the construction of mixed-use development at the lots mentioned in the first phase. These developments will transform the stadium area into a true live-work-play destination at one of the key entrances to the City.

In the third stage of implementation the City should promote the redevelopment of properties within the Cupples Station district.

Laclede's Landing/Arch Station

The finalized station area plan for the Laclede's Landing/Arch area will transform the district from a dated bar and club strip to a mixed-use, residential neighborhood that borders the Mississippi River. In order to catalyze the redevelopment of the station area, it is recommended a three-stage approach be taken.

First, the City must demonstrate support for the proposed mixed-use development within the Landing. In tandem with this, SLDC should work with Metro to locate and secure an alternative office location so that the existing building on 1st Street can be redeveloped into residential units.

At the second stage of redevelopment, City officials limit 3am liquor licenses in the area by working with existing business owners. Ideally, bars and clubs should be relocated to the 2nd Street corridor, leaving 1st Street for residential uses. Additional new residential development at the vacant parcels along 1st Street should be promoted by the City.

In the third stage of implementation the City must work with the owners of the Lumiere Place Casino to explore the possibility of development to the east of the casino.

DESIGN

Stadium Station

Design is a critical element to the Stadium Station. The presence of Busch Stadium, the coming Ballpark Village, and the Cupples Station area lend to an overall historic feeling to the area. To the south, much of the area has seen little investment. To enhance the entrance to the station area and attract new office tenants, businesses, and residents, it is crucial that a design standard that promotes a quality, transit-oriented product be required for the area. The existing large scale brick buildings bordering the stadium to the east and west should serve as a design inspiration for future development.

To best achieve a quality design standard, it is crucial that the City adopt a form-based code, detailed in another section of the study, to easily communicate the expectations for the area. This code should aspire to create the most flexibility possible for developers with regards to parking ratio requirements and building height.

The stadium station area is experiencing a surge of new construction that will hopefully continue for years to come. Much of the new construction and renovation work that has occurred or is ongoing will mimic or reference historic design elements that are found in existing buildings in the vicinity. Because the stadium area—especially the areas to the north of Interstate 64—is the main entrance to the City for many visitors, a cohesive design approach should be taken to enhance the visitor or worker experience in the areas near the station to the north of Interstate 64.

Much of the area to the south of Interstate 64 remains undeveloped. While no significant development is suggested in the final station area plan at this time, it is critical that the City support a cohesive street enhancement program to increase the perception of safety in the area and prepare for future development. Existing historic buildings in the area—notably the Eugene Fields house—should remain in place.

Laclede's Landing/Arch Station

The Laclede's Landing/Arch station presents a unique challenge in terms of future building design. While much of the station area falls within an historic district, vacant developable parcels near the station and significant developable areas to the north of the MLK Bridge present an opportunity to push the design of new buildings in the Landing. While do not recommend a full departure from the design of the existing neighborhood fabric and scale in the area to the south of the MLK Bridge, there is an opportunity to introduce modern materials, fenestration, and technologies to improve the experiences of residents, visitors, and workers in the area. In turn, these new product types will likely attract people that will use transit and encourage further TOD in the station area. In the areas to the north of the MLK Bridge, modern design standards can be pushed given the presence of the newer casino building nearby.

To best achieve a quality design standard, it is crucial that the City adopt a form-based code, detailed in another section of the study, to easily communicate the expectations for the area. This code should aspire to create the

most flexibility possible for developers with regards to parking ratio requirements and building height. Specifically, building heights should be organized to maximize views of the river and Gateway Arch.

Because the area has seen little new construction over the past few decades—aside from the construction of the casino to the north—there is a significant opportunity to refresh the area with complementary buildings near the station and more modern, technologically advanced buildings to the north of the MLK Bridge. While most of St. Louis is known for its historic architecture, area near the casino would be easily distinguished by new, high quality, modern mixed-use residential buildings.

TASK A7: FINAL STATION AREA PLANS

DEVELOPMENT PROGRAM

Stadium Station

Given feedback from the TAC and the public, the consultant team developed the finalized station area plan for the Stadium Station. This plan assumes that significant retail and office space will be developed at both Ballpark Village, the former Cupples 7 site, and the parcel located immediately west of the MetroLink line.

Stadium Station Final Plan	
	Final Plan
Market Rate Residential (units)	800
Retail (sf)	250,000
Office (sf)	650,000
Hotels (rooms)	400
Structured Parking (spaces)	0

Laclede's Landing/Arch Station

Given feedback from the TAC and the public, the consultant team developed the finalized station area plan for the Laclede's Landing/Arch Station. This plan assumes that significant retail and office space will be developed at both Ballpark Village, the former Cupples 7 site, and the parcel located immediately west of the MetroLink line.

Laclede's Landing/Arch Final Plan	
	Final Plan
Market Rate Residential (units)	1,000
Retail (sf)	150,000
Office (sf)	250,000
Hotels (rooms)	0
Structure Parking (spaces)	1,500

MODEL ASSUMPTIONS: PREFERRED DEVELOPMENT PLAN COSTS & PHASING

Stadium Station

An econometric model was developed to analyze the preferred development plan for the Stadium station. The following table details key assumptions in the preferred development model regarding rents, construction costs, and other factors:

Fiscal Impact and Feasibility Analysis
Summary of Assumptions and Inputs

Development	NEW CONSTRUCTION		RENOVATIONS	
Affordable Housing				
Monthly Rent/s.f.	$0.90	per square foot	$0.90	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	800	square feet	800	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$150	per square foot	$160	per square foot
Non-Profit Cost Multiplier	60%	of Private Dev Cost	60%	of Private Dev Cost
Total Development Cost	$240	per square foot	$260	per square foot
Stand-Alone Apartments				
Monthly Rent/s.f.	$1.50	per square foot	$1.40	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	800	square feet	950	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$145	per square foot	$160	per square foot
Non-Profit Cost Multiplier	0%	of Private Dev Cost	0%	of Private Dev Cost
Total Development Cost	$150	per square foot	$160	per square foot
Mixed-Use Apartments				
Monthly Rent/s.f.	$1.55	per square foot	$1.45	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	1,000	square feet	1,000	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$145	per square foot	$160	per square foot
Non-Profit Cost Multiplier	0%	of Private Dev Cost	0%	of Private Dev Cost
Total Development Cost	$150	per square foot	$160	per square foot
Storefront Retail				
Annual Lease/s.f.	$15.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,850		17,850	
2013 Development Cost	$150	per square foot	$150	per square foot
Restaurant				
Annual Lease/s.f.	$15.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,850		17,850	
2013 Development Cost	$200	per square foot	$200	per square foot
Office/Institutional				
Annual Lease/s.f.	$17.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,000		17,000	
2013 Development Cost	$160	per square foot	$160	per square foot
Surface Parking				
Annual Lease/space	$200	per space	$200	per space
Monthly Parking	$100	per space	$100	per space
Spaces	500		500	
2013 Development Cost	$10,000	per space	$10,000	per space
Parking Garage				
Annual Lease/space	$1,000	per space	$1,000	per space
Monthly Parking	$117	per space	$117	per space
Spaces	500		500	
2013 Development Cost	$20,000	per space	$20,000	per space

A full listing of the development assumptions for the Stadium station is available in the Appendix.

An inflation rate of 2.5 percent was applied to rents, operating costs, and developments costs. For the sake of comparison, it is assumed that all development will be sold in year 30 and priced using an appropriate capitalization rate.

Generally, it was assumed that retail property would be built prior to the construction of significant residential, hotel, or office space. The following diagram shows the general phasing of the suggested redevelopment.

GENERAL PHASING DIAGRAM: STADIUM STATION

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

Laclede's Landing/Arch Station

An econometric model was developed to analyze the preferred development plan for the Laclede's Landing/Arch station. The following table details key assumptions in the preferred development model regarding rents, construction costs, and other factors:

Fiscal Impact and Feasibility Analysis
Summary of Assumptions and Inputs

Development	NEW CONSTRUCTION		RENOVATIONS	
Affordable Housing				
Monthly Rent/s.f.	$0.90	per square foot	$0.90	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	800	square feet	800	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$150	per square foot	$160	per square foot
Non-Profit Cost Multiplier	60%	of Private Dev Cost	60%	of Private Dev Cost
Total Development Cost	$240	per square foot	$260	per square foot
Stand-Alone Apartments				
Monthly Rent/s.f.	$1.50	per square foot	$1.40	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	800	square feet	950	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$145	per square foot	$160	per square foot
Non-Profit Cost Multiplier	0%	of Private Dev Cost	0%	of Private Dev Cost
Total Development Cost	$150	per square foot	$160	per square foot
Mixed-Use Apartments				
Monthly Rent/s.f.	$1.55	per square foot	$1.45	per square foot
Monthly Parking	$0	per month	$0	per month
Average Unit Size	1,000	square feet	1,000	square feet
Number of Units	90	per acre	90	per acre
2011 Private Development Cost	$145	per square foot	$160	per square foot
Non-Profit Cost Multiplier	0%	of Private Dev Cost	0%	of Private Dev Cost
Total Development Cost	$150	per square foot	$160	per square foot
Storefront Retail				
Annual Lease/s.f.	$15.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,850		17,850	
2013 Development Cost	$150	per square foot	$150	per square foot
Restaurant				
Annual Lease/s.f.	$15.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,850		17,850	
2013 Development Cost	$200	per square foot	$200	per square foot
Office/Institutional				
Annual Lease/s.f.	$17.00	per square foot (NNN)	$13.00	per square foot (NNN)
Monthly Parking	$0	per month	$0	per month
Square Feet (net leasable)	17,000		17,000	
2013 Development Cost	$160	per square foot	$160	per square foot
Surface Parking				
Annual Lease/space	$200	per space	$200	per space
Monthly Parking	$100	per space	$100	per space
Spaces	500		500	
2013 Development Cost	$10,000	per space	$10,000	per space
Parking Garage				
Annual Lease/space	$1,000	per space	$1,000	per space
Monthly Parking	$117	per space	$117	per space
Spaces	500		500	
2013 Development Cost	$20,000	per space	$20,000	per space

A full listing of the development assumptions for the Laclede's Landing station is available in the Appendix.

An inflation rate of 2.5 percent was applied to rents, operating costs, and developments costs. For the sake of comparison, it is assumed that all development will be sold in year 30 and priced using an appropriate capitalization rate.

Generally, it was assumed that one or more significant residential properties would be developed prior to the construction of additional office or retail space. Furthermore, it was assumed that vacant retail and office space must achieve an acceptable occupancy rate (roughly 85 to 95 percent occupied) before a significant amount of new product is developed. The following diagram shows the general phasing of the suggested redevelopment.

GENERAL PHASING DIAGRAM: LACLEDE'S LANDING/ ARCH STATION

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

MODEL ASSUMPTIONS: SUBSIDIES & DEVELOPMENT GAPS

General Public Assistance for Redevelopment

At this time, the City of St. Louis has an array of development tools to help offset some costs. Tax Increment Financing, a tool that allows a developer to collect incremental real property and economic activity tax revenue, is a popular way to finance property acquisition, infrastructure improvements, and renovation costs in the city. Other tools, such as Community Improvement Districts, allow for a developer to generate funds for area amenities or other programs. A complete listing of possible incentive tools is included in the Appendix.

Gap financing can come from private sources as well.[3] It should be noted that competition for these limited resources is great. The following lists potential sources of gap financing:

- Business Community
- Community-Based Organizations
- Developers
- Financial Institutions
- Philanthropic Organizations

In addition to tools geared towards property redevelopment, the City offers some assistance to small business owners in the form of grants, tax credits, and other specialized programs. In order to entice businesses into each station area, it is critical that these programs be marketed towards the business community.

Stadium Station

In many ways, the Stadium Station is already on the road to denser, more transit oriented development. The ongoing construction of Ballpark Village will provide additional restaurant and entertainment options within an easy walk of the station, and additional office, residential, and hotel development is planned for the area over the next decade, and many public incentives were secured for its construction. However, it is hoped that as density and demand increases, there will be less need for the use of additional public subsidy for the station area.

The following table details the estimated funding gap and the amount of public financing available for the finalized development scenario.

[3] http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000KiJOMEA3

Estimated Funding Gap: Stadium Station	
	Final
Development Cost	$514.6M
Development Value	$422.3M
Funding Gap	$92.3M
Available Public Subsidy	$145.0M

In general, the available public subsidies would fill any financing gaps for the finalized scenario for the Stadium Station. Under this scenario, it would be necessary for developers to seek private gap financing. It should be noted that approximately $17.0 million of the estimated available public subsidies are dedicated to the Ballpark Village project, leaving approximately $128.0 million of public subsidy available for other projects.

Laclede's Landing/Arch Station

The Laclede's Landing/Arch station offers a unique opportunity for significant new residential mixed-use development to occur over the next five years and for additional development to occur in years six through thirty. However, it is likely that a gap between the development cost and the actual value of the development post-development will exist. Therefore, it is necessary to find some sort of financing –be it public or private—to fill the gap and entice development.

The following table details the estimated funding gap and the amount of public financing available for each development scenario.

Estimated Funding Gap: Laclede's Landing/Arch Station	
	Final
Development Cost	$293.4
Development Value	$197.2
Funding Gap	$96.2
Available Public Subsidy	$59.8

In general, the available public subsidies would fill any financing gaps. It should be noted that a CID has been established for property owners in the area, and it has been reported that the CID generates less than $500,000 annually or approximately $3.4 million over the next 20 years using a discount rate of six percent. It can be assumed that the existing CID could generate substantially more funds in the future.

Business owners and other advocates for the Landing are investigating the use of Chapter 353 tax abatement to spur residential development in the Landing. However, all developers should be encouraged to seek a diversity of public and private gap financing sources as initial developments are proposed for the area.

MODEL OUTCOMES

Stadium Station

It should be noted that while the economic projections below estimate the potential returns of the suggested redevelopment plan, no significant market analysis has been performed to estimate the actual demand for these development configurations.

Estimated Financial Returns: Stadium Station	
	Final
Return Without Gap Financing	5.8%
Return With Gap Financing	6.7%
Land Residual Value @ 15%	$70.9M
Land Residual Value @ 20%	$94.6M

While the overall return for the suggested redevelopment plan in the finalized plan is within an acceptable range for a developer both with and without financing, it is highly likely that some sort of public incentive or other private gap financing will be necessary to attract developers to a long-ignored area of the City due to the high risk inherent to real estate development.

For the full economic analysis of each alternative, please see the Appendix.

Laclede's Landing/Arch Station

It should be noted that while the economic projections below estimate the potential returns of the suggested redevelopment plan, no significant market analysis has been performed to estimate the actual demand for these development configurations.

Estimated Financial Returns: Laclede's Landing/Arch Station	
	Final
Return Without Gap Financing	7.4%
Return With Gap Financing	10.8%
Land Residual Value @ 15%	$27.2M
Land Residual Value @ 20%	$36.2M

While the overall return for the suggested redevelopment plan in the finalized plan is within an acceptable range for a developer both with and without financing, it is highly likely that some sort of public incentive or other private gap financing will be necessary to attract developers to a long-ignored area of the City due to the high risk inherent to real estate development.

For the full economic analysis of each alternative, please see the Appendix.

APPENDIX: GENERAL PUBLIC SUBSIDY DESCRIPTIONS

General Development Incentives

Tax Increment Financing: A TIF collects a portion of net new real property, earnings, and sales taxes. These funds are then used to finance development and other improvements within the TIF district.

Community Improvement District (CID): A CID can levy real property and/or additional sales taxes to be used for certain improvements or services within the boundaries of the CID. Sales tax CIDs are capped at 1.0%.

Transportation Development District (TDD): A TDD can be funded through special assessment, real property tax, or sales tax. Sales tax TDDs are capped at 1.0%. Funds are used to support transportation improvement projects like signage, road conditions, or other transport-related needs within the districts of the TDD.

Chapter 353 Redevelopment: This program allows for full or partial abatement of real property taxes for up to 25 years.

Chapter 99 Redevelopment: This program allows for full or partial abatement of real property taxes for up to 10 years.

Specialized Development Incentives

Tax-Exempt Bond Financing: This bond incentive provides long-term capital financing for major projects.

Chapter 100 Bond Financing: This bond incentive provides long-term capital financing for major projects.

Chapter 100 Sales Tax Exemption: Used in conjunction with Chapter 100 Bonds, the Chapter 100 Sales Tax Exemption reduces the costs of purchasing non-manufacturing equipment.

The Small Business Association 7(a) Loan Guaranty: The SBA provides financing to small businesses with reasonable terms.

New Markets Tax Credits (NMTC): These credits are typically used to attract investments to low-income areas and offer tax credits for a portion of the investment. Typically, NMTC are utilized for large areas of redevelopment to increase return.

Historic Tax Credits: Offers tax credits for owners of recognized historic structures.

Land Assemblage Tax Credit: This credit is used to assemble large parcels of land for development.[4] Brownfields Revolving Loan Fund: Offers tax credits for assistance with the remediation of contaminated sites.

[4] The Land Assemblage Tax credit may require the reauthorization of the Missouri Legislature

Business Development Incentives

Revolving Loan Fund: The Revolving Loan Fund provides low-interest, short term, and subordinated loans for working capital, machinery, equipment, land purchase, renovation, and construction. Businesses must be located in St. Louis. To be eligible for the funds, a business must create at least one new job for every $10,000 of funding. In addition, the recipient of funds must agree to a First Source employment agreement with the City.

SBA 504 Loan: The SBA 504 loan provides a low interest, long-term loan for businesses investing in major capital improvements. The project must be owner-occupied, and at least one job must be created for each $65,000 in funding.

SBA 7(1) Loan Guaranty: The SBA 7(a) loan guaranty allows the SBA—in this case the City of St. Louis—to guaranty the loan to assure the lender that the government will reimburse the lending institution in the event of a default. While this program puts some financial risk on the City, it may be a key component to attracting new business.

LDC Loan: Provides direct, low-interest, subordinated loans for working capital, machinery, athe purchase of land, renovation, construction, and leasehold improvements. At least one full-time job must be created or retained for every $10,000 of funding. Cannot be used for speculative real estate development, franchise fees, or refinancing. Borrower must agree to use First Source Employment through the City.

Urban Enterprise Loans: The UEL is a state-funded loan program that assists companies expanding in or relocating to the State. The business must locate in a designated

Enhanced Enterprise Zone. Funding may be used for fixed asset financing, machinery, furniture, or working capital. The business must retain or create one job for every $20,000 in funding. The loan maximum is set at $100,000.

For more information on funding types, please see:

http://stlouis-mo.gov/government/departments/sldc/economic-development/financing/index.cfm

http://www.gilmorebell.com/ED_Memo_8_24_10.pdf

APPENDIX: DOWNTOWN CID MAP

http://www.downtownstl.org/DowntownCID/CIDMap.aspx

APPENDIX: PARCELS WITH PUBLIC SUBSIDY

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10117000020	98	Mercantile Library/Modesa	Stadium Station
10129000150	137	Railway Exchange Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
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10099008011	48	Marquette Building	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
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10099008011	48	Marquette Building	Stadium Station
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10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10099008011	48	Marquette Building	Stadium Station
10129000120	137	Railway Exchange Building	Stadium Station
10129000140	137	Railway Exchange Building	Stadium Station
10099000065	48	Marquette Building	Stadium Station
10117000120	98	Mercantile Library/Modesa	Stadium Station
10129000030	137	Railway Exchange Building	Stadium Station
10117000010	98	Mercantile Library/Modesa	Stadium Station
10117000090	98	Mercantile Library/Modesa	Stadium Station
10128000011	137	Railway Exchange Building	Stadium Station
10129000020	137	Railway Exchange Building	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10117000080	98	Mercantile Library/Modesa	Stadium Station
10129000130	137	Railway Exchange Building	Stadium Station
10117000070	111	LaSalle Building	Stadium Station
10127000185	85	600 Washington RPA I	Stadium Station
10099000060	39	Security Bldg	Stadium Station
10129000040	137	Railway Exchange Building	Stadium Station
10129000110	137	Railway Exchange Building	Stadium Station
10274000010	24	920 Olive/1000 Locust	Stadium Station
10215040015	67	1635 Washington	Stadium Station
10215048050	8	Edison Brothers Warehouse	Stadium Station
10215048050	8	Edison Brothers Warehouse	Stadium Station
10215048050	8	Edison Brothers Warehouse	Stadium Station
10215048050	8	Edison Brothers Warehouse	Stadium Station
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10215048050	8	Edison Brothers Warehouse	Stadium Station
10215048050	8	Edison Brothers Warehouse	Stadium Station
10117000040	98	Mercantile Library/Modesa	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10117000050	98	Mercantile Library/Modesa	Stadium Station
10129000160	137	Railway Exchange Building	Stadium Station
10129000180	137	Railway Exchange Building	Stadium Station
10281000020	112	1001 Locust	Stadium Station
10192008300	26	Paul Brown/Arcade Bldg.	Stadium Station
10192008300	26	Paul Brown/Arcade Bldg.	Stadium Station
10192008300	26	Paul Brown/Arcade Bldg.	Stadium Station
10215040017	67	1635 Washington	Stadium Station
10181000080	120	Chemical Building	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
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10273008021	79	Syndicate Trust	Stadium Station
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10273008021	79	Syndicate Trust	Stadium Station
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10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
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10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
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10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10273008021	79	Syndicate Trust	Stadium Station
10279000035	80	Ludwig Lofts	Stadium Station
10280000030	24	920 Olive/1000 Locust	Stadium Station
10427000021	3	Cupples	Stadium Station
10417000057	3	Cupples	Stadium Station
10418000040	3	Cupples	Stadium Station
10425000010	3	Cupples	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
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10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
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10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10434008011	89	Ballpark Lofts	Stadium Station
10417000013	3	Cupples	Stadium Station
10417000013	3	Cupples	Stadium Station
10417000045	3	Cupples	Stadium Station
10417000056	3	Cupples	Stadium Station
10427000010	3	Cupples	Stadium Station
10427000010	89	Ballpark Lofts	Stadium Station
10436000012	3	Cupples	Stadium Station
10435000020	3	Cupples	Stadium Station
10435000040	3	Cupples	Stadium Station
10437000040	3	Cupples	Stadium Station
10435000030	3	Cupples	Stadium Station
10434000041	89	Ballpark Lofts	Stadium Station
10435000010	3	Cupples	Stadium Station
10427000022	3	Cupples	Stadium Station
10435000050	3	Cupples	Stadium Station
10418000111	3	Cupples	Stadium Station
10437000010	3	Cupples	Stadium Station
10437000010	3	Cupples	Stadium Station
10516000080	139	1111 Olive	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
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10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station

STADIUM STATION TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10516008011	23	Louderman Bldg.	Stadium Station
10504000011	83	Park Pacific	Stadium Station
16465000010	92	Ballpark Village/MODESA	Stadium Station
16470000010	63	Pet Building	Stadium Station
16466000035	92	Ballpark Village/MODESA	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10084000030	Downtown CID	Stadium Station
10100000010	Downtown CID	Stadium Station
10117000020	Downtown CID	Stadium Station
10117000100	Downtown CID	Stadium Station
10129000150	Downtown CID	Stadium Station
10084000040	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
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STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
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10099008011	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10099008011	Downtown CID	Stadium Station
10103000100	Downtown CID	Stadium Station
10106000040	Downtown CID	Stadium Station
10129000120	Downtown CID	Stadium Station
10129000140	Downtown CID	Stadium Station
10086000010	Downtown CID	Stadium Station
10086000010	Downtown CID	Stadium Station
10099000025	Downtown CID	Stadium Station
10117000120	Downtown CID	Stadium Station
10129000030	Downtown CID	Stadium Station
10129000100	Downtown CID	Stadium Station
10084000010	Downtown CID	Stadium Station
10115000010	Downtown CID	Stadium Station
10117000010	Downtown CID	Stadium Station
10117000090	Downtown CID	Stadium Station
10117000110	Downtown CID	Stadium Station
10128000011	Downtown CID	Stadium Station
10129000020	Downtown CID	Stadium Station
10099000070	Downtown CID	Stadium Station
10116000015	Downtown CID	Stadium Station
10117000080	Downtown CID	Stadium Station
10129000010	Downtown CID	Stadium Station
10129000130	Downtown CID	Stadium Station
10131000022	Downtown CID	Stadium Station
10100000040	Downtown CID	Stadium Station
10101000010	Downtown CID	Stadium Station
10117000060	Downtown CID	Stadium Station
10117000070	Downtown CID	Stadium Station
10127000185	Downtown CID	Stadium Station
10130000010	Downtown CID	Stadium Station
10099000060	Downtown CID	Stadium Station
10129000040	Downtown CID	Stadium Station
10129000110	Downtown CID	Stadium Station
10180000010	Downtown CID	Stadium Station
10181000060	Downtown CID	Stadium Station
10191000200	Downtown CID	Stadium Station
10194000013	Downtown CID	Stadium Station
10205050010	Downtown CID	Stadium Station
10216000050	Downtown CID	Stadium Station
10272000046	Downtown CID	Stadium Station
10274000010	Downtown CID	Stadium Station
10279000070	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10184000150	Downtown CID	Stadium Station
10189008011	Downtown CID	Stadium Station
10189008011	Downtown CID	Stadium Station
10192000020	Downtown CID	Stadium Station
10206060060	Downtown CID	Stadium Station
10216000150	Downtown CID	Stadium Station
10216000165	Downtown CID	Stadium Station
10180000060	Downtown CID	Stadium Station
10181000020	Downtown CID	Stadium Station
10185000010	Downtown CID	Stadium Station
10195000021	Downtown CID	Stadium Station
10272000070	Downtown CID	Stadium Station
10272000080	Downtown CID	Stadium Station
10278000010	Downtown CID	Stadium Station
10280000025	Downtown CID	Stadium Station
10280000050	Downtown CID	Stadium Station
10215040015	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
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10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
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10215048050	Downtown CID	Stadium Station
10215048050	Downtown CID	Stadium Station
10274008021	Downtown CID	Stadium Station
10274008021	Downtown CID	Stadium Station
10274008021	Downtown CID	Stadium Station
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10274008021	Downtown CID	Stadium Station
10274008021	Downtown CID	Stadium Station
10274008021	Downtown CID	Stadium Station
10275000050	Downtown CID	Stadium Station
10279000020	Downtown CID	Stadium Station
10279000050	Downtown CID	Stadium Station
10279000065	Downtown CID	Stadium Station
10100000030	Downtown CID	Stadium Station
10117000040	Downtown CID	Stadium Station
10117000050	Downtown CID	Stadium Station
10129000160	Downtown CID	Stadium Station
10129000180	Downtown CID	Stadium Station
10181000050	Downtown CID	Stadium Station
10181000070	Downtown CID	Stadium Station
10194000012	Downtown CID	Stadium Station
10194000030	Downtown CID	Stadium Station
10205050100	Downtown CID	Stadium Station
10281000020	Downtown CID	Stadium Station
10278000030	Downtown CID	Stadium Station
10279000010	Downtown CID	Stadium Station
10182000010	Downtown CID	Stadium Station
10192008300	Downtown CID	Stadium Station
10192008300	Downtown CID	Stadium Station
10192008300	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10194000011	Downtown CID	Stadium Station
10215040017	Downtown CID	Stadium Station
10181000080	Downtown CID	Stadium Station
10206060050	Downtown CID	Stadium Station
10216000160	Downtown CID	Stadium Station
10272000050	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
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STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10273008021	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
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STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10273008021	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
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10273008021	Downtown CID	Stadium Station
10273008021	Downtown CID	Stadium Station
10274000040	Downtown CID	Stadium Station
10274000060	Downtown CID	Stadium Station
10279000080	Downtown CID	Stadium Station
10280000015	Downtown CID	Stadium Station
10280000060	Downtown CID	Stadium Station
10280000080	Downtown CID	Stadium Station
10274000070	Downtown CID	Stadium Station
10275000013	Downtown CID	Stadium Station
10279000035	Downtown CID	Stadium Station
10279000060	Downtown CID	Stadium Station
10281000030	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
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10281008040	Downtown CID	Stadium Station
10281008040	Downtown CID	Stadium Station
10274000050	Downtown CID	Stadium Station
10278000020	Downtown CID	Stadium Station
10823000040	Downtown CID	Stadium Station
10823008061	Downtown CID	Stadium Station
10823008061	Downtown CID	Stadium Station
10823008061	Downtown CID	Stadium Station
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10823008061	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10823008061	Downtown CID	Stadium Station
10823008061	Downtown CID	Stadium Station
10823008061	Downtown CID	Stadium Station
10180000050	Downtown CID	Stadium Station
10181000030	Downtown CID	Stadium Station
10188000020	Downtown CID	Stadium Station
10272000060	Downtown CID	Stadium Station
10280000030	Downtown CID	Stadium Station
10280000040	Downtown CID	Stadium Station
10427000021	Downtown CID	Stadium Station
10417000057	Downtown CID	Stadium Station
10425000010	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
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STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
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10434008011	Downtown CID	Stadium Station
10434008011	Downtown CID	Stadium Station
10417000013	Downtown CID	Stadium Station
10417000045	Downtown CID	Stadium Station
10427000010	Downtown CID	Stadium Station
10436000012	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10435000020	Downtown CID	Stadium Station
10435000040	Downtown CID	Stadium Station
10437000040	Downtown CID	Stadium Station
10435000030	Downtown CID	Stadium Station
10427000045	Downtown CID	Stadium Station
10434000041	Downtown CID	Stadium Station
10435000010	Downtown CID	Stadium Station
10427000022	Downtown CID	Stadium Station
10435000050	Downtown CID	Stadium Station
10823000080	Downtown CID	Stadium Station
10417000046	Downtown CID	Stadium Station
10437000010	Downtown CID	Stadium Station
10503000030	Downtown CID	Stadium Station
10502000025	Downtown CID	Stadium Station
10503000010	Downtown CID	Stadium Station
10516000080	Downtown CID	Stadium Station
10516008011	Downtown CID	Stadium Station
10516008011	Downtown CID	Stadium Station
10516008011	Downtown CID	Stadium Station
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10516008011	Downtown CID	Stadium Station
10516008011	Downtown CID	Stadium Station
10516008011	Downtown CID	Stadium Station
10503000050	Downtown CID	Stadium Station
10503000120	Downtown CID	Stadium Station

STADIUM STATION SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10503000020	Downtown CID	Stadium Station
10503000060	Downtown CID	Stadium Station
10503000130	Downtown CID	Stadium Station
10516000090	Downtown CID	Stadium Station
10502000011	Downtown CID	Stadium Station
10502000175	Downtown CID	Stadium Station
10504000011	Downtown CID	Stadium Station
10503000070	Downtown CID	Stadium Station
10503000080	Downtown CID	Stadium Station
10503000040	Downtown CID	Stadium Station
10503000105	Downtown CID	Stadium Station
10516000070	Downtown CID	Stadium Station
10516000015	Downtown CID	Stadium Station
10516000020	Downtown CID	Stadium Station
10503000090	Downtown CID	Stadium Station
10503000100	Downtown CID	Stadium Station
10516000030	Downtown CID	Stadium Station
10516000040	Downtown CID	Stadium Station
16464000010	Downtown CID	Stadium Station
16464000020	Downtown CID	Stadium Station
16469000150	Downtown CID	Stadium Station
16490000020	Downtown CID	Stadium Station
16464000015	Downtown CID	Stadium Station
16468000030	Downtown CID	Stadium Station
16465000010	Downtown CID	Stadium Station
16468000011	Downtown CID	Stadium Station
16509000020	Downtown CID	Stadium Station
16470000010	Downtown CID	Stadium Station
16466000035	Downtown CID	Stadium Station
16467000010	Downtown CID	Stadium Station

STADIUM STATION CHAPTER 353 PROPERTIES

HANDLE	CHAPTER 353 NAME	STATION AREA
10084000030	Transurban	Stadium Station
10100000010	Frates	Stadium Station
10106000010	Civic Center	Stadium Station
10084000020	Transurban	Stadium Station
10084000040	Transurban	Stadium Station
10099008011	Marquette Building (314 North Broadway)	Stadium Station
10103000100	Civic Center	Stadium Station
10106000040	Civic Center	Stadium Station
10086000010	HBE (Adams Mark), 717	Stadium Station
10099000025	Marquette Building (314 North Broadway)	Stadium Station
10114000010	Civic Center	Stadium Station
10118000016	Mayco	Stadium Station
10084000010	Transurban	Stadium Station
10115000010	Civic Center	Stadium Station
10128000011	Mayco	Stadium Station
10099000070	Marquette Building (314 North Broadway)	Stadium Station
10116000015	Broadway/Olive (Met Square)	Stadium Station
10131000022	Civic Center	Stadium Station
10078000010	Laclede's Landing	Stadium Station
10100000040	Frates	Stadium Station
10101000010	Boatmans Tower (Planters)	Stadium Station
10130000010	Civic Center	Stadium Station
10131000010	Civic Center	Stadium Station
10086000020	717 HBE (Adams Mark)	Stadium Station
10180000010	Mayco	Stadium Station
10191000200	Southwestern Bell Data Center (Landmark)	Stadium Station
10194000013	Washington Avenue	Stadium Station
10205050010	Civic Center	Stadium Station
10272000046	Washington Avenue	Stadium Station
10276000040	Gateway Mall (Pride) [353]	Stadium Station
10278000040	SW R.C. II	Stadium Station
10279000070	Majestic Plan I	Stadium Station
10184000150	Gateway Mall (Pride) [353]	Stadium Station
10189008011	Civic Center	Stadium Station
10190000210	Gateway Mall (Pride) [353]	Stadium Station
10276000010	Gateway Mall (Pride) [353]	Stadium Station
10180000060	Mayco	Stadium Station
10185000010	Civic Center	Stadium Station
10188000030	Civic Center	Stadium Station
10195000021	Civic Center	Stadium Station
10272000070	Washington Avenue	Stadium Station
10272000080	Washington Avenue	Stadium Station
10278000010	SW R.C. II	Stadium Station
10275000050	Southwestern Bell Center Tower	Stadium Station
10279000020	Majestic Plan II (Garage)	Stadium Station
10279000065	Majestic Plan I	Stadium Station

STADIUM STATION CHAPTER 353 PROPERTIES

HANDLE	CHAPTER 353 NAME	STATION AREA
10100000030	Frates	Stadium Station
10194000012	Washington Avenue	Stadium Station
10194000030	Washington Avenue	Stadium Station
10205050100	Civic Center	Stadium Station
10276000030	Gateway Mall (Pride) [353]	Stadium Station
10278000030	SW R.C. II	Stadium Station
10279000010	Majestic Plan II (Garage)	Stadium Station
10194000011	Washington Avenue	Stadium Station
10190000200	Gateway Mall (Pride) [353]	Stadium Station
10195000005	Civic Center	Stadium Station
10205060020	Civic Center	Stadium Station
10272000050	Washington Avenue	Stadium Station
10279000080	Majestic Plan I	Stadium Station
10275000013	Southwestern Bell Center Tower	Stadium Station
10281008040	Washington Avenue	Stadium Station
10276000020	Gateway Mall (Pride) [353]	Stadium Station
10278000020	SW R.C. II	Stadium Station
10279000090	Majestic Plan I	Stadium Station
10180000050	Mayco	Stadium Station
10181000030	Locust Street, 714	Stadium Station
10188000010	Civic Center	Stadium Station
10188000020	Civic Center	Stadium Station
10272000060	Washington Avenue	Stadium Station
10276000050	Gateway Mall (Pride) [353]	Stadium Station
10502000025	Southwestern Bell Parking Garage	Stadium Station
10502000011	Southwestern Bell Parking Garage	Stadium Station
16464000010	Civic Center	Stadium Station
16464000020	Civic Center	Stadium Station
16468000020	Civic Center	Stadium Station
16469000150	Civic Center	Stadium Station
16490000020	Mansion House Center [353]	Stadium Station
16464000015	Civic Center	Stadium Station
16468000030	Civic Center	Stadium Station
16509000010	Civic Center	Stadium Station
16465000010	Civic Center	Stadium Station
16468000011	Civic Center	Stadium Station
16509000020	Civic Center	Stadium Station
16470000010	Civic Center	Stadium Station
16467000010	Civic Center	Stadium Station

STADIUM STATION CHAPTER 100 PROPERTIES

HANDLE	CHAPTER 100 NAME	STATION AREA
10040000030	Stadium South [100]	Stadium Station
10051000020	Stadium South [100]	Stadium Station
10051000035	Stadium South [100]	Stadium Station
10052000070	Stadium South [100]	Stadium Station
10052000090	Stadium South [100]	Stadium Station
10074000060	Stadium South [100]	Stadium Station
10074000080	Stadium South [100]	Stadium Station
10076000030	Stadium South [100]	Stadium Station
10041000080	Stadium South [100]	Stadium Station
10050000040	Stadium South [100]	Stadium Station
10051000025	Stadium South [100]	Stadium Station
10052000060	Stadium South [100]	Stadium Station
10074000010	Stadium South [100]	Stadium Station
10074000070	Stadium South [100]	Stadium Station
10041000070	Stadium South [100]	Stadium Station
10041000090	Stadium South [100]	Stadium Station
10041000170	Stadium South [100]	Stadium Station
10049000010	Stadium South [100]	Stadium Station
10050000010	Stadium South [100]	Stadium Station
10050000050	Stadium South [100]	Stadium Station
10041000020	Stadium South [100]	Stadium Station
10041000040	Stadium South [100]	Stadium Station
10050000125	Stadium South [100]	Stadium Station
10051000010	Stadium South [100]	Stadium Station
10052000100	Stadium South [100]	Stadium Station
10053000010	Stadium South [100]	Stadium Station
10074000030	Stadium South [100]	Stadium Station
10076000095	Stadium South [100]	Stadium Station
10076000035	Stadium South [100]	Stadium Station
10077000020	Stadium South [100]	Stadium Station
10077000080	Stadium South [100]	Stadium Station
10147000140	Stadium South [100]	Stadium Station
10148000071	Stadium South [100]	Stadium Station
10149000110	Stadium South [100]	Stadium Station
10150060050	Stadium South [100]	Stadium Station
10077000030	Stadium South [100]	Stadium Station
10077000070	Stadium South [100]	Stadium Station
10147000130	Stadium South [100]	Stadium Station
10148000015	Stadium South [100]	Stadium Station
10148000072	Stadium South [100]	Stadium Station
10149000010	Stadium South [100]	Stadium Station
10077000010	Stadium South [100]	Stadium Station
10109000020	Stadium South [100]	Stadium Station
10109000030	Stadium South [100]	Stadium Station
10147000090	Stadium South [100]	Stadium Station
10147000115	Stadium South [100]	Stadium Station
10149000035	Stadium South [100]	Stadium Station
10149000060	Stadium South [100]	Stadium Station
10040000010	Stadium South [100]	Stadium Station
10041000100	Stadium South [100]	Stadium Station
10041000160	Stadium South [100]	Stadium Station
10051000040	Stadium South [100]	Stadium Station
10052000080	Stadium South [100]	Stadium Station
10074000050	Stadium South [100]	Stadium Station
10076000070	Stadium South [100]	Stadium Station
10077000035	Stadium South [100]	Stadium Station
10052000010	Stadium South [100]	Stadium Station
10052000020	Stadium South [100]	Stadium Station

STADIUM STATION CHAPTER 100 PROPERTIES

HANDLE	CHAPTER 100 NAME	STATION AREA
10075000025	Stadium South [100]	Stadium Station
10076000010	Stadium South [100]	Stadium Station
10076000060	Stadium South [100]	Stadium Station
10149000075	Stadium South [100]	Stadium Station
10149000090	Stadium South [100]	Stadium Station
10150060040	Stadium South [100]	Stadium Station
10150060070	Stadium South [100]	Stadium Station
10159000080	Stadium South [100]	Stadium Station
10109000010	Stadium South [100]	Stadium Station
10147000120	Stadium South [100]	Stadium Station
10148000085	Stadium South [100]	Stadium Station
10149000080	Stadium South [100]	Stadium Station
10150060030	Stadium South [100]	Stadium Station
10157000029	Stadium South [100]	Stadium Station
10159000020	Stadium South [100]	Stadium Station
10159000091	Stadium South [100]	Stadium Station
10160000070	Stadium South [100]	Stadium Station
10077000120	Stadium South [100]	Stadium Station
10078000010	Stadium South [100]	Stadium Station
10117000070	LaSalle Building	Stadium Station
10147000010	Stadium South [100]	Stadium Station
10148000035	Stadium South [100]	Stadium Station
10148000045	Stadium South [100]	Stadium Station
10149000140	Stadium South [100]	Stadium Station
10150050055	Stadium South [100]	Stadium Station
10157000010	Stadium South [100]	Stadium Station
10157000025	Stadium South [100]	Stadium Station
10041000030	Stadium South [100]	Stadium Station
10041000060	Stadium South [100]	Stadium Station
10050000135	Stadium South [100]	Stadium Station
10052000120	Stadium South [100]	Stadium Station
10053000020	Stadium South [100]	Stadium Station
10074000025	Stadium South [100]	Stadium Station
10074000040	Stadium South [100]	Stadium Station
10076000080	Stadium South [100]	Stadium Station
10076000110	Stadium South [100]	Stadium Station
10109000040	Stadium South [100]	Stadium Station
10147000105	Stadium South [100]	Stadium Station
10149000020	Stadium South [100]	Stadium Station
10149000055	Stadium South [100]	Stadium Station
10159000040	Stadium South [100]	Stadium Station
10159000060	Stadium South [100]	Stadium Station
10160000150	Stadium South [100]	Stadium Station
10159000010	Stadium South [100]	Stadium Station
10159000070	Stadium South [100]	Stadium Station
10160000140	Stadium South [100]	Stadium Station
10161000041	Stadium South [100]	Stadium Station
10161000105	Stadium South [100]	Stadium Station
10162000030	Stadium South [100]	Stadium Station
10159000101	Stadium South [100]	Stadium Station
10160000060	Stadium South [100]	Stadium Station
10160000090	Stadium South [100]	Stadium Station
10162000015	Stadium South [100]	Stadium Station
10162000025	Stadium South [100]	Stadium Station
10192000020	Arcade Building	Stadium Station
10192000020	Wright Building	Stadium Station
10160000050	Stadium South [100]	Stadium Station
10161000065	Stadium South [100]	Stadium Station

STADIUM STATION CHAPTER 100 PROPERTIES

HANDLE	CHAPTER 100 NAME	STATION AREA
10161000071	Stadium South [100]	Stadium Station
10159000030	Stadium South [100]	Stadium Station
10159000050	Stadium South [100]	Stadium Station
10160000160	Stadium South [100]	Stadium Station
10161000012	Stadium South [100]	Stadium Station
10161000200	Stadium South [100]	Stadium Station
10161000215	Stadium South [100]	Stadium Station
10182000020	Chemical Buidling	Stadium Station
10192000025	Arcade Building	Stadium Station
10052000040	Stadium South [100]	Stadium Station
10052000050	Stadium South [100]	Stadium Station
10075000015	Stadium South [100]	Stadium Station
10076000020	Stadium South [100]	Stadium Station
10077000100	Stadium South [100]	Stadium Station
10077000110	Stadium South [100]	Stadium Station
10100000030	Fourth and Pine	Stadium Station
10129000180	Olive Street, 600-610	Stadium Station
10148000025	Stadium South [100]	Stadium Station
10148000050	Stadium South [100]	Stadium Station
10148000065	Stadium South [100]	Stadium Station
10149000120	Stadium South [100]	Stadium Station
10149000130	Stadium South [100]	Stadium Station
10156050010	Stadium South [100]	Stadium Station
10156060010	Stadium South [100]	Stadium Station
10160000030	Stadium South [100]	Stadium Station
10158000010	Stadium South [100]	Stadium Station
10159000015	Stadium South [100]	Stadium Station
10161000011	Stadium South [100]	Stadium Station
10161000185	Stadium South [100]	Stadium Station
10161000020	Stadium South [100]	Stadium Station
10161000055	Stadium South [100]	Stadium Station
10161000170	Stadium South [100]	Stadium Station
10162000020	Stadium South [100]	Stadium Station
10161000030	Stadium South [100]	Stadium Station
10161000042	Stadium South [100]	Stadium Station
10161000115	Stadium South [100]	Stadium Station
10161000175	Stadium South [100]	Stadium Station
10161000175	South Broadway, 715	Stadium Station
10212000005	Central Industrial Corridor East	Stadium Station
10161000210	Stadium South [100]	Stadium Station
10192008300	Paul Brown Building	Stadium Station
10274000040	Frisco Building	Stadium Station
10160000040	Stadium South [100]	Stadium Station
10161000085	Stadium South [100]	Stadium Station
10161000095	Stadium South [100]	Stadium Station
10162000040	Stadium South [100]	Stadium Station
10439000020	Central Industrial Corridor East	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10040000030	Stadium South [99]	Stadium Station
10051000020	Stadium South [99]	Stadium Station
10051000035	Stadium South [99]	Stadium Station
10052000070	Stadium South [99]	Stadium Station
10052000090	Stadium South [99]	Stadium Station
10074000060	Stadium South [99]	Stadium Station
10074000080	Stadium South [99]	Stadium Station
10076000030	Stadium South [99]	Stadium Station
10041000080	Stadium South [99]	Stadium Station
10050000040	Stadium South [99]	Stadium Station
10051000025	Stadium South [99]	Stadium Station
10052000060	Stadium South [99]	Stadium Station
10074000010	Stadium South [99]	Stadium Station
10074000070	Stadium South [99]	Stadium Station
10041000070	Stadium South [99]	Stadium Station
10041000090	Stadium South [99]	Stadium Station
10041000170	Stadium South [99]	Stadium Station
10049000010	Stadium South [99]	Stadium Station
10050000010	Stadium South [99]	Stadium Station
10050000050	Stadium South [99]	Stadium Station
10041000020	Stadium South [99]	Stadium Station
10041000040	Stadium South [99]	Stadium Station
10050000125	Stadium South [99]	Stadium Station
10051000010	Stadium South [99]	Stadium Station
10052000100	Stadium South [99]	Stadium Station
10053000010	Stadium South [99]	Stadium Station
10074000030	Stadium South [99]	Stadium Station
10076000095	Stadium South [99]	Stadium Station
10076000035	Stadium South [99]	Stadium Station
10077000020	Stadium South [99]	Stadium Station
10077000080	Stadium South [99]	Stadium Station
10100000010	et, 401 & 408 and 400 Washingt	Stadium Station
10106000010	Downtown Sports Stadium	Stadium Station
10117000100	Olive Street, 515	Stadium Station
10147000140	South Downtown	Stadium Station
10147000140	Stadium South [99]	Stadium Station
10148000071	Stadium South [99]	Stadium Station
10149000110	Stadium South [99]	Stadium Station
10150060050	Stadium South [99]	Stadium Station
10077000030	Stadium South [99]	Stadium Station
10077000070	Stadium South [99]	Stadium Station
10084000040	South 4th Street, 2-90 (Drury)	Stadium Station
10099008011	roadway, 300-314 (Marquette B	Stadium Station
10103000100	Downtown Sports Stadium	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10106000040	Downtown Sports Stadium	Stadium Station
10147000130	Stadium South [99]	Stadium Station
10148000015	Stadium South [99]	Stadium Station
10148000072	Stadium South [99]	Stadium Station
10149000010	Stadium South [99]	Stadium Station
10077000010	Stadium South [99]	Stadium Station
10099000025	oadway/St. Charles/North Fourt	Stadium Station
10109000020	Stadium South [99]	Stadium Station
10109000030	Stadium South [99]	Stadium Station
10114000010	Downtown Sports Stadium	Stadium Station
10118000016	is Centre (Downtown Commercia	Stadium Station
10147000090	South Downtown	Stadium Station
10147000090	Stadium South [99]	Stadium Station
10147000115	South Downtown	Stadium Station
10147000115	Stadium South [99]	Stadium Station
10149000035	Stadium South [99]	Stadium Station
10149000060	Cupples Station [99]	Stadium Station
10149000060	LaSalle Park	Stadium Station
10149000060	Stadium South [99]	Stadium Station
10040000010	Stadium South [99]	Stadium Station
10041000100	Stadium South [99]	Stadium Station
10041000160	Stadium South [99]	Stadium Station
10051000040	Stadium South [99]	Stadium Station
10052000080	Stadium South [99]	Stadium Station
10074000050	Stadium South [99]	Stadium Station
10076000070	Stadium South [99]	Stadium Station
10077000035	Stadium South [99]	Stadium Station
10084000010	South 4th Street, 2-90 (Drury)	Stadium Station
10052000010	Stadium South [99]	Stadium Station
10052000020	Stadium South [99]	Stadium Station
10075000025	Stadium South [99]	Stadium Station
10076000010	Stadium South [99]	Stadium Station
10076000060	Stadium South [99]	Stadium Station
10115000010	Downtown Sports Stadium	Stadium Station
10117000110	Olive Street, 515	Stadium Station
10128000011	is Centre (Downtown Commercia	Stadium Station
10149000075	Stadium South [99]	Stadium Station
10149000090	Stadium South [99]	Stadium Station
10150060040	Stadium South [99]	Stadium Station
10150060070	Stadium South [99]	Stadium Station
10159000080	Stadium South [99]	Stadium Station
10109000010	Stadium South [99]	Stadium Station
10131000022	Downtown Sports Stadium	Stadium Station
10147000120	South Downtown	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10147000120	Stadium South [99]	Stadium Station
10148000085	Stadium South [99]	Stadium Station
10149000080	Stadium South [99]	Stadium Station
10150060030	Stadium South [99]	Stadium Station
10157000029	Stadium South [99]	Stadium Station
10159000020	Stadium South [99]	Stadium Station
10159000091	Stadium South [99]	Stadium Station
10160000070	Stadium South [99]	Stadium Station
10077000120	Stadium South [99]	Stadium Station
10078000010	Stadium South [99]	Stadium Station
10101000010	DeSoto-Carr	Stadium Station
10117000060	North Broadway, 303	Stadium Station
10130000010	Downtown Sports Stadium	Stadium Station
10131000010	Downtown Sports Stadium	Stadium Station
10147000010	South Downtown	Stadium Station
10147000010	Stadium South [99]	Stadium Station
10148000035	Stadium South [99]	Stadium Station
10148000045	Stadium South [99]	Stadium Station
10149000140	Stadium South [99]	Stadium Station
10150050055	Stadium South [99]	Stadium Station
10157000010	Stadium South [99]	Stadium Station
10157000025	Stadium South [99]	Stadium Station
10041000030	Stadium South [99]	Stadium Station
10041000060	Stadium South [99]	Stadium Station
10050000135	Stadium South [99]	Stadium Station
10052000120	Stadium South [99]	Stadium Station
10053000020	Stadium South [99]	Stadium Station
10074000025	Stadium South [99]	Stadium Station
10074000040	Stadium South [99]	Stadium Station
10076000080	Stadium South [99]	Stadium Station
10076000110	Stadium South [99]	Stadium Station
10109000040	Stadium South [99]	Stadium Station
10147000105	South Downtown	Stadium Station
10147000105	Stadium South [99]	Stadium Station
10149000020	Stadium South [99]	Stadium Station
10149000055	Stadium South [99]	Stadium Station
10159000040	Stadium South [99]	Stadium Station
10159000060	Stadium South [99]	Stadium Station
10160000150	Stadium South [99]	Stadium Station
10159000010	Stadium South [99]	Stadium Station
10159000070	Stadium South [99]	Stadium Station
10160000140	Stadium South [99]	Stadium Station
10161000041	Stadium South [99]	Stadium Station
10161000105	Stadium South [99]	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10162000030	South Downtown	Stadium Station
10162000030	Stadium South [99]	Stadium Station
10181000060	Olive Building, 705	Stadium Station
10182000040	Olive/7th/Pine	Stadium Station
10194000013	Downtown Washington Avenue	Stadium Station
10205050010	Downtown Sports Stadium	Stadium Station
10217000070	Station East (Kiel)	Stadium Station
10218000050	Station East (Kiel)	Stadium Station
10272000046	Downtown Washington Avenue	Stadium Station
10274000010	Olive Street, 920	Stadium Station
10159000101	Stadium South [99]	Stadium Station
10160000060	Stadium South [99]	Stadium Station
10160000090	Stadium South [99]	Stadium Station
10162000015	Stadium South [99]	Stadium Station
10162000025	South Downtown	Stadium Station
10162000025	Stadium South [99]	Stadium Station
10182000080	Olive/7th/Pine	Stadium Station
10189008011	Downtown Sports Stadium	Stadium Station
10206060060	Eleventh/Walnut (Court Square)	Stadium Station
10160000050	Stadium South [99]	Stadium Station
10161000065	Stadium South [99]	Stadium Station
10161000071	Stadium South [99]	Stadium Station
10180000060	ssador Building (Eighth & Washir	Stadium Station
10185000010	Downtown Sports Stadium	Stadium Station
10188000030	Downtown Sports Stadium	Stadium Station
10195000021	Downtown Sports Stadium	Stadium Station
10272000070	Downtown Washington Avenue	Stadium Station
10272000080	Downtown Washington Avenue	Stadium Station
10280000050	/ 315 North Tenth Street / 1001	Stadium Station
10280000050	Olive Street, 1004	Stadium Station
10159000030	Stadium South [99]	Stadium Station
10159000050	Stadium South [99]	Stadium Station
10160000160	Stadium South [99]	Stadium Station
10161000012	Stadium South [99]	Stadium Station
10161000200	Stadium South [99]	Stadium Station
10161000215	Stadium South [99]	Stadium Station
10182000020	Olive/7th/Pine	Stadium Station
10215048050	ı 14th Street, 400 - Floors 9 to 12	Stadium Station
10217000020	Station East (Kiel)	Stadium Station
10217000040	Station East (Kiel)	Stadium Station
10052000040	Stadium South [99]	Stadium Station
10052000050	Stadium South [99]	Stadium Station
10075000015	Stadium South [99]	Stadium Station
10076000020	Stadium South [99]	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10077000100	Stadium South [99]	Stadium Station
10077000110	Stadium South [99]	Stadium Station
10148000025	Stadium South [99]	Stadium Station
10148000050	Stadium South [99]	Stadium Station
10148000065	Stadium South [99]	Stadium Station
10149000120	Stadium South [99]	Stadium Station
10149000130	Stadium South [99]	Stadium Station
10156050010	Stadium South [99]	Stadium Station
10156060010	Stadium South [99]	Stadium Station
10160000030	Stadium South [99]	Stadium Station
10158000010	Stadium South [99]	Stadium Station
10159000015	Stadium South [99]	Stadium Station
10161000011	Stadium South [99]	Stadium Station
10161000185	Stadium South [99]	Stadium Station
10161000020	Stadium South [99]	Stadium Station
10161000055	Stadium South [99]	Stadium Station
10161000170	Stadium South [99]	Stadium Station
10162000020	South Downtown	Stadium Station
10162000020	Stadium South [99]	Stadium Station
10161000030	Stadium South [99]	Stadium Station
10161000042	Stadium South [99]	Stadium Station
10161000115	Stadium South [99]	Stadium Station
10161000175	Stadium South [99]	Stadium Station
10181000070	Olive Building, 705	Stadium Station
10194000012	Downtown Washington Avenue	Stadium Station
10194000030	Downtown Washington Avenue	Stadium Station
10205050100	Downtown Sports Stadium	Stadium Station
10217000060	Station East (Kiel)	Stadium Station
10218000040	Station East (Kiel)	Stadium Station
10218000060	Station East (Kiel)	Stadium Station
10280000096	Olive Street, 1017 (L.G.L. Bldg)	Stadium Station
10161000210	Stadium South [99]	Stadium Station
10182000030	Olive/7th/Pine	Stadium Station
10194000011	Downtown Washington Avenue	Stadium Station
10217000030	Station East (Kiel)	Stadium Station
10190000200	North 9th Street, 10	Stadium Station
10195000005	Downtown Sports Stadium	Stadium Station
10205060020	Downtown Sports Stadium	Stadium Station
10212000010	Cupples Station [99]	Stadium Station
10212000010	LaSalle Park	Stadium Station
10217000050	Station East (Kiel)	Stadium Station
10218000070	Station East (Kiel)	Stadium Station
10272000050	Downtown Washington Avenue	Stadium Station
10273008021	Syndicate/Century	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10279000035	Olive Street, 1004	Stadium Station
10279000060	Pine Street, 1001	Stadium Station
10281008040	Downtown Washington Avenue	Stadium Station
10274000050	Mark Twain Hotel	Stadium Station
10280000070	Olive Street, 1009	Stadium Station
10160000040	Stadium South [99]	Stadium Station
10161000085	Stadium South [99]	Stadium Station
10161000095	Stadium South [99]	Stadium Station
10162000040	Stadium South [99]	Stadium Station
10180000050	ssador Building (Eighth & Washir	Stadium Station
10188000010	Downtown Sports Stadium	Stadium Station
10188000020	Cupples Station [99]	Stadium Station
10188000020	Downtown Sports Stadium	Stadium Station
10188000020	LaSalle Park	Stadium Station
10273000010	Syndicate/Century	Stadium Station
10280000030	/ 315 North Tenth Street / 1001	Stadium Station
10280000040	/ 315 North Tenth Street / 1001	Stadium Station
10418000100	Cupples Station [99]	Stadium Station
10426000005	Cupples Station [99]	Stadium Station
10426000005	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000015	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000015	Cupples Station [99]	Stadium Station
10427000021	Cupples Station [99]	Stadium Station
10427000021	:h/Clark/8th/Poplar (McCormack	Stadium Station
10417000010	Cupples Station [99]	Stadium Station
10421000011	LaSalle Park	Stadium Station
10422000030	Cupples Station [99]	Stadium Station
10426000010	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000010	Cupples Station [99]	Stadium Station
10429000040	Cupples Station [99]	Stadium Station
10430000030	LaSalle Park	Stadium Station
10431060060	LaSalle Park	Stadium Station
10432000060	Cupples Station [99]	Stadium Station
10417000011	Cupples Station [99]	Stadium Station
10421000010	LaSalle Park	Stadium Station
10422000025	Cupples Station [99]	Stadium Station
10422000040	Cupples Station [99]	Stadium Station
10429000035	Cupples Station [99]	Stadium Station
10429000045	Cupples Station [99]	Stadium Station
10430000020	LaSalle Park	Stadium Station
10430000040	Cupples Station [99]	Stadium Station
10430000040	LaSalle Park	Stadium Station
10430000060	LaSalle Park	Stadium Station
10418000040	Cupples Station [99]	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10419000050	Cupples Station [99]	Stadium Station
10419000320	Cupples Station [99]	Stadium Station
10422000050	Cupples Station [99]	Stadium Station
10425000010	:h/Clark/8th/Poplar (McCormack	Stadium Station
10425000010	Cupples Station [99]	Stadium Station
10427000050	Cupples Station [99]	Stadium Station
10429000025	Cupples Station [99]	Stadium Station
10431050020	LaSalle Park	Stadium Station
10431060010	LaSalle Park	Stadium Station
10434000035	:h/Clark/8th/Poplar (McCormack	Stadium Station
10434000035	Cupples Station [99]	Stadium Station
10417000013	Cupples Station [99]	Stadium Station
10419000010	Cupples Station [99]	Stadium Station
10419000020	Cupples Station [99]	Stadium Station
10421000015	LaSalle Park	Stadium Station
10421000020	LaSalle Park	Stadium Station
10426000020	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000020	Cupples Station [99]	Stadium Station
10426000030	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000030	Cupples Station [99]	Stadium Station
10427000010	Cupples Station [99]	Stadium Station
10427000010	:h/Clark/8th/Poplar (McCormack	Stadium Station
10429000060	Cupples Station [99]	Stadium Station
10429000065	Cupples Station [99]	Stadium Station
10432000025	Cupples Station [99]	Stadium Station
10432000030	Cupples Station [99]	Stadium Station
10436000012	Cupples Station [99]	Stadium Station
10435000020	:h/Clark/8th/Poplar (McCormack	Stadium Station
10435000020	Cupples Station [99]	Stadium Station
10435000040	:h/Clark/8th/Poplar (McCormack	Stadium Station
10435000040	Cupples Station [99]	Stadium Station
10436000011	Cupples Station [99]	Stadium Station
10437000040	Cupples Station [99]	Stadium Station
10439000020	Cupples Station [99]	Stadium Station
10435000030	:h/Clark/8th/Poplar (McCormack	Stadium Station
10435000030	Cupples Station [99]	Stadium Station
10439000030	Cupples Station [99]	Stadium Station
10444050080	Station East (Kiel)	Stadium Station
10461000085	LaSalle Park	Stadium Station
10437000030	Cupples Station [99]	Stadium Station
10437000030	LaSalle Park	Stadium Station
10462050045	LaSalle Park	Stadium Station
10427000030	:h/Clark/8th/Poplar (McCormack	Stadium Station
10427000030	Cupples Station [99]	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10431060020	LaSalle Park	Stadium Station
10431060040	LaSalle Park	Stadium Station
10432000050	Cupples Station [99]	Stadium Station
10432000070	Cupples Station [99]	Stadium Station
10417000012	Cupples Station [99]	Stadium Station
10417000070	South Downtown	Stadium Station
10417000070	Cupples Station [99]	Stadium Station
10418000030	Cupples Station [99]	Stadium Station
10418000050	Cupples Station [99]	Stadium Station
10419000040	Cupples Station [99]	Stadium Station
10419000060	Cupples Station [99]	Stadium Station
10462050040	LaSalle Park	Stadium Station
10422000045	Cupples Station [99]	Stadium Station
10422000060	Cupples Station [99]	Stadium Station
10429000010	Cupples Station [99]	Stadium Station
10431050010	LaSalle Park	Stadium Station
10431050040	LaSalle Park	Stadium Station
10434000041	:h/Clark/8th/Poplar (McCormack	Stadium Station
10434000041	Cupples Station [99]	Stadium Station
10435000010	Cupples Station [99]	Stadium Station
10439000050	Cupples Station [99]	Stadium Station
10422000010	Cupples Station [99]	Stadium Station
10426000018	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000018	Cupples Station [99]	Stadium Station
10427000022	Cupples Station [99]	Stadium Station
10427000022	:h/Clark/8th/Poplar (McCormack	Stadium Station
10429000030	Cupples Station [99]	Stadium Station
10430000050	LaSalle Park	Stadium Station
10431060030	LaSalle Park	Stadium Station
10432000040	Cupples Station [99]	Stadium Station
10435000050	:h/Clark/8th/Poplar (McCormack	Stadium Station
10435000050	Cupples Station [99]	Stadium Station
10439000010	Cupples Station [99]	Stadium Station
10418000111	Cupples Station [99]	Stadium Station
10419000025	Cupples Station [99]	Stadium Station
10421000012	LaSalle Park	Stadium Station
10421000013	LaSalle Park	Stadium Station
10426000040	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000040	Cupples Station [99]	Stadium Station
10426000050	:h/Clark/8th/Poplar (McCormack	Stadium Station
10426000050	Cupples Station [99]	Stadium Station
10429000050	Cupples Station [99]	Stadium Station
10430000010	LaSalle Park	Stadium Station
10431060070	LaSalle Park	Stadium Station

STADIUM STATION CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10432000010	Cupples Station [99]	Stadium Station
10437000010	Cupples Station [99]	Stadium Station
10437000020	Cupples Station [99]	Stadium Station
10462050065	LaSalle Park	Stadium Station
10462050075	LaSalle Park	Stadium Station
10439000040	Cupples Station [99]	Stadium Station
10439000060	Cupples Station [99]	Stadium Station
10462050010	LaSalle Park	Stadium Station
10486000005	LaSalle Park	Stadium Station
10486000020	LaSalle Park	Stadium Station
10486000025	LaSalle Park	Stadium Station
10503000010	North Tucker, 210	Stadium Station
10516000090	North Tucker Boulevard, 300	Stadium Station
10486000021	LaSalle Park	Stadium Station
10486000040	LaSalle Park	Stadium Station
10486000015	LaSalle Park	Stadium Station
10503000040	Olive Street, 1112	Stadium Station
10516000015	North Tucker Boulevard, 300	Stadium Station
16464000010	Downtown Sports Stadium	Stadium Station
16464000020	Downtown Sports Stadium	Stadium Station
16468000020	South 4th/Spruce	Stadium Station
16468000020	Downtown Sports Stadium	Stadium Station
16469000150	South Downtown	Stadium Station
16469000150	Downtown Sports Stadium	Stadium Station
16490000020	Mansion House Center [99]	Stadium Station
16464000015	Downtown Sports Stadium	Stadium Station
16468000030	Downtown Sports Stadium	Stadium Station
16509000010	adway/Spruce/South 3rd/Poplar	Stadium Station
16509000010	Downtown Sports Stadium	Stadium Station
16465000010	South Downtown	Stadium Station
16465000010	Downtown Sports Stadium	Stadium Station
16468000011	South 4th/Spruce	Stadium Station
16468000011	Downtown Sports Stadium	Stadium Station
16509000020	adway/Spruce/South 3rd/Poplar	Stadium Station
16509000020	Downtown Sports Stadium	Stadium Station
16470000010	adway/Spruce/South 3rd/Poplar	Stadium Station
16470000010	Downtown Sports Stadium	Stadium Station
16467000010	Downtown Sports Stadium	Stadium Station

LACLEDE'S LANDING/ARCH STATION

TIF PROPERTIES

HANDLE	TIF DISTRICT	TIF NAME	STATION AREA
10014000020	66	Switzer Building	LaClede's Landing
10016000101	126	Sky Wheel St Louis	LaClede's Landing
10120000040	129	Dillards Building	LaClede's Landing
10120000010	129	Dillards Building	LaClede's Landing
10141000012	52	Bottle District	LaClede's Landing
10125008151	129	Dillards Building	LaClede's Landing
10125008151	129	Dillards Building	LaClede's Landing
10144000020	52	Bottle District	LaClede's Landing
10144000010	52	Bottle District	LaClede's Landing
10141000011	52	Bottle District	LaClede's Landing
10126000015	85	600 Washington RPA I	LaClede's Landing
10144000090	52	Bottle District	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10015000010	Laclede's Landing CID	LaClede's Landing
10015000060	Laclede's Landing CID	LaClede's Landing
10018000100	Riverside CID	LaClede's Landing
10026000100	Laclede's Landing CID	LaClede's Landing
10027000080	Laclede's Landing CID	LaClede's Landing
10014000020	Laclede's Landing CID	LaClede's Landing
10015000080	Laclede's Landing CID	LaClede's Landing
10016000045	Laclede's Landing CID	LaClede's Landing
10017000045	Riverside CID	LaClede's Landing
10067000050	Laclede's Landing CID	LaClede's Landing
10070000046	Riverside CID	LaClede's Landing
10014000035	Laclede's Landing CID	LaClede's Landing
10014000050	Laclede's Landing CID	LaClede's Landing
10017000080	Riverside CID	LaClede's Landing
10018000010	Riverside CID	LaClede's Landing
10018000065	Riverside CID	LaClede's Landing
10018000080	Riverside CID	LaClede's Landing
10023000020	Riverside CID	LaClede's Landing
10024000015	Riverside CID	LaClede's Landing
10026000010	Laclede's Landing CID	LaClede's Landing
10066000150	Laclede's Landing CID	LaClede's Landing
10067000041	Laclede's Landing CID	LaClede's Landing
10067000061	Laclede's Landing CID	LaClede's Landing
10014000070	Laclede's Landing CID	LaClede's Landing
10016000101	Laclede's Landing CID	LaClede's Landing
10016000101	Laclede's Landing CID	LaClede's Landing
10017000010	Riverside CID	LaClede's Landing
10018000087	Riverside CID	LaClede's Landing
10018000092	Riverside CID	LaClede's Landing
10026000050	Laclede's Landing CID	LaClede's Landing
10067000096	Laclede's Landing CID	LaClede's Landing
10068000010	Laclede's Landing CID	LaClede's Landing
10014000040	Laclede's Landing CID	LaClede's Landing
10015000050	Laclede's Landing CID	LaClede's Landing
10120000010	Downtown CID	LaClede's Landing
10121000010	Downtown CID	LaClede's Landing
10016000055	Laclede's Landing CID	LaClede's Landing
10018000075	Riverside CID	LaClede's Landing
10023000015	Riverside CID	LaClede's Landing
10026000020	Laclede's Landing CID	LaClede's Landing
10027000010	Laclede's Landing CID	LaClede's Landing
10067000091	Laclede's Landing CID	LaClede's Landing
10070000018	Riverside CID	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

SBD PROPERTIES

HANDLE	SBD NAME	STATION AREA
10097000020	Downtown CID	LaClede's Landing
10016000011	Laclede's Landing CID	LaClede's Landing
10016000020	Laclede's Landing CID	LaClede's Landing
10018000020	Riverside CID	LaClede's Landing
10018000050	Riverside CID	LaClede's Landing
10067000012	Laclede's Landing CID	LaClede's Landing
10067000021	Laclede's Landing CID	LaClede's Landing
10070000005	Riverside CID	LaClede's Landing
10097000010	Downtown CID	LaClede's Landing
10097000030	Downtown CID	LaClede's Landing
10125008151	Downtown CID	LaClede's Landing
10095000015	Downtown CID	LaClede's Landing
10095000090	Downtown CID	LaClede's Landing
10096000030	Downtown CID	LaClede's Landing
10014000060	Laclede's Landing CID	LaClede's Landing
10026000055	Laclede's Landing CID	LaClede's Landing
10067000102	Laclede's Landing CID	LaClede's Landing
10068000020	Laclede's Landing CID	LaClede's Landing
10098000010	Downtown CID	LaClede's Landing
10119000011	Downtown CID	LaClede's Landing
10166000010	Downtown CID	LaClede's Landing
10015000090	Laclede's Landing CID	LaClede's Landing
10015000095	Laclede's Landing CID	LaClede's Landing
10016000025	Laclede's Landing CID	LaClede's Landing
10018000030	Riverside CID	LaClede's Landing
10018000040	Riverside CID	LaClede's Landing
10025000005	Laclede's Landing CID	LaClede's Landing
10067000031	Laclede's Landing CID	LaClede's Landing
10068000062	Laclede's Landing CID	LaClede's Landing
10068000080	Laclede's Landing CID	LaClede's Landing
10096000010	Downtown CID	LaClede's Landing
10096000020	Downtown CID	LaClede's Landing
10126000015	Downtown CID	LaClede's Landing
10164000010	Downtown CID	LaClede's Landing
16490000046	Downtown CID	LaClede's Landing
16490000046	Downtown CID	LaClede's Landing
16490000050	Downtown CID	LaClede's Landing
16490000030	Downtown CID	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 353 PROPERTIES

HANDLE	CHAPTER 353 NAME	STATION AREA
10015000010	Laclede's Landing	LaClede's Landing
10015000060	Laclede's Landing	LaClede's Landing
10016000040	Laclede's Landing	LaClede's Landing
10016000050	Laclede's Landing	LaClede's Landing
10026000100	Laclede's Landing	LaClede's Landing
10027000030	Laclede's Landing	LaClede's Landing
10027000080	Laclede's Landing	LaClede's Landing
10068000035	Laclede's Landing	LaClede's Landing
10068000050	Laclede's Landing	LaClede's Landing
10014000020	Laclede's Landing	LaClede's Landing
10015000080	Laclede's Landing	LaClede's Landing
10016000045	Laclede's Landing	LaClede's Landing
10025000045	Laclede's Landing	LaClede's Landing
10026000090	Laclede's Landing	LaClede's Landing
10066000011	Laclede's Landing	LaClede's Landing
10067000050	Laclede's Landing	LaClede's Landing
10068000030	Laclede's Landing	LaClede's Landing
10068000055	Laclede's Landing	LaClede's Landing
10014000035	Laclede's Landing	LaClede's Landing
10014000050	Laclede's Landing	LaClede's Landing
10025000040	Laclede's Landing	LaClede's Landing
10026000010	Laclede's Landing	LaClede's Landing
10066000150	Laclede's Landing	LaClede's Landing
10067000041	Laclede's Landing	LaClede's Landing
10067000061	Laclede's Landing	LaClede's Landing
10014000070	Laclede's Landing	LaClede's Landing
10014000090	Laclede's Landing	LaClede's Landing
10016000101	Laclede's Landing	LaClede's Landing
10026000030	Laclede's Landing	LaClede's Landing
10026000050	Laclede's Landing	LaClede's Landing
10067000096	Laclede's Landing	LaClede's Landing
10068000010	Laclede's Landing	LaClede's Landing
10097000040	Broadway Building, 500	LaClede's Landing
10124000080	Convention Plaza South	LaClede's Landing
10124000150	Convention Plaza South	LaClede's Landing
10014000040	Laclede's Landing	LaClede's Landing
10015000050	Laclede's Landing	LaClede's Landing
10120000010	Century Venture (555 Washington Bldg)	LaClede's Landing
10124000050	Convention Plaza South	LaClede's Landing
10124000070	Convention Plaza South	LaClede's Landing
10124000090	Convention Plaza South	LaClede's Landing
10124000110	Convention Plaza South	LaClede's Landing
10016000055	Laclede's Landing	LaClede's Landing
10026000020	Laclede's Landing	LaClede's Landing
10027000010	Laclede's Landing	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 353 PROPERTIES

HANDLE	CHAPTER 353 NAME	STATION AREA
10067000091	Laclede's Landing	LaClede's Landing
10068000040	Laclede's Landing	LaClede's Landing
10016000011	Laclede's Landing	LaClede's Landing
10016000020	Laclede's Landing	LaClede's Landing
10025000015	Laclede's Landing	LaClede's Landing
10025000020	Laclede's Landing	LaClede's Landing
10027000040	Laclede's Landing	LaClede's Landing
10027000070	Laclede's Landing	LaClede's Landing
10067000012	Laclede's Landing	LaClede's Landing
10067000021	Laclede's Landing	LaClede's Landing
10068000090	Laclede's Landing	LaClede's Landing
10124000140	Convention Plaza South	LaClede's Landing
10124000060	Convention Plaza South	LaClede's Landing
10124000130	Convention Plaza South	LaClede's Landing
10095000015	Missouri Athletic Club (MAC) [353]	LaClede's Landing
10095000090	Missouri Athletic Club (MAC) [353]	LaClede's Landing
10096000030	Missouri Athletic Club (MAC) [353]	LaClede's Landing
10124000010	Convention Plaza South	LaClede's Landing
10124000040	Convention Plaza South	LaClede's Landing
10127000016	Mayco	LaClede's Landing
10014000060	Laclede's Landing	LaClede's Landing
10014000080	Laclede's Landing	LaClede's Landing
10016000060	Laclede's Landing	LaClede's Landing
10016000110	Laclede's Landing	LaClede's Landing
10026000040	Laclede's Landing	LaClede's Landing
10026000055	Laclede's Landing	LaClede's Landing
10067000102	Laclede's Landing	LaClede's Landing
10068000020	Laclede's Landing	LaClede's Landing
10118000015	Mayco	LaClede's Landing
10119000011	Mayco	LaClede's Landing
10124000100	Convention Plaza South	LaClede's Landing
10124000120	Convention Plaza South	LaClede's Landing
10170000080	Washington Avenue	LaClede's Landing
10170000030	Washington Avenue	LaClede's Landing
10165000150	Washington Avenue	LaClede's Landing
10170000115	Washington Avenue	LaClede's Landing
10170000050	Washington Avenue	LaClede's Landing
10170000070	Washington Avenue	LaClede's Landing
10014000010	Laclede's Landing	LaClede's Landing
10015000090	Laclede's Landing	LaClede's Landing
10015000095	Laclede's Landing	LaClede's Landing
10016000025	Laclede's Landing	LaClede's Landing
10025000005	Laclede's Landing	LaClede's Landing
10025000030	Laclede's Landing	LaClede's Landing
10027000050	Laclede's Landing	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 353 PROPERTIES

HANDLE	CHAPTER 353 NAME	STATION AREA
10027000060	Laclede's Landing	LaClede's Landing
10066000200	Laclede's Landing	LaClede's Landing
10067000031	Laclede's Landing	LaClede's Landing
10068000062	Laclede's Landing	LaClede's Landing
10068000080	Laclede's Landing	LaClede's Landing
10096000010	Missouri Athletic Club (MAC) [353]	LaClede's Landing
10096000020	Missouri Athletic Club (MAC) [353]	LaClede's Landing
10124000020	Convention Plaza South	LaClede's Landing
10124000030	Convention Plaza South	LaClede's Landing
10127008101	Mayco	LaClede's Landing
10170000040	Washington Avenue	LaClede's Landing
10170000100	Washington Avenue	LaClede's Landing
10170000090	Washington Avenue	LaClede's Landing
10170000105	Washington Avenue	LaClede's Landing
10170000045	Washington Avenue	LaClede's Landing
10170000060	Washington Avenue	LaClede's Landing
10164000010	Mayco	LaClede's Landing
16490000030	Mansion House Center [353]	LaClede's Landing
16490000030	Civic Center	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 100 PROPERTIES

HANDLE	CHAPTER 100 NAME	STATION AREA
10027000080	Greeley Building	LaClede's Landing
10016000101	Cherrick Building	LaClede's Landing
10016000011	Cherrick Building	LaClede's Landing
10068000090	Levee Building	LaClede's Landing
10026000055	Stadium South [100]	LaClede's Landing
10015000090	Cherrick Building	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10018000100	Riverside	LaClede's Landing
10019000035	Riverside	LaClede's Landing
10071030045	Riverside	LaClede's Landing
10017000045	Riverside	LaClede's Landing
10018000086	Riverside	LaClede's Landing
10019000015	Riverside	LaClede's Landing
10070000046	Riverside	LaClede's Landing
10071040015	Riverside	LaClede's Landing
10014000035	City Block 14 East	LaClede's Landing
10014000050	City Block 14 East	LaClede's Landing
10017000080	Riverside	LaClede's Landing
10018000010	Riverside	LaClede's Landing
10018000065	Riverside	LaClede's Landing
10018000080	Riverside	LaClede's Landing
10022000021	Riverside	LaClede's Landing
10023000020	Riverside	LaClede's Landing
10024000015	Riverside	LaClede's Landing
10071030500	Riverside	LaClede's Landing
10071040040	Riverside	LaClede's Landing
10017000010	Riverside	LaClede's Landing
10018000087	Riverside	LaClede's Landing
10018000092	Riverside	LaClede's Landing
10021000030	Vaughn Apartments	LaClede's Landing
10022000015	Riverside	LaClede's Landing
10071030050	Riverside	LaClede's Landing
10071030065	Riverside	LaClede's Landing
10094000020	DeSoto-Carr	LaClede's Landing
10124000080	is Centre (Downtown Commercia	LaClede's Landing
10124000150	is Centre (Downtown Commercia	LaClede's Landing
10137040020	DeSoto-Carr	LaClede's Landing
10142000010	DeSoto-Carr	LaClede's Landing
10014000040	City Block 14 East	LaClede's Landing
10123000030	DeSoto-Carr	LaClede's Landing
10124000050	is Centre (Downtown Commercia	LaClede's Landing
10124000070	is Centre (Downtown Commercia	LaClede's Landing
10137040010	DeSoto-Carr	LaClede's Landing
10137040100	DeSoto-Carr	LaClede's Landing
10124000090	is Centre (Downtown Commercia	LaClede's Landing
10124000110	is Centre (Downtown Commercia	LaClede's Landing
10140000011	DeSoto-Carr	LaClede's Landing
10141000012	DeSoto-Carr	LaClede's Landing
10018000075	Riverside	LaClede's Landing
10023000015	Riverside	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10070000018	Riverside	LaClede's Landing
10071040045	Riverside	LaClede's Landing
10094000040	DeSoto-Carr	LaClede's Landing
10097000020	et, 401 & 408 and 400 Washingt	LaClede's Landing
10018000020	Riverside	LaClede's Landing
10018000050	Riverside	LaClede's Landing
10070000005	Riverside	LaClede's Landing
10071040048	Riverside	LaClede's Landing
10094000010	DeSoto-Carr	LaClede's Landing
10094000030	DeSoto-Carr	LaClede's Landing
10097000010	et, 401 & 408 and 400 Washingt	LaClede's Landing
10097000030	et, 401 & 408 and 400 Washingt	LaClede's Landing
10124000140	is Centre (Downtown Commerci	LaClede's Landing
10141000013	DeSoto-Carr	LaClede's Landing
10144000020	DeSoto-Carr	LaClede's Landing
10122000050	DeSoto-Carr	LaClede's Landing
10124000060	is Centre (Downtown Commerci	LaClede's Landing
10124000130	is Centre (Downtown Commerci	LaClede's Landing
10144000010	DeSoto-Carr	LaClede's Landing
10095000015	Missouri Athletic Club (MAC) [99	LaClede's Landing
10095000090	Missouri Athletic Club (MAC) [99	LaClede's Landing
10096000030	Missouri Athletic Club (MAC) [99	LaClede's Landing
10124000010	/Convention Plaza/North 6th Sre	LaClede's Landing
10124000010	is Centre (Downtown Commerci	LaClede's Landing
10124000040	is Centre (Downtown Commerci	LaClede's Landing
10127000016	is Centre (Downtown Commerci	LaClede's Landing
10014000060	City Block 14 East	LaClede's Landing
10014000080	City Block 14 East	LaClede's Landing
10018000091	Riverside	LaClede's Landing
10022000010	Riverside	LaClede's Landing
10022000017	Riverside	LaClede's Landing
10026000055	Stadium South [99]	LaClede's Landing
10071030060	Riverside	LaClede's Landing
10071030090	Riverside	LaClede's Landing
10098000010	oadway/St. Charles/North Fourt	LaClede's Landing
10118000015	is Centre (Downtown Commerci	LaClede's Landing
10124000100	is Centre (Downtown Commerci	LaClede's Landing
10124000120	is Centre (Downtown Commerci	LaClede's Landing
10141000011	DeSoto-Carr	LaClede's Landing
10170000080	Downtown Washington Avenue	LaClede's Landing
10170000030	Downtown Washington Avenue	LaClede's Landing
10165000150	Downtown Washington Avenue	LaClede's Landing
10166000010	is Centre (Downtown Commerci	LaClede's Landing

LACLEDE'S LANDING/ARCH STATION

CHAPTER 99 PROPERTIES

HANDLE	CHAPTER 99 NAME	STATION AREA
10170000115	Downtown Washington Avenue	LaClede's Landing
10170000050	Downtown Washington Avenue	LaClede's Landing
10170000070	Downtown Washington Avenue	LaClede's Landing
10018000030	Riverside	LaClede's Landing
10018000040	Riverside	LaClede's Landing
10096000010	Missouri Athletic Club (MAC) [99	LaClede's Landing
10096000020	Missouri Athletic Club (MAC) [99	LaClede's Landing
10124000020	is Centre (Downtown Commercia	LaClede's Landing
10124000030	is Centre (Downtown Commercia	LaClede's Landing
10127008101	is Centre (Downtown Commercia	LaClede's Landing
10144000090	DeSoto-Carr	LaClede's Landing
10170000040	Downtown Washington Avenue	LaClede's Landing
10170000100	Downtown Washington Avenue	LaClede's Landing
10170000090	Downtown Washington Avenue	LaClede's Landing
10170000105	Downtown Washington Avenue	LaClede's Landing
10170000045	Downtown Washington Avenue	LaClede's Landing
10170000060	Downtown Washington Avenue	LaClede's Landing
16489000010	Washington Avenue, 333	LaClede's Landing
16490000030	Mansion House Center [99]	LaClede's Landing
16490000030	South 4th/Spruce	LaClede's Landing
16490000030	Downtown Sports Stadium	LaClede's Landing
16489000020	Washington Avenue, 333	LaClede's Landing

APPENDIX: FINAL MODEL SPREADSHEETS

MIXED USE APARTMENTS - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	150	150	150	150	300	300	300	300	300	300	300	300	300	300	465	465
POTENTIAL GROSS REVENUE																						
Base Rental Revenue		1,000	$1.55	$ -	$ -	$ -	$ 2,931,244	$ 3,004,525	$ 3,079,638	$ 3,156,629	$ 6,471,089	$ 6,632,867	$ 6,798,688	$ 6,968,655	$ 7,142,872	$ 7,321,444	$ 7,504,480	$ 7,692,092	$ 7,884,394	$ 8,081,504	$ 12,839,489	$ 13,160,476
Vacancy Allowance			95%	$ -	$ -	$ -	$ 146,562	$ 150,226	$ 153,982	$ 157,831	$ 323,554	$ 331,643	$ 339,934	$ 348,433	$ 357,144	$ 366,072	$ 375,224	$ 384,605	$ 394,220	$ 404,075	$ 641,974	$ 658,024
Effective Gross Revenue				$ -	$ -	$ -	$ 2,784,682	$ 2,854,299	$ 2,925,656	$ 2,998,797	$ 6,147,535	$ 6,301,223	$ 6,458,754	$ 6,620,223	$ 6,785,728	$ 6,955,371	$ 7,129,256	$ 7,307,487	$ 7,490,174	$ 7,677,429	$ 12,197,515	$ 12,502,453
OPERATING EXPENSES																						
Operating Expenses/s.f.		1,000	30%	$ -	$ -	$ -	$ 835,404	$ 856,290	$ 877,697	$ 899,639	$ 1,844,260	$ 1,890,367	$ 1,937,626	$ 1,986,067	$ 2,035,718	$ 2,086,611	$ 2,138,777	$ 2,192,246	$ 2,247,052	$ 2,303,229	$ 3,659,254	$ 3,750,736
Taxes			10%	$ -	$ -	$ -	$ 278,468	$ 285,430	$ 292,566	$ 299,880	$ 614,753	$ 630,122	$ 645,875	$ 662,022	$ 678,573	$ 695,537	$ 712,926	$ 730,749	$ 749,017	$ 767,743	$ 1,219,751	$ 1,250,245
Total Operating Expenses				$ -	$ -	$ -	$ 1,113,873	$ 1,141,719	$ 1,170,262	$ 1,199,519	$ 2,459,014	$ 2,520,489	$ 2,583,502	$ 2,648,089	$ 2,714,291	$ 2,782,149	$ 2,851,702	$ 2,922,995	$ 2,996,070	$ 3,070,971	$ 4,879,006	$ 5,000,981
NOI BEFORE TAXES				$ -	$ -	$ -	$ 1,949,277	$ 1,998,009	$ 2,047,959	$ 2,099,158	$ 4,303,274	$ 4,410,856	$ 4,521,128	$ 4,634,156	$ 4,750,010	$ 4,868,760	$ 4,990,479	$ 5,115,241	$ 5,243,122	$ 5,374,200	$ 8,538,260	$ 8,751,717
NOI AFTER TAXES				$ -	$ -	$ -	$ 1,670,809	$ 1,712,579	$ 1,755,394	$ 1,799,278	$ 3,688,521	$ 3,780,734	$ 3,875,252	$ 3,972,134	$ 4,071,437	$ 4,173,223	$ 4,277,553	$ 4,384,492	$ 4,494,105	$ 4,606,457	$ 7,318,509	$ 7,501,472
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 116,250	$ 116,250
Total Leasing and Capital Costs				$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 116,250	$ 116,250
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 1,911,777	$ 1,960,509	$ 2,010,459	$ 2,061,658	$ 4,228,274	$ 4,335,856	$ 4,446,128	$ 4,559,156	$ 4,675,010	$ 4,793,760	$ 4,915,479	$ 5,040,241	$ 5,168,122	$ 5,299,200	$ 8,422,010	$ 8,635,467
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 1,633,309	$ 1,675,079	$ 1,717,894	$ 1,761,778	$ 3,613,521	$ 3,705,734	$ 3,800,252	$ 3,897,134	$ 3,996,437	$ 4,098,223	$ 4,202,553	$ 4,309,492	$ 4,419,105	$ 4,531,457	$ 7,202,259	$ 7,385,222
ANNUAL DEBT SERVICE				$ -	$ -	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ (25,413,352)	$ -	$ -	$ -	$ -	$ -											
BEFORE TAX CASH FLOW				$ -	$ -	$ (30,452,705)	$ (3,127,576)	$ (3,078,844)	$ (3,028,894)	$ (2,977,695)	$ (811,079)	$ (703,497)	$ (593,226)	$ (480,197)	$ (364,344)	$ (245,593)	$ (123,874)	$ 888	$ 128,769	$ 259,847	$ 3,382,657	$ 3,596,114
AFTER TAX CASH FLOW				$ -	$ -	$ (30,452,705)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ (11,481,417)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ (16,520,770)	$ (3,127,576)	$ (3,078,844)	$ (3,028,894)	$ (2,977,695)	$ (811,079)	$ (703,497)	$ (593,226)	$ (480,197)	$ (364,344)	$ (245,593)	$ (123,874)	$ 888	$ 128,769	$ 259,847	$ 3,382,657	$ 3,596,114
AFTER TAX CASH FLOW				$ -	$ -	$ (16,520,770)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			6.80%	$ -	$ -	$ -	$ 28,665,840	$ 29,382,486	$ 30,117,048	$ 30,869,974	$ 63,283,447	$ 64,865,533	$ 66,487,171	$ 68,149,350	$ 69,853,084	$ 71,599,411	$ 73,389,396	$ 75,224,131	$ 77,104,735	$ 79,032,353	$ 125,562,651	$ 128,701,717
Commission			4.00%	$ -	$ -	$ -	$ (1,146,634)	$ (1,175,299)	$ (1,204,682)	$ (1,234,799)	$ (2,531,338)	$ (2,594,621)	$ (2,659,487)	$ (2,725,974)	$ (2,794,123)	$ (2,863,976)	$ (2,935,576)	$ (3,008,965)	$ (3,084,189)	$ (3,161,294)	$ (5,022,506)	$ (5,148,069)
Adjusted Sale Price				$ -	$ -	$ -	$ 27,519,206	$ 28,207,186	$ 28,912,366	$ 29,635,175	$ 60,752,109	$ 62,270,911	$ 63,827,684	$ 65,423,376	$ 67,058,961	$ 68,735,435	$ 70,453,821	$ 72,215,166	$ 74,020,545	$ 75,871,059	$ 120,540,145	$ 123,553,648
Beginning Mortgage Balance				$ -	$ -	$ 73,961,647.83	$ 72,965,318.26	$ 71,912,787.68	$70,800,886.51	$69,626,265.16	$ 68,385,385.93	$67,074,511.37	$65,689,693.17	$64,226,760.34	$62,681,306.60	$61,048,677.13	$59,323,954.51	$57,501,943.99	$55,577,157.75	$53,543,798.43	$51,395,741.67	$49,126,517.62
Remaining Mortgage Balance				$ -	$ -	$ 72,965,318	$ 71,912,788	$ 70,800,887	$ 69,626,265	$ 68,385,386	$ 67,074,511	$ 65,689,693	$ 64,226,760	$ 62,681,307	$ 61,048,677	$ 59,323,955	$ 57,501,944	$ 55,577,158	$ 53,543,798	$ 51,395,742	$ 49,126,518	$ 46,729,292
Before Tax Operating Cash Flow				$ -	$ -	$ (30,452,705)	$ (3,127,576)	$ (3,078,844)	$ (3,028,894)	$ (2,977,695)	$ (811,079)	$ (703,497)	$ (593,226)	$ (480,197)	$ (364,344)	$ (245,593)	$ (123,874)	$ 888	$ 128,769	$ 259,847	$ 3,382,657	$ 3,596,114
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (30,452,705)	$ (3,127,576)	$ (3,078,844)	$ (3,028,894)	$ (2,977,695)	$ (811,079)	$ (703,497)	$ (593,226)	$ (480,197)	$ (364,344)	$ (245,593)	$ (123,874)	$ 888	$ 128,769	$ 259,847	$ 3,382,657	$ 3,596,114
Before-Tax IRR	7.80%																					
After Tax Operating Cash Flow				$ -	$ -	$ (30,452,705)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (30,452,705)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
After Tax IRR without Subsidy	6.88%																					
After Tax Operating Cash Flow				$ -	$ -	$ (16,520,770)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (16,520,770)	$ (3,406,044)	$ (3,364,274)	$ (3,321,460)	$ (3,277,575)	$ (1,425,832)	$ (1,333,619)	$ (1,239,101)	$ (1,142,220)	$ (1,042,916)	$ (941,130)	$ (836,800)	$ (729,861)	$ (620,249)	$ (507,896)	$ 2,162,906	$ 2,345,868
After Tax IRR without Subsidy	8.44%																					

MIXED USE APARTMENTS - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				465	465	465	465	465	600	600	600	600	600	600	600
POTENTIAL GROSS REVENUE															
Base Rental Revenue		1,000	$1.55	$ 13,489,488	$ 13,826,725	$ 14,172,394	$ 14,526,703	$ 14,889,871	$ 19,693,055	$ 20,185,382	$ 20,690,016	$ 21,207,267	$ 21,737,448	$ 22,280,884	$ 22,837,907
Vacancy Allowance			95%	$ 674,474	$ 691,336	$ 708,620	$ 726,335	$ 744,494	$ 984,653	$ 1,009,269	$ 1,034,501	$ 1,060,363	$ 1,086,872	$ 1,114,044	$ 1,141,895
Effective Gross Revenue				$ 12,815,014	$ 13,135,389	$ 13,463,774	$ 13,800,368	$ 14,145,377	$ 18,708,402	$ 19,176,113	$ 19,655,515	$ 20,146,903	$ 20,650,576	$ 21,166,840	$ 21,696,011
OPERATING EXPENSES															
Operating Expenses/s f		1,000	30%	$ 3,844,504	$ 3,940,617	$ 4,039,132	$ 4,140,110	$ 4,243,613	$ 5,612,521	$ 5,752,834	$ 5,896,655	$ 6,044,071	$ 6,195,173	$ 6,350,052	$ 6,508,803
Taxes			10%	$ 1,281,501	$ 1,313,539	$ 1,346,377	$ 1,380,037	$ 1,414,538	$ 1,870,840	$ 1,917,611	$ 1,965,552	$ 2,014,690	$ 2,065,058	$ 2,116,684	$ 2,169,601
Total Operating Expenses				$ 5,126,006	$ 5,254,156	$ 5,385,510	$ 5,520,147	$ 5,658,151	$ 7,483,361	$ 7,670,445	$ 7,862,206	$ 8,058,761	$ 8,260,230	$ 8,466,736	$ 8,678,404
NOI BEFORE TAXES				$ 8,970,510	$ 9,194,772	$ 9,424,642	$ 9,660,258	$ 9,901,764	$ 13,095,882	$ 13,423,279	$ 13,758,861	$ 14,102,832	$ 14,455,403	$ 14,816,788	$ 15,187,208
NOI AFTER TAXES				$ 7,689,008	$ 7,881,234	$ 8,078,264	$ 8,280,221	$ 8,487,226	$ 11,225,041	$ 11,505,668	$ 11,793,309	$ 12,088,142	$ 12,390,345	$ 12,700,104	$ 13,017,607
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ 116,250	$ 116,250	$ 116,250	$ 116,250	$ 116,250	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000
Total Leasing and Capital Costs				$ 116,250	$ 116,250	$ 116,250	$ 116,250	$ 116,250	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ 8,854,260	$ 9,078,522	$ 9,308,392	$ 9,544,008	$ 9,785,514	$ 12,945,882	$ 13,273,279	$ 13,608,861	$ 13,952,832	$ 14,305,403	$ 14,666,788	$ 15,037,208
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ 7,572,758	$ 7,764,984	$ 7,962,014	$ 8,163,971	$ 8,370,976	$ 11,075,041	$ 11,355,668	$ 11,643,309	$ 11,938,142	$ 12,240,345	$ 12,550,104	$ 12,867,607
ANNUAL DEBT SERVICE				$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)	$ (5,039,353)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				$ 3,814,906	$ 4,039,169	$ 4,269,039	$ 4,504,655	$ 4,746,161	$ 7,906,529	$ 8,233,926	$ 8,569,508	$ 8,913,479	$ 9,266,050	$ 9,627,435	$ 9,997,855
AFTER TAX CASH FLOW				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 7,828,253
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 3,814,906	$ 4,039,169	$ 4,269,039	$ 4,504,655	$ 4,746,161	$ 7,906,529	$ 8,233,926	$ 8,569,508	$ 8,913,479	$ 9,266,050	$ 9,627,435	$ 9,997,855
AFTER TAX CASH FLOW				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 7,828,253
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			6.80%	$ 131,919,260	$ 135,217,242	$ 138,597,673	$ 142,062,614	$ 145,614,180	$ 192,586,496	$ 197,401,158	$ 202,336,187	$ 207,394,592	$ 212,579,457	$ 217,893,943	$ 223,341,292
Commission			4.00%	$ (5,276,770)	$ (5,408,690)	$ (5,543,907)	$ (5,682,505)	$ (5,824,567)	$ (7,703,460)	$ (7,896,046)	$ (8,093,447)	$ (8,295,784)	$ (8,503,178)	$ (8,715,758)	$ (8,933,652)
Adjusted Sale Price				$ 126,642,490	$ 129,808,552	$ 133,053,766	$ 136,380,110	$ 139,789,613	$ 184,883,036	$ 189,505,112	$ 194,242,740	$ 199,098,808	$ 204,076,278	$ 209,178,185	$ 214,407,640
Beginning Mortgage Balance				$46,729,291 50	$44,196,842 98	$41,521,544 46	$38,695,338 08	$35,709,711 43	$32,555,671 98	$29,223,719 91	$25,703,819 56	$21,985,369 15	$18,057,168 92	$13,907,387 31	$ 9,523,525 40
Remaining Mortgage Balance				$ 44,196,843	$ 41,521,544	$ 38,695,338	$ 35,709,711	$ 32,555,672	$ 29,223,720	$ 25,703,820	$ 21,985,369	$ 18,057,169	$ 13,907,387	$ 9,523,525	$ 4,892,379
Before Tax Operating Cash Flow				$ 3,814,906	$ 4,039,169	$ 4,269,039	$ 4,504,655	$ 4,746,161	$ 7,906,529	$ 8,233,926	$ 8,569,508	$ 8,913,479	$ 9,266,050	$ 9,627,435	$ 9,997,855
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 209,515,261
Total Before Tax Cash Flow				$ 3,814,906	$ 4,039,169	$ 4,269,039	$ 4,504,655	$ 4,746,161	$ 7,906,529	$ 8,233,926	$ 8,569,508	$ 8,913,479	$ 9,266,050	$ 9,627,435	$ 219,513,115
Before-Tax IRR	7.80%														
After Tax Operating Cash Flow				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 7,828,253
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 209,515,261
Total Before Tax Cash Flow				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 217,343,514
After Tax IRR without Subsidy	6.88%														
After Tax Operating Cash Flow				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 7,828,253
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 209,515,261
Total Before Tax Cash Flow				$ 2,533,405	$ 2,725,630	$ 2,922,661	$ 3,124,618	$ 3,331,623	$ 6,035,688	$ 6,316,314	$ 6,603,956	$ 6,898,789	$ 7,200,992	$ 7,510,751	$ 217,343,514
After Tax IRR without Subsidy	8.44%														

DEVELOPMENT STRATEGIES 2017

NEW RETAIL - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	50000	50000	50000	80000	80000	80000	80000	100000	100000	100000	100000	100000	125000	125000	125000	125000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$15.00	$ -	$ -	$ -	$ 787,969	$ 807,668	$ 827,860	$ 1,357,690	$ 1,391,632	$ 1,426,423	$ 1,462,083	$ 1,873,294	$ 1,920,127	$ 1,968,130	$ 2,017,333	$ 2,067,767	$ 2,649,326	$ 2,715,559	$ 2,783,448	$ 2,853,034
Vacancy Allowance			95%	$ -	$ -	$ -	$ 39,398	$ 40,383	$ 41,393	$ 67,884	$ 69,582	$ 71,321	$ 73,104	$ 93,665	$ 96,006	$ 98,406	$ 100,867	$ 103,388	$ 132,466	$ 135,778	$ 139,172	$ 142,652
Effective Gross Revenue				$ -	$ -	$ -	$ 748,570	$ 767,285	$ 786,467	$ 1,289,805	$ 1,322,050	$ 1,355,102	$ 1,388,979	$ 1,779,630	$ 1,824,120	$ 1,869,723	$ 1,916,467	$ 1,964,378	$ 2,516,860	$ 2,579,781	$ 2,644,276	$ 2,710,383
OPERATING EXPENSES																						
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ 125,000	$ 125,000	$ 125,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 312,500	$ 312,500	$ 312,500	$ 312,500
Taxes			$1.00	$ -	$ -	$ -	$ 787,969	$ 807,668	$ 827,860	$ 1,357,690	$ 1,391,632	$ 1,426,423	$ 1,462,083	$ 1,873,294	$ 1,920,127	$ 1,968,130	$ 2,017,333	$ 2,067,767	$ 2,649,326	$ 2,715,559	$ 2,783,448	$ 2,853,034
Total Operating Expenses				$ -	$ -	$ -	$ 912,969	$ 932,668	$ 952,860	$ 1,557,690	$ 1,591,632	$ 1,626,423	$ 1,662,083	$ 2,123,294	$ 2,170,127	$ 2,218,130	$ 2,267,333	$ 2,317,767	$ 2,961,826	$ 3,028,059	$ 3,095,948	$ 3,165,534
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ 623,570**	**$ 642,285**	**$ 661,467**	**$ 1,089,805**	**$ 1,122,050**	**$ 1,155,102**	**$ 1,188,979**	**$ 1,529,630**	**$ 1,574,120**	**$ 1,619,723**	**$ 1,666,467**	**$ 1,714,378**	**$ 2,204,360**	**$ 2,267,281**	**$ 2,331,776**	**$ 2,397,883**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ (164,398)**	**$ (165,383)**	**$ (166,393)**	**$ (267,884)**	**$ (269,582)**	**$ (271,321)**	**$ (273,104)**	**$ (343,665)**	**$ (346,006)**	**$ (348,406)**	**$ (350,867)**	**$ (353,388)**	**$ (444,966)**	**$ (448,278)**	**$ (451,672)**	**$ (455,152)**
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ 157,594	$ 161,534	$ 165,572	$ 271,538	$ 278,326	$ 285,285	$ 292,417	$ 374,659	$ 384,025	$ 393,626	$ 403,467	$ 413,553	$ 529,865	$ 543,112	$ 556,690	$ 570,607
Leasing Commmissions			1.15%	$ -	$ -	$ -	$ 8,609	$ 8,824	$ 9,044	$ 14,833	$ 15,204	$ 15,584	$ 15,973	$ 20,466	$ 20,977	$ 21,502	$ 22,039	$ 22,590	$ 28,944	$ 29,667	$ 30,409	$ 31,169
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ 11,229	$ 11,509	$ 11,797	$ 19,347	$ 19,831	$ 20,327	$ 20,835	$ 26,694	$ 27,362	$ 28,046	$ 28,747	$ 29,466	$ 37,753	$ 38,697	$ 39,664	$ 40,656
Total Leasing and Capital Costs				$ -	$ -	$ -	$ 177,431	$ 181,867	$ 186,413	$ 305,718	$ 313,361	$ 321,195	$ 329,225	$ 421,819	$ 432,365	$ 443,174	$ 454,253	$ 465,609	$ 596,562	$ 611,476	$ 626,763	$ 642,432
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ 446,139**	**$ 460,418**	**$ 475,053**	**$ 784,088**	**$ 808,690**	**$ 833,907**	**$ 859,755**	**$ 1,107,811**	**$ 1,141,756**	**$ 1,176,550**	**$ 1,212,214**	**$ 1,248,769**	**$ 1,607,798**	**$ 1,655,805**	**$ 1,705,013**	**$ 1,755,451**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ (341,829)**	**$ (347,250)**	**$ (352,806)**	**$ (573,602)**	**$ (582,942)**	**$ (592,516)**	**$ (602,329)**	**$ (765,484)**	**$ (778,371)**	**$ (791,580)**	**$ (805,120)**	**$ (818,998)**	**$ (1,041,528)**	**$ (1,059,754)**	**$ (1,078,435)**	**$ (1,097,584)**
ANNUAL DEBT SERVICE				$ -	$ -	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ (6,228,507)	$ -	$ -	$ -													
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ (7,908,289)**	**$ (1,233,642)**	**$ (1,219,364)**	**$ (1,204,729)**	**$ (895,694)**	**$ (871,092)**	**$ (845,875)**	**$ (820,027)**	**$ (571,971)**	**$ (538,026)**	**$ (503,232)**	**$ (467,568)**	**$ (431,013)**	**$ (71,984)**	**$ (23,977)**	**$ 25,231**	**$ 75,669**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ (7,908,289)**	**$ (2,021,611)**	**$ (2,027,032)**	**$ (2,032,588)**	**$ (2,253,384)**	**$ (2,262,724)**	**$ (2,272,298)**	**$ (2,282,111)**	**$ (2,445,266)**	**$ (2,458,153)**	**$ (2,471,362)**	**$ (2,484,902)**	**$ (2,498,780)**	**$ (2,721,310)**	**$ (2,739,536)**	**$ (2,758,217)**	**$ (2,777,366)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ (6,163,462)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ (7,843,243)	$ (1,233,642)	$ (1,219,364)	$ (1,204,729)	$ (895,694)	$ (871,092)	$ (845,875)	$ (820,027)	$ (571,971)	$ (538,026)	$ (503,232)	$ (467,568)	$ (431,013)	$ (71,984)	$ (23,977)	$ 25,231	$ 75,669
AFTER TAX CASH FLOW				$ -	$ -	$ (7,843,243)	$ (2,021,611)	$ (2,027,032)	$ (2,032,588)	$ (2,253,384)	$ (2,262,724)	$ (2,272,298)	$ (2,282,111)	$ (2,445,266)	$ (2,458,153)	$ (2,471,362)	$ (2,484,902)	$ (2,498,780)	$ (2,721,310)	$ (2,739,536)	$ (2,758,217)	$ (2,777,366)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ 7,512,895	$ 7,738,368	$ 7,969,478	$ 13,130,185	$ 13,518,681	$ 13,916,889	$ 14,325,052	$ 18,429,274	$ 18,965,307	$ 19,514,741	$ 20,077,911	$ 20,655,160	$ 26,558,550	$ 27,316,640	$ 28,093,682	$ 28,890,151
Commission			4.00%	$ -	$ -	$ -	$ (300,516)	$ (309,535)	$ (318,779)	$ (525,207)	$ (540,747)	$ (556,676)	$ (573,002)	$ (737,171)	$ (758,612)	$ (780,590)	$ (803,116)	$ (826,206)	$ (1,062,342)	$ (1,092,666)	$ (1,123,747)	$ (1,155,606)
Adjusted Sale Price				$ -	$ -	$ -	$ 7,212,380	$ 7,428,834	$ 7,650,699	$ 12,604,978	$ 12,977,933	$ 13,360,213	$ 13,752,050	$ 17,692,103	$ 18,206,695	$ 18,734,151	$ 19,274,794	$ 19,828,953	$ 25,496,208	$ 26,223,974	$ 26,969,935	$ 27,734,545
Beginning Mortgage Balance				$ -	$ -	$ 24,653,846.15	$ 24,321,736.79	$ 23,970,893.85	$23,600,260.61	$23,208,720.74	$22,795,094.94	$22,358,137.40	$ 21,896,532.01	$21,408,888.46	$20,893,737.97	$20,349,528.95	$19,774,622.26	$19,167,286.32	$18,525,691.86	$17,847,906.42	$17,131,888.56	$16,375,481.66
Remaining Mortgage Balance				$ -	$ -	$ 24,321,737	$ 23,970,894	$ 23,600,261	$ 23,208,721	$ 22,795,095	$ 22,358,137	$ 21,896,532	$ 21,408,888	$ 20,893,738	$ 20,349,529	$ 19,774,622	$ 19,167,286	$ 18,525,692	$ 17,847,906	$ 17,131,889	$ 16,375,482	$ 15,576,407
Before Tax Operating Cash Flow				$ -	$ -	$ (7,908,289)	$ (1,233,642)	$ (1,219,364)	$ (1,204,729)	$ (895,694)	$ (871,092)	$ (845,875)	$ (820,027)	$ (571,971)	$ (538,026)	$ (503,232)	$ (467,568)	$ (431,013)	$ (71,984)	$ (23,977)	$ 25,231	$ 75,669
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (7,908,289)	$ (1,233,642)	$ (1,219,364)	$ (1,204,729)	$ (895,694)	$ (871,092)	$ (845,875)	$ (820,027)	$ (571,971)	$ (538,026)	$ (503,232)	$ (467,568)	$ (431,013)	$ (71,984)	$ (23,977)	$ 25,231	$ 75,669
Before-Tax IRR	**5.54%**																					
After Tax Operating Cash Flow				$ -	$ -	$ (7,908,289)	$ (2,021,611)	$ (2,027,032)	$ (2,032,588)	$ (2,253,384)	$ (2,262,724)	$ (2,272,298)	$ (2,282,111)	$ (2,445,266)	$ (2,458,153)	$ (2,471,362)	$ (2,484,902)	$ (2,498,780)	$ (2,721,310)	$ (2,739,536)	$ (2,758,217)	$ (2,777,366)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (7,908,289)	$ (2,021,611)	$ (2,027,032)	$ (2,032,588)	$ (2,253,384)	$ (2,262,724)	$ (2,272,298)	$ (2,282,111)	$ (2,445,266)	$ (2,458,153)	$ (2,471,362)	$ (2,484,902)	$ (2,498,780)	$ (2,721,310)	$ (2,739,536)	$ (2,758,217)	$ (2,777,366)
After Tax IRR without Subsidy	**-4.07%**																					
After Tax Operating Cash Flow				$ -	$ -	$ (7,843,243)	$ (2,021,611)	$ (2,027,032)	$ (2,032,588)	$ (2,253,384)	$ (2,262,724)	$ (2,272,298)	$ (2,282,111)	$ (2,445,266)	$ (2,458,153)	$ (2,471,362)	$ (2,484,902)	$ (2,498,780)	$ (2,721,310)	$ (2,739,536)	$ (2,758,217)	$ (2,777,366)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (7,843,243)	$ (2,021,611)	$ (2,027,032)	$ (2,032,588)	$ (2,253,384)	$ (2,262,724)	$ (2,272,298)	$ (2,282,111)	$ (2,445,266)	$ (2,458,153)	$ (2,471,362)	$ (2,484,902)	$ (2,498,780)	$ (2,721,310)	$ (2,739,536)	$ (2,758,217)	$ (2,777,366)
After Tax IRR with Sutsidy	**-4.07%**																					

DEVELOPMENT STRATEGIES 2011

NEW RETAIL - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				125000	155000	155000	155000	155000	155000	175000	175000	175000	175000	175000	175000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$15.00	$ 2,924,360	$ 3,716,862	$ 3,809,783	$ 3,905,028	$ 4,002,653	$ 4,102,720	$ 4,747,906	$ 4,866,603	$ 4,988,268	$ 5,112,975	$ 5,240,799	$ 5,371,819
Vacancy Allowance			95%	$ 146,218	$ 185,843	$ 190,489	$ 195,251	$ 200,133	$ 205,136	$ 237,395	$ 243,330	$ 249,413	$ 255,649	$ 262,040	$ 268,591
Effective Gross Revenue				$ 2,778,142	$ 3,531,019	$ 3,619,294	$ 3,709,776	$ 3,802,521	$ 3,897,584	$ 4,510,510	$ 4,623,273	$ 4,738,855	$ 4,857,326	$ 4,978,759	$ 5,103,228
OPERATING EXPENSES															
Operating Expenses/s.f			$2.50	$ 312,500	$ 387,500	$ 387,500	$ 387,500	$ 387,500	$ 387,500	$ 437,500	$ 437,500	$ 437,500	$ 437,500	$ 437,500	$ 437,500
Taxes			$1.00	$ 2,924,360	$ 3,716,862	$ 3,809,783	$ 3,905,028	$ 4,002,653	$ 4,102,720	$ 4,747,906	$ 4,866,603	$ 4,988,268	$ 5,112,975	$ 5,240,799	$ 5,371,819
Total Operating Expenses				$ 3,236,860	$ 4,104,362	$ 4,197,283	$ 4,292,528	$ 4,390,153	$ 4,490,220	$ 5,185,406	$ 5,304,103	$ 5,425,768	$ 5,550,475	$ 5,678,299	$ 5,809,319
NOI BEFORE TAXES				**$ 2,465,642**	**$ 3,143,519**	**$ 3,231,794**	**$ 3,322,276**	**$ 3,415,021**	**$ 3,510,084**	**$ 4,073,010**	**$ 4,185,773**	**$ 4,301,355**	**$ 4,419,826**	**$ 4,541,259**	**$ 4,665,728**
NOI AFTER TAXES				**$ (458,718)**	**$ (573,343)**	**$ (577,989)**	**$ (582,751)**	**$ (587,633)**	**$ (592,636)**	**$ (674,895)**	**$ (680,830)**	**$ (686,913)**	**$ (693,149)**	**$ (699,540)**	**$ (706,091)**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	$ 584,872	$ 743,372	$ 761,957	$ 781,006	$ 800,531	$ 820,544	$ 949,581	$ 973,321	$ 997,654	$ 1,022,595	$ 1,048,160	$ 1,074,364
Leasing Commissions			1.15%	$ 31,949	$ 40,607	$ 41,622	$ 42,662	$ 43,729	$ 44,822	$ 51,871	$ 53,168	$ 54,497	$ 55,859	$ 57,256	$ 58,687
Capital Expenditure Reserve			1.50%	$ 41,672	$ 52,965	$ 54,289	$ 55,647	$ 57,038	$ 58,464	$ 67,658	$ 69,349	$ 71,083	$ 72,860	$ 74,681	$ 76,548
Total Leasing and Capital Costs				$ 658,493	$ 836,944	$ 857,868	$ 879,315	$ 901,298	$ 923,830	$ 1,069,110	$ 1,095,837	$ 1,123,233	$ 1,151,314	$ 1,180,097	$ 1,209,599
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 1,807,149**	**$ 2,306,574**	**$ 2,373,926**	**$ 2,442,962**	**$ 2,513,723**	**$ 2,586,254**	**$ 3,003,901**	**$ 3,089,936**	**$ 3,178,122**	**$ 3,268,512**	**$ 3,361,162**	**$ 3,456,129**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ (1,117,211)**	**$ (1,410,287)**	**$ (1,435,857)**	**$ (1,462,066)**	**$ (1,488,930)**	**$ (1,516,466)**	**$ (1,744,005)**	**$ (1,776,668)**	**$ (1,810,147)**	**$ (1,844,463)**	**$ (1,879,637)**	**$ (1,915,690)**
ANNUAL DEBT SERVICE				$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)	$ (1,679,782)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ 127,367**	**$ 626,792**	**$ 694,144**	**$ 763,180**	**$ 833,941**	**$ 906,472**	**$ 1,324,119**	**$ 1,410,154**	**$ 1,498,340**	**$ 1,588,730**	**$ 1,681,381**	**$ 1,776,347**
AFTER TAX CASH FLOW				**$ (2,796,993)**	**$ (3,090,069)**	**$ (3,115,639)**	**$ (3,141,848)**	**$ (3,168,712)**	**$ (3,196,248)**	**$ (3,423,787)**	**$ (3,456,449)**	**$ (3,489,929)**	**$ (3,524,245)**	**$ (3,559,419)**	**$ (3,595,472)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 127,367	$ 626,792	$ 694,144	$ 763,180	$ 833,941	$ 906,472	$ 1,324,119	$ 1,410,154	$ 1,498,340	$ 1,588,730	$ 1,681,381	$ 1,776,347
AFTER TAX CASH FLOW				$ (2,796,993)	$ (3,090,069)	$ (3,115,639)	$ (3,141,848)	$ (3,168,712)	$ (3,196,248)	$ (3,423,787)	$ (3,456,449)	$ (3,489,929)	$ (3,524,245)	$ (3,559,419)	$ (3,595,472)
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 29,706,531	$ 37,873,718	$ 38,937,278	$ 40,027,427	$ 41,144,829	$ 42,290,167	$ 49,072,414	$ 50,431,001	$ 51,823,553	$ 53,250,919	$ 54,713,969	$ 56,213,596
Commission			4.00%	$ (1,188,261)	$ (1,514,949)	$ (1,557,491)	$ (1,601,097)	$ (1,645,793)	$ (1,691,607)	$ (1,962,897)	$ (2,017,240)	$ (2,072,942)	$ (2,130,037)	$ (2,188,559)	$ (2,248,544)
Adjusted Sale Price				$ 28,518,270	$ 36,358,769	$ 37,379,787	$ 38,426,330	$ 39,499,036	$ 40,598,560	$ 47,109,517	$ 48,413,761	$ 49,750,611	$ 51,120,882	$ 52,525,411	$ 53,965,052
Beginning Mortgage Balance				$15,576,407.47	$14,732,259.21	$13,840,494.35	$12,898,426.95	$11,903,219.54	$10,851,874.61	$ 9,741,225.57	$ 8,567,927.18	$ 7,328,445.55	$ 6,019,047.41	$ 4,635,788.92	$ 3,174,503.77
Remaining Mortgage Balance				$ 14,732,259	$ 13,840,494	$ 12,898,427	$ 11,903,220	$ 10,851,875	$ 9,741,226	$ 8,567,927	$ 7,328,446	$ 6,019,047	$ 4,635,789	$ 3,174,504	$ 1,630,791
Before Tax Operating Cash Flow				$ 127,367	$ 626,792	$ 694,144	$ 763,180	$ 833,941	$ 906,472	$ 1,324,119	$ 1,410,154	$ 1,498,340	$ 1,588,730	$ 1,681,381	$ 1,776,347
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 52,334,261
Total Before Tax Cash Flow				$ 127,367	$ 626,792	$ 694,144	$ 763,180	$ 833,941	$ 906,472	$ 1,324,119	$ 1,410,154	$ 1,498,340	$ 1,588,730	$ 1,681,381	$ 54,110,608
Before-Tax IRR	**5.54%**														
After Tax Operating Cash Flow				$ (2,796,993)	$ (3,090,069)	$ (3,115,639)	$ (3,141,848)	$ (3,168,712)	$ (3,196,248)	$ (3,423,787)	$ (3,456,449)	$ (3,489,929)	$ (3,524,245)	$ (3,559,419)	$ (3,595,472)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 52,334,261
Total Before Tax Cash Flow				$ (2,796,993)	$ (3,090,069)	$ (3,115,639)	$ (3,141,848)	$ (3,168,712)	$ (3,196,248)	$ (3,423,787)	$ (3,456,449)	$ (3,489,929)	$ (3,524,245)	$ (3,559,419)	$ 48,738,789
After Tax IRR without Subsidy	**-4.07%**														
After Tax Operating Cash Flow				$ (2,796,993)	$ (3,090,069)	$ (3,115,639)	$ (3,141,848)	$ (3,168,712)	$ (3,196,248)	$ (3,423,787)	$ (3,456,449)	$ (3,489,929)	$ (3,524,245)	$ (3,559,419)	$ (3,595,472)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 52,334,261
Total Before Tax Cash Flow				$ (2,796,993)	$ (3,090,069)	$ (3,115,639)	$ (3,141,848)	$ (3,168,712)	$ (3,196,248)	$ (3,423,787)	$ (3,456,449)	$ (3,489,929)	$ (3,524,245)	$ (3,559,419)	$ 48,738,789
After Tax IRR with Sutsidy	**-4.07%**														

STAND ALONE APARTMENTS - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	100	100	100	100	200	200	200	200	200	200	200	200	200	200	200	200
POTENTIAL GROSS REVENUE																						
Base Rental Revenue		800	$1.50	$ -	$ -	$ -	$ 1,512,900	$ 1,550,723	$ 1,589,491	$ 1,629,228	$ 3,339,917	$ 3,423,415	$ 3,509,000	$ 3,596,725	$ 3,686,643	$ 3,778,810	$ 3,873,280	$ 3,970,112	$ 4,069,365	$ 4,171,099	$ 4,275,376	$ 4,382,261
Vacancy Allowance			95%	$ -	$ -	$ -	$ 75,645	$ 77,536	$ 79,475	$ 81,461	$ 166,996	$ 171,171	$ 175,450	$ 179,836	$ 184,332	$ 188,940	$ 193,664	$ 198,506	$ 203,468	$ 208,555	$ 213,769	$ 219,113
Effective Gross Revenue				$ -	$ -	$ -	$ 1,437,255	$ 1,473,186	$ 1,510,016	$ 1,547,766	$ 3,172,921	$ 3,252,244	$ 3,333,550	$ 3,416,889	$ 3,502,311	$ 3,589,869	$ 3,679,616	$ 3,771,606	$ 3,865,896	$ 3,962,544	$ 4,061,607	$ 4,163,148
OPERATING EXPENSES																						
Operating Expenses/s f		800	30%	$ -	$ -	$ -	$ 431,177	$ 441,956	$ 453,005	$ 464,330	$ 951,876	$ 975,673	$ 1,000,065	$ 1,025,067	$ 1,050,693	$ 1,076,961	$ 1,103,885	$ 1,131,482	$ 1,159,769	$ 1,188,763	$ 1,218,482	$ 1,248,944
Taxes			10%	$ -	$ -	$ -	$ 143,726	$ 147,319	$ 151,002	$ 154,777	$ 317,292	$ 325,224	$ 333,355	$ 341,689	$ 350,231	$ 358,987	$ 367,962	$ 377,161	$ 386,590	$ 396,254	$ 406,161	$ 416,315
Total Operating Expenses				$ -	$ -	$ -	$ 574,902	$ 589,275	$ 604,006	$ 619,107	$ 1,269,168	$ 1,300,898	$ 1,333,420	$ 1,366,756	$ 1,400,925	$ 1,435,948	$ 1,471,846	$ 1,508,642	$ 1,546,359	$ 1,585,018	$ 1,624,643	$ 1,665,259
NOI BEFORE TAXES				$ -	$ -	$ -	$ 1,006,079	$ 1,031,230	$ 1,057,011	$ 1,083,437	$ 2,221,045	$ 2,276,571	$ 2,333,485	$ 2,391,822	$ 2,451,618	$ 2,512,908	$ 2,575,731	$ 2,640,124	$ 2,706,127	$ 2,773,781	$ 2,843,125	$ 2,914,203
NOI AFTER TAXES				$ -	$ -	$ -	$ 862,353	$ 883,912	$ 906,010	$ 928,660	$ 1,903,753	$ 1,951,347	$ 2,000,130	$ 2,050,133	$ 2,101,387	$ 2,153,921	$ 2,207,769	$ 2,262,964	$ 2,319,538	$ 2,377,526	$ 2,436,964	$ 2,497,889
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ -	$ -	$ -	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total Leasing and Capital Costs				$ -	$ -	$ -	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 981,079	$ 1,006,230	$ 1,032,011	$ 1,058,437	$ 2,171,045	$ 2,226,571	$ 2,283,485	$ 2,341,822	$ 2,401,618	$ 2,462,908	$ 2,525,731	$ 2,590,124	$ 2,656,127	$ 2,723,781	$ 2,793,125	$ 2,864,203
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 837,353	$ 858,912	$ 881,010	$ 903,660	$ 1,853,753	$ 1,901,347	$ 1,950,130	$ 2,000,133	$ 2,051,387	$ 2,103,921	$ 2,157,769	$ 2,212,964	$ 2,269,538	$ 2,327,526	$ 2,386,964	$ 2,447,889
ANNUAL DEBT SERVICE				$ -	$ -	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ (8,038,123)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
BEFORE TAX CASH FLOW				$ -	$ -	$ (9,338,601)	$ (319,400)	$ (294,248)	$ (268,467)	$ (242,042)	$ 870,567	$ 926,093	$ 983,007	$ 1,041,344	$ 1,101,140	$ 1,162,430	$ 1,225,253	$ 1,289,646	$ 1,355,649	$ 1,423,302	$ 1,492,647	$ 1,563,725
AFTER TAX CASH FLOW				$ -	$ -	$ (9,338,601)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ (4,510,865)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ (5,811,343)	$ (319,400)	$ (294,248)	$ (268,467)	$ (242,042)	$ 870,567	$ 926,093	$ 983,007	$ 1,041,344	$ 1,101,140	$ 1,162,430	$ 1,225,253	$ 1,289,646	$ 1,355,649	$ 1,423,302	$ 1,492,647	$ 1,563,725
AFTER TAX CASH FLOW				$ -	$ -	$ (5,811,343)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			6.80%	$ -	$ -	$ -	$ 14,795,272	$ 15,165,154	$ 15,544,283	$ 15,932,890	$ 32,662,424	$ 33,478,985	$ 34,315,959	$ 35,173,858	$ 36,053,205	$ 36,954,535	$ 37,878,398	$ 38,825,358	$ 39,795,992	$ 40,790,892	$ 41,810,664	$ 42,855,931
Commission			4.00%	$ -	$ -	$ -	$ (591,811)	$ (606,606)	$ (621,771)	$ (637,316)	$ (1,306,497)	$ (1,339,159)	$ (1,372,638)	$ (1,406,954)	$ (1,442,128)	$ (1,478,181)	$ (1,515,136)	$ (1,553,014)	$ (1,591,840)	$ (1,631,636)	$ (1,672,427)	$ (1,714,237)
Adjusted Sale Price				$ -	$ -	$ -	$ 14,203,461	$ 14,558,548	$ 14,922,511	$ 15,295,574	$ 31,355,927	$ 32,139,825	$ 32,943,321	$ 33,766,904	$ 34,611,077	$ 35,476,353	$ 36,363,262	$ 37,272,344	$ 38,204,152	$ 39,159,256	$ 40,138,238	$ 41,141,694
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ (257,117)	$ (528,738)	$ (815,680)	$ (1,118,808)	$ (1,439,035)	$ (1,777,326)	$ (2,134,698)	$ (2,512,229)	$ (2,911,056)	$ (3,332,380)	$ (3,777,469)	$ (4,247,666)	$ (4,744,385)	$ (5,269,122)
Remaining Mortgage Balance				$ -	$ -	$ -	$ -	$ (257,117)	$ (528,738)	$ (815,680)	$ (1,118,808)	$ (1,439,035)	$ (1,777,326)	$ (2,134,698)	$ (2,512,229)	$ (2,911,056)	$ (3,332,380)	$ (3,777,469)	$ (4,247,666)	$ (4,744,385)	$ (5,269,122)	$ (5,823,460)
Before Tax Operating Cash Flow				$ -	$ -	$ (9,338,601)	$ (319,400)	$ (294,248)	$ (268,467)	$ (242,042)	$ 870,567	$ 926,093	$ 983,007	$ 1,041,344	$ 1,101,140	$ 1,162,430	$ 1,225,253	$ 1,289,646	$ 1,355,649	$ 1,423,302	$ 1,492,647	$ 1,563,725
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (9,338,601)	$ (319,400)	$ (294,248)	$ (268,467)	$ (242,042)	$ 870,567	$ 926,093	$ 983,007	$ 1,041,344	$ 1,101,140	$ 1,162,430	$ 1,225,253	$ 1,289,646	$ 1,355,649	$ 1,423,302	$ 1,492,647	$ 1,563,725
Before-Tax IRR	11.47%																					
After Tax Operating Cash Flow				$ -	$ -	$ (9,338,601)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (9,338,601)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
After Tax IRR without Subsidy	10.03%																					
After Tax Operating Cash Flow				$ -	$ -	$ (5,811,343)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (5,811,343)	$ (463,125)	$ (441,566)	$ (419,469)	$ (396,818)	$ 553,274	$ 600,868	$ 649,652	$ 699,655	$ 750,909	$ 803,443	$ 857,291	$ 912,485	$ 969,060	$ 1,027,048	$ 1,086,486	$ 1,147,410
After Tax IRR without Subsidy	12.30%																					

STAND ALONE APARTMENTS - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				200	200	200	200	200	200	200	200	200	200	200	200
POTENTIAL GROSS REVENUE															
Base Rental Revenue		800	$1.50	$ 4,491,817	$ 4,604,113	$ 4,719,215	$ 4,837,196	$ 4,958,126	$ 5,082,079	$ 5,209,131	$ 5,339,359	$ 5,472,843	$ 5,609,664	$ 5,749,906	$ 5,893,653
Vacancy Allowance			95%	$ 224,591	$ 230,206	$ 235,961	$ 241,860	$ 247,906	$ 254,104	$ 260,457	$ 266,968	$ 273,642	$ 280,483	$ 287,495	$ 294,683
Effective Gross Revenue				$ 4,267,226	$ 4,373,907	$ 4,483,255	$ 4,595,336	$ 4,710,219	$ 4,827,975	$ 4,948,674	$ 5,072,391	$ 5,199,201	$ 5,329,181	$ 5,462,410	$ 5,598,971
OPERATING EXPENSES															
Operating Expenses/s.f.		800	30%	$ 1,280,168	$ 1,312,172	$ 1,344,976	$ 1,378,601	$ 1,413,066	$ 1,448,392	$ 1,484,602	$ 1,521,717	$ 1,559,760	$ 1,598,754	$ 1,638,723	$ 1,679,691
Taxes			10%	$ 426,723	$ 437,391	$ 448,325	$ 459,534	$ 471,022	$ 482,797	$ 494,867	$ 507,239	$ 519,920	$ 532,918	$ 546,241	$ 559,897
Total Operating Expenses				$ 1,706,891	$ 1,749,563	$ 1,793,302	$ 1,838,134	$ 1,884,088	$ 1,931,190	$ 1,979,470	$ 2,028,956	$ 2,079,680	$ 2,131,672	$ 2,184,964	$ 2,239,588
NOI BEFORE TAXES				**$ 2,987,058**	**$ 3,061,735**	**$ 3,138,278**	**$ 3,216,735**	**$ 3,297,154**	**$ 3,379,582**	**$ 3,464,072**	**$ 3,550,674**	**$ 3,639,441**	**$ 3,730,427**	**$ 3,823,687**	**$ 3,919,279**
NOI AFTER TAXES				**$ 2,560,336**	**$ 2,624,344**	**$ 2,689,953**	**$ 2,757,202**	**$ 2,826,132**	**$ 2,896,785**	**$ 2,969,205**	**$ 3,043,435**	**$ 3,119,520**	**$ 3,197,509**	**$ 3,277,446**	**$ 3,359,382**
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total Leasing and Capital Costs				$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 2,937,058**	**$ 3,011,735**	**$ 3,088,278**	**$ 3,166,735**	**$ 3,247,154**	**$ 3,329,582**	**$ 3,414,072**	**$ 3,500,674**	**$ 3,589,441**	**$ 3,680,427**	**$ 3,773,687**	**$ 3,869,279**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 2,510,336**	**$ 2,574,344**	**$ 2,639,953**	**$ 2,707,202**	**$ 2,776,132**	**$ 2,846,785**	**$ 2,919,205**	**$ 2,993,435**	**$ 3,069,520**	**$ 3,147,509**	**$ 3,227,446**	**$ 3,309,382**
ANNUAL DEBT SERVICE				$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)	$ (1,300,478)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ 1,636,580**	**$ 1,711,257**	**$ 1,787,800**	**$ 1,866,257**	**$ 1,946,675**	**$ 2,029,104**	**$ 2,113,594**	**$ 2,200,195**	**$ 2,288,962**	**$ 2,379,948**	**$ 2,473,209**	**$ 2,568,801**
AFTER TAX CASH FLOW				**$ 1,209,858**	**$ 1,273,866**	**$ 1,339,474**	**$ 1,406,723**	**$ 1,475,653**	**$ 1,546,307**	**$ 1,618,726**	**$ 1,692,956**	**$ 1,769,042**	**$ 1,847,030**	**$ 1,926,968**	**$ 2,008,904**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				**$ 1,636,580**	**$ 1,711,257**	**$ 1,787,800**	**$ 1,866,257**	**$ 1,946,675**	**$ 2,029,104**	**$ 2,113,594**	**$ 2,200,195**	**$ 2,288,962**	**$ 2,379,948**	**$ 2,473,209**	**$ 2,568,801**
AFTER TAX CASH FLOW				**$ 1,209,858**	**$ 1,273,866**	**$ 1,339,474**	**$ 1,406,723**	**$ 1,475,653**	**$ 1,546,307**	**$ 1,618,726**	**$ 1,692,956**	**$ 1,769,042**	**$ 1,847,030**	**$ 1,926,968**	**$ 2,008,904**
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			6.80%	$ 43,927,329	$ 45,025,512	$ 46,151,150	$ 47,304,929	$ 48,487,552	$ 49,699,741	$ 50,942,234	$ 52,215,790	$ 53,521,185	$ 54,859,215	$ 56,230,695	$ 57,636,462
Commission			4.00%	$ (1,757,093)	$ (1,801,020)	$ (1,846,046)	$ (1,892,197)	$ (1,939,502)	$ (1,987,990)	$ (2,037,689)	$ (2,088,632)	$ (2,140,847)	$ (2,194,369)	$ (2,249,228)	$ (2,305,458)
Adjusted Sale Price				$ 42,170,236	$ 43,224,492	$ 44,305,104	$ 45,412,732	$ 46,548,050	$ 47,711,751	$ 48,904,545	$ 50,127,159	$ 51,380,338	$ 52,664,846	$ 53,981,467	$ 55,331,004
Beginning Mortgage Balance				$ (5,823,460)	$ (6,409,066)	$ (7,027,705)	$ (7,681,240)	$ (8,371,640)	$ (9,100,983)	$ (9,871,467)	$ (10,685,413)	$ (11,545,272)	$ (12,453,633)	$ (13,413,233)	$ (14,426,962)
Remaining Mortgage Balance				$ (6,409,066)	$ (7,027,705)	$ (7,681,240)	$ (8,371,640)	$ (9,100,983)	$ (9,871,467)	$ (10,685,413)	$ (11,545,272)	$ (12,453,633)	$ (13,413,233)	$ (14,426,962)	$ (15,497,874)
Before Tax Operating Cash Flow				$ 1,636,580	$ 1,711,257	$ 1,787,800	$ 1,866,257	$ 1,946,675	$ 2,029,104	$ 2,113,594	$ 2,200,195	$ 2,288,962	$ 2,379,948	$ 2,473,209	$ 2,568,801
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,828,878
Total Before Tax Cash Flow				$ 1,636,580	$ 1,711,257	$ 1,787,800	$ 1,866,257	$ 1,946,675	$ 2,029,104	$ 2,113,594	$ 2,200,195	$ 2,288,962	$ 2,379,948	$ 2,473,209	$ 73,397,679
Before-Tax IRR	**11.47%**														
After Tax Operating Cash Flow				$ 1,209,858	$ 1,273,866	$ 1,339,474	$ 1,406,723	$ 1,475,653	$ 1,546,307	$ 1,618,726	$ 1,692,956	$ 1,769,042	$ 1,847,030	$ 1,926,968	$ 2,008,904
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,828,878
Total Before Tax Cash Flow				$ 1,209,858	$ 1,273,866	$ 1,339,474	$ 1,406,723	$ 1,475,653	$ 1,546,307	$ 1,618,726	$ 1,692,956	$ 1,769,042	$ 1,847,030	$ 1,926,968	$ 72,837,782
After Tax IRR without Subsidy	**10.03%**														
After Tax Operating Cash Flow				$ 1,209,858	$ 1,273,866	$ 1,339,474	$ 1,406,723	$ 1,475,653	$ 1,546,307	$ 1,618,726	$ 1,692,956	$ 1,769,042	$ 1,847,030	$ 1,926,968	$ 2,008,904
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,828,878
Total Before Tax Cash Flow				$ 1,209,858	$ 1,273,866	$ 1,339,474	$ 1,406,723	$ 1,475,653	$ 1,546,307	$ 1,618,726	$ 1,692,956	$ 1,769,042	$ 1,847,030	$ 1,926,968	$ 72,837,782
After Tax IRR without Subsidy	**12.30%**														

OFFICE - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	0	0	0	0	0	400000	400000	400000	400000	400000	400000	400000	650000	650000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$17.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,492,268	$ 8,704,575	$ 8,922,189	$ 9,145,244	$ 9,373,875	$ 9,608,222	$ 9,848,428	$ 16,403,787	$ 16,813,882
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 424,613	$ 435,229	$ 446,109	$ 457,262	$ 468,694	$ 480,411	$ 492,421	$ 820,189	$ 840,694
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,067,655	$ 8,269,346	$ 8,476,080	$ 8,687,982	$ 8,905,181	$ 9,127,811	$ 9,356,006	$ 15,583,598	$ 15,973,188
OPERATING EXPENSES																						
Operating Expenses/s.f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,625,000	$ 1,625,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,625,000	$ 1,625,000
NOI BEFORE TAXES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,067,655	$ 7,269,346	$ 7,476,080	$ 7,687,982	$ 7,905,181	$ 8,127,811	$ 8,356,006	$ 13,958,598	$ 14,348,188
NOI AFTER TAXES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,067,655	$ 7,269,346	$ 7,476,080	$ 7,687,982	$ 7,905,181	$ 8,127,811	$ 8,356,006	$ 13,958,598	$ 14,348,188
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$4.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,998,181	$ 2,048,135	$ 2,099,339	$ 2,151,822	$ 2,205,618	$ 2,260,758	$ 2,317,277	$ 3,859,715	$ 3,956,207
Leasing Commissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 96,812	$ 99,232	$ 101,713	$ 104,256	$ 106,862	$ 109,534	$ 112,272	$ 187,003	$ 191,678
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 121,015	$ 124,040	$ 127,141	$ 130,320	$ 133,578	$ 136,917	$ 140,340	$ 233,754	$ 239,598
Total Leasing and Captital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,216,007	$ 2,271,408	$ 2,328,193	$ 2,386,398	$ 2,446,058	$ 2,507,209	$ 2,569,889	$ 4,280,472	$ 4,387,484
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,851,647	$ 4,997,939	$ 5,147,887	$ 5,301,584	$ 5,459,124	$ 5,620,602	$ 5,786,117	$ 9,678,126	$ 9,960,704
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,851,647	$ 4,997,939	$ 5,147,887	$ 5,301,584	$ 5,459,124	$ 5,620,602	$ 5,786,117	$ 9,678,126	$ 9,960,704
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (18,665,637)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (27,893,333)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (35,495,347)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (35,495,347)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 85,152,467	$ 87,582,484	$ 90,073,251	$ 92,626,287	$ 95,243,149	$ 97,925,432	$ 100,674,773	$ 168,175,877	$ 172,869,731
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,406,099)	$ (3,503,299)	$ (3,602,930)	$ (3,705,051)	$ (3,809,726)	$ (3,917,017)	$ (4,026,991)	$ (6,727,035)	$ (6,914,789)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 81,746,369	$ 84,079,184	$ 86,470,321	$ 88,921,235	$ 91,433,423	$ 94,008,415	$ 96,647,782	$ 161,448,841	$ 165,954,942
Beginning Mortgage Balance				$ -	$ -	$ 111,573,333	$ -	$ -	$ -	$ -	$ -	$ -	$ 111,573,333	$ 110,070,341	$ 108,482,568	$ 106,805,231	$ 105,033,280	$ 103,161,377	$ 101,183,884	$ 99,094,845	$ 96,887,968	$ 94,556,605
Remaining Mortgage Balance													$ 110,070,341	$ 108,482,568	$ 106,805,231	$ 105,033,280	$ 103,161,377	$ 101,183,884	$ 99,094,845	$ 96,887,968	$ 94,556,605	$ 92,093,735
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
Before-Tax IRR	**10.06%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (26,267,651)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
After Tax IRR without Subsidy	**10.06%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (35,495,347)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (35,495,347)	$ (2,750,366)	$ (2,604,075)	$ (2,454,126)	$ (2,300,429)	$ (2,142,890)	$ (1,981,412)	$ (1,815,896)	$ 2,076,113	$ 2,358,691
After Tax IRR with Sutsidy	**8.72%**																					

DEVELOPMENT STRATEGIES

RENOVATIONS

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CUMULATIVE UNITS					0	0	0	0	100000	100000	100000	100000	100000	200000	200000	200000	200000	200000	200000	200000	200000	200000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$13.00	$ -	$ -	$ -	$ -	$ -	$ 1,434,957	$ 1,470,831	$ 1,507,601	$ 1,545,291	$ 1,583,924	$ 3,247,044	$ 3,328,220	$ 3,411,425	$ 3,496,711	$ 3,584,129	$ 3,673,732	$ 3,765,575	$ 3,859,715	$ 3,956,207
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ 71,748	$ 73,542	$ 75,380	$ 77,265	$ 79,196	$ 162,352	$ 166,411	$ 170,571	$ 174,836	$ 179,206	$ 183,687	$ 188,279	$ 192,986	$ 197,810
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ 1,363,209	$ 1,397,289	$ 1,432,221	$ 1,468,027	$ 1,504,728	$ 3,084,692	$ 3,161,809	$ 3,240,854	$ 3,321,875	$ 3,404,922	$ 3,490,045	$ 3,577,296	$ 3,666,729	$ 3,758,397
OPERATING EXPENSES																						
Operating Expenses/s.f			$2.50	$ -	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
NOI BEFORE TAXES				$ -	$ -	$ -	$ -	$ -	$ 1,113,209	$ 1,147,289	$ 1,182,221	$ 1,218,027	$ 1,254,728	$ 2,584,692	$ 2,661,809	$ 2,740,854	$ 2,821,875	$ 2,904,922	$ 2,990,045	$ 3,077,296	$ 3,166,729	$ 3,258,397
NOI AFTER TAXES				$ -	$ -	$ -	$ -	$ -	$ 1,113,209	$ 1,147,289	$ 1,182,221	$ 1,218,027	$ 1,254,728	$ 2,584,692	$ 2,661,809	$ 2,740,854	$ 2,821,875	$ 2,904,922	$ 2,990,045	$ 3,077,296	$ 3,166,729	$ 3,258,397
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$4.00	$ -	$ -	$ -	$ -	$ -	$ 441,525	$ 452,563	$ 463,877	$ 475,474	$ 487,361	$ 999,090	$ 1,024,068	$ 1,049,669	$ 1,075,911	$ 1,102,809	$ 1,130,379	$ 1,158,639	$ 1,187,604	$ 1,217,295
Leasing Commissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ 16,359	$ 16,767	$ 17,187	$ 17,616	$ 18,057	$ 37,016	$ 37,942	$ 38,890	$ 39,863	$ 40,859	$ 41,881	$ 42,928	$ 44,001	$ 45,101
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ 20,448	$ 20,959	$ 21,483	$ 22,020	$ 22,571	$ 46,270	$ 47,427	$ 48,613	$ 49,828	$ 51,074	$ 52,351	$ 53,659	$ 55,001	$ 56,376
Total Leasing and Captital Costs				$ -	$ -	$ -	$ -	$ -	$ 478,332	$ 490,290	$ 502,547	$ 515,111	$ 527,989	$ 1,082,377	$ 1,109,436	$ 1,137,172	$ 1,165,602	$ 1,194,742	$ 1,224,610	$ 1,255,226	$ 1,286,606	$ 1,318,771
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 634,877	$ 656,999	$ 679,674	$ 702,916	$ 726,739	$ 1,502,314	$ 1,552,372	$ 1,603,682	$ 1,656,274	$ 1,710,181	$ 1,765,435	$ 1,822,071	$ 1,880,123	$ 1,939,626
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 634,877	$ 656,999	$ 679,674	$ 702,916	$ 726,739	$ 1,502,314	$ 1,552,372	$ 1,603,682	$ 1,656,274	$ 1,710,181	$ 1,765,435	$ 1,822,071	$ 1,880,123	$ 1,939,626

OFFICE - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ (1,525,490)														
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ (4,287,216)**	**$ (2,126,849)**	**$ (2,104,727)**	**$ (2,082,052)**	**$ (2,058,810)**	**$ (2,034,987)**	**$ (1,259,411)**	**$ (1,209,353)**	**$ (1,158,044)**	**$ (1,105,452)**	**$ (1,051,545)**	**$ (996,291)**	**$ (939,655)**	**$ (881,603)**	**$ (822,100)**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ (4,287,216)**	**$ (2,126,849)**	**$ (2,104,727)**	**$ (2,082,052)**	**$ (2,058,810)**	**$ (2,034,987)**	**$ (1,259,411)**	**$ (1,209,353)**	**$ (1,158,044)**	**$ (1,105,452)**	**$ (1,051,545)**	**$ (996,291)**	**$ (939,655)**	**$ (881,603)**	**$ (822,100)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ (10,133,333)														
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (12,895,059)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (12,895,059)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ 13,412,156	$ 13,822,761	$ 14,243,631	$ 14,675,023	$ 15,117,200	$ 31,140,862	$ 32,069,986	$ 33,022,338	$ 33,998,499	$ 34,999,064	$ 36,024,643	$ 37,075,861	$ 38,153,360	$ 39,257,796
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ (536,486)	$ (552,910)	$ (569,745)	$ (587,001)	$ (604,688)	$ (1,245,634)	$ (1,282,799)	$ (1,320,894)	$ (1,359,940)	$ (1,399,963)	$ (1,440,986)	$ (1,483,034)	$ (1,526,134)	$ (1,570,312)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ 12,875,669	$ 13,269,850	$ 13,673,886	$ 14,088,022	$ 14,512,512	$ 29,895,227	$ 30,787,186	$ 31,701,444	$ 32,638,559	$ 33,599,101	$ 34,583,657	$ 35,592,827	$ 36,627,226	$ 37,687,485
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ 40,533,333	$ 39,987,313	$ 39,410,493	$ 38,801,136	$ 38,157,406	$ 37,477,365	$ 36,758,964	$ 36,000,039	$ 35,198,306	$ 34,351,348	$ 33,456,615	$ 32,511,412	$ 31,512,893	$ 30,458,049	$ 29,343,703
Remaining Mortgage Balance				$ -	$ -	$ -		$ 39,987,313	$ 39,410,493	$ 38,801,136	$ 38,157,406	$ 37,477,365	$ 36,758,964	$ 36,000,039	$ 35,198,306	$ 34,351,348	$ 33,456,615	$ 32,511,412	$ 31,512,893	$ 30,458,049	$ 29,343,703	$ 28,166,500
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (4,287,216)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (4,287,216)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
Before-Tax IRR	**2.36%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (4,287,216)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (4,287,216)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
After Tax IRR without Subsidy	**2.36%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (12,895,059)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (12,895,059)	$ (2,126,849)	$ (2,104,727)	$ (2,082,052)	$ (2,058,810)	$ (2,034,987)	$ (1,259,411)	$ (1,209,353)	$ (1,158,044)	$ (1,105,452)	$ (1,051,545)	$ (996,291)	$ (939,655)	$ (881,603)	$ (822,100)
After Tax IRR with Subsidy	**0.91%**																					

OFFICE - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				650000	650000	650000	650000	650000	650000	650000	650000	650000	650000	650000	650000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$17.00	$ 17,234,229	$ 17,665,085	$ 18,106,712	$ 18,559,379	$ 19,023,364	$ 19,498,948	$ 19,986,422	$ 20,486,082	$ 20,998,234	$ 21,523,190	$ 22,061,270	$ 22,612,802
Vacancy Allowance			95%	$ 861,711	$ 883,254	$ 905,336	$ 927,969	$ 951,168	$ 974,947	$ 999,321	$ 1,024,304	$ 1,049,912	$ 1,076,160	$ 1,103,063	$ 1,130,640
Effective Gross Revenue				$ 16,372,517	$ 16,781,830	$ 17,201,376	$ 17,631,410	$ 18,072,196	$ 18,524,001	$ 18,987,101	$ 19,461,778	$ 19,948,323	$ 20,447,031	$ 20,958,206	$ 21,482,162
OPERATING EXPENSES															
Operating Expenses/s f			$2.50	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000	$ 1,625,000
NOI BEFORE TAXES				**$ 14,747,517**	**$ 15,156,830**	**$ 15,576,376**	**$ 16,006,410**	**$ 16,447,196**	**$ 16,899,001**	**$ 17,362,101**	**$ 17,836,778**	**$ 18,323,323**	**$ 18,822,031**	**$ 19,333,206**	**$ 19,857,162**
NOI AFTER TAXES				**$ 14,747,517**	**$ 15,156,830**	**$ 15,576,376**	**$ 16,006,410**	**$ 16,447,196**	**$ 16,899,001**	**$ 17,362,101**	**$ 17,836,778**	**$ 18,323,323**	**$ 18,822,031**	**$ 19,333,206**	**$ 19,857,162**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$4.00	$ 4,055,113	$ 4,156,490	$ 4,260,403	$ 4,366,913	$ 4,476,086	$ 4,587,988	$ 4,702,687	$ 4,820,255	$ 4,940,761	$ 5,064,280	$ 5,190,887	$ 5,320,659
Leasing Commmissions			1.20%	$ 196,470	$ 201,382	$ 206,417	$ 211,577	$ 216,866	$ 222,288	$ 227,845	$ 233,541	$ 239,380	$ 245,364	$ 251,498	$ 257,786
Capital Expenditure Reserve			1.50%	$ 245,588	$ 251,727	$ 258,021	$ 264,471	$ 271,083	$ 277,860	$ 284,807	$ 291,927	$ 299,225	$ 306,705	$ 314,373	$ 322,232
Total Leasing and Capital Costs				$ 4,497,171	$ 4,609,600	$ 4,724,840	$ 4,842,961	$ 4,964,035	$ 5,088,136	$ 5,215,339	$ 5,345,723	$ 5,479,366	$ 5,616,350	$ 5,756,759	$ 5,900,678
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 10,250,347**	**$ 10,547,230**	**$ 10,851,536**	**$ 11,163,450**	**$ 11,483,161**	**$ 11,810,865**	**$ 12,146,761**	**$ 12,491,056**	**$ 12,843,957**	**$ 13,205,681**	**$ 13,576,448**	**$ 13,956,484**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 10,250,347**	**$ 10,547,230**	**$ 10,851,536**	**$ 11,163,450**	**$ 11,483,161**	**$ 11,810,865**	**$ 12,146,761**	**$ 12,491,056**	**$ 12,843,957**	**$ 13,205,681**	**$ 13,576,448**	**$ 13,956,484**
ANNUAL DEBT SERVICE				$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)	$ (7,602,013)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				**$ 2,648,333**	**$ 2,945,217**	**$ 3,249,523**	**$ 3,561,436**	**$ 3,881,147**	**$ 4,208,851**	**$ 4,544,748**	**$ 4,889,042**	**$ 5,241,944**	**$ 5,603,667**	**$ 5,974,434**	**$ 6,354,471**
AFTER TAX CASH FLOW				**$ 2,648,333**	**$ 2,945,217**	**$ 3,249,523**	**$ 3,561,436**	**$ 3,881,147**	**$ 4,208,851**	**$ 4,544,748**	**$ 4,889,042**	**$ 5,241,944**	**$ 5,603,667**	**$ 5,974,434**	**$ 6,354,471**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 6,354,471
AFTER TAX CASH FLOW				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 6,354,471
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 177,680,932	$ 182,612,414	$ 187,667,182	$ 192,848,319	$ 198,158,985	$ 203,602,417	$ 209,181,936	$ 214,900,942	$ 220,762,923	$ 226,771,454	$ 232,930,198	$ 239,242,911
Commission			4.00%	$ (7,107,237)	$ (7,304,497)	$ (7,506,687)	$ (7,713,933)	$ (7,926,359)	$ (8,144,097)	$ (8,367,277)	$ (8,596,038)	$ (8,830,517)	$ (9,070,858)	$ (9,317,208)	$ (9,569,716)
Adjusted Sale Price				$ 170,573,695	$ 175,307,917	$ 180,160,494	$ 185,134,386	$ 190,232,625	$ 195,458,321	$ 200,814,658	$ 206,304,904	$ 211,932,406	$ 217,700,596	$ 223,612,990	$ 229,673,195
Beginning Mortgage Balance				$ 92,093,735	$ 89,491,940	$ 86,743,383	$ 83,839,786	$ 80,772,404	$ 77,531,996	$ 74,108,805	$ 70,492,518	$ 66,672,245	$ 62,636,478	$ 58,373,062	$ 53,869,156
Remaining Mortgage Balance				$ 89,491,940	$ 86,743,383	$ 83,839,786	$ 80,772,404	$ 77,531,996	$ 74,108,805	$ 70,492,518	$ 66,672,245	$ 62,636,478	$ 58,373,062	$ 53,869,156	$ 49,111,194
Before Tax Operating Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 6,354,471
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 180,562,001
Total Before Tax Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 186,916,471
Before-Tax IRR	**10.06%**														
After Tax Operating Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 6,354,471
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 180,562,001
Total Before Tax Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 186,916,471
After Tax IRR without Subsidy	**10.06%**														
After Tax Operating Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 6,354,471
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 180,562,001
Total Before Tax Cash Flow				$ 2,648,333	$ 2,945,217	$ 3,249,523	$ 3,561,436	$ 3,881,147	$ 4,208,851	$ 4,544,748	$ 4,889,042	$ 5,241,944	$ 5,603,667	$ 5,974,434	$ 186,916,471
After Tax IRR with Sutsidy	**8.72%**														

DEVELOPMENT STRATEGIES 2012

RENOVATIONS

CUMULATIVE UNITS			200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000
POTENTIAL GROSS REVENUE															
Base Rental Revenue		$13.00	$ 4,055,113	$ 4,156,490	$ 4,260,403	$ 4,366,913	$ 4,476,086	$ 4,587,988	$ 4,702,687	$ 4,820,255	$ 4,940,761	$ 5,064,280	$ 5,190,887	$ 5,320,659
Vacancy Allowance		95%	$ 202,756	$ 207,825	$ 213,020	$ 218,346	$ 223,804	$ 229,399	$ 235,134	$ 241,013	$ 247,038	$ 253,214	$ 259,544	$ 266,033
Effective Gross Revenue			$ 3,852,357	$ 3,948,666	$ 4,047,383	$ 4,148,567	$ 4,252,281	$ 4,358,588	$ 4,467,553	$ 4,579,242	$ 4,693,723	$ 4,811,066	$ 4,931,343	$ 5,054,626
OPERATING EXPENSES															
Operating Expenses/s f		$2.50	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
Taxes		$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses			$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
NOI BEFORE TAXES			**$ 3,352,357**	**$ 3,448,666**	**$ 3,547,383**	**$ 3,648,567**	**$ 3,752,281**	**$ 3,858,588**	**$ 3,967,553**	**$ 4,079,242**	**$ 4,193,723**	**$ 4,311,066**	**$ 4,431,343**	**$ 4,554,626**
NOI AFTER TAXES			**$ 3,352,357**	**$ 3,448,666**	**$ 3,547,383**	**$ 3,648,567**	**$ 3,752,281**	**$ 3,858,588**	**$ 3,967,553**	**$ 4,079,242**	**$ 4,193,723**	**$ 4,311,066**	**$ 4,431,343**	**$ 4,554,626**
LEASING AND CAPITAL COSTS															
Tenant Improvements		$4.00	$ 1,247,727	$ 1,278,920	$ 1,310,893	$ 1,343,665	$ 1,377,257	$ 1,411,689	$ 1,446,981	$ 1,483,155	$ 1,520,234	$ 1,558,240	$ 1,597,196	$ 1,637,126
Leasing Commmissions		1.20%	$ 46,228	$ 47,384	$ 48,569	$ 49,783	$ 51,027	$ 52,303	$ 53,611	$ 54,951	$ 56,325	$ 57,733	$ 59,176	$ 60,656
Capital Expenditure Reserve		1.50%	$ 57,785	$ 59,230	$ 60,711	$ 62,229	$ 63,784	$ 65,379	$ 67,013	$ 68,689	$ 70,406	$ 72,166	$ 73,970	$ 75,819
Total Leasing and Capital Costs			$ 1,351,741	$ 1,385,534	$ 1,420,172	$ 1,455,677	$ 1,492,069	$ 1,529,370	$ 1,567,605	$ 1,606,795	$ 1,646,965	$ 1,688,139	$ 1,730,342	$ 1,773,601
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE			**$ 2,000,616**	**$ 2,063,132**	**$ 2,127,210**	**$ 2,192,890**	**$ 2,260,213**	**$ 2,329,218**	**$ 2,399,948**	**$ 2,472,447**	**$ 2,546,758**	**$ 2,622,927**	**$ 2,701,000**	**$ 2,781,025**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE			**$ 2,000,616**	**$ 2,063,132**	**$ 2,127,210**	**$ 2,192,890**	**$ 2,260,213**	**$ 2,329,218**	**$ 2,399,948**	**$ 2,472,447**	**$ 2,546,758**	**$ 2,622,927**	**$ 2,701,000**	**$ 2,781,025**

OFFICE - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
ANNUAL DEBT SERVICE				$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)	$ (2,761,726)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ (761,109)**	**$ (698,594)**	**$ (634,516)**	**$ (568,835)**	**$ (501,513)**	**$ (432,508)**	**$ (361,777)**	**$ (289,279)**	**$ (214,967)**	**$ (138,798)**	**$ (60,725)**	**$ 19,300**
AFTER TAX CASH FLOW				**$ (761,109)**	**$ (698,594)**	**$ (634,516)**	**$ (568,835)**	**$ (501,513)**	**$ (432,508)**	**$ (361,777)**	**$ (289,279)**	**$ (214,967)**	**$ (138,798)**	**$ (60,725)**	**$ 19,300**
EQUITY CONTRIBUTION WITH SUBSIDIES															
BEFORE TAX CASH FLOW				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 19,300
AFTER TAX CASH FLOW				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 19,300
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 40,389,844	$ 41,550,192	$ 42,739,549	$ 43,958,641	$ 45,208,209	$ 46,489,017	$ 47,801,845	$ 49,147,493	$ 50,526,783	$ 51,940,555	$ 53,389,671	$ 54,875,015
Commission			4.00%	$ (1,615,594)	$ (1,662,008)	$ (1,709,582)	$ (1,758,346)	$ (1,808,328)	$ (1,859,561)	$ (1,912,074)	$ (1,965,900)	$ (2,021,071)	$ (2,077,622)	$ (2,135,587)	$ (2,195,001)
Adjusted Sale Price				$ 38,774,250	$ 39,888,185	$ 41,029,968	$ 42,200,295	$ 43,399,881	$ 44,629,456	$ 45,889,771	$ 47,181,593	$ 48,505,711	$ 49,862,933	$ 51,254,084	$ 52,680,015
Beginning Mortgage Balance				$ 28,166,500	$ 26,922,893	$ 25,609,137	$ 24,221,274	$ 22,755,126	$ 21,206,275	$ 19,570,057	$ 17,841,543	$ 16,015,527	$ 14,086,510	$ 12,048,681	$ 9,895,902
Remaining Mortgage Balance				$ 26,922,893	$ 25,609,137	$ 24,221,274	$ 22,755,126	$ 21,206,275	$ 19,570,057	$ 17,841,543	$ 16,015,527	$ 14,086,510	$ 12,048,681	$ 9,895,902	$ 7,621,690
Before Tax Operating Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 19,300
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 45,058,324
Total Before Tax Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 45,077,624
Before-Tax IRR	**2.36%**														
After Tax Operating Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 19,300
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 45,058,324
Total Before Tax Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 45,077,624
After Tax IRR without Subsidy	**2.36%**														
After Tax Operating Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 19,300
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 45,058,324
Total Before Tax Cash Flow				$ (761,109)	$ (698,594)	$ (634,516)	$ (568,835)	$ (501,513)	$ (432,508)	$ (361,777)	$ (289,279)	$ (214,967)	$ (138,798)	$ (60,725)	$ 45,077,624
After Tax IRR with Sutsidy	**0.91%**														

RESTAURANT - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	30000	40000	40000	40000	40000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$15.00	$ -	$ -	$ -	$ 472,781	$ 484,601	$ 496,716	$ 509,134	$ 521,862	$ 534,909	$ 548,281	$ 561,988	$ 576,038	$ 590,439	$ 605,200	$ 620,330	$ 847,784	$ 868,979	$ 890,703	$ 912,971
Vacancy Allowance			95%	$ -	$ -	$ -	$ 23,639	$ 24,230	$ 24,836	$ 25,457	$ 26,093	$ 26,745	$ 27,414	$ 28,099	$ 28,802	$ 29,522	$ 30,260	$ 31,016	$ 42,389	$ 43,449	$ 44,535	$ 45,649
Effective Gross Revenue				$ -	$ -	$ -	$ 449,142	$ 460,371	$ 471,880	$ 483,677	$ 495,769	$ 508,163	$ 520,867	$ 533,889	$ 547,236	$ 560,917	$ 574,940	$ 589,313	$ 805,395	$ 825,530	$ 846,168	$ 867,322
OPERATING EXPENSES																						
Operating Expenses/s.f			$2.50	$ -	$ -	$ -	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ 374,142**	**$ 385,371**	**$ 396,880**	**$ 408,677**	**$ 420,769**	**$ 433,163**	**$ 445,867**	**$ 458,889**	**$ 472,236**	**$ 485,917**	**$ 499,940**	**$ 514,313**	**$ 705,395**	**$ 725,530**	**$ 746,168**	**$ 767,322**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ 374,142**	**$ 385,371**	**$ 396,880**	**$ 408,677**	**$ 420,769**	**$ 433,163**	**$ 445,867**	**$ 458,889**	**$ 472,236**	**$ 485,917**	**$ 499,940**	**$ 514,313**	**$ 705,395**	**$ 725,530**	**$ 746,168**	**$ 767,322**
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ 94,556	$ 96,920	$ 99,343	$ 101,827	$ 104,372	$ 106,982	$ 109,656	$ 112,398	$ 115,208	$ 118,088	$ 121,040	$ 124,066	$ 169,557	$ 173,796	$ 178,141	$ 182,594
Leasing Commissions			1.20%	$ -	$ -	$ -	$ 5,390	$ 5,524	$ 5,663	$ 5,804	$ 5,949	$ 6,098	$ 6,250	$ 6,407	$ 6,567	$ 6,731	$ 6,899	$ 7,072	$ 9,665	$ 9,906	$ 10,154	$ 10,408
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ 6,737	$ 6,906	$ 7,078	$ 7,255	$ 7,437	$ 7,622	$ 7,813	$ 8,008	$ 8,209	$ 8,414	$ 8,624	$ 8,840	$ 12,081	$ 12,383	$ 12,693	$ 13,010
Total Leasing and Capital Costs				$ -	$ -	$ -	$ 106,683	$ 109,350	$ 112,084	$ 114,886	$ 117,758	$ 120,702	$ 123,720	$ 126,813	$ 129,983	$ 133,233	$ 136,563	$ 139,977	$ 191,303	$ 196,085	$ 200,987	$ 206,012
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ 267,459**	**$ 276,021**	**$ 284,796**	**$ 293,791**	**$ 303,011**	**$ 312,461**	**$ 322,148**	**$ 332,076**	**$ 342,253**	**$ 352,684**	**$ 363,377**	**$ 374,336**	**$ 514,093**	**$ 529,445**	**$ 545,181**	**$ 561,311**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ 267,459**	**$ 276,021**	**$ 284,796**	**$ 293,791**	**$ 303,011**	**$ 312,461**	**$ 322,148**	**$ 332,076**	**$ 342,253**	**$ 352,684**	**$ 363,377**	**$ 374,336**	**$ 514,093**	**$ 529,445**	**$ 545,181**	**$ 561,311**
ANNUAL DEBT SERVICE				$ -	$ -	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ (6,685,520)	$ -	$ -	$ -	$ -												
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ (7,432,381)**	**$ (479,402)**	**$ (470,840)**	**$ (462,065)**	**$ (453,070)**	**$ (443,850)**	**$ (434,400)**	**$ (424,713)**	**$ (414,785)**	**$ (404,608)**	**$ (394,176)**	**$ (383,484)**	**$ (372,525)**	**$ (232,768)**	**$ (217,416)**	**$ (201,680)**	**$ (185,550)**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ (7,432,381)**	**$ (479,402)**	**$ (470,840)**	**$ (462,065)**	**$ (453,070)**	**$ (443,850)**	**$ (434,400)**	**$ (424,713)**	**$ (414,785)**	**$ (404,608)**	**$ (394,176)**	**$ (383,484)**	**$ (372,525)**	**$ (232,768)**	**$ (217,416)**	**$ (201,680)**	**$ (185,550)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ (2,740,385)	$ -	$ -	$ -	$ -												
BEFORE TAX CASH FLOW				$ -	$ -	$ (3,487,246)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
AFTER TAX CASH FLOW				$ -	$ -	$ (3,487,246)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ 4,507,737	$ 4,643,021	$ 4,781,687	$ 4,923,819	$ 5,069,505	$ 5,218,833	$ 5,371,894	$ 5,528,782	$ 5,689,592	$ 5,854,422	$ 6,023,373	$ 6,196,548	$ 8,498,736	$ 8,741,325	$ 8,989,978	$ 9,244,848
Commission			4.00%	$ -	$ -	$ -	$ (180,309)	$ (185,721)	$ (191,267)	$ (196,953)	$ (202,780)	$ (208,753)	$ (214,876)	$ (221,151)	$ (227,584)	$ (234,177)	$ (240,935)	$ (247,862)	$ (339,949)	$ (349,653)	$ (359,599)	$ (369,794)
Adjusted Sale Price				$ -	$ -	$ -	$ 4,327,428	$ 4,457,300	$ 4,590,419	$ 4,726,867	$ 4,866,725	$ 5,010,080	$ 5,157,019	$ 5,307,631	$ 5,462,008	$ 5,620,245	$ 5,782,438	$ 5,948,686	$ 8,158,786	$ 8,391,672	$ 8,630,379	$ 8,875,054
Beginning Mortgage Balance				$ -	$ -	$10,961,538.46	$10,813,876.73	$ 10,657,885.72	$10,493,095.59	$10,319,010.00	$10,135,104.61	$ 9,940,825.52	$ 9,735,587.56	$ 9,518,772.56	$ 9,289,727.49	$ 9,047,762.48	$ 8,792,148.74	$ 8,522,116.38	$ 8,236,852.07	$ 7,935,496.61	$ 7,617,142.34	$ 7,280,830.38
Remaining Mortgage Balance				$ -	$ -	$ 10,813,877	$ 10,657,886	$ 10,493,096	$ 10,319,010	$ 10,135,105	$ 9,940,826	$ 9,735,588	$ 9,518,773	$ 9,289,727	$ 9,047,762	$ 8,792,149	$ 8,522,116	$ 8,236,852	$ 7,935,497	$ 7,617,142	$ 7,280,830	$ 6,925,548
Before Tax Operating Cash Flow				$ -	$ -	$ (7,432,381)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (7,432,381)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
Before-Tax IRR	**2.64%**																					
After Tax Operating Cash Flow				$ -	$ -	$ (7,432,381)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (7,432,381)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
After Tax IRR without Subsidy	**2.64%**																					
After Tax Operating Cash Flow				$ -	$ -	$ (3,487,246)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (3,487,246)	$ (479,402)	$ (470,840)	$ (462,065)	$ (453,070)	$ (443,850)	$ (434,400)	$ (424,713)	$ (414,785)	$ (404,608)	$ (394,176)	$ (383,484)	$ (372,525)	$ (232,768)	$ (217,416)	$ (201,680)	$ (185,550)
After Tax IRR with Sutsidy	**4.30%**																					

DEVELOPMENT STRATEGIES 2013

RESTAURANT - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				40000	50000	50000	50000	50000	50000	65000	65000	65000	65000	75000	75000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$15.00	$ 935,795	$ 1,198,988	$ 1,228,962	$ 1,259,686	$ 1,291,179	$ 1,323,458	$ 1,763,508	$ 1,807,595	$ 1,852,785	$ 1,899,105	$ 2,246,057	$ 2,302,208
Vacancy Allowance			95%	$ 46,790	$ 59,949	$ 61,448	$ 62,984	$ 64,559	$ 66,173	$ 88,175	$ 90,380	$ 92,639	$ 94,955	$ 112,303	$ 115,110
Effective Gross Revenue				$ 889,005	$ 1,139,038	$ 1,167,514	$ 1,196,702	$ 1,226,620	$ 1,257,285	$ 1,675,332	$ 1,717,216	$ 1,760,146	$ 1,804,150	$ 2,133,754	$ 2,187,098
OPERATING EXPENSES															
Operating Expenses/s f			$2.50	$ 100,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 162,500	$ 162,500	$ 162,500	$ 162,500	$ 187,500	$ 187,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 100,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 162,500	$ 162,500	$ 162,500	$ 162,500	$ 187,500	$ 187,500
NOI BEFORE TAXES				$ 789,005	$ 1,014,038	$ 1,042,514	$ 1,071,702	$ 1,101,620	$ 1,132,285	$ 1,512,832	$ 1,554,716	$ 1,597,646	$ 1,641,650	$ 1,946,254	$ 1,999,598
NOI AFTER TAXES				$ 789,005	$ 1,014,038	$ 1,042,514	$ 1,071,702	$ 1,101,620	$ 1,132,285	$ 1,512,832	$ 1,554,716	$ 1,597,646	$ 1,641,650	$ 1,946,254	$ 1,999,598
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	$ 187,159	$ 239,798	$ 245,792	$ 251,937	$ 258,236	$ 264,692	$ 352,702	$ 361,519	$ 370,557	$ 379,821	$ 449,211	$ 460,442
Leasing Commmissions			1.20%	$ 10,668	$ 13,668	$ 14,010	$ 14,360	$ 14,719	$ 15,087	$ 20,104	$ 20,607	$ 21,122	$ 21,650	$ 25,605	$ 26,245
Capital Expenditure Reserve			1.50%	$ 13,335	$ 17,086	$ 17,513	$ 17,951	$ 18,399	$ 18,859	$ 25,130	$ 25,758	$ 26,402	$ 27,062	$ 32,006	$ 32,806
Total Leasing and Capital Costs				$ 211,162	$ 270,552	$ 277,315	$ 284,248	$ 291,354	$ 298,638	$ 397,936	$ 407,884	$ 418,081	$ 428,533	$ 506,823	$ 519,493
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ 577,843	$ 743,487	$ 765,199	$ 787,454	$ 810,265	$ 833,647	$ 1,114,897	$ 1,146,832	$ 1,179,565	$ 1,213,117	$ 1,439,431	$ 1,480,105
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ 577,843	$ 743,487	$ 765,199	$ 787,454	$ 810,265	$ 833,647	$ 1,114,897	$ 1,146,832	$ 1,179,565	$ 1,213,117	$ 1,439,431	$ 1,480,105
ANNUAL DEBT SERVICE				$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)	$ (746,861)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
AFTER TAX CASH FLOW				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
EQUITY CONTRIBUTION WITH SUBSIDIES															
BEFORE TAX CASH FLOW				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
AFTER TAX CASH FLOW				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 9,506,090	$ 12,217,328	$ 12,560,412	$ 12,912,073	$ 13,272,526	$ 13,641,989	$ 18,226,897	$ 18,731,515	$ 19,248,748	$ 19,778,913	$ 23,448,844	$ 24,091,541
Commission			4.00%	$ (380,244)	$ (488,693)	$ (502,416)	$ (516,483)	$ (530,901)	$ (545,680)	$ (729,076)	$ (749,261)	$ (769,950)	$ (791,157)	$ (937,954)	$ (963,662)
Adjusted Sale Price				$ 9,125,846	$ 11,728,635	$ 12,057,996	$ 12,395,590	$ 12,741,625	$ 13,096,310	$ 17,497,821	$ 17,982,254	$ 18,478,798	$ 18,987,756	$ 22,510,890	$ 23,127,879
Beginning Mortgage Balance				$ 6,925,547.78	$ 6,550,224.45	$ 6,153,729.94	$ 5,734,870.02	$ 5,292,383.10	$ 4,824,936.45	$ 4,331,122.13	$ 3,809,452.80	$ 3,258,357.22	$ 2,676,175.52	$ 2,061,154.20	$ 1,411,440.84
Remaining Mortgage Balance				$ 6,550,224	$ 6,153,730	$ 5,734,870	$ 5,292,383	$ 4,824,936	$ 4,331,122	$ 3,809,453	$ 3,258,357	$ 2,676,176	$ 2,061,154	$ 1,411,441	$ 725,079
Before Tax Operating Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,402,801
Total Before Tax Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 23,136,045
Before-Tax IRR	2.64%														
After Tax Operating Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,402,801
Total Before Tax Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 23,136,045
After Tax IRR without Subsidy	2.64%														
After Tax Operating Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 733,244
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,402,801
Total Before Tax Cash Flow				$ (169,018)	$ (3,374)	$ 18,338	$ 40,593	$ 63,404	$ 86,786	$ 368,036	$ 399,971	$ 432,704	$ 466,256	$ 692,570	$ 23,136,045
After Tax IRR with Subsidy	4.30%														

DEVELOPMENT [illegible] 2024

GARAGE PARKING - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	0	0	0	0	0	1800	1800	1800	1800	1800	1800	1800	1800	1800
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$1,000 00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,247,953	$ 2,304,152	$ 2,361,756	$ 2,420,800	$ 2,481,320	$ 2,543,353	$ 2,606,937	$ 2,672,110	$ 2,738,913
Vacancy Allowance			75%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 561,988	$ 576,038	$ 590,439	$ 605,200	$ 620,330	$ 635,838	$ 651,734	$ 668,028	$ 684,728
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,685,965	$ 1,728,114	$ 1,771,317	$ 1,815,600	$ 1,860,990	$ 1,907,515	$ 1,955,203	$ 2,004,083	$ 2,054,185
OPERATING EXPENSES																						
Operating Expenses/s f			10 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 168,597	$ 172,811	$ 177,132	$ 181,560	$ 186,099	$ 190,751	$ 195,520	$ 200,408	$ 205,418
Taxes			$280 00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 672,597	$ 676,811	$ 681,132	$ 685,560	$ 690,099	$ 694,751	$ 699,520	$ 704,408	$ 709,418
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,517,369**	**$ 1,555,303**	**$ 1,594,185**	**$ 1,634,040**	**$ 1,674,891**	**$ 1,716,763**	**$ 1,759,682**	**$ 1,803,674**	**$ 1,848,766**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,013,369**	**$ 1,051,303**	**$ 1,090,185**	**$ 1,130,040**	**$ 1,170,891**	**$ 1,212,763**	**$ 1,255,682**	**$ 1,299,674**	**$ 1,344,766**
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,517,369**	**$ 1,555,303**	**$ 1,594,185**	**$ 1,634,040**	**$ 1,674,891**	**$ 1,716,763**	**$ 1,759,682**	**$ 1,803,674**	**$ 1,848,766**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,013,369**	**$ 1,051,303**	**$ 1,090,185**	**$ 1,130,040**	**$ 1,170,891**	**$ 1,212,763**	**$ 1,255,682**	**$ 1,299,674**	**$ 1,344,766**
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (33,609,091)									
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (34,172,358)**	**$ 954,102**	**$ 992,036**	**$ 1,030,919**	**$ 1,070,773**	**$ 1,111,624**	**$ 1,153,497**	**$ 1,196,416**	**$ 1,240,408**	**$ 1,285,500**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (34,172,358)**	**$ 450,102**	**$ 488,036**	**$ 526,919**	**$ 566,773**	**$ 607,624**	**$ 649,497**	**$ 692,416**	**$ 736,408**	**$ 781,500**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (5,476,150)									
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,039,416)	$ 954,102	$ 992,036	$ 1,030,919	$ 1,070,773	$ 1,111,624	$ 1,153,497	$ 1,196,416	$ 1,240,408	$ 1,285,500
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,039,416)	$ 450,102	$ 488,036	$ 526,919	$ 566,773	$ 607,624	$ 649,497	$ 692,416	$ 736,408	$ 781,500
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			5 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,347,370	$ 31,106,054	$ 31,883,706	$ 32,680,798	$ 33,497,818	$ 34,335,264	$ 35,193,645	$ 36,073,487	$ 36,975,324
Commission			4 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,213,895)	$ (1,244,242)	$ (1,275,348)	$ (1,307,232)	$ (1,339,913)	$ (1,373,411)	$ (1,407,746)	$ (1,442,939)	$ (1,479,013)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 29,133,475	$ 29,861,812	$ 30,608,358	$ 31,373,566	$ 32,157,906	$ 32,961,853	$ 33,785,900	$ 34,630,547	$ 35,496,311
Beginning Mortgage Balance				$ -	$ -	$ 8,743,850 14	$ -	$ -	$ -	$ -	$ 8,743,850 14	$ -	$ -	$ 8,743,850 14	$ 8,626,063	$ 8,501,631	$ 8,370,180	$ 8,231,315	$ 8,084,617	$ 7,929,643	$ 7,765,928	$ 7,592,978	$ 7,410,272
Remaining Mortgage Balance				$ -	$ -	$ -	$ -							$ 8,626,063	$ 8,501,631	$ 8,370,180	$ 8,231,315	$ 8,084,617	$ 7,929,643	$ 7,765,928	$ 7,592,978	$ 7,410,272	$ 7,217,261
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (34,172,358)	$ 954,102	$ 992,036	$ 1,030,919	$ 1,070,773	$ 1,111,624	$ 1,153,497	$ 1,196,416	$ 1,240,408	$ 1,285,500
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (34,172,358)	$ 954,102	$ 992,036	$ 1,030,919	$ 1,070,773	$ 1,111,624	$ 1,153,497	$ 1,196,416	$ 1,240,408	$ 1,285,500
Before-Tax IRR	**4.69%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (34,172,358)	$ 450,102	$ 488,036	$ 526,919	$ 566,773	$ 607,624	$ 649,497	$ 692,416	$ 736,408	$ 781,500
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (34,172,358)	$ 450,102	$ 488,036	$ 526,919	$ 566,773	$ 607,624	$ 649,497	$ 692,416	$ 736,408	$ 781,500
After Tax IRR without Subsidy	**3.40%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,039,416)	$ 450,102	$ 488,036	$ 526,919	$ 566,773	$ 607,624	$ 649,497	$ 692,416	$ 736,408	$ 781,500
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,039,416)	$ 450,102	$ 488,036	$ 526,919	$ 566,773	$ 607,624	$ 649,497	$ 692,416	$ 736,408	$ 781,500
After Tax IRR with Sutsidy	**15.89%**																					

DEVELOPMENT [illegible]

GARAGE PARKING - STADIUM STATION

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$1,000.00	$ 2,807,386	$ 2,877,570	$ 2,949,510	$ 3,023,247	$ 3,098,829	$ 3,176,299	$ 3,255,707	$ 3,337,099	$ 3,420,527	$ 3,506,040	$ 3,593,691	$ 3,683,533
Vacancy Allowance			75%	$ 701,846	$ 719,393	$ 737,377	$ 755,812	$ 774,707	$ 794,075	$ 813,927	$ 834,275	$ 855,132	$ 876,510	$ 898,423	$ 920,883
Effective Gross Revenue				$ 2,105,539	$ 2,158,178	$ 2,212,132	$ 2,267,435	$ 2,324,121	$ 2,382,224	$ 2,441,780	$ 2,502,825	$ 2,565,395	$ 2,629,530	$ 2,695,268	$ 2,762,650
OPERATING EXPENSES															
Operating Expenses/s f			10.00%	$ 210,554	$ 215,818	$ 221,213	$ 226,744	$ 232,412	$ 238,222	$ 244,178	$ 250,282	$ 256,540	$ 262,953	$ 269,527	$ 276,265
Taxes			$280.00	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000	$ 504,000
Total Operating Expenses				$ 714,554	$ 719,818	$ 725,213	$ 730,744	$ 736,412	$ 742,222	$ 748,178	$ 754,282	$ 760,540	$ 766,953	$ 773,527	$ 780,265
NOI BEFORE TAXES				$ 1,894,985	$ 1,942,360	$ 1,990,919	$ 2,040,692	$ 2,091,709	$ 2,144,002	$ 2,197,602	$ 2,252,542	$ 2,308,856	$ 2,366,577	$ 2,425,741	$ 2,486,385
NOI AFTER TAXES				$ 1,390,985	$ 1,438,360	$ 1,486,919	$ 1,536,692	$ 1,587,709	$ 1,640,002	$ 1,693,602	$ 1,748,542	$ 1,804,856	$ 1,862,577	$ 1,921,741	$ 1,982,385
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ 1,894,985	$ 1,942,360	$ 1,990,919	$ 2,040,692	$ 2,091,709	$ 2,144,002	$ 2,197,602	$ 2,252,542	$ 2,308,856	$ 2,366,577	$ 2,425,741	$ 2,486,385
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ 1,390,985	$ 1,438,360	$ 1,486,919	$ 1,536,692	$ 1,587,709	$ 1,640,002	$ 1,693,602	$ 1,748,542	$ 1,804,856	$ 1,862,577	$ 1,921,741	$ 1,982,385
ANNUAL DEBT SERVICE				$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)	$ (563,267)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				$ 1,331,719	$ 1,379,093	$ 1,427,652	$ 1,477,425	$ 1,528,443	$ 1,580,735	$ 1,634,335	$ 1,689,276	$ 1,745,589	$ 1,803,310	$ 1,862,475	$ 1,923,118
AFTER TAX CASH FLOW				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 1,419,118
EQUITY CONTRIBUTION WITH SUBSIDIES															
BEFORE TAX CASH FLOW				$ 1,331,719	$ 1,379,093	$ 1,427,652	$ 1,477,425	$ 1,528,443	$ 1,580,735	$ 1,634,335	$ 1,689,276	$ 1,745,589	$ 1,803,310	$ 1,862,475	$ 1,923,118
AFTER TAX CASH FLOW				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 1,419,118
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			5.00%	$ 37,899,707	$ 38,847,200	$ 39,818,379	$ 40,813,839	$ 41,834,185	$ 42,880,040	$ 43,952,041	$ 45,050,842	$ 46,177,113	$ 47,331,540	$ 48,514,829	$ 49,727,700
Commission			4.00%	$ (1,515,988)	$ (1,553,888)	$ (1,592,735)	$ (1,632,554)	$ (1,673,367)	$ (1,715,202)	$ (1,758,082)	$ (1,802,034)	$ (1,847,085)	$ (1,893,262)	$ (1,940,593)	$ (1,989,108)
Adjusted Sale Price				$ 36,383,719	$ 37,293,312	$ 38,225,644	$ 39,181,285	$ 40,160,818	$ 41,164,838	$ 42,193,959	$ 43,248,808	$ 44,330,028	$ 45,438,279	$ 46,574,236	$ 47,738,592
Beginning Mortgage Balance				$ 7,217,261	$ 7,013,361	$ 6,797,961	$ 6,570,410	$ 6,330,023	$ 6,076,077	$ 5,807,806	$ 5,524,403	$ 5,225,013	$ 4,908,735	$ 4,574,617	$ 4,221,652
Remaining Mortgage Balance				$ 7,013,361	$ 6,797,961	$ 6,570,410	$ 6,330,023	$ 6,076,077	$ 5,807,806	$ 5,524,403	$ 5,225,013	$ 4,908,735	$ 4,574,617	$ 4,221,652	$ 3,848,777
Before Tax Operating Cash Flow				$ 1,331,719	$ 1,379,093	$ 1,427,652	$ 1,477,425	$ 1,528,443	$ 1,580,735	$ 1,634,335	$ 1,689,276	$ 1,745,589	$ 1,803,310	$ 1,862,475	$ 1,923,118
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 43,889,814
Total Before Tax Cash Flow				$ 1,331,719	$ 1,379,093	$ 1,427,652	$ 1,477,425	$ 1,528,443	$ 1,580,735	$ 1,634,335	$ 1,689,276	$ 1,745,589	$ 1,803,310	$ 1,862,475	$ 45,812,933
Before-Tax IRR	4.69%														
After Tax Operating Cash Flow				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 1,419,118
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 43,889,814
Total Before Tax Cash Flow				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 45,308,933
After Tax IRR without Subsidy	3.40%														
After Tax Operating Cash Flow				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 1,419,118
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 43,889,814
Total Before Tax Cash Flow				$ 827,719	$ 875,093	$ 923,652	$ 973,425	$ 1,024,443	$ 1,076,735	$ 1,130,335	$ 1,185,276	$ 1,241,589	$ 1,299,310	$ 1,358,475	$ 45,308,933
After Tax IRR with Sutsidy	15.89%														

DEVELOPMENT STRATEGIES 2011

AFFORDABLE APARTMENTS - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	150	150	150	150	150	330	330	330	330	330	330	330	330	330
POTENTIAL GROSS REVENUE																						
Base Rental Revenue		800	$0.90	$ -	$ -	$ -	$ -	$ -	$ 1,430,542	$ 1,466,305	$ 1,502,963	$ 1,540,537	$ 1,579,050	$ 3,560,758	$ 3,649,777	$ 3,741,021	$ 3,834,547	$ 3,930,411	$ 4,028,671	$ 4,129,388	$ 4,232,622	$ 4,338,438
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ 71,527	$ 73,315	$ 75,148	$ 77,027	$ 78,953	$ 178,038	$ 182,489	$ 187,051	$ 191,727	$ 196,521	$ 201,434	$ 206,469	$ 211,631	$ 216,922
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ 1,359,014	$ 1,392,990	$ 1,427,815	$ 1,463,510	$ 1,500,098	$ 3,382,720	$ 3,467,288	$ 3,553,970	$ 3,642,820	$ 3,733,890	$ 3,827,237	$ 3,922,918	$ 4,020,991	$ 4,121,516
OPERATING EXPENSES																						
Operating Expenses/s f		800	50%	$ -	$ -	$ -	$ -	$ -	$ 679,507	$ 696,495	$ 713,907	$ 731,755	$ 750,049	$ 1,691,360	$ 1,733,644	$ 1,776,985	$ 1,821,410	$ 1,866,945	$ 1,913,619	$ 1,961,459	$ 2,010,496	$ 2,060,758
Taxes			10%	$ -	$ -	$ -	$ -	$ -	$ 135,901	$ 139,299	$ 142,781	$ 146,351	$ 150,010	$ 338,272	$ 346,729	$ 355,397	$ 364,282	$ 373,389	$ 382,724	$ 392,292	$ 402,099	$ 412,152
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ 815,409	$ 835,794	$ 856,689	$ 878,106	$ 900,059	$ 2,029,632	$ 2,080,373	$ 2,132,382	$ 2,185,692	$ 2,240,334	$ 2,296,342	$ 2,353,751	$ 2,412,595	$ 2,472,910
NOI BEFORE TAXES				$ -	$ -	$ -	$ -	$ -	$ 679,507	$ 696,495	$ 713,907	$ 731,755	$ 750,049	$ 1,691,360	$ 1,733,644	$ 1,776,985	$ 1,821,410	$ 1,866,945	$ 1,913,619	$ 1,961,459	$ 2,010,496	$ 2,060,758
NOI AFTER TAXES				$ -	$ -	$ -	$ -	$ -	$ 543,606	$ 557,196	$ 571,126	$ 585,404	$ 600,039	$ 1,353,088	$ 1,386,915	$ 1,421,588	$ 1,457,128	$ 1,493,556	$ 1,530,895	$ 1,569,167	$ 1,608,397	$ 1,648,606
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ -	$ -	$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 642,007	$ 658,995	$ 676,407	$ 694,255	$ 712,549	$ 1,608,860	$ 1,651,144	$ 1,694,485	$ 1,738,910	$ 1,784,445	$ 1,831,119	$ 1,878,959	$ 1,927,996	$ 1,978,258
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 506,106	$ 519,696	$ 533,626	$ 547,904	$ 562,539	$ 1,270,588	$ 1,304,415	$ 1,339,088	$ 1,374,628	$ 1,411,056	$ 1,448,395	$ 1,486,667	$ 1,525,897	$ 1,566,106
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ (6,651,488)														
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (528,423)	$ (511,436)	$ (494,023)	$ (476,175)	$ (457,882)	$ 438,430	$ 480,714	$ 524,055	$ 568,479	$ 614,015	$ 660,688	$ 708,529	$ 757,565	$ 807,828
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ (3,073,134)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (4,243,565)	$ (528,423)	$ (511,436)	$ (494,023)	$ (476,175)	$ (457,882)	$ 438,430	$ 480,714	$ 524,055	$ 568,479	$ 614,015	$ 660,688	$ 708,529	$ 757,565	$ 807,828
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (4,243,565)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			6.80%	$ -	$ -	$ -	$ -	$ -	$ 9,992,753	$ 10,242,572	$ 10,498,636	$ 10,761,102	$ 11,030,130	$ 24,872,943	$ 25,494,766	$ 26,132,135	$ 26,785,439	$ 27,455,075	$ 28,141,452	$ 28,844,988	$ 29,566,113	$ 30,305,265
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ (399,710)	$ (409,703)	$ (419,945)	$ (430,444)	$ (441,205)	$ (994,918)	$ (1,019,791)	$ (1,045,285)	$ (1,071,418)	$ (1,098,203)	$ (1,125,658)	$ (1,153,800)	$ (1,182,645)	$ (1,212,211)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ 9,593,043	$ 9,832,869	$ 10,078,691	$ 10,330,658	$ 10,588,925	$ 23,878,025	$ 24,474,976	$ 25,086,850	$ 25,714,021	$ 26,356,872	$ 27,015,793	$ 27,691,188	$ 28,383,468	$ 29,093,055
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ (231,406)	$ (475,864)	$ (734,112)	$ (1,006,928)	$ (1,295,132)	$ (1,599,593)	$ (1,921,228)	$ (2,261,006)	$ (2,619,950)	$ (2,999,142)	$ (3,399,722)	$ (3,822,899)	$ (4,269,946)	$ (4,742,210)
Remaining Mortgage Balance				$ -	$ -	$ -	$ -	$ (231,406)	$ (475,864)	$ (734,112)	$ (1,006,928)	$ (1,295,132)	$ (1,599,593)	$ (1,921,228)	$ (2,261,006)	$ (2,619,950)	$ (2,999,142)	$ (3,399,722)	$ (3,822,899)	$ (4,269,946)	$ (4,742,210)	$ (5,241,114)
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (528,423)	$ (511,436)	$ (494,023)	$ (476,175)	$ (457,882)	$ 438,430	$ 480,714	$ 524,055	$ 568,479	$ 614,015	$ 660,688	$ 708,529	$ 757,565	$ 807,828
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (528,423)	$ (511,436)	$ (494,023)	$ (476,175)	$ (457,882)	$ 438,430	$ 480,714	$ 524,055	$ 568,479	$ 614,015	$ 660,688	$ 708,529	$ 757,565	$ 807,828
Before-Tax IRR	9.31%																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (7,821,919)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
After Tax IRR without Subsidy	7.73%																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (4,243,565)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (4,243,565)	$ (664,325)	$ (650,735)	$ (636,805)	$ (622,526)	$ (607,891)	$ 100,158	$ 133,985	$ 168,658	$ 204,197	$ 240,626	$ 277,965	$ 316,237	$ 355,466	$ 395,676
After Tax IRR without Subsidy	9.78%																					

DEVELOPMENT STRATEGIES, 2011

AFFORDABLE APARTMENTS - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				330	330	330	330	330	330	330	330	330	330	330	330
POTENTIAL GROSS REVENUE															
Base Rental Revenue		800	$0.90	$ 4,446,899	$ 4,558,071	$ 4,672,023	$ 4,788,824	$ 4,908,544	$ 5,031,258	$ 5,157,039	$ 5,285,965	$ 5,418,115	$ 5,553,567	$ 5,692,407	$ 5,834,717
Vacancy Allowance			95%	$ 222,345	$ 227,904	$ 233,601	$ 239,441	$ 245,427	$ 251,563	$ 257,852	$ 264,298	$ 270,906	$ 277,678	$ 284,620	$ 291,736
Effective Gross Revenue				$ 4,224,554	$ 4,330,168	$ 4,438,422	$ 4,549,383	$ 4,663,117	$ 4,779,695	$ 4,899,187	$ 5,021,667	$ 5,147,209	$ 5,275,889	$ 5,407,786	$ 5,542,981
OPERATING EXPENSES															
Operating Expenses/s.f.		800	50%	$ 2,112,277	$ 2,165,084	$ 2,219,211	$ 2,274,691	$ 2,331,559	$ 2,389,848	$ 2,449,594	$ 2,510,834	$ 2,573,604	$ 2,637,945	$ 2,703,893	$ 2,771,490
Taxes			10%	$ 422,455	$ 433,017	$ 443,842	$ 454,938	$ 466,312	$ 477,970	$ 489,919	$ 502,167	$ 514,721	$ 527,589	$ 540,779	$ 554,298
Total Operating Expenses				$ 2,534,732	$ 2,598,101	$ 2,663,053	$ 2,729,630	$ 2,797,870	$ 2,867,817	$ 2,939,512	$ 3,013,000	$ 3,088,325	$ 3,165,533	$ 3,244,672	$ 3,325,789
NOI BEFORE TAXES				$ 2,112,277	$ 2,165,084	$ 2,219,211	$ 2,274,691	$ 2,331,559	$ 2,389,848	$ 2,449,594	$ 2,510,834	$ 2,573,604	$ 2,637,945	$ 2,703,893	$ 2,771,490
NOI AFTER TAXES				$ 1,689,822	$ 1,732,067	$ 1,775,369	$ 1,819,753	$ 1,865,247	$ 1,911,878	$ 1,959,675	$ 2,008,667	$ 2,058,884	$ 2,110,356	$ 2,163,115	$ 2,217,192
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500
Total Leasing and Capital Costs				$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500	$ 82,500
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ 2,029,777	$ 2,082,584	$ 2,136,711	$ 2,192,191	$ 2,249,059	$ 2,307,348	$ 2,367,094	$ 2,428,334	$ 2,491,104	$ 2,555,445	$ 2,621,393	$ 2,688,990
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ 1,607,322	$ 1,649,567	$ 1,692,869	$ 1,737,253	$ 1,782,747	$ 1,829,378	$ 1,877,175	$ 1,926,167	$ 1,976,384	$ 2,027,856	$ 2,080,615	$ 2,134,692
ANNUAL DEBT SERVICE				$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)	$ (1,170,430)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				$ 859,347	$ 912,153	$ 966,281	$ 1,021,761	$ 1,078,628	$ 1,136,917	$ 1,196,663	$ 1,257,903	$ 1,320,674	$ 1,385,014	$ 1,450,963	$ 1,518,560
AFTER TAX CASH FLOW				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 964,262
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 859,347	$ 912,153	$ 966,281	$ 1,021,761	$ 1,078,628	$ 1,136,917	$ 1,196,663	$ 1,257,903	$ 1,320,674	$ 1,385,014	$ 1,450,963	$ 1,518,560
AFTER TAX CASH FLOW				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 964,262
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			6.80%	$ 31,062,897	$ 31,839,469	$ 32,635,456	$ 33,451,343	$ 34,287,626	$ 35,144,817	$ 36,023,437	$ 36,924,023	$ 37,847,124	$ 38,793,302	$ 39,763,134	$ 40,757,213
Commission			4.00%	$ (1,242,516)	$ (1,273,579)	$ (1,305,418)	$ (1,338,054)	$ (1,371,505)	$ (1,405,793)	$ (1,440,937)	$ (1,476,961)	$ (1,513,885)	$ (1,551,732)	$ (1,590,525)	$ (1,630,289)
Adjusted Sale Price				$ 29,820,381	$ 30,565,891	$ 31,330,038	$ 32,113,289	$ 32,916,121	$ 33,739,024	$ 34,582,500	$ 35,447,062	$ 36,333,239	$ 37,241,570	$ 38,172,609	$ 39,126,924
Beginning Mortgage Balance				$ (5,241,114)	$ (5,768,159)	$ (6,324,934)	$ (6,913,116)	$ (7,534,476)	$ (8,190,885)	$ (8,884,321)	$ (9,616,872)	$ (10,390,745)	$ (11,208,270)	$ (12,071,910)	$ (12,984,266)
Remaining Mortgage Balance				$ (5,768,159)	$ (6,324,934)	$ (6,913,116)	$ (7,534,476)	$ (8,190,885)	$ (8,884,321)	$ (9,616,872)	$ (10,390,745)	$ (11,208,270)	$ (12,071,910)	$ (12,984,266)	$ (13,948,088)
Before Tax Operating Cash Flow				$ 859,347	$ 912,153	$ 966,281	$ 1,021,761	$ 1,078,628	$ 1,136,917	$ 1,196,663	$ 1,257,903	$ 1,320,674	$ 1,385,014	$ 1,450,963	$ 1,518,560
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 53,075,010
Total Before Tax Cash Flow				$ 859,347	$ 912,153	$ 966,281	$ 1,021,761	$ 1,078,628	$ 1,136,917	$ 1,196,663	$ 1,257,903	$ 1,320,674	$ 1,385,014	$ 1,450,963	$ 54,593,571
Before-Tax IRR	9.31%														
After Tax Operating Cash Flow				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 964,262
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 53,075,010
Total Before Tax Cash Flow				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 54,039,272
After Tax IRR without Subsidy	7.73%														
After Tax Operating Cash Flow				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 964,262
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 53,075,010
Total Before Tax Cash Flow				$ 436,891	$ 479,137	$ 522,438	$ 566,823	$ 612,316	$ 658,948	$ 706,745	$ 755,736	$ 805,953	$ 857,425	$ 910,184	$ 54,039,272
After Tax IRR without Subsidy	9.78%														

DEVELOPMENT STRATEGIES 2014

OFFICE - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52	1.56	1.60	1.64
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52	1.56	1.60	1.64
NEW CONSTRUCTION																									
CUMULATIVE UNITS					0	0	0	0	0	0	100000	100000	100000	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	250000	250000
POTENTIAL GROSS REVENUE																									
Base Rental Revenue			$17.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,971,479	$ 2,020,766	$ 2,071,285	$ 4,246,134	$ 4,352,287	$ 4,461,095	$ 4,572,622	$ 4,686,938	$ 4,804,111	$ 4,924,214	$ 5,047,319	$ 5,173,502	$ 5,302,840	$ 6,794,263	$ 6,964,120
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 98,574	$ 101,038	$ 103,564	$ 212,307	$ 217,614	$ 223,055	$ 228,631	$ 234,347	$ 240,206	$ 246,211	$ 252,366	$ 258,675	$ 265,142	$ 339,713	$ 348,206
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,872,905	$ 1,919,727	$ 1,967,721	$ 4,033,827	$ 4,134,673	$ 4,238,040	$ 4,343,991	$ 4,452,591	$ 4,563,905	$ 4,678,003	$ 4,794,953	$ 4,914,827	$ 5,037,698	$ 6,454,550	$ 6,615,914
OPERATING EXPENSES																									
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000	$ 250,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 625,000	$ 625,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000	$ 250,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 625,000	$ 625,000
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,622,905**	**$ 1,669,727**	**$ 1,717,721**	**$ 3,533,827**	**$ 3,634,673**	**$ 3,738,040**	**$ 3,843,991**	**$ 3,952,591**	**$ 4,063,905**	**$ 4,178,003**	**$ 4,294,953**	**$ 4,414,827**	**$ 4,537,698**	**$ 5,829,550**	**$ 5,990,914**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,622,905**	**$ 1,669,727**	**$ 1,717,721**	**$ 3,533,827**	**$ 3,634,673**	**$ 3,738,040**	**$ 3,843,991**	**$ 3,952,591**	**$ 4,063,905**	**$ 4,178,003**	**$ 4,294,953**	**$ 4,414,827**	**$ 4,537,698**	**$ 5,829,550**	**$ 5,990,914**
LEASING AND CAPITAL COSTS																									
Tenant Improvements			$4.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 463,877	$ 475,474	$ 487,361	$ 999,090	$ 1,024,068	$ 1,049,669	$ 1,075,911	$ 1,102,809	$ 1,130,379	$ 1,158,639	$ 1,187,604	$ 1,217,295	$ 1,247,727	$ 1,598,650	$ 1,638,616
Leasing Commmissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,475	$ 23,037	$ 23,613	$ 48,406	$ 49,616	$ 50,856	$ 52,128	$ 53,431	$ 54,767	$ 56,136	$ 57,539	$ 58,978	$ 60,452	$ 77,455	$ 79,391
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 28,094	$ 28,796	$ 29,516	$ 60,507	$ 62,020	$ 63,571	$ 65,160	$ 66,789	$ 68,459	$ 70,170	$ 71,924	$ 73,722	$ 75,565	$ 96,818	$ 99,239
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 514,446	$ 527,307	$ 540,490	$ 1,108,004	$ 1,135,704	$ 1,164,096	$ 1,193,199	$ 1,223,029	$ 1,253,605	$ 1,284,945	$ 1,317,068	$ 1,349,995	$ 1,383,745	$ 1,772,923	$ 1,817,246
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,108,459**	**$ 1,142,421**	**$ 1,177,231**	**$ 2,425,824**	**$ 2,498,969**	**$ 2,573,944**	**$ 2,650,792**	**$ 2,729,562**	**$ 2,810,301**	**$ 2,893,058**	**$ 2,977,885**	**$ 3,064,832**	**$ 3,153,953**	**$ 4,056,627**	**$ 4,173,668**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,108,459**	**$ 1,142,421**	**$ 1,177,231**	**$ 2,425,824**	**$ 2,498,969**	**$ 2,573,944**	**$ 2,650,792**	**$ 2,729,562**	**$ 2,810,301**	**$ 2,893,058**	**$ 2,977,885**	**$ 3,064,832**	**$ 3,153,953**	**$ 4,056,627**	**$ 4,173,668**
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,144,667)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (7,819,326)**	**$ (566,201)**	**$ (532,239)**	**$ (497,429)**	**$ 751,164**	**$ 824,310**	**$ 899,284**	**$ 976,132**	**$ 1,054,902**	**$ 1,135,641**	**$ 1,218,399**	**$ 1,303,225**	**$ 1,390,172**	**$ 1,479,293**	**$ 2,381,967**	**$ 2,499,008**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (7,819,326)**	**$ (566,201)**	**$ (532,239)**	**$ (497,429)**	**$ 751,164**	**$ 824,310**	**$ 899,284**	**$ 976,132**	**$ 1,054,902**	**$ 1,135,641**	**$ 1,218,399**	**$ 1,303,225**	**$ 1,390,172**	**$ 1,479,293**	**$ 2,381,967**	**$ 2,499,008**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (1,674,660)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (1,674,660)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
IRR AND ROE CALCULATIONS																									
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 19,553,071	$ 20,117,199	$ 20,695,430	$ 42,576,234	$ 43,791,242	$ 45,036,625	$ 46,313,143	$ 47,621,574	$ 48,962,716	$ 50,337,386	$ 51,746,424	$ 53,190,687	$ 54,671,056	$ 70,235,544	$ 72,179,685
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (782,123)	$ (804,688)	$ (827,817)	$ (1,703,049)	$ (1,751,650)	$ (1,801,465)	$ (1,852,526)	$ (1,904,863)	$ (1,958,509)	$ (2,013,495)	$ (2,069,857)	$ (2,127,627)	$ (2,186,842)	$ (2,809,422)	$ (2,887,187)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,770,948	$ 19,312,511	$ 19,867,613	$ 40,873,184	$ 42,039,592	$ 43,235,160	$ 44,460,618	$ 45,716,711	$ 47,004,208	$ 48,323,891	$ 49,676,567	$ 51,063,059	$ 52,484,214	$ 67,426,122	$ 69,292,498
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ -	$ 24,578,667	$ 24,247,570	$ 23,897,797	$ 23,528,294	$ 23,137,948	$ 22,725,584	$ 22,289,958	$ 21,829,761	$ 21,343,604	$ 20,830,025	$ 20,287,475	$ 19,714,321	$ 19,108,838	$ 18,469,200	$ 17,793,481	$ 17,079,647
Remaining Mortgage Balance										$ 24,247,570	$ 23,897,797	$ 23,528,294	$ 23,137,948	$ 22,725,584	$ 22,289,958	$ 21,829,761	$ 21,343,604	$ 20,830,025	$ 20,287,475	$ 19,714,321	$ 19,108,838	$ 18,469,200	$ 17,793,481	$ 17,079,647	$ 16,325,546
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (7,819,326)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (7,819,326)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
Before-Tax IRR	**16.44%**																								
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (7,819,326)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (7,819,326)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
After Tax IRR without Subsidy	**16.44%**																								
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (1,674,660)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (1,674,660)	$ (566,201)	$ (532,239)	$ (497,429)	$ 751,164	$ 824,310	$ 899,284	$ 976,132	$ 1,054,902	$ 1,135,641	$ 1,218,399	$ 1,303,225	$ 1,390,172	$ 1,479,293	$ 2,381,967	$ 2,499,008
After Tax IRR with Sutsidy	**26.29%**																								
DEVELOPMENT STRATEGIES 2019																									
RENOVATIONS																									
CUMULATIVE UNITS					0	0	0	0	50000	50000	50000	50000	50000	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000	105000
POTENTIAL GROSS REVENUE																									
Base Rental Revenue			$13.00	$ -	$ -	$ -	$ -	$ -	$ 717,478	$ 735,415	$ 753,801	$ 772,646	$ 791,962	$ 1,704,698	$ 1,747,315	$ 1,790,998	$ 1,835,773	$ 1,881,668	$ 1,928,709	$ 1,976,927	$ 2,026,350	$ 2,077,009	$ 2,128,934	$ 2,182,158	$ 2,236,711
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ 35,874	$ 36,771	$ 37,690	$ 38,632	$ 39,598	$ 85,235	$ 87,366	$ 89,550	$ 91,789	$ 94,083	$ 96,435	$ 98,846	$ 101,318	$ 103,850	$ 106,447	$ 109,108	$ 111,836
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ 681,604	$ 698,645	$ 716,111	$ 734,013	$ 752,364	$ 1,619,463	$ 1,659,950	$ 1,701,448	$ 1,743,985	$ 1,787,584	$ 1,832,274	$ 1,878,081	$ 1,925,033	$ 1,973,158	$ 2,022,487	$ 2,073,050	$ 2,124,876
OPERATING EXPENSES																									
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 556,604**	**$ 573,645**	**$ 591,111**	**$ 609,013**	**$ 627,364**	**$ 1,356,963**	**$ 1,397,450**	**$ 1,438,948**	**$ 1,481,485**	**$ 1,525,084**	**$ 1,569,774**	**$ 1,615,581**	**$ 1,662,533**	**$ 1,710,658**	**$ 1,759,987**	**$ 1,810,550**	**$ 1,862,376**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 556,604**	**$ 573,645**	**$ 591,111**	**$ 609,013**	**$ 627,364**	**$ 1,356,963**	**$ 1,397,450**	**$ 1,438,948**	**$ 1,481,485**	**$ 1,525,084**	**$ 1,569,774**	**$ 1,615,581**	**$ 1,662,533**	**$ 1,710,658**	**$ 1,759,987**	**$ 1,810,550**	**$ 1,862,376**
LEASING AND CAPITAL COSTS																									
Tenant Improvements			$4.00	$ -	$ -	$ -	$ -	$ -	$ 220,763	$ 226,282	$ 231,939	$ 237,737	$ 243,681	$ 524,522	$ 537,636	$ 551,076	$ 564,853	$ 578,975	$ 593,449	$ 608,285	$ 623,492	$ 639,080	$ 655,057	$ 671,433	$ 688,219
Leasing Commmissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ 8,179	$ 8,384	$ 8,593	$ 8,808	$ 9,028	$ 19,434	$ 19,919	$ 20,417	$ 20,928	$ 21,451	$ 21,987	$ 22,537	$ 23,100	$ 23,678	$ 24,270	$ 24,877	$ 25,499
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ 10,224	$ 10,480	$ 10,742	$ 11,010	$ 11,285	$ 24,292	$ 24,899	$ 25,522	$ 26,160	$ 26,814	$ 27,484	$ 28,171	$ 28,875	$ 29,597	$ 30,337	$ 31,096	$ 31,873
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ 239,166	$ 245,145	$ 251,274	$ 257,556	$ 263,994	$ 568,248	$ 582,454	$ 597,016	$ 611,941	$ 627,239	$ 642,920	$ 658,993	$ 675,468	$ 692,355	$ 709,664	$ 727,405	$ 745,591
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 317,439**	**$ 328,500**	**$ 339,837**	**$ 351,458**	**$ 363,369**	**$ 788,715**	**$ 814,995**	**$ 841,933**	**$ 869,544**	**$ 897,845**	**$ 926,853**	**$ 956,587**	**$ 987,064**	**$ 1,018,304**	**$ 1,050,324**	**$ 1,083,144**	**$ 1,116,785**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 317,439**	**$ 328,500**	**$ 339,837**	**$ 351,458**	**$ 363,369**	**$ 788,715**	**$ 814,995**	**$ 841,933**	**$ 869,544**	**$ 897,845**	**$ 926,853**	**$ 956,587**	**$ 987,064**	**$ 1,018,304**	**$ 1,050,324**	**$ 1,083,144**	**$ 1,116,785**

OFFICE - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ (5,320,000)																	
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ 3,834,767																	
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ 2,384,861	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ 2,384,861	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
IRR AND ROE CALCULATIONS																									
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ 6,706,078	$ 6,911,380	$ 7,121,815	$ 7,337,511	$ 7,558,600	$ 16,348,952	$ 16,836,743	$ 17,336,727	$ 17,849,212	$ 18,374,508	$ 18,912,937	$ 19,464,827	$ 20,030,514	$ 20,610,343	$ 21,204,668	$ 21,813,851	$ 22,438,263
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ (268,243)	$ (276,455)	$ (284,873)	$ (293,500)	$ (302,344)	$ (653,958)	$ (673,470)	$ (693,469)	$ (713,968)	$ (734,980)	$ (756,517)	$ (778,593)	$ (801,221)	$ (824,414)	$ (848,187)	$ (872,554)	$ (897,531)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ 6,437,835	$ 6,634,925	$ 6,836,943	$ 7,044,011	$ 7,256,256	$ 15,694,994	$ 16,163,273	$ 16,643,258	$ 17,135,243	$ 17,639,528	$ 18,156,420	$ 18,686,234	$ 19,229,293	$ 19,785,929	$ 20,356,481	$ 20,941,297	$ 21,540,733
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ 21,280,000	$ 20,993,339	$ 20,690,509	$ 20,370,596	$ 20,032,638	$ 19,675,616	$ 19,298,456	$ 18,900,021	$ 18,479,110	$ 18,034,458	$ 17,564,723	$ 17,068,491	$ 16,544,269	$ 15,990,475	$ 15,405,444	$ 14,787,412	$ 14,134,519	$ 13,444,797
Remaining Mortgage Balance				$ -	$ -	$ -		$ 20,993,339	$ 20,690,509	$ 20,370,596	$ 20,032,638	$ 19,675,616	$ 19,298,456	$ 18,900,021	$ 18,479,110	$ 18,034,458	$ 17,564,723	$ 17,068,491	$ 16,544,269	$ 15,990,475	$ 15,405,444	$ 14,787,412	$ 14,134,519	$ 13,444,797	$ 12,716,169
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
Before-Tax IRR	**0.89%**																								
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (6,769,906)	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
After Tax IRR without Subsidy	**0.89%**																								
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ 2,384,861	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ 2,384,861	$ (1,132,467)	$ (1,121,406)	$ (1,110,069)	$ (1,098,448)	$ (1,086,537)	$ (661,191)	$ (634,911)	$ (607,973)	$ (580,362)	$ (552,061)	$ (523,053)	$ (493,319)	$ (462,842)	$ (431,602)	$ (399,582)	$ (366,762)	$ (333,121)
After Tax IRR with Sutsidy	**5.10%**																								

OFFICE - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION												
CUMULATIVE UNITS				250000	250000	325000	325000	325000	325000	400000	400000	400000
POTENTIAL GROSS REVENUE												
Base Rental Revenue			$17 00	$ 7,138,223	$ 7,316,678	$ 9,749,474	$ 9,993,211	$ 10,243,041	$ 10,499,117	$ 13,245,040	$ 13,576,166	$ 13,915,570
Vacancy Allowance			95%	$ 356,911	$ 365,834	$ 487,474	$ 499,661	$ 512,152	$ 524,956	$ 662,252	$ 678,808	$ 695,779
Effective Gross Revenue				$ 6,781,312	$ 6,950,845	$ 9,262,000	$ 9,493,550	$ 9,730,889	$ 9,974,161	$ 12,582,788	$ 12,897,358	$ 13,219,792
OPERATING EXPENSES												
Operating Expenses/s f			$2 50	$ 625,000	$ 625,000	$ 812,500	$ 812,500	$ 812,500	$ 812,500	$ 1,000,000	$ 1,000,000	$ 1,000,000
Taxes			$0 00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 625,000	$ 625,000	$ 812,500	$ 812,500	$ 812,500	$ 812,500	$ 1,000,000	$ 1,000,000	$ 1,000,000
NOI BEFORE TAXES				**$ 6,156,312**	**$ 6,325,845**	**$ 8,449,500**	**$ 8,681,050**	**$ 8,918,389**	**$ 9,161,661**	**$ 11,582,788**	**$ 11,897,358**	**$ 12,219,792**
NOI AFTER TAXES				**$ 6,156,312**	**$ 6,325,845**	**$ 8,449,500**	**$ 8,681,050**	**$ 8,918,389**	**$ 9,161,661**	**$ 11,582,788**	**$ 11,897,358**	**$ 12,219,792**
LEASING AND CAPITAL COSTS												
Tenant Improvements			$4 00	$ 1,679,582	$ 1,721,571	$ 2,293,994	$ 2,351,344	$ 2,410,127	$ 2,470,381	$ 3,116,480	$ 3,194,392	$ 3,274,252
Leasing Commmissions			1 20%	$ 81,376	$ 83,410	$ 111,144	$ 113,923	$ 116,771	$ 119,690	$ 150,993	$ 154,768	$ 158,638
Capital Expenditure Reserve			1 50%	$ 101,720	$ 104,263	$ 138,930	$ 142,403	$ 145,963	$ 149,612	$ 188,742	$ 193,460	$ 198,297
Total Leasing and Capital Costs				$ 1,862,677	$ 1,909,244	$ 2,544,068	$ 2,607,670	$ 2,672,861	$ 2,739,683	$ 3,456,215	$ 3,542,621	$ 3,631,186
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 4,293,634**	**$ 4,416,600**	**$ 5,905,432**	**$ 6,073,381**	**$ 6,245,528**	**$ 6,421,978**	**$ 8,126,573**	**$ 8,354,737**	**$ 8,588,606**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 4,293,634**	**$ 4,416,600**	**$ 5,905,432**	**$ 6,073,381**	**$ 6,245,528**	**$ 6,421,978**	**$ 8,126,573**	**$ 8,354,737**	**$ 8,588,606**
ANNUAL DEBT SERVICE				$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)	$ (1,674,660)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				**$ 2,618,975**	**$ 2,741,941**	**$ 4,230,773**	**$ 4,398,721**	**$ 4,570,868**	**$ 4,747,319**	**$ 6,451,913**	**$ 6,680,078**	**$ 6,913,946**
AFTER TAX CASH FLOW				**$ 2,618,975**	**$ 2,741,941**	**$ 4,230,773**	**$ 4,398,721**	**$ 4,570,868**	**$ 4,747,319**	**$ 6,451,913**	**$ 6,680,078**	**$ 6,913,946**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 6,913,946
AFTER TAX CASH FLOW				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 6,913,946
IRR AND ROE CALCULATIONS												
Sale Price (before tax NOI)			8 30%	$ 74,172,430	$ 76,214,994	$ 101,801,209	$ 104,590,968	$ 107,450,471	$ 110,381,462	$ 139,551,664	$ 143,341,660	$ 147,226,407
Commission			4 00%	$ (2,966,897)	$ (3,048,600)	$ (4,072,048)	$ (4,183,639)	$ (4,298,019)	$ (4,415,258)	$ (5,582,067)	$ (5,733,666)	$ (5,889,056)
Adjusted Sale Price				$ 71,205,533	$ 73,166,394	$ 97,729,160	$ 100,407,329	$ 103,152,452	$ 105,966,203	$ 133,969,598	$ 137,607,994	$ 141,337,351
Beginning Mortgage Balance				$ 16,325,546	$ 15,528,909	$ 14,687,335	$ 13,798,289	$ 12,859,094	$ 11,866,922	$ 10,818,783	$ 9,711,521	$ 8,541,800
Remaining Mortgage Balance				$ 15,528,909	$ 14,687,335	$ 13,798,289	$ 12,859,094	$ 11,866,922	$ 10,818,783	$ 9,711,521	$ 8,541,800	$ 7,306,098
Before Tax Operating Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 6,913,946
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 134,031,252
Total Before Tax Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 140,945,198
Before-Tax IRR	**16.44%**											
After Tax Operating Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 6,913,946
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 134,031,252
Total Before Tax Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 140,945,198
After Tax IRR without Subsidy	**16.44%**											
After Tax Operating Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 6,913,946
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 134,031,252
Total Before Tax Cash Flow				$ 2,618,975	$ 2,741,941	$ 4,230,773	$ 4,398,721	$ 4,570,868	$ 4,747,319	$ 6,451,913	$ 6,680,078	$ 140,945,198
After Tax IRR with Sutsidy	**26.29%**											

DEVELOPMENT STRATEGIES 2009

RENOVATIONS

CUMULATIVE UNITS				105000	105000	105000	105000	105000	105000	105000	105000	105000
POTENTIAL GROSS REVENUE												
Base Rental Revenue			$13 00	$ 2,292,629	$ 2,349,945	$ 2,408,694	$ 2,468,911	$ 2,530,634	$ 2,593,900	$ 2,658,747	$ 2,725,216	$ 2,793,346
Vacancy Allowance			95%	$ 114,631	$ 117,497	$ 120,435	$ 123,446	$ 126,532	$ 129,695	$ 132,937	$ 136,261	$ 139,667
Effective Gross Revenue				$ 2,177,998	$ 2,232,448	$ 2,288,259	$ 2,345,465	$ 2,404,102	$ 2,464,205	$ 2,525,810	$ 2,588,955	$ 2,653,679
OPERATING EXPENSES												
Operating Expenses/s f			$2 50	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500
Taxes			$0 00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500	$ 262,500
NOI BEFORE TAXES				**$ 1,915,498**	**$ 1,969,948**	**$ 2,025,759**	**$ 2,082,965**	**$ 2,141,602**	**$ 2,201,705**	**$ 2,263,310**	**$ 2,326,455**	**$ 2,391,179**
NOI AFTER TAXES				**$ 1,915,498**	**$ 1,969,948**	**$ 2,025,759**	**$ 2,082,965**	**$ 2,141,602**	**$ 2,201,705**	**$ 2,263,310**	**$ 2,326,455**	**$ 2,391,179**
LEASING AND CAPITAL COSTS												
Tenant Improvements			$4 00	$ 705,424	$ 723,060	$ 741,136	$ 759,665	$ 778,657	$ 798,123	$ 818,076	$ 838,528	$ 859,491
Leasing Commmissions			1 20%	$ 26,136	$ 26,789	$ 27,459	$ 28,146	$ 28,849	$ 29,570	$ 30,310	$ 31,067	$ 31,844
Capital Expenditure Reserve			1 50%	$ 32,670	$ 33,487	$ 34,324	$ 35,182	$ 36,062	$ 36,963	$ 37,887	$ 38,834	$ 39,805
Total Leasing and Capital Costs				$ 764,230	$ 783,336	$ 802,919	$ 822,992	$ 843,567	$ 864,656	$ 886,273	$ 908,430	$ 931,140
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 1,151,267**	**$ 1,186,612**	**$ 1,222,839**	**$ 1,259,973**	**$ 1,298,035**	**$ 1,337,048**	**$ 1,377,037**	**$ 1,418,025**	**$ 1,460,038**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 1,151,267**	**$ 1,186,612**	**$ 1,222,839**	**$ 1,259,973**	**$ 1,298,035**	**$ 1,337,048**	**$ 1,377,037**	**$ 1,418,025**	**$ 1,460,038**

OFFICE - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	22	23	24	25	26	27	28	29	30
ANNUAL DEBT SERVICE				$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)	$ (1,449,906)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES												
BEFORE TAX CASH FLOW				**$ (298,639)**	**$ (263,294)**	**$ (227,067)**	**$ (189,933)**	**$ (151,871)**	**$ (112,858)**	**$ (72,869)**	**$ (31,881)**	**$ 10,132**
AFTER TAX CASH FLOW				**$ (298,639)**	**$ (263,294)**	**$ (227,067)**	**$ (189,933)**	**$ (151,871)**	**$ (112,858)**	**$ (72,869)**	**$ (31,881)**	**$ 10,132**
EQUITY CONTRIBUTION WITH SUBSIDIES												
BEFORE TAX CASH FLOW				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 10,132
AFTER TAX CASH FLOW				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 10,132
IRR AND ROE CALCULATIONS												
Sale Price (before tax NOI)			8.30%	$ 23,078,286	$ 23,734,310	$ 24,406,734	$ 25,095,968	$ 25,802,434	$ 26,526,561	$ 27,268,791	$ 28,029,577	$ 28,809,383
Commission			4.00%	$ (923,131)	$ (949,372)	$ (976,269)	$ (1,003,839)	$ (1,032,097)	$ (1,061,062)	$ (1,090,752)	$ (1,121,183)	$ (1,152,375)
Adjusted Sale Price				$ 22,155,155	$ 22,784,937	$ 23,430,464	$ 24,092,130	$ 24,770,336	$ 25,465,499	$ 26,178,040	$ 26,908,394	$ 27,657,008
Beginning Mortgage Balance				$ 12,716,169	$ 11,946,441	$ 11,133,294	$ 10,274,280	$ 9,366,810	$ 8,408,152	$ 7,395,418	$ 6,325,557	$ 5,195,349
Remaining Mortgage Balance				$ 11,946,441	$ 11,133,294	$ 10,274,280	$ 9,366,810	$ 8,408,152	$ 7,395,418	$ 6,325,557	$ 5,195,349	$ 4,001,387
Before Tax Operating Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 10,132
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 23,655,620
Total Before Tax Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 23,665,753
Before-Tax IRR	**0.89%**											
After Tax Operating Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 10,132
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 23,655,620
Total Before Tax Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 23,665,753
After Tax IRR without Subsidy	**0.89%**											
After Tax Operating Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 10,132
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 23,655,620
Total Before Tax Cash Flow				$ (298,639)	$ (263,294)	$ (227,067)	$ (189,933)	$ (151,871)	$ (112,858)	$ (72,869)	$ (31,881)	$ 23,665,753
After Tax IRR with Sutsidy	**5.10%**											

RESTAURANT - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	0	5000	5000	5000	10000	10000	10000	15000	15000	15000	20000	20000	20000	25000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$15.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 84,856	$ 86,977	$ 89,151	$ 182,760	$ 187,329	$ 192,013	$ 295,219	$ 302,600	$ 310,165	$ 423,892	$ 434,489	$ 445,352	$ 570,607
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,243	$ 4,349	$ 4,458	$ 9,138	$ 9,366	$ 9,601	$ 14,761	$ 15,130	$ 15,508	$ 21,195	$ 21,724	$ 22,268	$ 28,530
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ 80,613	$ 82,628	$ 84,694	$ 173,622	$ 177,963	$ 182,412	$ 280,459	$ 287,470	$ 294,657	$ 402,698	$ 412,765	$ 423,084	$ 542,077
OPERATING EXPENSES																						
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,500	$ 12,500	$ 12,500	$ 25,000	$ 25,000	$ 25,000	$ 37,500	$ 37,500	$ 37,500	$ 50,000	$ 50,000	$ 50,000	$ 62,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ 12,500	$ 12,500	$ 12,500	$ 25,000	$ 25,000	$ 25,000	$ 37,500	$ 37,500	$ 37,500	$ 50,000	$ 50,000	$ 50,000	$ 62,500
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 68,113**	**$ 70,128**	**$ 72,194**	**$ 148,622**	**$ 152,963**	**$ 157,412**	**$ 242,959**	**$ 249,970**	**$ 257,157**	**$ 352,698**	**$ 362,765**	**$ 373,084**	**$ 479,577**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 68,113**	**$ 70,128**	**$ 72,194**	**$ 148,622**	**$ 152,963**	**$ 157,412**	**$ 242,959**	**$ 249,970**	**$ 257,157**	**$ 352,698**	**$ 362,765**	**$ 373,084**	**$ 479,577**
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,971	$ 17,395	$ 17,830	$ 36,552	$ 37,466	$ 38,403	$ 59,044	$ 60,520	$ 62,033	$ 84,778	$ 86,898	$ 89,070	$ 114,121
Leasing Commmissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ -	$ 967	$ 992	$ 1,016	$ 2,083	$ 2,136	$ 2,189	$ 3,366	$ 3,450	$ 3,536	$ 4,832	$ 4,953	$ 5,077	$ 6,505
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,209	$ 1,239	$ 1,270	$ 2,604	$ 2,669	$ 2,736	$ 4,207	$ 4,312	$ 4,420	$ 6,040	$ 6,191	$ 6,346	$ 8,131
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ 19,148	$ 19,626	$ 20,117	$ 41,240	$ 42,271	$ 43,328	$ 66,616	$ 68,282	$ 69,989	$ 95,651	$ 98,043	$ 100,494	$ 128,757
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 48,965**	**$ 50,502**	**$ 52,077**	**$ 107,383**	**$ 110,692**	**$ 114,084**	**$ 176,342**	**$ 181,688**	**$ 187,168**	**$ 257,046**	**$ 264,722**	**$ 272,590**	**$ 350,819**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 48,965**	**$ 50,502**	**$ 52,077**	**$ 107,383**	**$ 110,692**	**$ 114,084**	**$ 176,342**	**$ 181,688**	**$ 187,168**	**$ 257,046**	**$ 264,722**	**$ 272,590**	**$ 350,819**
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ (1,461,538)	$ -												
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (1,859,864)**	**$ (349,361)**	**$ (347,824)**	**$ (346,249)**	**$ (290,943)**	**$ (287,634)**	**$ (284,241)**	**$ (221,984)**	**$ (216,638)**	**$ (211,158)**	**$ (141,280)**	**$ (133,603)**	**$ (125,735)**	**$ (47,507)**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (1,859,864)**	**$ (349,361)**	**$ (347,824)**	**$ (346,249)**	**$ (290,943)**	**$ (287,634)**	**$ (284,241)**	**$ (221,984)**	**$ (216,638)**	**$ (211,158)**	**$ (141,280)**	**$ (133,603)**	**$ (125,735)**	**$ (47,507)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -												
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ (398,326)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ (398,326)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ 820,637	$ 844,918	$ 869,806	$ 1,790,631	$ 1,842,927	$ 1,896,531	$ 2,927,211	$ 3,011,687	$ 3,098,274	$ 4,249,368	$ 4,370,662	$ 4,494,989	$ 5,778,030
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ (32,825)	$ (33,797)	$ (34,792)	$ (71,625)	$ (73,717)	$ (75,861)	$ (117,088)	$ (120,467)	$ (123,931)	$ (169,975)	$ (174,826)	$ (179,800)	$ (231,121)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ 787,811	$ 811,121	$ 835,013	$ 1,719,006	$ 1,769,210	$ 1,820,669	$ 2,810,123	$ 2,891,219	$ 2,974,343	$ 4,079,393	$ 4,195,836	$ 4,315,190	$ 5,546,909
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ 5,846,153.85	$ 5,767,401	$ 5,684,206	$ 5,596,318	$ 5,503,472	$ 5,405,389	$ 5,301,774	$ 5,192,313	$ 5,076,679	$ 4,954,521	$ 4,825,473	$ 4,689,146	$ 4,545,129	$ 4,392,988
Remaining Mortgage Balance				$ -	$ -	$ -	$ -		$ 5,767,401	$ 5,684,206	$ 5,596,318	$ 5,503,472	$ 5,405,389	$ 5,301,774	$ 5,192,313	$ 5,076,679	$ 4,954,521	$ 4,825,473	$ 4,689,146	$ 4,545,129	$ 4,392,988	$ 4,232,265
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (1,859,864)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (1,859,864)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
Before-Tax IRR	**4.79%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (1,859,864)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (1,859,864)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
After Tax IRR without Subsidy	**4.79%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (398,326)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (398,326)	$ (349,361)	$ (347,824)	$ (346,249)	$ (290,943)	$ (287,634)	$ (284,241)	$ (221,984)	$ (216,638)	$ (211,158)	$ (141,280)	$ (133,603)	$ (125,735)	$ (47,507)
After Tax IRR with Sutsidy	**7.03%**																					

DEVELOPMENT [illegible]

RESTAURANT - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				25000	30000	30000	30000	30000	35000	35000	35000	40000	40000	40000	40000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$15.00	$ 584,872	$ 719,393	$ 737,377	$ 755,812	$ 774,707	$ 926,421	$ 949,581	$ 973,321	$ 1,140,176	$ 1,168,680	$ 1,197,897	$ 1,227,844
Vacancy Allowance			95%	$ 29,244	$ 35,970	$ 36,869	$ 37,791	$ 38,735	$ 46,321	$ 47,479	$ 48,666	$ 57,009	$ 58,434	$ 59,895	$ 61,392
Effective Gross Revenue				$ 555,628	$ 683,423	$ 700,509	$ 718,021	$ 735,972	$ 880,100	$ 902,102	$ 924,655	$ 1,083,167	$ 1,110,246	$ 1,138,002	$ 1,166,452
OPERATING EXPENSES															
Operating Expenses/s f			$2.50	$ 62,500	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 87,500	$ 87,500	$ 87,500	$ 100,000	$ 100,000	$ 100,000	$ 100,000
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 62,500	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 87,500	$ 87,500	$ 87,500	$ 100,000	$ 100,000	$ 100,000	$ 100,000
NOI BEFORE TAXES				**$ 493,128**	**$ 608,423**	**$ 625,509**	**$ 643,021**	**$ 660,972**	**$ 792,600**	**$ 814,602**	**$ 837,155**	**$ 983,167**	**$ 1,010,246**	**$ 1,038,002**	**$ 1,066,452**
NOI AFTER TAXES				**$ 493,128**	**$ 608,423**	**$ 625,509**	**$ 643,021**	**$ 660,972**	**$ 792,600**	**$ 814,602**	**$ 837,155**	**$ 983,167**	**$ 1,010,246**	**$ 1,038,002**	**$ 1,066,452**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	$ 116,974	$ 143,879	$ 147,475	$ 151,162	$ 154,941	$ 185,284	$ 189,916	$ 194,664	$ 228,035	$ 233,736	$ 239,579	$ 245,569
Leasing Commissions			1.20%	$ 6,668	$ 8,201	$ 8,406	$ 8,616	$ 8,832	$ 10,561	$ 10,825	$ 11,096	$ 12,998	$ 13,323	$ 13,656	$ 13,997
Capital Expenditure Reserve			1.50%	$ 8,334	$ 10,251	$ 10,508	$ 10,770	$ 11,040	$ 13,201	$ 13,532	$ 13,870	$ 16,248	$ 16,654	$ 17,070	$ 17,497
Total Leasing and Capital Costs				$ 131,976	$ 162,331	$ 166,389	$ 170,549	$ 174,813	$ 209,047	$ 214,273	$ 219,630	$ 257,281	$ 263,713	$ 270,305	$ 277,063
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 361,152**	**$ 446,092**	**$ 459,119**	**$ 472,472**	**$ 486,159**	**$ 583,553**	**$ 600,329**	**$ 617,525**	**$ 725,886**	**$ 746,533**	**$ 767,697**	**$ 789,389**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 361,152**	**$ 446,092**	**$ 459,119**	**$ 472,472**	**$ 486,159**	**$ 583,553**	**$ 600,329**	**$ 617,525**	**$ 725,886**	**$ 746,533**	**$ 767,697**	**$ 789,389**
ANNUAL DEBT SERVICE				$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)	$ (398,326)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ (37,174)**	**$ 47,766**	**$ 60,793**	**$ 74,146**	**$ 87,833**	**$ 185,227**	**$ 202,003**	**$ 219,199**	**$ 327,560**	**$ 348,208**	**$ 369,371**	**$ 391,063**
AFTER TAX CASH FLOW				**$ (37,174)**	**$ 47,766**	**$ 60,793**	**$ 74,146**	**$ 87,833**	**$ 185,227**	**$ 202,003**	**$ 219,199**	**$ 327,560**	**$ 348,208**	**$ 369,371**	**$ 391,063**
EQUITY CONTRIBUTION WITH SUBSIDIES															
BEFORE TAX CASH FLOW				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 391,063
AFTER TAX CASH FLOW				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 391,063
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 5,941,306	$ 7,330,397	$ 7,536,247	$ 7,747,244	$ 7,963,515	$ 9,549,393	$ 9,814,483	$ 10,086,200	$ 11,845,384	$ 12,171,639	$ 12,506,050	$ 12,848,822
Commission			4.00%	$ (237,652)	$ (293,216)	$ (301,450)	$ (309,890)	$ (318,541)	$ (381,976)	$ (392,579)	$ (403,448)	$ (473,815)	$ (486,866)	$ (500,242)	$ (513,953)
Adjusted Sale Price				$ 5,703,654	$ 7,037,181	$ 7,234,797	$ 7,437,354	$ 7,644,975	$ 9,167,417	$ 9,421,903	$ 9,682,752	$ 11,371,568	$ 11,684,773	$ 12,005,808	$ 12,334,869
Beginning Mortgage Balance				$ 4,232,265	$ 4,062,476	$ 3,883,110	$ 3,693,625	$ 3,493,453	$ 3,281,989	$ 3,058,597	$ 2,822,604	$ 2,573,299	$ 2,309,932	$ 2,031,708	$ 1,737,791
Remaining Mortgage Balance				$ 4,062,476	$ 3,883,110	$ 3,693,625	$ 3,493,453	$ 3,281,989	$ 3,058,597	$ 2,822,604	$ 2,573,299	$ 2,309,932	$ 2,031,708	$ 1,737,791	$ 1,427,294
Before Tax Operating Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 391,063
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,907,575
Total Before Tax Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 11,298,639
Before-Tax IRR	**4.79%**														
After Tax Operating Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 391,063
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,907,575
Total Before Tax Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 11,298,639
After Tax IRR without Subsidy	**4.79%**														
After Tax Operating Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 391,063
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,907,575
Total Before Tax Cash Flow				$ (37,174)	$ 47,766	$ 60,793	$ 74,146	$ 87,833	$ 185,227	$ 202,003	$ 219,199	$ 327,560	$ 348,208	$ 369,371	$ 11,298,639
After Tax IRR with Sutsidy	**7.03%**														

GARAGE PARKING - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	1500	1500	1500	1500	1500	3000	3000	3000	3000	3000	3000	3000	3000	3000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$1,000.00	$ -	$ -	$ -	$ -	$ -	$ 1,655,719	$ 1,697,112	$ 1,739,540	$ 1,783,029	$ 1,827,604	$ 3,746,589	$ 3,840,254	$ 3,936,260	$ 4,034,666	$ 4,135,533	$ 4,238,921	$ 4,344,894	$ 4,453,517	$ 4,564,855
Vacancy Allowance			75%	$ -	$ -	$ -	$ -	$ -	$ 413,930	$ 424,278	$ 434,885	$ 445,757	$ 456,901	$ 936,647	$ 960,063	$ 984,065	$ 1,008,667	$ 1,033,883	$ 1,059,730	$ 1,086,224	$ 1,113,379	$ 1,141,214
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ 1,241,790	$ 1,272,834	$ 1,304,655	$ 1,337,271	$ 1,370,703	$ 2,809,942	$ 2,880,190	$ 2,952,195	$ 3,026,000	$ 3,101,650	$ 3,179,191	$ 3,258,671	$ 3,340,138	$ 3,423,641
OPERATING EXPENSES																						
Operating Expenses/s f			10.00%	$ -	$ -	$ -	$ -	$ -	$ 124,179	$ 127,283	$ 130,466	$ 133,727	$ 137,070	$ 280,994	$ 288,019	$ 295,219	$ 302,600	$ 310,165	$ 317,919	$ 325,867	$ 334,014	$ 342,364
Taxes			$280.00	$ -	$ -	$ -	$ -	$ -	$ 420,000	$ 420,000	$ 420,000	$ 420,000	$ 420,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ 544,179	$ 547,283	$ 550,466	$ 553,727	$ 557,070	$ 1,120,994	$ 1,128,019	$ 1,135,219	$ 1,142,600	$ 1,150,165	$ 1,157,919	$ 1,165,867	$ 1,174,014	$ 1,182,364
NOI BEFORE TAXES				$ -	$ -	$ -	$ -	$ -	$ 1,117,611	$ 1,145,551	$ 1,174,190	$ 1,203,544	$ 1,233,633	$ 2,528,948	$ 2,592,171	$ 2,656,975	$ 2,723,400	$ 2,791,485	$ 2,861,272	$ 2,932,804	$ 3,006,124	$ 3,081,277
NOI AFTER TAXES				$ -	$ -	$ -	$ -	$ -	$ 697,611	$ 725,551	$ 754,190	$ 783,544	$ 813,633	$ 1,688,948	$ 1,752,171	$ 1,816,975	$ 1,883,400	$ 1,951,485	$ 2,021,272	$ 2,092,804	$ 2,166,124	$ 2,241,277
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 1,117,611	$ 1,145,551	$ 1,174,190	$ 1,203,544	$ 1,233,633	$ 2,528,948	$ 2,592,171	$ 2,656,975	$ 2,723,400	$ 2,791,485	$ 2,861,272	$ 2,932,804	$ 3,006,124	$ 3,081,277
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ 697,611	$ 725,551	$ 754,190	$ 783,544	$ 813,633	$ 1,688,948	$ 1,752,171	$ 1,816,975	$ 1,883,400	$ 1,951,485	$ 2,021,272	$ 2,092,804	$ 2,166,124	$ 2,241,277
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ (4,563,458)														
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 648,222	$ 676,162	$ 704,801	$ 734,156	$ 764,244	$ 2,059,559	$ 2,122,782	$ 2,187,587	$ 2,254,011	$ 2,322,096	$ 2,391,883	$ 2,463,415	$ 2,536,735	$ 2,611,888
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ (2,159,841)														
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (2,629,229)	$ 648,222	$ 676,162	$ 704,801	$ 734,156	$ 764,244	$ 2,059,559	$ 2,122,782	$ 2,187,587	$ 2,254,011	$ 2,322,096	$ 2,391,883	$ 2,463,415	$ 2,536,735	$ 2,611,888
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ (2,629,229)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			5.00%	$ -	$ -	$ -	$ -	$ -	$ 22,352,211	$ 22,911,016	$ 23,483,792	$ 24,070,887	$ 24,672,659	$ 50,578,950	$ 51,843,424	$ 53,139,510	$ 54,467,997	$ 55,829,697	$ 57,225,440	$ 58,656,076	$ 60,122,478	$ 61,625,540
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ (894,088)	$ (916,441)	$ (939,352)	$ (962,835)	$ (986,906)	$ (2,023,158)	$ (2,073,737)	$ (2,125,580)	$ (2,178,720)	$ (2,233,188)	$ (2,289,018)	$ (2,346,243)	$ (2,404,899)	$ (2,465,022)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ 21,458,123	$ 21,994,576	$ 22,544,440	$ 23,108,051	$ 23,685,752	$ 48,555,792	$ 49,769,687	$ 51,013,929	$ 52,289,277	$ 53,596,509	$ 54,936,422	$ 56,309,833	$ 57,717,579	$ 59,160,518
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ 7,286,541.79	$ 7,188,386	$ 7,084,693	$ 6,975,150	$ 6,859,429	$ 6,737,181	$ 6,608,036	$ 6,471,607	$ 6,327,482	$ 6,175,227	$ 6,014,384	$ 5,844,468	$ 5,664,967	$ 5,475,342	$ 5,275,019
Remaining Mortgage Balance				$ -	$ -	$ -	$ -	$ 7,188,386	$ 7,084,693	$ 6,975,150	$ 6,859,429	$ 6,737,181	$ 6,608,036	$ 6,471,607	$ 6,327,482	$ 6,175,227	$ 6,014,384	$ 5,844,468	$ 5,664,967	$ 5,475,342	$ 5,275,019	$ 5,063,397
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 648,222	$ 676,162	$ 704,801	$ 734,156	$ 764,244	$ 2,059,559	$ 2,122,782	$ 2,187,587	$ 2,254,011	$ 2,322,096	$ 2,391,883	$ 2,463,415	$ 2,536,735	$ 2,611,888
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 648,222	$ 676,162	$ 704,801	$ 734,156	$ 764,244	$ 2,059,559	$ 2,122,782	$ 2,187,587	$ 2,254,011	$ 2,322,096	$ 2,391,883	$ 2,463,415	$ 2,536,735	$ 2,611,888
Before-Tax IRR	25.44%																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (5,032,847)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
After Tax IRR without Subsidy	19.36%																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ (2,629,229)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ (2,629,229)	$ 228,222	$ 256,162	$ 284,801	$ 314,156	$ 344,244	$ 1,219,559	$ 1,282,782	$ 1,347,587	$ 1,414,011	$ 1,482,096	$ 1,551,883	$ 1,623,415	$ 1,696,735	$ 1,771,888
After Tax IRR with Sutsidy	26.50%																					
DEVELOPMENT STRATEGIES 2011																						

RENOVATIONS

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CUMULATIVE UNITS					0	0	0	0	0	0	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$13.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 376,900	$ 386,323	$ 395,981	$ 405,880	$ 416,027	$ 426,428	$ 437,089	$ 448,016	$ 459,216	$ 470,697	$ 482,464	$ 494,526
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,845	$ 19,316	$ 19,799	$ 20,294	$ 20,801	$ 21,321	$ 21,854	$ 22,401	$ 22,961	$ 23,535	$ 24,123	$ 24,726
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 358,055	$ 367,007	$ 376,182	$ 385,586	$ 395,226	$ 405,107	$ 415,234	$ 425,615	$ 436,256	$ 447,162	$ 458,341	$ 469,800
OPERATING EXPENSES																						
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
NOI BEFORE TAXES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 295,555	$ 304,507	$ 313,682	$ 323,086	$ 332,726	$ 342,607	$ 352,734	$ 363,115	$ 373,756	$ 384,662	$ 395,841	$ 407,300
NOI AFTER TAXES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 295,555	$ 304,507	$ 313,682	$ 323,086	$ 332,726	$ 342,607	$ 352,734	$ 363,115	$ 373,756	$ 384,662	$ 395,841	$ 407,300
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 86,977	$ 89,151	$ 91,380	$ 93,665	$ 96,006	$ 98,406	$ 100,867	$ 103,388	$ 105,973	$ 108,622	$ 111,338	$ 114,121
Leasing Commmissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,297	$ 4,404	$ 4,514	$ 4,627	$ 4,743	$ 4,861	$ 4,983	$ 5,107	$ 5,235	$ 5,366	$ 5,500	$ 5,638
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,371	$ 5,505	$ 5,643	$ 5,784	$ 5,928	$ 6,077	$ 6,229	$ 6,384	$ 6,544	$ 6,707	$ 6,875	$ 7,047
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 96,645	$ 99,061	$ 101,537	$ 104,076	$ 106,677	$ 109,344	$ 112,078	$ 114,880	$ 117,752	$ 120,696	$ 123,713	$ 126,806
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,911	$ 205,446	$ 212,145	$ 219,011	$ 226,049	$ 233,262	$ 240,656	$ 248,235	$ 256,004	$ 263,966	$ 272,128	$ 280,494
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,911	$ 205,446	$ 212,145	$ 219,011	$ 226,049	$ 233,262	$ 240,656	$ 248,235	$ 256,004	$ 263,966	$ 272,128	$ 280,494

GARAGE PARKING - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -														
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,560,908	$ 3,668,756	$ 3,779,300	$ 3,892,608	$ 4,008,748	$ 4,127,792	$ 4,249,812	$ 4,374,883	$ 4,503,080	$ 4,634,483	$ 4,769,170	$ 4,907,225
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (142,436)	$ (146,750)	$ (151,172)	$ (155,704)	$ (160,350)	$ (165,112)	$ (169,992)	$ (174,995)	$ (180,123)	$ (185,379)	$ (190,767)	$ (196,289)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,418,471	$ 3,522,006	$ 3,628,128	$ 3,736,903	$ 3,848,398	$ 3,962,681	$ 4,079,820	$ 4,199,888	$ 4,322,957	$ 4,449,103	$ 4,578,403	$ 4,710,936
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ (154,915)	$ (318,569)	$ (491,454)	$ (674,091)	$ (867,031)	$ (1,070,853)	$ (1,286,173)	$ (1,513,639)	$ (1,753,935)	$ (2,007,786)	$ (2,275,956)	$ (2,559,253)	$ (2,858,531)	$ (3,174,690)
Remaining Mortgage Balance				$ -	$ -	$ -	$ -	$ (154,915)	$ (318,569)	$ (491,454)	$ (674,091)	$ (867,031)	$ (1,070,853)	$ (1,286,173)	$ (1,513,639)	$ (1,753,935)	$ (2,007,786)	$ (2,275,956)	$ (2,559,253)	$ (2,858,531)	$ (3,174,690)	$ (3,508,682)
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
Before-Tax IRR	**9.19%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax IRR without Subsidy	**9.19%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax IRR with Subsidy	**9.19%**																					

GARAGE PARKING - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				3000	3000	3000	3000	3000	3500	3500	3500	3500	3500	3500	3500
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$1,000.00	$ 4,678,976	$ 4,795,951	$ 4,915,849	$ 5,038,746	$ 5,164,714	$ 6,176,137	$ 6,330,541	$ 6,488,804	$ 6,651,024	$ 6,817,300	$ 6,987,733	$ 7,162,426
Vacancy Allowance			75%	$ 1,169,744	$ 1,198,988	$ 1,228,962	$ 1,259,686	$ 1,291,179	$ 1,544,034	$ 1,582,635	$ 1,622,201	$ 1,662,756	$ 1,704,325	$ 1,746,933	$ 1,790,606
Effective Gross Revenue				$ 3,509,232	$ 3,596,963	$ 3,686,887	$ 3,779,059	$ 3,873,536	$ 4,632,103	$ 4,747,906	$ 4,866,603	$ 4,988,268	$ 5,112,975	$ 5,240,799	$ 5,371,819
OPERATING EXPENSES															
Operating Expenses/s f			10.00%	$ 350,923	$ 359,696	$ 368,689	$ 377,906	$ 387,354	$ 463,210	$ 474,791	$ 486,660	$ 498,827	$ 511,298	$ 524,080	$ 537,182
Taxes			$280.00	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 840,000	$ 980,000	$ 980,000	$ 980,000	$ 980,000	$ 980,000	$ 980,000	$ 980,000
Total Operating Expenses				$ 1,190,923	$ 1,199,696	$ 1,208,689	$ 1,217,906	$ 1,227,354	$ 1,443,210	$ 1,454,791	$ 1,466,660	$ 1,478,827	$ 1,491,298	$ 1,504,080	$ 1,517,182
NOI BEFORE TAXES				**$ 3,158,309**	**$ 3,237,267**	**$ 3,318,198**	**$ 3,401,153**	**$ 3,486,182**	**$ 4,168,893**	**$ 4,273,115**	**$ 4,379,943**	**$ 4,489,442**	**$ 4,601,678**	**$ 4,716,719**	**$ 4,834,637**
NOI AFTER TAXES				**$ 2,318,309**	**$ 2,397,267**	**$ 2,478,198**	**$ 2,561,153**	**$ 2,646,182**	**$ 3,188,893**	**$ 3,293,115**	**$ 3,399,943**	**$ 3,509,442**	**$ 3,621,678**	**$ 3,736,719**	**$ 3,854,637**
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commmissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 3,158,309**	**$ 3,237,267**	**$ 3,318,198**	**$ 3,401,153**	**$ 3,486,182**	**$ 4,168,893**	**$ 4,273,115**	**$ 4,379,943**	**$ 4,489,442**	**$ 4,601,678**	**$ 4,716,719**	**$ 4,834,637**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 2,318,309**	**$ 2,397,267**	**$ 2,478,198**	**$ 2,561,153**	**$ 2,646,182**	**$ 3,188,893**	**$ 3,293,115**	**$ 3,399,943**	**$ 3,509,442**	**$ 3,621,678**	**$ 3,736,719**	**$ 3,854,637**
ANNUAL DEBT SERVICE				$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)	$ (469,389)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ 2,688,920**	**$ 2,767,878**	**$ 2,848,810**	**$ 2,931,764**	**$ 3,016,793**	**$ 3,699,504**	**$ 3,803,726**	**$ 3,910,554**	**$ 4,020,053**	**$ 4,132,289**	**$ 4,247,331**	**$ 4,365,249**
AFTER TAX CASH FLOW				**$ 1,848,920**	**$ 1,927,878**	**$ 2,008,810**	**$ 2,091,764**	**$ 2,176,793**	**$ 2,719,504**	**$ 2,823,726**	**$ 2,930,554**	**$ 3,040,053**	**$ 3,152,289**	**$ 3,267,331**	**$ 3,385,249**
EQUITY CONTRIBUTION WITH SUBSIDIES															
BEFORE TAX CASH FLOW				$ 2,688,920	$ 2,767,878	$ 2,848,810	$ 2,931,764	$ 3,016,793	$ 3,699,504	$ 3,803,726	$ 3,910,554	$ 4,020,053	$ 4,132,289	$ 4,247,331	$ 4,365,249
AFTER TAX CASH FLOW				$ 1,848,920	$ 1,927,878	$ 2,008,810	$ 2,091,764	$ 2,176,793	$ 2,719,504	$ 2,823,726	$ 2,930,554	$ 3,040,053	$ 3,152,289	$ 3,267,331	$ 3,385,249
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			5.00%	$ 63,166,178	$ 64,745,333	$ 66,363,966	$ 68,023,065	$ 69,723,642	$ 83,377,855	$ 85,462,301	$ 87,598,859	$ 89,788,830	$ 92,033,551	$ 94,334,390	$ 96,692,749
Commission			4.00%	$ (2,526,647)	$ (2,589,813)	$ (2,654,559)	$ (2,720,923)	$ (2,788,946)	$ (3,335,114)	$ (3,418,492)	$ (3,503,954)	$ (3,591,553)	$ (3,681,342)	$ (3,773,376)	$ (3,867,710)
Adjusted Sale Price				$ 60,639,531	$ 62,155,519	$ 63,709,407	$ 65,302,142	$ 66,934,696	$ 80,042,741	$ 82,043,809	$ 84,094,904	$ 86,197,277	$ 88,352,209	$ 90,561,014	$ 92,825,039
Beginning Mortgage Balance				$ 5,063,397	$ 4,839,838	$ 4,603,669	$ 4,354,178	$ 4,090,613	$ 3,812,181	$ 3,518,044	$ 3,207,314	$ 2,879,058	$ 2,532,285	$ 2,165,951	$ 1,778,953
Remaining Mortgage Balance				$ 4,839,838	$ 4,603,669	$ 4,354,178	$ 4,090,613	$ 3,812,181	$ 3,518,044	$ 3,207,314	$ 2,879,058	$ 2,532,285	$ 2,165,951	$ 1,778,953	$ 1,370,126
Before Tax Operating Cash Flow				$ 2,688,920	$ 2,767,878	$ 2,848,810	$ 2,931,764	$ 3,016,793	$ 3,699,504	$ 3,803,726	$ 3,910,554	$ 4,020,053	$ 4,132,289	$ 4,247,331	$ 4,365,249
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,454,914
Total Before Tax Cash Flow				$ 2,688,920	$ 2,767,878	$ 2,848,810	$ 2,931,764	$ 3,016,793	$ 3,699,504	$ 3,803,726	$ 3,910,554	$ 4,020,053	$ 4,132,289	$ 4,247,331	$ 95,820,162
Before-Tax IRR	**25.44%**														
After Tax Operating Cash Flow				$ 1,848,920	$ 1,927,878	$ 2,008,810	$ 2,091,764	$ 2,176,793	$ 2,719,504	$ 2,823,726	$ 2,930,554	$ 3,040,053	$ 3,152,289	$ 3,267,331	$ 3,385,249
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,454,914
Total Before Tax Cash Flow				$ 1,848,920	$ 1,927,878	$ 2,008,810	$ 2,091,764	$ 2,176,793	$ 2,719,504	$ 2,823,726	$ 2,930,554	$ 3,040,053	$ 3,152,289	$ 3,267,331	$ 94,840,162
After Tax IRR without Subsidy	**19.36%**														
After Tax Operating Cash Flow				$ 1,848,920	$ 1,927,878	$ 2,008,810	$ 2,091,764	$ 2,176,793	$ 2,719,504	$ 2,823,726	$ 2,930,554	$ 3,040,053	$ 3,152,289	$ 3,267,331	$ 3,385,249
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,454,914
Total Before Tax Cash Flow				$ 1,848,920	$ 1,927,878	$ 2,008,810	$ 2,091,764	$ 2,176,793	$ 2,719,504	$ 2,823,726	$ 2,930,554	$ 3,040,053	$ 3,152,289	$ 3,267,331	$ 94,840,162
After Tax IRR with Subsidy	**26.50%**														
DEVELOPMENT STRATEGIES 2003															
RENOVATIONS															
CUMULATIVE UNITS				25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$13.00	$ 506,889	$ 519,561	$ 532,550	$ 545,864	$ 559,511	$ 573,498	$ 587,836	$ 602,532	$ 617,595	$ 633,035	$ 648,861	$ 665,082
Vacancy Allowance			95%	$ 25,344	$ 25,978	$ 26,628	$ 27,293	$ 27,976	$ 28,675	$ 29,392	$ 30,127	$ 30,880	$ 31,652	$ 32,443	$ 33,254
Effective Gross Revenue				$ 481,545	$ 493,583	$ 505,923	$ 518,571	$ 531,535	$ 544,824	$ 558,444	$ 572,405	$ 586,715	$ 601,383	$ 616,418	$ 631,828
OPERATING EXPENSES															
Operating Expenses/s f			$2.50	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
NOI BEFORE TAXES				**$ 419,045**	**$ 431,083**	**$ 443,423**	**$ 456,071**	**$ 469,035**	**$ 482,324**	**$ 495,944**	**$ 509,905**	**$ 524,215**	**$ 538,883**	**$ 553,918**	**$ 569,328**
NOI AFTER TAXES				**$ 419,045**	**$ 431,083**	**$ 443,423**	**$ 456,071**	**$ 469,035**	**$ 482,324**	**$ 495,944**	**$ 509,905**	**$ 524,215**	**$ 538,883**	**$ 553,918**	**$ 569,328**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	$ 116,974	$ 119,899	$ 122,896	$ 125,969	$ 129,118	$ 132,346	$ 135,654	$ 139,046	$ 142,522	$ 146,085	$ 149,737	$ 153,481
Leasing Commmissions			1.20%	$ 5,779	$ 5,923	$ 6,071	$ 6,223	$ 6,378	$ 6,538	$ 6,701	$ 6,869	$ 7,041	$ 7,217	$ 7,397	$ 7,582
Capital Expenditure Reserve			1.50%	$ 7,223	$ 7,404	$ 7,589	$ 7,779	$ 7,973	$ 8,172	$ 8,377	$ 8,586	$ 8,801	$ 9,021	$ 9,246	$ 9,477
Total Leasing and Capital Costs				$ 129,976	$ 133,226	$ 136,556	$ 139,970	$ 143,469	$ 147,056	$ 150,732	$ 154,501	$ 158,363	$ 162,322	$ 166,380	$ 170,540
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ 289,069**	**$ 297,858**	**$ 306,867**	**$ 316,101**	**$ 325,566**	**$ 335,268**	**$ 345,212**	**$ 355,404**	**$ 365,852**	**$ 376,561**	**$ 387,537**	**$ 398,788**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ 289,069**	**$ 297,858**	**$ 306,867**	**$ 316,101**	**$ 325,566**	**$ 335,268**	**$ 345,212**	**$ 355,404**	**$ 365,852**	**$ 376,561**	**$ 387,537**	**$ 398,788**

GARAGE PARKING - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
ANNUAL DEBT SERVICE				$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ (125,854)**	**$ (117,065)**	**$ (108,056)**	**$ (98,822)**	**$ (89,357)**	**$ (79,655)**	**$ (69,711)**	**$ (59,518)**	**$ (49,071)**	**$ (38,362)**	**$ (27,385)**	**$ (16,134)**
AFTER TAX CASH FLOW				**$ (125,854)**	**$ (117,065)**	**$ (108,056)**	**$ (98,822)**	**$ (89,357)**	**$ (79,655)**	**$ (69,711)**	**$ (59,518)**	**$ (49,071)**	**$ (38,362)**	**$ (27,385)**	**$ (16,134)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
AFTER TAX CASH FLOW				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 5,048,730	$ 5,193,774	$ 5,342,444	$ 5,494,830	$ 5,651,026	$ 5,811,127	$ 5,975,231	$ 6,143,437	$ 6,315,848	$ 6,492,569	$ 6,673,709	$ 6,859,377
Commission			4.00%	$ (201,949)	$ (207,751)	$ (213,698)	$ (219,793)	$ (226,041)	$ (232,445)	$ (239,009)	$ (245,737)	$ (252,634)	$ (259,703)	$ (266,948)	$ (274,375)
Adjusted Sale Price				$ 4,846,781	$ 4,986,023	$ 5,128,746	$ 5,275,037	$ 5,424,985	$ 5,578,682	$ 5,736,221	$ 5,897,699	$ 6,063,214	$ 6,232,867	$ 6,406,761	$ 6,585,002
Beginning Mortgage Balance				$ (3,508,682)	$ (3,861,515)	$ (4,234,250)	$ (4,628,010)	$ (5,043,982)	$ (5,483,417)	$ (5,947,640)	$ (6,438,049)	$ (6,956,121)	$ (7,503,416)	$ (8,081,583)	$ (8,692,363)
Remaining Mortgage Balance				$ (3,861,515)	$ (4,234,250)	$ (4,628,010)	$ (5,043,982)	$ (5,483,417)	$ (5,947,640)	$ (6,438,049)	$ (6,956,121)	$ (7,503,416)	$ (8,081,583)	$ (8,692,363)	$ (9,337,596)
Before Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,922,598
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 15,906,464
Before-Tax IRR	**9.19%**														
After Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,922,598
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 15,906,464
After Tax IRR without Subsidy	**9.19%**														
After Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,922,598
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 15,906,464
After Tax IRR with Sutsidy	**9.19%**														

NEW RETAIL - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	0	0	0	20000	20000	20000	40000	40000	40000	60000	60000	60000	80000	80000	80000	100000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$15.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 339,422	$ 347,908	$ 356,606	$ 731,042	$ 749,318	$ 768,051	$ 1,180,878	$ 1,210,400	$ 1,240,660	$ 1,695,569	$ 1,737,958	$ 1,781,407	$ 2,282,427
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,971	$ 17,395	$ 17,830	$ 36,552	$ 37,466	$ 38,403	$ 59,044	$ 60,520	$ 62,033	$ 84,778	$ 86,898	$ 89,070	$ 114,121
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ 322,451	$ 330,513	$ 338,775	$ 694,490	$ 711,852	$ 729,648	$ 1,121,834	$ 1,149,880	$ 1,178,627	$ 1,610,790	$ 1,651,060	$ 1,692,336	$ 2,168,306
OPERATING EXPENSES																						
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ 50,000	$ 50,000	$ 100,000	$ 100,000	$ 100,000	$ 150,000	$ 150,000	$ 150,000	$ 200,000	$ 200,000	$ 200,000	$ 250,000
Taxes			$1.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 339,422	$ 347,908	$ 356,606	$ 731,042	$ 749,318	$ 768,051	$ 1,180,878	$ 1,210,400	$ 1,240,660	$ 1,695,569	$ 1,737,958	$ 1,781,407	$ 2,282,427
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ 389,422	$ 397,908	$ 406,606	$ 831,042	$ 849,318	$ 868,051	$ 1,330,878	$ 1,360,400	$ 1,390,660	$ 1,895,569	$ 1,937,958	$ 1,981,407	$ 2,532,427
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 272,451**	**$ 280,513**	**$ 288,775**	**$ 594,490**	**$ 611,852**	**$ 629,648**	**$ 971,834**	**$ 999,880**	**$ 1,028,627**	**$ 1,410,790**	**$ 1,451,060**	**$ 1,492,336**	**$ 1,918,306**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (66,971)**	**$ (67,395)**	**$ (67,830)**	**$ (136,552)**	**$ (137,466)**	**$ (138,403)**	**$ (209,044)**	**$ (210,520)**	**$ (212,033)**	**$ (284,778)**	**$ (286,898)**	**$ (289,070)**	**$ (364,121)**
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 67,884	$ 69,592	$ 71,321	$ 146,208	$ 149,864	$ 153,610	$ 236,176	$ 242,080	$ 248,132	$ 339,114	$ 347,592	$ 356,281	$ 456,485
Leasing Commissions			1.15%	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,708	$ 3,801	$ 3,896	$ 7,987	$ 8,186	$ 8,391	$ 12,901	$ 13,224	$ 13,554	$ 18,524	$ 18,987	$ 19,462	$ 24,936
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,837	$ 4,958	$ 5,082	$ 10,417	$ 10,678	$ 10,945	$ 16,828	$ 17,248	$ 17,679	$ 24,162	$ 24,766	$ 25,385	$ 32,525
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ 76,429	$ 78,340	$ 80,299	$ 164,612	$ 168,728	$ 172,946	$ 265,904	$ 272,552	$ 279,366	$ 381,800	$ 391,345	$ 401,128	$ 513,946
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 196,022**	**$ 202,172**	**$ 208,477**	**$ 429,877**	**$ 443,124**	**$ 456,702**	**$ 705,930**	**$ 727,328**	**$ 749,261**	**$ 1,028,990**	**$ 1,059,715**	**$ 1,091,208**	**$ 1,404,360**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (143,401)**	**$ (145,736)**	**$ (148,129)**	**$ (301,164)**	**$ (306,194)**	**$ (311,348)**	**$ (474,948)**	**$ (483,072)**	**$ (491,399)**	**$ (666,578)**	**$ (678,243)**	**$ (690,199)**	**$ (878,067)**
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)	$ (783,549)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ (2,875,000)													
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (3,658,549)**	**$ (587,527)**	**$ (581,376)**	**$ (575,072)**	**$ (353,671)**	**$ (340,425)**	**$ (326,846)**	**$ (77,619)**	**$ (56,221)**	**$ (34,287)**	**$ 245,442**	**$ 276,166**	**$ 307,659**	**$ 620,812**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (3,658,549)**	**$ (926,949)**	**$ (929,284)**	**$ (931,678)**	**$ (1,084,713)**	**$ (1,089,742)**	**$ (1,094,897)**	**$ (1,258,497)**	**$ (1,266,621)**	**$ (1,274,947)**	**$ (1,450,127)**	**$ (1,461,791)**	**$ (1,473,747)**	**$ (1,661,616)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ 5,441,385	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ 4,657,836	$ (587,527)	$ (581,376)	$ (575,072)	$ (353,671)	$ (340,425)	$ (326,846)	$ (77,619)	$ (56,221)	$ (34,287)	$ 245,442	$ 276,166	$ 307,659	$ 620,812
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ 4,657,836	$ (926,949)	$ (929,284)	$ (931,678)	$ (1,084,713)	$ (1,089,742)	$ (1,094,897)	$ (1,258,497)	$ (1,266,621)	$ (1,274,947)	$ (1,450,127)	$ (1,461,791)	$ (1,473,747)	$ (1,661,616)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,282,546	$ 3,379,670	$ 3,479,222	$ 7,162,526	$ 7,371,710	$ 7,586,123	$ 11,708,844	$ 12,046,746	$ 12,393,096	$ 16,997,472	$ 17,482,650	$ 17,979,957	$ 23,112,121
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ (131,302)	$ (135,187)	$ (139,169)	$ (286,501)	$ (294,868)	$ (303,445)	$ (468,354)	$ (481,870)	$ (495,724)	$ (679,899)	$ (699,306)	$ (719,198)	$ (924,485)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ 3,151,244	$ 3,244,483	$ 3,340,053	$ 6,876,025	$ 7,076,841	$ 7,282,678	$ 11,240,491	$ 11,564,876	$ 11,897,372	$ 16,317,573	$ 16,783,344	$ 17,260,758	$ 22,187,636
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ $11,500,000.00	$ 11,345,085	$ 11,181,431	$ 11,008,546	$ 10,825,909	$ 10,632,969	$ 10,429,147	$ 10,213,827	$ 9,986,361	$ 9,746,065	$ 9,492,214	$ 9,224,044	$ 8,940,747	$ 8,641,469
Remaining Mortgage Balance				$ -	$ -	$ -	$ -		$ 11,345,085	$ 11,181,431	$ 11,008,546	$ 10,825,909	$ 10,632,969	$ 10,429,147	$ 10,213,827	$ 9,986,361	$ 9,746,065	$ 9,492,214	$ 9,224,044	$ 8,940,747	$ 8,641,469	$ 8,325,310
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (3,658,549)	$ (587,527)	$ (581,376)	$ (575,072)	$ (353,671)	$ (340,425)	$ (326,846)	$ (77,619)	$ (56,221)	$ (34,287)	$ 245,442	$ 276,166	$ 307,659	$ 620,812
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (3,658,549)	$ (587,527)	$ (581,376)	$ (575,072)	$ (353,671)	$ (340,425)	$ (326,846)	$ (77,619)	$ (56,221)	$ (34,287)	$ 245,442	$ 276,166	$ 307,659	$ 620,812
Before-Tax IRR	**11.46%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (3,658,549)	$ (926,949)	$ (929,284)	$ (931,678)	$ (1,084,713)	$ (1,089,742)	$ (1,094,897)	$ (1,258,497)	$ (1,266,621)	$ (1,274,947)	$ (1,450,127)	$ (1,461,791)	$ (1,473,747)	$ (1,661,616)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ (3,658,549)	$ (926,949)	$ (929,284)	$ (931,678)	$ (1,084,713)	$ (1,089,742)	$ (1,094,897)	$ (1,258,497)	$ (1,266,621)	$ (1,274,947)	$ (1,450,127)	$ (1,461,791)	$ (1,473,747)	$ (1,661,616)
After Tax IRR without Subsidy	**0.12%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ 4,657,836	$ (926,949)	$ (929,284)	$ (931,678)	$ (1,084,713)	$ (1,089,742)	$ (1,094,897)	$ (1,258,497)	$ (1,266,621)	$ (1,274,947)	$ (1,450,127)	$ (1,461,791)	$ (1,473,747)	$ (1,661,616)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ 4,657,836	$ (926,949)	$ (929,284)	$ (931,678)	$ (1,084,713)	$ (1,089,742)	$ (1,094,897)	$ (1,258,497)	$ (1,266,621)	$ (1,274,947)	$ (1,450,127)	$ (1,461,791)	$ (1,473,747)	$ (1,661,616)
After Tax IRR with Sutsidy	**22.85%**																					

DEVELOPMENT STRATEGIES 2007

RENOVATIONS

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CUMULATIVE UNITS					0	0	0	0	0	0	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
POTENTIAL GROSS REVENUE																						
Base Rental Revenue			$13.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 376,900	$ 386,323	$ 395,981	$ 405,880	$ 416,027	$ 426,428	$ 437,089	$ 448,016	$ 459,216	$ 470,697	$ 482,464	$ 494,526
Vacancy Allowance			95%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,845	$ 19,316	$ 19,799	$ 20,294	$ 20,801	$ 21,321	$ 21,854	$ 22,401	$ 22,961	$ 23,535	$ 24,123	$ 24,726
Effective Gross Revenue				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 358,055	$ 367,007	$ 376,182	$ 385,586	$ 395,226	$ 405,107	$ 415,234	$ 425,615	$ 436,256	$ 447,162	$ 458,341	$ 469,800
OPERATING EXPENSES																						
Operating Expenses/s f			$2.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
Taxes			$0.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500
NOI BEFORE TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 295,555**	**$ 304,507**	**$ 313,682**	**$ 323,086**	**$ 332,726**	**$ 342,607**	**$ 352,734**	**$ 363,115**	**$ 373,756**	**$ 384,662**	**$ 395,841**	**$ 407,300**
NOI AFTER TAXES				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 295,555**	**$ 304,507**	**$ 313,682**	**$ 323,086**	**$ 332,726**	**$ 342,607**	**$ 352,734**	**$ 363,115**	**$ 373,756**	**$ 384,662**	**$ 395,841**	**$ 407,300**
LEASING AND CAPITAL COSTS																						
Tenant Improvements			$3.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 86,977	$ 89,151	$ 91,380	$ 93,665	$ 96,006	$ 98,406	$ 100,867	$ 103,388	$ 105,973	$ 108,622	$ 111,338	$ 114,121
Leasing Commmissions			1.20%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,297	$ 4,404	$ 4,514	$ 4,627	$ 4,743	$ 4,861	$ 4,983	$ 5,107	$ 5,235	$ 5,366	$ 5,500	$ 5,638
Capital Expenditure Reserve			1.50%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,371	$ 5,505	$ 5,643	$ 5,784	$ 5,928	$ 6,077	$ 6,229	$ 6,384	$ 6,544	$ 6,707	$ 6,875	$ 7,047
Total Leasing and Capital Costs				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 96,645	$ 99,061	$ 101,537	$ 104,076	$ 106,677	$ 109,344	$ 112,078	$ 114,880	$ 117,752	$ 120,696	$ 123,713	$ 126,806
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,911	$ 205,446	$ 212,145	$ 219,011	$ 226,049	$ 233,262	$ 240,656	$ 248,235	$ 256,004	$ 263,966	$ 272,128	$ 280,494
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,911	$ 205,446	$ 212,145	$ 219,011	$ 226,049	$ 233,262	$ 240,656	$ 248,235	$ 256,004	$ 263,966	$ 272,128	$ 280,494

NEW RETAIL - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ANNUAL DEBT SERVICE				$ -	$ -	$ -	$ -	$ -	$ -	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,089,744)	$ -	$ -	$ -									
BEFORE TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (6,504,666)**	**$ (216,012)**	**$ (209,477)**	**$ (202,778)**	**$ (195,912)**	**$ (188,874)**	**$ (181,660)**	**$ (174,266)**	**$ (166,687)**	**$ (158,919)**	**$ (150,956)**	**$ (142,795)**	**$ (134,429)**
AFTER TAX CASH FLOW				**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (6,504,666)**	**$ (216,012)**	**$ (209,477)**	**$ (202,778)**	**$ (195,912)**	**$ (188,874)**	**$ (181,660)**	**$ (174,266)**	**$ (166,687)**	**$ (158,919)**	**$ (150,956)**	**$ (142,795)**	**$ (134,429)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ 2,226,641	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ 1,811,718	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
AFTER TAX CASH FLOW				$ -	$ -	$ -	$ -	$ -	$ -	$ 1,811,718	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			8.30%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,560,908	$ 3,668,756	$ 3,779,300	$ 3,892,608	$ 4,008,748	$ 4,127,792	$ 4,249,812	$ 4,374,883	$ 4,503,080	$ 4,634,483	$ 4,769,170	$ 4,907,225
Commission			4.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (142,436)	$ (146,750)	$ (151,172)	$ (155,704)	$ (160,350)	$ (165,112)	$ (169,992)	$ (174,995)	$ (180,123)	$ (185,379)	$ (190,767)	$ (196,289)
Adjusted Sale Price				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,418,471	$ 3,522,006	$ 3,628,128	$ 3,736,903	$ 3,848,398	$ 3,962,681	$ 4,079,820	$ 4,199,888	$ 4,322,957	$ 4,449,103	$ 4,578,403	$ 4,710,936
Beginning Mortgage Balance				$ -	$ -	$ -	$ -	$ -	$ -	$ 6,089,743.59	$ 6,007,709.30	$ 5,921,047.62	$ 5,829,497.55	$ 5,732,783.33	$ 5,630,613.67	$ 5,522,680.84	$ 5,408,659.75	$ 5,288,206.98	$ 5,160,959.72	$ 5,026,534.71	$ 4,884,527.08	$ 4,734,509.10
Remaining Mortgage Balance				$ -	$ -	$ -	$ -			$ 6,007,709	$ 5,921,048	$ 5,829,498	$ 5,732,783	$ 5,630,614	$ 5,522,681	$ 5,408,660	$ 5,288,207	$ 5,160,960	$ 5,026,535	$ 4,884,527	$ 4,734,509	$ 4,576,029
Before Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,504,666)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,504,666)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
Before-Tax IRR	**-3.30%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,504,666)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ (6,504,666)	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax IRR without Subsidy	**-3.30%**																					
After Tax Operating Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ 1,811,718	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ -	$ -	$ -	$ -	$ 1,811,718	$ (216,012)	$ (209,477)	$ (202,778)	$ (195,912)	$ (188,874)	$ (181,660)	$ (174,266)	$ (166,687)	$ (158,919)	$ (150,956)	$ (142,795)	$ (134,429)
After Tax IRR with Sutsidy	**#NUM!**																					

DEVELOPMENT CRITERIA (DEC 2013)

NEW RETAIL - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				100000	120000	120000	120000	120000	160000	160000	160000	160000	160000	160000	160000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$15.00	2,339,488	2,877,570	2,949,510	3,023,247	3,098,829	4,235,066	4,340,942	4,449,466	4,560,702	4,674,720	4,791,588	4,911,378
Vacancy Allowance			95%	116,974	143,879	147,475	151,162	154,941	211,753	217,047	222,473	228,035	233,736	239,579	245,569
Effective Gross Revenue				2,222,514	2,733,692	2,802,034	2,872,085	2,943,887	4,023,312	4,123,895	4,226,993	4,332,667	4,440,984	4,552,009	4,665,809
OPERATING EXPENSES															
Operating Expenses/s.f			$2.50	250,000	300,000	300,000	300,000	300,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Taxes			$1.00	2,339,488	2,877,570	2,949,510	3,023,247	3,098,829	4,235,066	4,340,942	4,449,466	4,560,702	4,674,720	4,791,588	4,911,378
Total Operating Expenses				2,589,488	3,177,570	3,249,510	3,323,247	3,398,829	4,635,066	4,740,942	4,849,466	4,960,702	5,074,720	5,191,588	5,311,378
NOI BEFORE TAXES				**1,972,514**	**2,433,692**	**2,502,034**	**2,572,085**	**2,643,887**	**3,623,312**	**3,723,895**	**3,826,993**	**3,932,667**	**4,040,984**	**4,152,009**	**4,265,809**
NOI AFTER TAXES				**(366,974)**	**(443,879)**	**(447,475)**	**(451,162)**	**(454,941)**	**(611,753)**	**(617,047)**	**(622,473)**	**(628,035)**	**(633,736)**	**(639,579)**	**(645,569)**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	467,898	575,514	589,902	604,649	619,766	847,013	868,188	889,893	912,140	934,944	958,318	982,276
Leasing Commissions			1.15%	25,559	31,437	32,229	33,029	33,855	46,268	47,425	48,610	49,826	51,071	52,348	53,657
Capital Expenditure Reserve			1.50%	33,338	41,005	42,031	43,081	44,158	60,350	61,858	63,405	64,990	66,615	68,280	69,987
Total Leasing and Capital Costs				526,794	647,957	664,156	680,760	697,779	953,631	977,472	1,001,908	1,026,956	1,052,630	1,078,946	1,105,919
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**1,445,719**	**1,785,735**	**1,837,878**	**1,891,325**	**1,946,108**	**2,669,681**	**2,746,423**	**2,825,084**	**2,905,711**	**2,988,354**	**3,073,063**	**3,159,889**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**(893,769)**	**(1,091,835)**	**(1,111,631)**	**(1,131,922)**	**(1,152,720)**	**(1,565,384)**	**(1,594,519)**	**(1,624,382)**	**(1,654,991)**	**(1,686,366)**	**(1,718,525)**	**(1,751,488)**
ANNUAL DEBT SERVICE				(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)	(783,549)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**662,171**	**1,002,186**	**1,054,329**	**1,107,776**	**1,162,560**	**1,886,133**	**1,962,875**	**2,041,535**	**2,122,162**	**2,204,805**	**2,289,514**	**2,376,341**
AFTER TAX CASH FLOW				**(1,677,317)**	**(1,875,384)**	**(1,895,180)**	**(1,915,471)**	**(1,936,269)**	**(2,348,933)**	**(2,378,068)**	**(2,407,931)**	**(2,438,540)**	**(2,469,915)**	**(2,502,074)**	**(2,535,037)**
EQUITY CONTRIBUTION WITH SUBSIDIES				-	-	-	-	-	-	-	-	-	-	-	-
BEFORE TAX CASH FLOW				662,171	1,002,186	1,054,329	1,107,776	1,162,560	1,886,133	1,962,875	2,041,535	2,122,162	2,204,805	2,289,514	2,376,341
AFTER TAX CASH FLOW				(1,677,317)	(1,875,384)	(1,895,180)	(1,915,471)	(1,936,269)	(2,348,933)	(2,378,068)	(2,407,931)	(2,438,540)	(2,469,915)	(2,502,074)	(2,535,037)
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	23,765,225	29,321,588	30,144,989	30,988,975	31,854,061	43,654,366	44,866,207	46,108,344	47,381,534	48,686,555	50,024,201	51,395,287
Commission			4.00%	(950,609)	(1,172,864)	(1,205,800)	(1,239,559)	(1,274,162)	(1,746,175)	(1,794,648)	(1,844,334)	(1,895,261)	(1,947,462)	(2,000,968)	(2,055,811)
Adjusted Sale Price				22,814,616	28,148,725	28,939,190	29,749,416	30,579,899	41,908,191	43,071,559	44,264,010	45,486,273	46,739,093	48,023,232	49,339,476
Beginning Mortgage Balance				8,325,310	7,991,318	7,638,485	7,265,750	6,871,990	6,456,018	6,016,583	5,552,360	5,061,951	4,543,879	3,996,584	3,418,417
Remaining Mortgage Balance				7,991,318	7,638,485	7,265,750	6,871,990	6,456,018	6,016,583	5,552,360	5,061,951	4,543,879	3,996,584	3,418,417	2,807,637
Before Tax Operating Cash Flow				662,171	1,002,186	1,054,329	1,107,776	1,162,560	1,886,133	1,962,875	2,041,535	2,122,162	2,204,805	2,289,514	2,376,341
Before Tax Cash Flow from Sale				-	-	-	-	-	-	-	-	-	-	-	46,531,839
Total Before Tax Cash Flow				662,171	1,002,186	1,054,329	1,107,776	1,162,560	1,886,133	1,962,875	2,041,535	2,122,162	2,204,805	2,289,514	48,908,180
Before-Tax IRR	**11.46%**														
After Tax Operating Cash Flow				(1,677,317)	(1,875,384)	(1,895,180)	(1,915,471)	(1,936,269)	(2,348,933)	(2,378,068)	(2,407,931)	(2,438,540)	(2,469,915)	(2,502,074)	(2,535,037)
After Tax Cash Flow from Sale				-	-	-	-	-	-	-	-	-	-	-	46,531,839
Total Before Tax Cash Flow				(1,677,317)	(1,875,384)	(1,895,180)	(1,915,471)	(1,936,269)	(2,348,933)	(2,378,068)	(2,407,931)	(2,438,540)	(2,469,915)	(2,502,074)	43,996,802
After Tax IRR without Subsidy	**0.12%**														
After Tax Operating Cash Flow				(1,677,317)	(1,875,384)	(1,895,180)	(1,915,471)	(1,936,269)	(2,348,933)	(2,378,068)	(2,407,931)	(2,438,540)	(2,469,915)	(2,502,074)	(2,535,037)
After Tax Cash Flow from Sale				-	-	-	-	-	-	-	-	-	-	-	46,531,839
Total Before Tax Cash Flow				(1,677,317)	(1,875,384)	(1,895,180)	(1,915,471)	(1,936,269)	(2,348,933)	(2,378,068)	(2,407,931)	(2,438,540)	(2,469,915)	(2,502,074)	43,996,802
After Tax IRR with Sutsidy	**22.85%**														

DEVELOPMENT STRATEGIES

RENOVATIONS

				19	20	21	22	23	24	25	26	27	28	29	30
CUMULATIVE UNITS				25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	25000
POTENTIAL GROSS REVENUE															
Base Rental Revenue			$13.00	506,889	519,561	532,550	545,864	559,511	573,498	587,836	602,532	617,595	633,035	648,861	665,082
Vacancy Allowance			95%	25,344	25,978	26,628	27,293	27,976	28,675	29,392	30,127	30,880	31,652	32,443	33,254
Effective Gross Revenue				481,545	493,583	505,923	518,571	531,535	544,824	558,444	572,405	586,715	601,383	616,418	631,828
OPERATING EXPENSES															
Operating Expenses/s.f			$2.50	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500
Taxes			$0.00	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses				62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500
NOI BEFORE TAXES				**419,045**	**431,083**	**443,423**	**456,071**	**469,035**	**482,324**	**495,944**	**509,905**	**524,215**	**538,883**	**553,918**	**569,328**
NOI AFTER TAXES				**419,045**	**431,083**	**443,423**	**456,071**	**469,035**	**482,324**	**495,944**	**509,905**	**524,215**	**538,883**	**553,918**	**569,328**
LEASING AND CAPITAL COSTS															
Tenant Improvements			$3.00	116,974	119,899	122,896	125,969	129,118	132,346	135,654	139,046	142,522	146,085	149,737	153,481
Leasing Commissions			1.20%	5,779	5,923	6,071	6,223	6,378	6,538	6,701	6,869	7,041	7,217	7,397	7,582
Capital Expenditure Reserve			1.50%	7,223	7,404	7,589	7,779	7,973	8,172	8,377	8,586	8,801	9,021	9,246	9,477
Total Leasing and Capital Costs				129,976	133,226	136,556	139,970	143,469	147,056	150,732	154,501	158,363	162,322	166,380	170,540
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				**289,069**	**297,858**	**306,867**	**316,101**	**325,566**	**335,268**	**345,212**	**355,404**	**365,852**	**376,561**	**387,537**	**398,788**
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				**289,069**	**297,858**	**306,867**	**316,101**	**325,566**	**335,268**	**345,212**	**355,404**	**365,852**	**376,561**	**387,537**	**398,788**

NEW RETAIL - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
ANNUAL DEBT SERVICE				$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)	$ (414,923)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				**$ (125,854)**	**$ (117,065)**	**$ (108,056)**	**$ (98,822)**	**$ (89,357)**	**$ (79,655)**	**$ (69,711)**	**$ (59,518)**	**$ (49,071)**	**$ (38,362)**	**$ (27,385)**	**$ (16,134)**
AFTER TAX CASH FLOW				**$ (125,854)**	**$ (117,065)**	**$ (108,056)**	**$ (98,822)**	**$ (89,357)**	**$ (79,655)**	**$ (69,711)**	**$ (59,518)**	**$ (49,071)**	**$ (38,362)**	**$ (27,385)**	**$ (16,134)**
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
AFTER TAX CASH FLOW				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			8.30%	$ 5,048,730	$ 5,199,774	$ 5,342,444	$ 5,494,830	$ 5,651,026	$ 5,811,127	$ 5,975,231	$ 6,143,437	$ 6,315,848	$ 6,492,569	$ 6,673,709	$ 6,859,377
Commission			4.00%	$ (201,949)	$ (207,751)	$ (213,698)	$ (219,793)	$ (226,041)	$ (232,445)	$ (239,009)	$ (245,737)	$ (252,634)	$ (259,703)	$ (266,948)	$ (274,375)
Adjusted Sale Price				$ 4,846,781	$ 4,986,023	$ 5,128,746	$ 5,275,037	$ 5,424,985	$ 5,578,682	$ 5,736,221	$ 5,897,699	$ 6,063,214	$ 6,232,867	$ 6,406,761	$ 6,585,002
Beginning Mortgage Balance				$ 4,576,028.93	$ 4,408,609.23	$ 4,231,745.74	$ 4,044,905.77	$ 3,847,526.55	$ 3,639,013.59	$ 3,418,738.86	$ 3,186,038.90	$ 2,940,212.84	$ 2,680,520.25	$ 2,406,178.96	$ 2,116,362.67
Remaining Mortgage Balance				$ 4,408,609	$ 4,231,746	$ 4,044,906	$ 3,847,527	$ 3,639,014	$ 3,418,739	$ 3,186,039	$ 2,940,213	$ 2,680,520	$ 2,406,179	$ 2,116,363	$ 1,810,198
Before Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,774,803
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 4,758,669
Before-Tax IRR	**-3.30%**														
After Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,774,803
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 4,758,669
After Tax IRR without Subsidy	**-3.30%**														
After Tax Operating Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ (16,134)
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,774,803
Total Before Tax Cash Flow				$ (125,854)	$ (117,065)	$ (108,056)	$ (98,822)	$ (89,357)	$ (79,655)	$ (69,711)	$ (59,518)	$ (49,071)	$ (38,362)	$ (27,385)	$ 4,758,669
After Tax IRR with Subsidy	**#NUM!**														

MIXED USE APARTMENTS - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RENT/SALES INCREASES				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
INFLATION				0.00	1.00	1.025	1.05	1.08	1.10	1.13	1.16	1.19	1.22	1.25	1.28	1.31	1.34	1.38	1.41	1.45	1.48	1.52
NEW CONSTRUCTION																						
CUMULATIVE UNITS					0	0	150	150	150	150	250	250	250	250	350	350	350	350	450	450	450	450
POTENTIAL GROSS REVENUE																						
Base Rental Revenue		1,000	$1.55	$ -	$ -	$ -	$ 2,931,244	$ 3,004,525	$ 3,079,638	$ 3,156,629	$ 5,392,574	$ 5,527,389	$ 5,665,573	$ 5,807,213	$ 8,333,350	$ 8,541,684	$ 8,755,226	$ 8,974,107	$ 11,826,591	$ 12,122,256	$ 12,425,312	$ 12,735,945
Vacancy Allowance			95%	$ -	$ -	$ -	$ 146,562	$ 150,226	$ 153,982	$ 157,831	$ 269,629	$ 276,369	$ 283,279	$ 290,361	$ 416,668	$ 427,084	$ 437,761	$ 448,705	$ 591,330	$ 606,113	$ 621,266	$ 636,797
Effective Gross Revenue				$ -	$ -	$ -	$ 2,784,682	$ 2,854,299	$ 2,925,656	$ 2,998,797	$ 5,122,946	$ 5,251,019	$ 5,382,295	$ 5,516,852	$ 7,916,683	$ 8,114,600	$ 8,317,465	$ 8,525,402	$ 11,235,261	$ 11,516,143	$ 11,804,046	$ 12,099,148
OPERATING EXPENSES																						
Operating Expenses/s f		1,000	30%	$ -	$ -	$ -	$ 835,404	$ 856,290	$ 877,697	$ 899,639	$ 1,536,884	$ 1,575,306	$ 1,614,688	$ 1,655,056	$ 2,375,005	$ 2,434,380	$ 2,495,239	$ 2,557,620	$ 3,370,578	$ 3,454,843	$ 3,541,214	$ 3,629,744
Taxes			10%	$ -	$ -	$ -	$ 278,468	$ 285,430	$ 292,566	$ 299,880	$ 512,295	$ 525,102	$ 538,229	$ 551,685	$ 791,668	$ 811,460	$ 831,746	$ 852,540	$ 1,123,526	$ 1,151,614	$ 1,180,405	$ 1,209,915
Total Operating Expenses				$ -	$ -	$ -	$ 1,113,873	$ 1,141,719	$ 1,170,262	$ 1,199,519	$ 2,049,178	$ 2,100,408	$ 2,152,918	$ 2,206,741	$ 3,166,673	$ 3,245,840	$ 3,326,986	$ 3,410,161	$ 4,494,105	$ 4,606,457	$ 4,721,619	$ 4,839,659
NOI BEFORE TAXES				$ -	$ -	$ -	$ 1,949,277	$ 1,998,009	$ 2,047,959	$ 2,099,158	$ 3,586,062	$ 3,675,714	$ 3,767,606	$ 3,861,797	$ 5,541,678	$ 5,680,220	$ 5,822,225	$ 5,967,781	$ 7,864,683	$ 8,061,300	$ 8,262,833	$ 8,469,403
NOI AFTER TAXES				$ -	$ -	$ -	$ 1,670,809	$ 1,712,579	$ 1,755,394	$ 1,799,278	$ 3,073,767	$ 3,150,612	$ 3,229,377	$ 3,310,111	$ 4,750,010	$ 4,868,760	$ 4,990,479	$ 5,115,241	$ 6,741,157	$ 6,909,686	$ 7,082,428	$ 7,259,489
LEASING AND CAPITAL COSTS																						
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 87,500	$ 87,500	$ 87,500	$ 87,500	$ 112,500	$ 112,500	$ 112,500	$ 112,500
Total Leasing and Capital Costs				$ -	$ -	$ -	$ 37,500	$ 37,500	$ 37,500	$ 37,500	$ 62,500	$ 62,500	$ 62,500	$ 62,500	$ 87,500	$ 87,500	$ 87,500	$ 87,500	$ 112,500	$ 112,500	$ 112,500	$ 112,500
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 1,911,777	$ 1,960,509	$ 2,010,459	$ 2,061,658	$ 3,523,562	$ 3,613,214	$ 3,705,106	$ 3,799,297	$ 5,454,178	$ 5,592,720	$ 5,734,725	$ 5,880,281	$ 7,752,183	$ 7,948,800	$ 8,150,333	$ 8,356,903
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ -	$ -	$ -	$ 1,633,309	$ 1,675,079	$ 1,717,894	$ 1,761,778	$ 3,011,267	$ 3,088,112	$ 3,166,877	$ 3,247,611	$ 4,662,510	$ 4,781,260	$ 4,902,979	$ 5,027,741	$ 6,628,657	$ 6,797,186	$ 6,969,928	$ 7,146,989
ANNUAL DEBT SERVICE				$ -	$ -	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES				$ -	$ -	$ (22,849,646)	$ -	$ -	$ -	$ -	-											
BEFORE TAX CASH FLOW				$ -	$ -	$ (28,728,892)	$ (3,967,468)	$ (3,918,736)	$ (3,868,786)	$ (3,817,587)	$ (2,355,683)	$ (2,266,032)	$ (2,174,139)	$ (2,079,949)	$ (425,067)	$ (286,525)	$ (144,520)	$ 1,036	$ 1,872,938	$ 2,069,555	$ 2,271,087	$ 2,477,658
AFTER TAX CASH FLOW				$ -	$ -	$ (28,728,892)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ (6,595,722)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ -	$ -	$ (12,474,967)	$ (3,967,468)	$ (3,918,736)	$ (3,868,786)	$ (3,817,587)	$ (2,355,683)	$ (2,266,032)	$ (2,174,139)	$ (2,079,949)	$ (425,067)	$ (286,525)	$ (144,520)	$ 1,036	$ 1,872,938	$ 2,069,555	$ 2,271,087	$ 2,477,658
AFTER TAX CASH FLOW				$ -	$ -	$ (12,474,967)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
IRR AND ROE CALCULATIONS																						
Sale Price (before tax NOI)			6.80%	$ -	$ -	$ -	$ 28,665,840	$ 29,382,486	$ 30,117,048	$ 30,869,974	$ 52,736,205	$ 54,054,611	$ 55,405,976	$ 56,791,125	$ 81,495,265	$ 83,532,646	$ 85,620,963	$ 87,761,487	$ 115,657,102	$ 118,548,530	$ 121,512,243	$ 124,550,049
Commission			4.00%	$ -	$ -	$ -	$ (1,146,634)	$ (1,175,299)	$ (1,204,682)	$ (1,234,799)	$ (2,109,448)	$ (2,162,184)	$ (2,216,239)	$ (2,271,645)	$ (3,259,811)	$ (3,341,306)	$ (3,424,839)	$ (3,510,459)	$ (4,626,284)	$ (4,741,941)	$ (4,860,490)	$ (4,982,002)
Adjusted Sale Price				$ -	$ -	$ -	$ 27,519,206	$ 28,207,186	$ 28,912,366	$ 29,635,175	$ 50,626,757	$ 51,892,426	$ 53,189,737	$ 54,519,480	$ 78,235,454	$ 80,191,341	$ 82,196,124	$ 84,251,027	$ 111,030,818	$ 113,806,588	$ 116,651,753	$ 119,568,047
Beginning Mortgage Balance				$ -	$ -	$ 86,288,589.13	$ 85,126,204.64	$ 83,898,252.52	$82,601,034.26	$81,230,642.69	$ 79,782,950.26	$78,253,596.60	$76,637,975.37	$74,931,220.40	$73,128,191.04	$71,223,456.65	$69,211,280.27	$67,085,601.32	$64,840,017.37	$62,467,764.84	$59,961,698.62	$57,314,270.56
Remaining Mortgage Balance				$ -	$ -	$ 85,126,205	$ 83,898,253	$ 82,601,034	$ 81,230,643	$ 79,782,950	$ 78,253,597	$ 76,637,975	$ 74,931,220	$ 73,128,191	$ 71,223,457	$ 69,211,280	$ 67,085,601	$ 64,840,017	$ 62,467,765	$ 59,961,699	$ 57,314,271	$ 54,517,507
Before Tax Operating Cash Flow				$ -	$ -	$ (28,728,892)	$ (3,967,468)	$ (3,918,736)	$ (3,868,786)	$ (3,817,587)	$ (2,355,683)	$ (2,266,032)	$ (2,174,139)	$ (2,079,949)	$ (425,067)	$ (286,525)	$ (144,520)	$ 1,036	$ 1,872,938	$ 2,069,555	$ 2,271,087	$ 2,477,658
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (28,728,892)	$ (3,967,468)	$ (3,918,736)	$ (3,868,786)	$ (3,817,587)	$ (2,355,683)	$ (2,266,032)	$ (2,174,139)	$ (2,079,949)	$ (425,067)	$ (286,525)	$ (144,520)	$ 1,036	$ 1,872,938	$ 2,069,555	$ 2,271,087	$ 2,477,658
Before-Tax IRR	8.24%																					
After Tax Operating Cash Flow				$ -	$ -	$ (28,728,892)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (28,728,892)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
After Tax IRR without Subsidy	7.37%																					
After Tax Operating Cash Flow				$ -	$ -	$ (12,474,967)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Before Tax Cash Flow				$ -	$ -	$ (12,474,967)	$ (4,245,936)	$ (4,204,166)	$ (4,161,352)	$ (4,117,467)	$ (2,867,978)	$ (2,791,134)	$ (2,712,369)	$ (2,631,634)	$ (1,216,736)	$ (1,097,985)	$ (976,266)	$ (851,504)	$ 749,411	$ 917,940	$ 1,090,682	$ 1,267,743
After Tax IRR without Subsidy	9.10%																					

MIXED USE APARTMENTS - LACLEDE'S LANDING/ARCH

YEAR	NPV OR IRR	UNIT OR SF	BASE ASSUMPTION	19	20	21	22	23	24	25	26	27	28	29	30
RENT/SALES INCREASES				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
INFLATION				1.56	1.60	1.64	1.68	1.72	1.76	1.81	1.85	1.90	1.95	2.00	2.05
NEW CONSTRUCTION															
CUMULATIVE UNITS				450	550	550	550	550	650	650	650	650	770	770	770
POTENTIAL GROSS REVENUE															
Base Rental Revenue		1,000	$1.55	$ 13,054,343	$ 16,354,191	$ 16,763,046	$ 17,182,122	$ 17,611,675	$ 21,334,143	$ 21,867,497	$ 22,414,184	$ 22,974,539	$ 27,896,392	$ 28,593,802	$ 29,308,647
Vacancy Allowance			95%	$ 652,717	$ 817,710	$ 838,152	$ 859,106	$ 880,584	$ 1,066,707	$ 1,093,375	$ 1,120,709	$ 1,148,727	$ 1,394,820	$ 1,429,690	$ 1,465,432
Effective Gross Revenue				$ 12,401,626	$ 15,536,482	$ 15,924,894	$ 16,323,016	$ 16,731,092	$ 20,267,436	$ 20,774,122	$ 21,293,475	$ 21,825,812	$ 26,501,572	$ 27,164,112	$ 27,843,214
OPERATING EXPENSES															
Operating Expenses/s f		1,000	30%	$ 3,720,488	$ 4,660,945	$ 4,777,468	$ 4,896,905	$ 5,019,327	$ 6,080,231	$ 6,232,237	$ 6,388,042	$ 6,547,744	$ 7,950,472	$ 8,149,233	$ 8,352,964
Taxes			10%	$ 1,240,163	$ 1,553,648	$ 1,592,489	$ 1,632,302	$ 1,673,109	$ 2,026,744	$ 2,077,412	$ 2,129,347	$ 2,182,581	$ 2,650,157	$ 2,716,411	$ 2,784,321
Total Operating Expenses				$ 4,960,651	$ 6,214,593	$ 6,369,958	$ 6,529,206	$ 6,692,437	$ 8,106,974	$ 8,309,649	$ 8,517,390	$ 8,730,325	$ 10,600,629	$ 10,865,645	$ 11,137,286
NOI BEFORE TAXES				$ 8,681,138	$ 10,875,537	$ 11,147,426	$ 11,426,111	$ 11,711,764	$ 14,187,205	$ 14,541,885	$ 14,905,432	$ 15,278,068	$ 18,551,101	$ 19,014,878	$ 19,490,250
NOI AFTER TAXES				$ 7,440,976	$ 9,321,889	$ 9,554,936	$ 9,793,810	$ 10,038,655	$ 12,160,462	$ 12,464,473	$ 12,776,085	$ 13,095,487	$ 15,900,943	$ 16,298,467	$ 16,705,929
LEASING AND CAPITAL COSTS															
Tenant Improvements				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Leasing Commissions				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Expenditure Reserve			$250	$ 112,500	$ 137,500	$ 137,500	$ 137,500	$ 137,500	$ 162,500	$ 162,500	$ 162,500	$ 162,500	$ 192,500	$ 192,500	$ 192,500
Total Leasing and Capital Costs				$ 112,500	$ 137,500	$ 137,500	$ 137,500	$ 137,500	$ 162,500	$ 162,500	$ 162,500	$ 162,500	$ 192,500	$ 192,500	$ 192,500
BEFORE TAX CASH FLOW BEFORE DEBT SERVICE				$ 8,568,638	$ 10,738,037	$ 11,009,926	$ 11,288,611	$ 11,574,264	$ 14,024,705	$ 14,379,385	$ 14,742,932	$ 15,115,568	$ 18,358,601	$ 18,822,378	$ 19,297,750
AFTER TAX CASH FLOW BEFORE DEBT SERVICE				$ 7,328,476	$ 9,184,389	$ 9,417,436	$ 9,656,310	$ 9,901,155	$ 11,997,962	$ 12,301,973	$ 12,613,585	$ 12,932,987	$ 15,708,443	$ 16,105,967	$ 16,513,429
ANNUAL DEBT SERVICE				$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)	$ (5,879,245)
EQUITY CONTRIBUTION WITHOUT SUBSIDIES															
BEFORE TAX CASH FLOW				$ 2,689,393	$ 4,858,792	$ 5,130,680	$ 5,409,366	$ 5,695,019	$ 8,145,460	$ 8,500,140	$ 8,863,687	$ 9,236,323	$ 12,479,355	$ 12,943,133	$ 13,418,505
AFTER TAX CASH FLOW				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 10,634,183
EQUITY CONTRIBUTION WITH SUBSIDIES				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BEFORE TAX CASH FLOW				$ 2,689,393	$ 4,858,792	$ 5,130,680	$ 5,409,366	$ 5,695,019	$ 8,145,460	$ 8,500,140	$ 8,863,687	$ 9,236,323	$ 12,479,355	$ 12,943,133	$ 13,418,505
AFTER TAX CASH FLOW				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 10,634,183
IRR AND ROE CALCULATIONS															
Sale Price (before tax NOI)			6.80%	$ 127,663,800	$ 159,934,372	$ 163,992,731	$ 168,031,049	$ 172,231,826	$ 208,635,371	$ 213,851,255	$ 219,197,536	$ 224,677,475	$ 272,810,303	$ 279,630,560	$ 286,621,324
Commission			4.00%	$ (5,106,552)	$ (6,397,375)	$ (6,557,309)	$ (6,721,242)	$ (6,889,273)	$ (8,345,415)	$ (8,554,050)	$ (8,767,901)	$ (8,987,099)	$ (10,912,412)	$ (11,185,222)	$ (11,464,853)
Adjusted Sale Price				$ 122,557,248	$ 153,536,997	$ 157,375,422	$ 161,309,807	$ 165,342,553	$ 200,289,956	$ 205,297,205	$ 210,429,635	$ 215,690,376	$ 261,897,891	$ 268,445,338	$ 275,156,471
Beginning Mortgage Balance				$54,517,506.75	$51,562,983.48	$48,441,801.87	$45,144,561.09	$41,661,330.01	$37,981,617.31	$34,094,339.90	$29,987,789.48	$25,649,597.34	$21,066,697.07	$16,225,285.20	$11,110,779.64
Remaining Mortgage Balance				$ 51,562,983	$ 48,441,802	$ 45,144,561	$ 41,661,330	$ 37,981,617	$ 34,094,340	$ 29,987,789	$ 25,649,597	$ 21,066,697	$ 16,225,285	$ 11,110,780	$ 5,707,776
Before Tax Operating Cash Flow				$ 2,689,393	$ 4,858,792	$ 5,130,680	$ 5,409,366	$ 5,695,019	$ 8,145,460	$ 8,500,140	$ 8,863,687	$ 9,236,323	$ 12,479,355	$ 12,943,133	$ 13,418,505
Before Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 269,448,696
Total Before Tax Cash Flow				$ 2,689,393	$ 4,858,792	$ 5,130,680	$ 5,409,366	$ 5,695,019	$ 8,145,460	$ 8,500,140	$ 8,863,687	$ 9,236,323	$ 12,479,355	$ 12,943,133	$ 282,867,200
Before-Tax IRR	8.24%														
After Tax Operating Cash Flow				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 10,634,183
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 269,448,696
Total Before Tax Cash Flow				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 280,082,879
After Tax IRR without Subsidy	7.37%														
After Tax Operating Cash Flow				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 10,634,183
After Tax Cash Flow from Sale				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 269,448,696
Total Before Tax Cash Flow				$ 1,449,230	$ 3,305,144	$ 3,538,191	$ 3,777,064	$ 4,021,910	$ 6,118,716	$ 6,422,728	$ 6,734,340	$ 7,053,742	$ 9,829,198	$ 10,226,722	$ 280,082,879
After Tax IRR without Subsidy	9.10%														

DEVELOPMENT STRATEGIES 2012

D

Transportation

Bernardin, Lochmueller & Associates

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TRANSPORTATION ANALYSIS OF STATION AREA PLANS

STADIUM AND ARCH-LACLEDE'S LANDING STATIONS

JULY 26, 2013

Bernardin, Lochmueller & Associates (BLA) completed the following transportation analysis of station area plans for the existing Stadium and Arch-Laclede's Landing MetroLink Stations. The purpose of this analysis was to identify the plans' impact upon multi-modal transportation, including pedestrians, cyclists, transit users, and motorists, and to recommend transportation improvements that would ultimately help facilitate implementation of the preferred plan for each station.

The specific tasks performed in conjunction with this analysis included:

- Attending technical advisory committee and public meetings;
- Participating in project team coordination meetings and work sessions;
- Obtaining and reviewing information of record and previous studies concerning the surrounding area and other pertinent transportation projects;
- Conducting field reconnaissance of existing transportation features within the station areas, including ascertaining physical characteristics and transportation activities;
- Defining station areas in accordance with probable ridership capture areas, including specifying potential transit capture rates based on proximity to the station and quality of the anticipated station area pedestrian environment;
- Providing general station area multi-modal transportation guidelines;
- Identifying existing transportation conditions within the station areas, including traffic circulation patterns, major street configurations, pedestrian and bicycle accommodations, and transit services;
- Contributing to the development of preliminary station area plans by identifying key multi-modal transportation enhancements;
- Conducting a thorough analysis of the alternative station area plans, emphasizing the relationship between development and transportation needs;
- Forecasting order-of-magnitude transit ridership, traffic generation, and parking needs of each alternative station area plan for comparative purposes; and
- Developing transportation recommendations for the preferred station area plan.

General Station Area Transportation Principles & Guidelines

The following general multi-modal transportation principles and guidelines are offered as strategies for maximizing the connectivity of the station area. The converse of these suggestions serves as guidance as to what not to do given the long lead time that will occur prior to implementation of the stations.

Design Pedestrian Routes to Be Direct and Minimize Conflicts:

- Minimize walking distances, while ensuring that sufficient circulation space is provided. People always seek the shortest walking route to their destination.
- Provide sufficient space through waiting areas (e.g., bus stops) to safely accommodate demand for both waiting passengers and through pedestrians.
- Minimize elevation changes or avoid them altogether wherever possible. Where necessary, ramps, small inclines, escalators, or elevators should be provided instead of, or in addition to, steps.
- Keep pedestrian routes clear of structural elements such as pillars, to increase accessibility, ease circulation, and maintain visibility and security.
- Locate information points, such as real-time information displays, in locations that avoid impeding pedestrian flows. Adequate space should be provided to allow customers to stand out of travel ways while reading displays.
- Wherever possible, provide multiple access routes to increase accessibility from all directions and to help distribute the flow of people during peak travel periods.
- Introduce traffic calming measures as necessary to control vehicle speeds around stations.
- Design pedestrian routes to meet accessibility standards for people with disabilities.
- Create visible pedestrian pathways through parking facilities delineated by sidewalks or surface markings.
- Design pedestrian waiting areas with enough space to accommodate passengers waiting to be picked up, with lighting, seating, and weather protection.

Create a Strong Sense of Security for Customers:

- The prominent use of closed circuit television (CCTV) should be considered for the station area.
- Avoid blind corners, alcoves, and other secluded locations.
- Ensure that shrubbery or other pedestrian enhancements do not block visibility of pedestrians or create hidden areas that pose a security risk.

Passengers Should Be Able to Orient Themselves Quickly and Easily:

- Minimize the need for wayfinding through direct line-of-sight connections along pedestrian desire lines where possible, particularly to connecting bus stops.
- Avoid changes in direction and blind corners, which can disorient customers.

- Where line-of-sight connections are not possible, provide wayfinding within stations, particularly to bus and rail transfer points and key local destinations.
- Wayfinding should be consistent across stations. Typefaces and symbols should be legible and signs should not be obscured by other signs or equipment.
- Prominently display maps to enable customers to locate destinations. Maps should include station plans, locations of parking, transit connections, bicycle racks, the local street network, and key nearby destinations.
- The station itself should be as visible as possible from the surrounding area.

Create a Network of Safe, Direct, and Appealing Walking Routes to the Station:

- Allow pedestrians to exit directly onto the street sidewalk.
- Use a variety of design treatments to ensure safe and comfortable pedestrian crossings of roads and driveways in the station area. These can include marked crosswalks, traffic signals, median islands, and curb bump-outs.
- Do not compromise pedestrian safety to accommodate greater auto volumes. Dual right-turn lanes and free right-turn lanes should be avoided throughout the station area and particularly along primary pedestrian routes.
- Incorporate pedestrian-friendly design and operations into the traffic signals in the vicinity of the station (e.g., pedestrian signal-heads with countdown timers, adequate pedestrian clearance time, and well-marked crosswalks). As appropriate, additional improvements such as leading pedestrian intervals, curb extensions, and exclusive pedestrian phases should be considered.
- Provide lighting at a pedestrian scale, with particular attention paid to locations with potential vehicle–pedestrian conflicts.
- Provide trees, wider sidewalks, seating and other street furniture to make routes more appealing to pedestrians. Shade should be a priority given the summer climate.

Establish Safe and Comfortable Bike Connections Leading to and from the Station:

- Provide appropriate bicycle facilities to and from the station that follow local best practices for bicycle design (e.g., bike lanes, shared-lane markings, and trails) and complement the regional network on on-street bicycle routes and off-street trails.
- Provide bicycle wayfinding to the station from adjoining streets and bikeways.
- Provide area maps in the station locating surrounding streets, popular destinations, and existing bikeways.

Provide Adequate Bike Facilities at the Station:

- Bike connections into and out of the station should minimize conflicts between bicyclists, pedestrians, automobiles, and buses.
- Provide adequate bicycle racks to meet demand, as space permits.
- Locate bicycle parking in secure, well-lit locations along bicyclists' desired route from major bikeways to the station entrance(s). Racks should not impede pedestrian flows.

- Locate bicycle parking where weather protection exists (such as a roof or awning), where possible. Covered parking in other locations may be warranted.
- Locate bicycle parking so that bicyclists do not have to dismount and walk to access it.
- Locate bicycle parking in proximity to station entrances wherever possible.

Place Connecting Bus Stops in Suitable Locations:

- Bus stops should be placed in suitable locations that make walking to the station short and safe.
- Bus stops should be located to minimize walking distances to station entrances and should avoid the need to cross roadways, particularly busy arterials. Where a roadway must be crossed, the bus stop should be located adjacent to a marked crosswalk.
- Bus stops should be immediately visible upon exiting the station.
- Bus stops should be located where they will not block crosswalks, obstruct traffic signals, or be obscured from motorists, bicyclists, and pedestrians.
- On-street bus stops are preferable unless off-street facilities are necessary to effectively serve multiple routes.
- Buses should be able to reach connecting stops via congestion-free routes, including dedicated lanes and signal priority where practical.

Provide Attractive Feeder Bus Service:

- Connecting bus service must be frequent and reliable.
- The bus route structure should be direct and clear. Route deviations should be avoided.
- There should be minimal and predictable transfer wait times.
- Providing real-time information about transit arrival times helps alleviate passenger uncertainty of bus arrivals and reduces the wait time burden.
- Connecting bus services should operate at relatively frequent headways. Headways generally should not exceed 10 to 15 minutes in the peak hour, and should not exceed 20 minutes in the off-peak.

Institute a Safe, Comfortable, and Convenient Environment for Intermodal Transfers:

- Connecting transit service at stations should be prioritized.
- Bus drop-offs and boardings should be located as close as possible to station entrances.
- The paths between bus passenger loading and unloading areas and the station entrance should be as short as possible.
- Stops should be well-marked to indicate which transit services stop at which locations.
- Real-time passenger information and easily understandable maps and schedules should be provided for connecting bus services.
- Weather protection, seating, lighting, and trash cans should be provided in bus waiting areas.
- Bus shelter design should enable waiting passengers to easily see oncoming vehicles.

Stadium Station

Establishment of Station Area

As an initial step in our evaluations, station area boundaries were established on the basis of transit shed thresholds. A transit shed illustrates the distance limits that potential transit riders are typically willing to walk to a station. A radius of ½ mile around the station, which is equivalent to a 10-minute walk, is a common transit shed boundary. The 5-minute walk radius is frequently referenced as well because a higher level of ridership is typically achieved from within that distance.

The actual transit sheds applied for this analysis account for adjacent stations along the alignment, major pedestrian boundaries (physical or perceptional), and major attractions in the area. These elements help define the geographic limits of the station's ridership capture. For example, the proximity to the 8th and Pine and Civic Center stations reduces the transit shed to the north and west. The 10-minute transit shed was reduced on the south side as well due to the railroad viaducts and Nestle campus, which act as barriers to pedestrian mobility. The 5-minute transit shed was marginally extended to the east to include hotels along 4th Street given the more accommodating pedestrian infrastructure between there and the station. The transit shed areas are illustrated in **Figure 1** below.

Figure 1: Stadium Station Transit Shed Boundaries

The Stadium station area contains a mix of high-density residential and commercial uses as well as several hotels. Capture rates for estimating future ridership increases were developed from existing capture rates while taking into account existing and planned land uses. A capture rate of 15 to 20 percent was selected for the area within the quarter mile transit shed, which is consistent with existing rates. A capture rate of 10 to 15 percent was selected for the area between the quarter mile and half mile transit shed. This rate is higher than the current capture rate, because it was assumed that planned improvements to pedestrian and bicycle conditions in the future could attract additional ridership.

Existing Conditions

Situated across the street from Busch Stadium in the heart of Downtown, the Stadium Station serves large crowds for Cardinal games and other events as well as the residential, office, and hospitality uses in the surrounding area.

Vehicular

To the north and west of the station, the streets form a uniform grid. Access to/from I-64 east is achieved via the 9th St off-ramp and 6th St on-ramp. Access to/from I-64 west is provided via the 6th St and 11th St off-ramps as well as on-ramps from both Broadway and 10th St. Access to other interstates in the area such as I-55, I-44, and I-70 is facilitated via Memorial Dr to the east and the Park Ave/7th St interchange to the south.

8th St, Broadway, and 4th St carry most of the north-south traffic in the area. East-west connectivity is very much limited by Busch Stadium itself and 6th St ramps to/from I-64. In fact, there are no east-west through streets between Clark Ave and Gratiot Ave – a distance of more than 4 blocks. In general, the area to the south of I-64 is disconnected. Large parking lots, freeway ramp infrastructure, and street interruptions create fragmentations in the street grid that disrupt circulation and hinder wayfinding.

Pedestrian

Most sidewalks in the station area are of sufficient quality to accommodate pedestrians. There are locations lacking ADA-complaint crosswalks and curb ramps, particularly along Clark Ave west of 8th St and Walnut St. South of I-64, disconnected streets and interstate ramps inhibit pedestrian connectivity.

Bicycle

Bicycle accommodations within the station area are limited. Aside from the route along 8th St designated by Bike St. Louis, there is no bicycle prioritization or dedicated infrastructure within the station area.

Transit

Metro has transitioned the bus system from the more traditional radial configuration of fixed route bus services to a transit-center-based system. As such, the majority of bus routes into and out of the Downtown area by-pass the station area to the west to serve the 14th St Transit Center. The #99 Downtown Trolley operates at a Downtown circulator route but it currently

uses Tucker Blvd and Market St and does not penetrate the station area. The Stadium MetroLink station was constructed as part of the original MetroLink alignment that opened in 1993. The station is located below grade and has 2 side platforms.

Analysis of Preliminary Station Area Plans

The station area plan alternatives were evaluated to provide input as to how the alternatives would impact the transportation system. This evaluation identified the implications of various development intensities and land use mixtures upon traffic, transit, and parking demands. These relationships were quantified using data provided by the Institute of Transportation Engineers (ITE) in Trip Generation and Parking Generation. These resources contain statistics from nationwide studies identifying the trip and parking characteristics of various land uses.

Our methodology emphasized the urban, transit-oriented nature of the station areas. For select land uses, these characteristics were inherent to the data available from ITE. In many instances, it was necessary to apply manual adjustments to account for characteristics such as internal trip capture within mixed-use developments, reduced auto ownership within transit-oriented developments, and neighborhood walkability. The adjustments reflect national research combined with local experiences.

The results of this analysis are summarized in **Table 1** below. Our findings and conclusions are as follows:

- **Alternative 1** – The Enhanced Stadium Station Crossing Area alternative would provide a balance of office, retail, residential, and hotel space. This alternative would add approximately 1,800 light rail trips, which would result in 900 new daily boardings on a typical weekday. The increase in traffic generated by this alternative should be reasonably served by existing transportation infrastructure and the access redundancy provided by multiple ramps to/from I-64 and numerous routes to/from I-55/I-44.

- **Alternative 2** – The Cupples | Ballpark District alternative contains a higher intensity of land uses than Alternative 1. In particular, the office and hotel square footage would be increased three-fold. This alternative would add approximately 3,200 transit trips, which would result in 1,800 new daily boardings on a typical weekday. A commensurate increase in vehicular traffic would be generated, although it would not be expected to oversaturate the planned street network.

Table 1: **Evaluation of Stadium Station Area Plan Alternatives**

Alternative	Proposed Development	Mode	Daily Demand
1 Enhanced Stadium Station Crossing Area	300 units RESIDENTIAL 150,000 sq. ft. RETAIL 250,000 sq. ft. OFFICE 250,000 sq. ft. HOTEL	Transit Trips	1,810
		Auto Trips	8,015
		Parking Spaces	1,277
2 Cupples | Ballpark District	450 units RESIDENTIAL 250,000 RETAIL 650,000 sq. ft. OFFICE 600,000 sq. ft. HOTEL	Transit Trips	3,220
		Auto Trips	13,510
		Parking Spaces	2,938
3 Cupples, Ballpark, Chouteau Mixed-Use District	950 units RESIDENTIAL 400,000 sq. ft. RETAIL 850,000 sq. ft. OFFICE 450,000 sq. ft. HOTEL	Transit Trips	4,008
		Auto Trips	17,453
		Parking Spaces	4,060
Preferred Alternative	800 units RESIDENTIAL 250,000 sq. ft. RETAIL 650,000 sq. ft. OFFICE 600,000 sq. ft. HOTEL	Transit Trips	3,584
		Auto Trips	14,448
		Parking Spaces	3,354

- **Alternative 3** – The Cupples, Ballpark, Chouteau Mixed-Use District alternative would provide more residential, office and retail space than Alternative 2, but fewer hotel rooms. This alternative would add approximately 4,000 transit trips, which would result in 2,000 new daily boardings on a typical weekday. Rerouting of the #99 Downtown Trolley from Market St to Clark Ave may be advisable to more effectively serve transit demands. From a vehicular traffic standpoint, this alternative would generate the largest traffic increase – over 17,000 trips per day. This magnitude of traffic would likely begin to saturate the street network and lead to increased peak period congestion.

- **Preferred Alternative** – The Preferred Alternative contains a relatively equitable distribution of land uses that mimics Alternative 2 except for additional residential units. This alternative would add approximately 3,600 transit trips, which would result in 1,800 new daily boardings on a typical weekday. The

overall traffic generation would be similar to Alternative 2 and should be reasonably served by the planned street network.

Preferred Station Area Plan – Specific Modality Recommendations

The following summarizes our analysis and recommendations with regards to the Stadium Station.

Pedestrians

Corridor-level pedestrian improvements are specified using a tiered approach. These tiers represent the scale of pedestrian and streetscape infrastructure recommended. Tier 1 projects should be deemed the most significant and warrant the largest infrastructure commitment in order to yield the most benefits to users. Tier 1 features include design elements such as wide sidewalks (8 feet or more), decorative pavement and crosswalks, pedestrian lighting, underground utilities, curb bump-outs, green infrastructure, street trees, and street furniture.

Tier 2 recommendations include narrower sidewalks (approximately 6 feet), standard pavements, painted crosswalks, and less elaborate streetscape measures. These corridors support the Tier 1 corridors and serve a less crucial role in the transportation network. Finally, Tier 3 recommendations address gaps in the existing pedestrian network, such as extending sidewalks to areas lacking pedestrian access, retrofitting intersections to include ADA-compliant crossings, and providing standard sidewalk widths, surface conditions, and lighting.

Figure 2: Pedestrian Recommendations

A.

TIER 1 – Perform a road diet on Clark Ave between Tucker Blvd and 8th St. A reduction from the current section of two through lanes in each direction plus a center turn lane to one through lane in each direction and a center median/left-turn lane is recommended. The recommended cross section is consistent with existing sections along Clark both east of 8th and west of Tucker.

There is a desire to make Clark more pedestrian friendly to complement the Cupples district and create a well-defined pedestrian linkage between Busch Stadium and the Scottrade Center. This recommendation is consistent with the Downtown Multimodal Access Plan which designated Clark as a neighborhood connector type street with one lane of traffic in each direction. Specific elements of this recommendation include:

- *Comprehensive streetscape such shade trees, decorative crosswalks, pedestrian bump-outs at intersections, lighting improvements, etc.*
- *Share-the-road signage or sharrows to alert motorists to bicycles.*
- *On-street parking to calm traffic and separate pedestrians from moving vehicles.*

B.

TIER 2 – Extend the streetscape improvements on Spruce St. implemented in conjunction with the Westin Hotel project west beyond 9th St to Tucker Blvd. Spruce should function as a neighborhood street penetrating the heart of the Cupples district and supporting new residential development. The level of streetscape may not need to be as elaborate as recommended for Clark but it should invite pedestrian trips and discourage through traffic.

- *Provide ADA-compliant crosswalks at all intersections.*
- *To the extent possible, extend the streetscape theme established adjacent to the Westin Hotel to Tucker Blvd.*

C.

Work closely with Great Rivers Greenway to implement Chouteau's Greenway, which is a future east-west linkage in the regional trail system that would connect Forest Park with the Mississippi River, as well as the CityGarden Connection. Chouteau's Greenway would extend across the southern portion of the station area and utilize a future multi-use bridge over I-55 to access the Gateway Arch. The CityGarden Connection would be a potential spur from Chouteau's Greenway along 10th St to the Gateway Mall and CityGarden.

- *Implement Chouteau's Greenway through the station area by constructing a multi-use trail along the Cerre St corridor.*
- *Construct the CityGarden Connection from Chouteau's Greenway north to the Gateway Mall utilizing existing green space along the east side of 10th St.*

- *Construct a multi-use pedestrian and bicycle bridge over I-55 to extend Chouteau's Greenway to the Arch.*

D.

Construct a tunnel along the Cerre St alignment under the I-64 ramps at 6th St. The ramps form a barrier to east-west connectivity south of I-64. The tunnel would provide dedicated pedestrian and bicycle treatments while also accommodating vehicular traffic. It would also provide a vital linkage in Chouteau's Greenway.

- *Create a tunnel under the ramps that accommodates two lanes for vehicular traffic, a six-foot sidewalk on the north side, and at least a 10-foot multi-use path on the south side.*
- *Add lighting and decoration to the tunnel to foster a sense of security for users.*

E.

TIER 2 – Provide streetscape and sidewalk improvements along 8th St from Cerre St to Market St. In particular, strategies should be investigated for reducing conflicts between vehicular traffic entering/exiting the Stadium West Parking Garage and pedestrians using the west sidewalk along 8th St. Overall, this corridor was upgraded as part of the Busch Stadium construction and the sidewalks appear to be of adequate width and sufficient quality to accommodate pedestrian trips. Only minor enhancements to this corridor would likely be needed to improve the pedestrian experience.

F.

TIER 2 – Provide streetscape and sidewalk improvements along Broadway from Cerre St to Market St. In particular, strategies should be investigated for reducing the level of conflict between vehicular traffic entering/exiting the Stadium East Parking Garage and pedestrians using the east sidewalk along Broadway.

G. (not shown)

TIER 3 – All other streets within the station area should be examined for the need for Tier 3 sidewalk and pedestrian improvements in order to provide minimum pedestrian accommodations and safe walking conditions. This includes ADA-compliant ramps at intersections, minimum sidewalk widths absent of obstructions, and satisfying basic standards for lighting and surface conditions.

Bicycle

Figure 3: Bicycle Recommendations

A. - - - - - - - - -

Provide share-the-road bicycling accommodations along 7th/8th St to encourage cycling to the Stadium station and greater Downtown area from areas to the south such as Soulard. A share-the-road corridor is consistent with the Bike St. Louis Plan and the Downtown Multimodal Access Study.

- *Implement share-the-road signage and pavement markings along 7th/8th St through the station area.*

B. ———————

Add dedicated bicycle infrastructure along 4th and Broadway to the south of Market St. This would connect existing dedicated bike lanes along Broadway in Soulard with the Gateway Mall and a future cycle track planned for Market St. This should be implemented in conjunction with an overall reconfiguration of lanes and pavement along both corridors.

- *Reduce the number of through lanes on Broadway and 4th St. to 3. Excess pavement should be designated for a dedicated bike lane, wider sidewalks, curb bump outs, and/or additional on-street parking.*

Transit

Figure 4: Transit Recommendations

A.

Create a new entrance to the eastbound platform of the Stadium station. Currently there is only one exit for the eastbound platform, which is at the south end of the platform. The westbound platform has exits onto both Spruce St and Clark Ave, which more effectively disperses passengers. A new entrance should be created on the eastbound platform that crosses under 8th St and surfaces at the southeast corner of 8th and Clark. This would reduce the number of passengers that cross 8th St at-grade and facilitate access into Ballpark Village.

- *Construct the new entrance under 8th St leading to the southeast corner of Clark Ave and 8th St.*

B.

As development occurs in the station area, consideration should be given to rerouting the #99 Downtown Shuttle to use Clark Ave instead of Market St and better serve the station area. The route would proceed east from the 14th St Transit Center along Clark Ave and then turn to the north using 4th St. The reverse direction would travel southbound on Broadway and turn on Clark towards the 14th St Transit Center.

Vehicular Traffic

Figure 5: Traffic Recommendations

A.

Connect the 9th St. exit ramp from westbound I-64 to 10th St adjacent to the existing westbound on-ramp. Reconfiguring the intrusive 9th St ramp would create a development opportunity in the vacated parcel located in the southwest corner of Clark Ave and 9th St. Additional benefits include relieving the existing awkward and confusing five-leg intersection at 9th St and Clark Ave, resulting in a standard four-way intersection hospitable to pedestrian and bicycle traffic. Moreover, the ramp modification would also facilitate the conversion of both 9th and 10th St.

- *Relocate the terminus of the I-64 westbound off-ramp from 9th St to 10th St.*
- *Convert 9th and 10th St to two-way traffic. Note that 10th St would need to remain one-way southbound to the south of Clark Ave and traffic signals would need to be modified accordingly.*

B.

Construct a roundabout at the intersection of 6th St and Gratiot St to more effectively serve traffic volumes at that location. The existing traffic signal is unwarranted due to low traffic volumes and a roundabout would provide more efficient intersection control.

C.

Create a street behind the Cupples buildings on the Poplar St. alignment to increase connectivity in the area. Currently, 9th, 10th and 11th Streets dead end south of Spruce St and become encumbered by numerous surface parking lots. Extending these streets south would expand the street grid providing a more intuitive layout for the Cupples district, lessen the isolated nature of the area under I-64, and facilitate connections to the future Chouteau's Greenway.

D.

Realign Gratiot St to provide access into Chouteau's Landing. Eastbound traffic on Gratiot is currently forced to turn to the north on 4th due to the offset alignment of Gratiot. This prevents traffic from I-64 (exiting at 6th St) from proceeding into Chouteau's Landing via Gratiot. Realigning the street to create a traditional four-way intersection would address the connectivity deficiency.

E.

City Arch River will convert Walnut St to two-way between Memorial Dr and 8th St as a mitigation strategy for the closure of Memorial Dr. This will significantly increase traffic volumes on the corridor. As such, it is recommended that Walnut St be designated as a vehicular mobility priority corridor and that the two-way conversion be extended from 8th St to Tucker Blvd. This corridor is the only continuous east-west street in the station area and is vital to providing access into the station area from the Memorial Dr exits from the Poplar Street Bridge and I-55/I-44.

- *Convert Walnut St to two-way traffic between 8th St and Tucker Blvd.*
- *Add a traffic signal at Tucker Blvd and Walnut St to serve westbound traffic.*

F.

Realign Poplar St at Broadway to create a four-way intersection with the westbound on-ramp for I-64. The existing on-ramp configuration encourages high traffic speeds in the right lane of Broadway, posing a safety hazard for pedestrians. Forming a more standard intersection and creating a traditional right-turn onto the I-64 on-ramp from southbound Broadway should achieve a safer environment for pedestrians while still providing adequate vehicular mobility.

Preferred Station Area Plan – Parking Guidelines

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 3,400 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.

Furthermore, there is a need to accommodate existing parking demands displaced by the removal of surface parking for development, including lots at Broadway and Spruce St, south side of Spruce St opposite the Westin Hotel, and the northwest quadrant of 9th St and Spruce St. According to the Arch Parking Alternatives Study, these demands would be equivalent to 350 spaces. Therefore, in addition to the new parking demand of 3,400 spaces, parking facilities would be needed to also serve a total existing demand for 350 spaces. In total, parking demands of 3,750 spaces would need to be satisfied as a result of the preferred station area plan alternative, as summarized in **Table 2**.

Table 2: Parking Supply Recommendations

New Parking Demand	3,400 spaces
Existing Parking Demand Displaced	350 spaces
New Parking Supply Needed	**3,750 spaces**

The station area has an abundance of surplus parking spaces based on the Arch Parking Alternatives Study. Evaluating parking needs by station area sub-areas, the majority of the parking needs can be served by existing facilities. The Cupples District should expect parking demand for 850 spaces. This demand would almost certainly be satisfied by a combination of on-site parking provided by individual developments and available spaces in the existing parking garage between 10th St. and 11th St. The mixed-use building proposed for Broadway and Spruce St should provide 400 spaces on-site to accommodate anticipated parking demands.

The largest parking demand would be generated by Ballpark Village, which would amount to 2,500 spaces. According to the Arch Parking Alternatives Study, the Stadium West and Stadium East Garages combined have approximately 2,000 surplus spaces available. Ballpark Village parking demands would be an ideal use of those spaces, although demand for at least 500 spaces would remain. It is likely that certain developments within Ballpark Village would elect to provide parking on-site, which would almost certainly exceed the remaining unsatisfied parking needs.

It should be acknowledged that usage of the Stadium West and Stadium East Garages would likely create conflicts with demands for baseball events that would need to be reconciled. Conflicts could be partially mitigated by the concept of shared parking. Offsetting temporal parking demands could enable the same space to be shared by multiple uses. For example, a parking space designated for office use to be available in the evening for a baseball event.

Ultimately, it is recommended that the parking needs of the station area be 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.

Arch-Laclede's Landing Station

Establishment of Station Area

As an initial step in our evaluations, station area boundaries were established on the basis of transit shed thresholds. A transit shed illustrates the distance limits that potential transit riders are typically willing to walk to a station. A radius of ½ mile around the station, which is equivalent to a 10-minute walk, is a common transit shed boundary. The 5-minute walk radius is frequently referenced as well because a higher level of ridership is typically achieved from within that distance.

The actual transit sheds applied for this analysis account for adjacent MetroLink stations, proximity of major destinations, and the anticipated attractiveness of the walking environment around the station, given planned station area enhancements. These elements help define the geographic limits of the station's ridership capture. The Laclede's Landing station area has several physical boundaries that constrain the capture area. Interstate 70 and the Mississippi River reduce the width of the transit shed on the east and west. The transit shed includes the Gateway Arch but there is no development potential south of the station itself. The transit shed areas are illustrated in **Figure 6** below.

Figure 6: Laclede's Landing Station Transit Shed Boundaries

The Laclede's Landing station area currently contains a mix of office and retail space but very little in residential development. Capture rates for estimating future ridership increases were developed from existing capture rates while taking into account existing and planned land uses. A capture rate of 15 to 20 percent was selected for the area within the quarter mile transit shed, which is consistent with existing capture rates.

A capture rate of 10 to 15 percent was selected for the area between the quarter mile and half mile transit shed. The area is very underdeveloped and, aside from the North Riverfront Trail, suffers from poor north-south pedestrian and bicycle connections. While the selected capture rate range is much higher than current rates, it is assumed that future growth and development would contribute to ridership increases.

Existing Conditions

The Laclede's Landing Station is located on the lower level of the historic Eads Bridge, adjacent to the Gateway Arch and Laclede's Landing entertainment district and within walking distance of Lumiere Place Casino. It primarily serves visitors and employees of these destinations.

Vehicular

Vehicular circulation within Laclede's Landing itself can be convoluted given the narrow street widths, one-way street orientations, interrupted street grid, and uneven cobblestone driving surfaces. North of the MLK Bridge, street upgrades implemented in conjunction with Lumiere Place provide for efficient circulation and ease of wayfinding.

Vehicular access to the station area is limited and confusing. Most traffic enters from the west via Washington Ave, Laclede's Landing Blvd, and Carr St. The intersections of these routes with Memorial Dr, 4th St, and Broadway are complicated by the elevated I-70 and its ramps as well as approaches to the Eads and MLK Bridges.

Access will be affected by City Arch River. Washington Ave east of Memorial Dr will be closed, eliminating that entry point. Reconfiguring Washington Ave and Memorial Dr, coupled with the extension of Memorial Dr (3rd St) north to Carr St, should help mitigate the loss of Washington Ave and create a more intuitive corridor for entering the station area from the south. That said, the MLK Bridge Approach and Carr St/Cole St intersections with 3rd, 4th, and Broadway, which will not be meaningfully addressed by City Arch River, will continue to contribute to access deficiencies for the station area, unless otherwise addressed.

Pedestrian

Pedestrian connectivity within the station area is relatively good. Most streets have sidewalks and offer direct connections to the MetroLink station via 1st and 2nd Streets. However, the infrastructure within Laclede's Landing does not include ADA-compliant crosswalks, and sections of the brick walking surfaces are uneven. The streets around Lumiere Place generally support pedestrian activity with high quality sidewalks.

Pedestrian linkages to the west are disrupted by the barrier formed by the elevated section of I-70 and the labyrinth of roadways and ramps underneath. While some enhancement of the 3rd St/Memorial Dr corridor will be provided by City Arch River, it is unlikely to significantly alter the pedestrian environment between the station area and Downtown to the west. Note that a streetscape project is planned for Washington Ave extending west from 3rd St/Memorial Dr.

Bicycle

The North Riverfront Trail extends north from a trailhead near O'Fallon Street. To the south, it utilizes LK Sullivan Blvd. As part of City Arch River, LK Sullivan Blvd will be rebuilt and include a dedicated, off-street multi-use path. There are no defined bicycle routes through the station area to connect Downtown with the riverfront. Several potential routes may be nullified by topography, surface (cobblestone), or other limitations. Within Laclede's Landing itself, the cobblestone streets preclude cycling of any kind.

Transit

Metro does not provide bus service to the station area. Transit riders are entirely reliant upon MetroLink service at the Laclede's Landing-Arch station. The station was constructed as part of the original MetroLink alignment that opened in 1993. The station is located above grade on the lower deck of the Eads Bridge and has 1 center platform.

Analysis of Preliminary Station Area Plans

The station area plan alternatives were evaluated to provide input as to how the alternatives would impact the transportation system. This evaluation identified the implications of various development intensities and land use mixtures upon traffic, transit, and parking demands. These relationships were quantified using data provided by the Institute of Transportation Engineers (ITE) in Trip Generation and Parking Generation. These resources contain statistics from nationwide studies identifying the trip and parking characteristics of various land uses.

Our methodology emphasized the urban, transit-oriented nature of the future station areas. For select land uses, these characteristics were inherent to the data available from ITE. In many instances, it was necessary to apply manual adjustments to account for characteristics such as internal trip capture within mixed-use developments, reduced auto ownership within transit-oriented developments, and neighborhood walkability. The adjustments reflect national research combined with local experiences.

The results of this analysis are summarized in **Table 3** below. Our findings and conclusions are as follows:

- **Alternative 1** – The Revitalized Laclede's Landing Historic District alternative focuses on the area between the Eads and MLK Bridges. Emphasis is placed on the renovation of existing buildings for office space and developing surface parking and vacant lots with new residential buildings. This alternative would

add approximately 700 light rail trips to the station, resulting in 350 new daily boardings on a typical weekday. The increase in traffic generated by this alternative should be reasonably served by the planned infrastructure improvements, including a westward extension of Lucas Ave and City Arch River improvements to 3rd St.

- **Alternative 2** – The Riverfront Mixed-Use District alternative would simply expand Alternative 1 by adding residential uses and retail space along 1st St to the north of the MLK Bridge. It would also create a greenway between 1st St and LK Sullivan Blvd and emphasize 1st St and 2nd St as the primary commercial streets within the station area. This alternative would add approximately 1,000 light rail trips to the station, resulting in 500 new daily boardings on a typical weekday. The anticipated traffic generation would be similar to Alternative 1 with the exception of additional development north of the MLK Bridge. Existing traffic infrastructure on Carr St would satisfactorily accommodate the additional development.

- **Alternative 3 –** The Riverfront Regeneration alternative is the most ambitious of the alternatives and expands upon the previous alternatives to address the area north of Carr St with a significant amount of residential development. This alternative would add approximately 2,300 light rail trips to the station, resulting in 1,150 new daily boardings on a typical weekday. From a vehicular traffic standpoint, this alternative would generate the largest traffic increase. That said, given the northern extent of the development, new roadway infrastructure to the north of Biddle St would be provided and should adequately accommodate anticipated traffic demands.

- **Preferred Alternative** – The preferred alternative is a downsized version of Alternative 3. While ambitious, the scale of residential development north of Carr St is reduced and all development north of Biddle St is eliminated. Additionally, this alternative places more emphasis on development along the riverfront in Laclede's Landing. This alternative would add approximately 1,800 light rail trips to the station, resulting in 900 new daily boardings on a typical weekday. Vehicular trips would be widely distributed throughout the station area such that the anticipated traffic generation would not be expected to oversaturate any one particular area of the road network.

Table 3: **Evaluation of Arch-Laclede's Landing Station Area Plan Alternatives**

Alternative	Proposed Development	Mode	Daily Demand
1 Revitalized Laclede's Landing Historic District	250 units RESIDENTIAL 50,000 sq. ft. RETAIL 200,000 sq. ft. OFFICE	Transit Trips	728
		Auto Trips	3,675
		Parking Spaces	880
2 Riverfront Mixed-Use District	350 units RESIDENTIAL 150,000 sq. ft. RETAIL 250,000 sq. ft. OFFICE	Transit Trips	1,063
		Auto Trips	6,538
		Parking Spaces	1,160
3 Riverfront Regeneration	1,100 units RESIDENTIAL 200,000 sq. ft. RETAIL 400,000 sq. ft. OFFICE	Transit Trips	2,320
		Auto Trips	12,623
		Parking Spaces	2,640
Preferred Alternative	1,000 units RESIDENTIAL 150,000 sq. ft. RETAIL 250,000 sq. ft. OFFICE	Transit Trips	1,863
		Auto Trips	9,937
		Parking Spaces	2,065

Preferred Station Area Plan – Specific Modality Recommendations

The following summarizes our analysis and recommendations with regards to the Arch-Laclede's Landing Station.

Pedestrians

Corridor-level pedestrian improvements are specified using a tiered approach. These tiers represent the scale of pedestrian and streetscape infrastructure recommended. Tier 1 projects should be deemed the most significant and warrant the largest infrastructure commitment in order to yield the most benefits to users. Tier 1 features include design elements such as wide sidewalks (8 feet or more), decorative pavement and crosswalks, pedestrian lighting, underground utilities, curb bump-outs, green infrastructure, street trees, and street furniture.

Tier 2 recommendations include narrower sidewalks (approximately 6 feet), standard pavements, painted crosswalks, and less elaborate streetscape measures. These corridors support the Tier 1 corridors and serve a less crucial role in the transportation network. Finally, Tier 3 recommendations address gaps in the existing pedestrian network, such as extending sidewalks to areas lacking pedestrian access, retrofitting intersections to include ADA-compliant crossings, and providing standard sidewalk widths, surface conditions, and lighting.

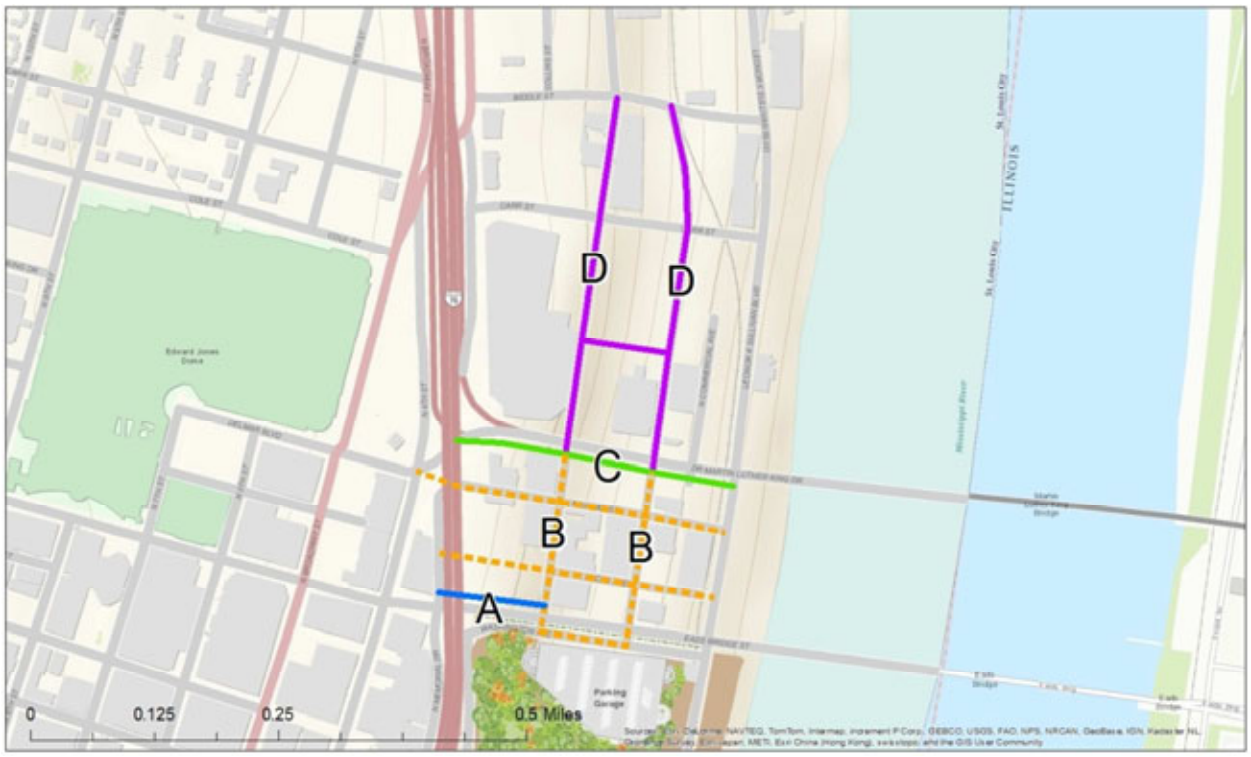

Figure 7: Pedestrian Recommendations

A.

TIER 1 – Construct a high-quality pedestrian connection between Memorial Dr. and 2nd St. Currently, pedestrian access into Laclede's Landing from Downtown is poor due to I-70 elevated. In particular, connections to Washington Ave are lacking and will not be improved by the City Arch River removal of Washington Ave adjacent to the Eads Bridge. An inviting pedestrian connection is needed to link Washington Ave to Laclede's Landing. It is recommended that a highly-visible pedestrian entryway be constructed on the north side of the Eads Bridge. This project will complement the City Arch River improvements to the intersection of Memorial Dr and Washington Ave and the Washington Ave streetscape project to the west of Memorial Dr.

- *Create a wide and inviting pedestrian entrance along the north side of the Eads Bridge between Memorial Dr. and 2nd St and include ample streetscape elements such as lighting, signage, decorative pavement and seating to create a welcoming gateway.*

B.

TIER 1 – Provide pedestrian and streetscape enhancements within Laclede's Landing to maximize the pedestrian experience. While Laclede's Landing current offers a unique pedestrian experience, ADA-complaint pedestrian crossings are lacking, sidewalks can be narrow (particularly when encroached upon by outdoor dining), and brick sidewalks create uneven surfaces in places. Tier 1 design standards should be applied to improve these facilities and ensure that people of all abilities are able to move about the area with ease.

- *Update sidewalks and crosswalks to satisfy ADA requirements.*
- *Provide streetscaping elements that complement the historic character of Laclede's Landing and contribute to a pleasant walking environment.*

C.

TIER 2 – Improve pedestrian connectivity along Laclede's Landing Blvd and under the MLK Bridge. These improvements should complement planned activation of space under the bridge and also calm vehicular traffic on Laclede's Landing Blvd.

- *Upgrade the streetscape along Laclede's Landing Blvd and MLK Blvd to complement the planned park facility under the MLK Bridge.*
- *Designate one traffic lane on Laclede's Landing Blvd for on-street parking as a means of calming traffic and increasing parking.*

D.

TIER 2 – Add pedestrian amenities along 1st St and 2nd St north of MLK Bridge in the vicinity of Lumiere Place. These corridors were upgraded by Lumiere Place within the last 10 years and the sidewalks appear to be of adequate width and sufficient quality to accommodate pedestrian trips. Only minor enhancements to these corridors would likely be needed to improve the pedestrian experience.

E. (not shown on map)
TIER 3 – All other streets within the station area should be examined for the need for Tier 3 sidewalk and pedestrian improvements in order to provide minimum pedestrian accommodations and safe walking conditions. This includes ADA-compliant ramps at intersections, minimum sidewalk widths absent of obstructions, and satisfying basic standards for lighting and surface conditions.

Bicycle

Figure 3: Bicycle Recommendations

A.
Construct a multi-use trail along the I-70 corridor connecting the northwest quadrant of the Gateway Arch grounds with Biddle St. The trail would capitalize on streetscape improvements that will be made to 3rd St by City Arch River. It would then utilize a section of 4th St between Convention Plaza and Biddle St that would be vacated by the future realignment of 4th St. Biddle St would be narrowed from 4 to 2 lanes and the surplus pavement would be converted to dedicated bicycle lanes. This project would fulfill a missing link between Downtown and the North Riverfront Trailhead, while serving numerous destinations along the route such as Lumiere Place, Edward Jones Dome, Laclede's Landing, Bottle District, and Washington Ave.

- *Construct a multi-use path along Memorial Dr between Washington Ave and Convention Plaza.*

- *Convert the disused section of 4th St. (See Vehicle Section A) to a multi-use path between Convention Center and Biddle St.*
- *Perform a road diet on Biddle St and create bicycle lanes between I-70 and the North Riverfront Trail.*

B.

City Arch River will reconstruct LK Sullivan Blvd to include a multi-use trail and significant streetscaping elements. These improvements should be provided along LK Sullivan Blvd throughout the station area to complement the other pedestrian and bicycle improvements recommended as part of the station area plan.

Transit

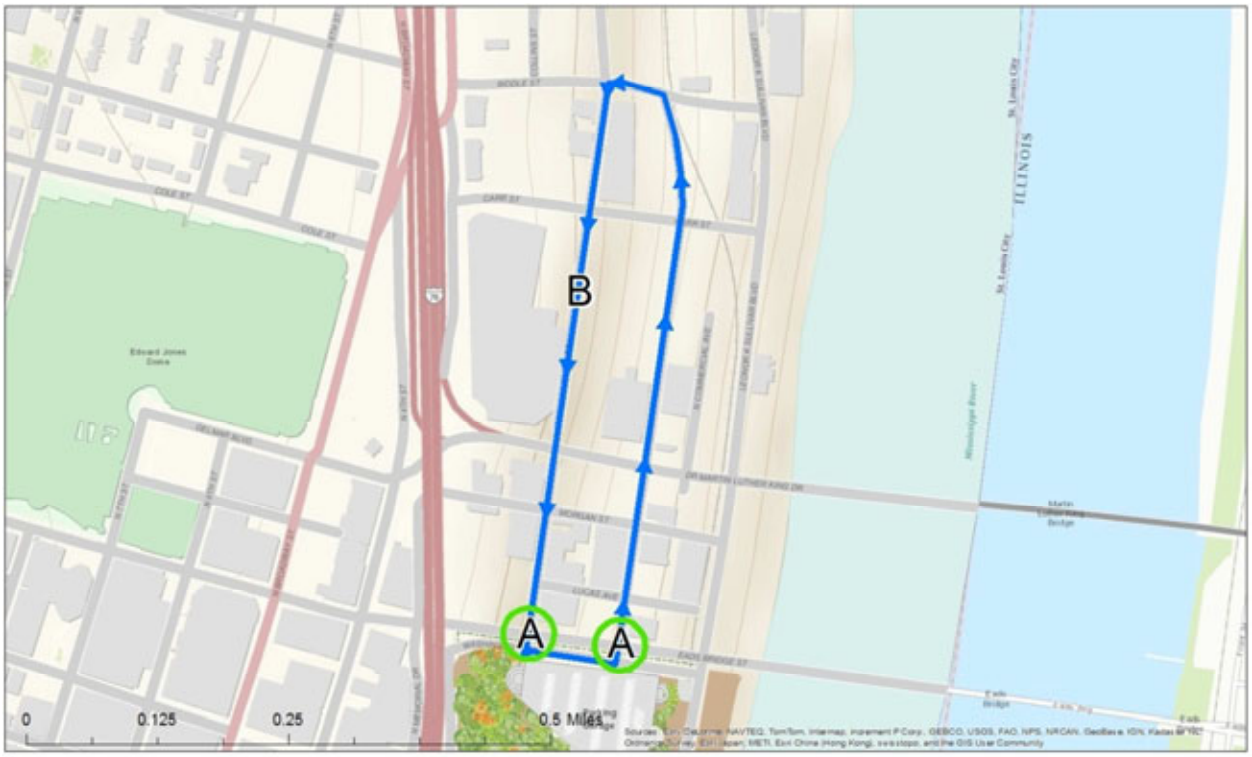

Figure 4: Transit Recommendations

A.

Improve the entrances to the Arch-Laclede's Landing MetroLink station to make it more inviting and noticeable and improve the sense of security under the Eads Bridge. The current station entrances are not particularly visible, can be difficult to locate, and are poorly lighted.

- *Improve the lighting under the Eads Bridge on 1st and 2nd Streets at the station entrances.*

- *Add signage at the station entrances and wayfinding signs throughout the station area to direct people to the station.*
- *Improve drainage and otherwise enhance the damp and dark nature of the station entrances.*

B.

As the station area develops, it would be beneficial to provide additional transit options and possibly connect more distant portions of the station area to and from the station. A small shuttle route could serve internal roads and move people from Carr St and Biddle St south to the station.

- *Consider providing a one-way transit shuttle loop – north on 1st St, west on Biddle St, south on 2nd St and east on the remnant of Washington Ave.*

Vehicular Traffic

Figure 5: Traffic Recommendations

A.

Apply the Downtown Multimodal Access Study recommendation to improve the intersections at the MLK Bridge touchdown and at Broadway/3rd St/Cole St/Carr St. The current intersections are inefficient, confusing, and hostile to cyclists and pedestrians. Simplifying the intersections and reintegrating them into downtown street grid would

make them safer and easier to navigate, which in turn would enhance access into and out of the station area.

- *Align Convention Plaza and Morgan St to provide a direct vehicular and pedestrian connection between Laclede's Landing and Downtown.*
- *Realign 4th St to connect with 3rd St north of the MLK Bridge, thereby vacating the existing section of 4th St adjacent to Baer Plaza.*
- *Realign Cole St and Carr St through Broadway and 3rd St to create more intuitive intersections.*

B.

Establish a vehicular connection between Biddle St and Broadway to the north of the station area. The street grid in this area is disconnected and future development of northern portions of the station area would benefit from an improved street connection to Broadway. This would also help compensate for the reduction in travel lanes on Biddle St itself.

C.

Maintain one-way circulation on 1st St, 2nd St, Lucas Ave, Morgan St, and Laclede's Landing Blvd. These streets are too narrow to accommodate both on-street parking and two-way traffic. In fact, select streets are too narrow for two-way traffic irrespective of on-street parking. The current circulation pattern is relatively intuitive, provides adequate access, and supports traffic management during special events. Moreover, circulation will be aided by the impending extension of Lucas St west to Memorial Dr and 3rd St. Note that this plan is predicated on City Arch River retaining a section of Washington Ave between 1st St and 2nd St to allow full circulation at the sound end of Laclede's Landing.

D.

Extend Lucas Ave west of 2nd St to Memorial Dr and 3rd St. The corridor should accommodate two-way traffic west of 2nd St. East of 2nd St, Lucas Ave should remain one-way eastbound. This improvement will help form a more complete circulatory system within Laclede's Landing and provide second point of entry and egress to complement Laclede's Landing Blvd and Morgan St and replace Washington Ave, which will be eliminated south of the Eads Bridge by City Arch River.

Preferred Station Area Plan – Parking Guidelines

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.

Furthermore, there is a need to accommodate existing parking demands displaced by development or other parking removals. According to the Arch Parking Alternatives Study, the removal of the Arch Parking Garage on Washington Ave by City Arch River will create a demand for 500 spaces that will need to be satisfied elsewhere, presumably within the station area.

Additionally, the existing parking demand between the Eads Bridge and Carr Street amounts to 1,200 spaces but many of the parking facilities accommodating these demands would become development parcels under the preferred station area plan. Of the 1,200 space existing demand, demand for only 500 spaces would continue to be served in an existing parking facility, which is the Lumiere Place Parking Garage to remain. The other 700 space demand is currently served by parking lots that would be eliminated.

Therefore, in addition to the new parking demand of 2,000 spaces, parking facilities would be needed to also serve a total existing demand for 1,200 spaces. This comprises 500 spaces removed from the Arch Garage plus 700 eliminated spaces north of the Eads Bridge. In total, new parking for 3,200 spaces is recommended to support the preferred station area plan, as summarized in **Table 4**.

Table 4: Parking Supply Recommendations

New Parking Demand	2,000 spaces
Existing Parking Demand Displaced	1,200 spaces
New Parking Supply Needed	**3,200 spaces**

The amount of the off-street spaces needed 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. Shared parking could reduce the off-street parking needs by up to 20 percent.

Ultimately, it is recommended that the parking needs of the station area be 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.

APPENDIX

Stadium Station - Enhanced Stadium Station Crossing Area

Daily Totals By Mode	
Transit Trips	1,810
Auto Trips	8,015
Parking Demand	1,277

Parking Needs by Area	
Ballpark Village	1,147
Cupples District	130

Residential

300 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit
High-Rise Apartment - 222: 4.2 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	200	4.2	10%	756	25%	20%	151	416	42
Cupples District	100	6.6	5%	627	25%	20%	125	345	34
					Totals		**277**	**761**	**76**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
Ballpark Village	200	1.2	240
Cupples District	100	1.2	120
		Totals	**360**

Office

150,000 sq. ft. Total

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	150,000	11	10%	1485	25%	15%	223	891	89
					Totals		**223**	**891**	**89**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.25 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	150,000	2.25	338
		Totals	**338**

Retail

250,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	190,000	42.7	20%	6490	20%	15%	974	4219	422
Cupples District	60,000	42.7	10%	2306	50%	5%	115	1038	104
						Totals	**1089**	**5256**	**526**

Parking Demand

ITE Land Use Code Shopping Center - 820: 2.6 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	215,000	1.6	344
Cupples District	10,000	1.0	10
		Totals	**354**

Hotel

250,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Hotel - 310: 8.2 daily trips/room

Description	Rooms	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	300	8.2	10%	2214	40%	10%	221	1107	111
						Totals	**221**	**1107**	**111**

Parking Demand

ITE Land Use Code Hotel - 310: 0.9 vehicles/occupied room reduced for pedestrian and transit trips

Description	Rooms	Rate	Parking Spaces Needed
Ballpark Village	300	0.75	225
		Totals	**225**

Stadium Station - Cupples | Ballpark District

Daily Totals By Mode	
Transit Trips	3,233
Auto Trips	13,563
Parking Demand	2,938

Parking Needs by Area	
Ballpark Village	1,993
Cupples District	570
Mixed-Use E. of Stadium	375

Residential

450 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit
High-Rise Apartment - 222: 4.2 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Cupples District	450	6.6	5%	2822	25%	20%	564	1552	155
					Totals		**564**	**1552**	**155**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
Cupples District	450	1.2	540
		Totals	**540**

Office

650,000 sq. ft. Total

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	490,000	11	10%	4851	25%	15%	728	2911	291
Mixed-Use Building East of Stadium	160,000	11	5%	1672	25%	15%	251	1003	100
					Totals		**978**	**3914**	**391**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.25 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	490,000	2.25	1103
Mixed-Use	160,000	2.25	360
		Totals	**1463**

Retail

250,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	205,000	42.7	20%	7003	20%	15%	1050	4552	455
Cupples District	30,000	42.7	10%	1153	50%	5%	58	519	52
Mixed-Use	15,000	42.7	10%	576	50%	5%	29	259	26
						Totals	**1137**	**5330**	**533**

Parking Demand

ITE Land Use Code Shopping Center - 820: 2.6 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	205,000	1.6	328
Cupples District	30,000	1.0	30
Mixed-Use	15,000	1.0	15
		Totals	**373**

Hotel

600,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Hotel - 310: 8.2 daily trips/room

Description	Rooms	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	750	8.2	10%	5535	40%	10%	554	2768	277
						Totals	**554**	**2768**	**277**

Parking Demand

ITE Land Use Code Hotel - 310: 0.9 vehicles/occupied room reduced for pedestrian and transit trips

Description	Rooms	Rate	Parking Spaces Needed
Ballpark Village	750	0.75	563
		Totals	**563**

Stadium Station - Cupples, Ballpark, Chouteau Mixed-Use District

Daily Totals By Mode	
Transit Trips	4,024
Auto Trips	17,519
Parking Demand	4,060

Parking Needs by Area	
Ballpark Village	2,698
Cupples District	700
Mixed-Use E. of Stadium	663

Residential

950 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit
High-Rise Apartment - 222: 4.2 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	450	4.2	10%	1701	25%	20%	340	936	94
Cupples District	500	6.6	5%	3135	25%	20%	627	1724	172
						Totals	**967**	**2660**	**266**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
Ballpark Village	450	1.2	540
Cupples District	500	1.2	600
		Totals	**1140**

Office

850,000 sq. ft. Total

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	650,000	11	10%	6435	25%	15%	965	3861	386
Mixed-Use Building East of Stadium	200,000	11	5%	2090	25%	15%	314	1254	125
						Totals	**1279**	**5115**	**512**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.25 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	650,000	2.25	1463
Mixed-Use	250,000	2.25	563
		Totals	**2025**

Retail

400,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	200,000	42.7	20%	6832	20%	15%	1025	4441	444
Cupples District	100,000	42.7	10%	3843	50%	5%	192	1729	173
Mixed-Use	100,000	42.7	10%	3843	50%	5%	192	1729	173
						Totals	**1409**	**7900**	**790**

Parking Demand

ITE Land Use Code Shopping Center - 820: 2.6 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	200,000	1.6	320
Cupples District	100,000	1.0	100
Mixed-Use	100,000	1.0	100
		Totals	**520**

Hotel

450,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Hotel - 310: 8.2 daily trips/room

Description	Rooms	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	500	8.2	10%	3690	40%	10%	369	1845	185
						Totals	**369**	**1845**	**185**

Parking Demand

ITE Land Use Code Hotel - 310: 0.9 vehicles/occupied room reduced for pedestrian and transit trips

Description	Rooms	Rate	Parking Spaces Needed
Ballpark Village	500	0.75	375
		Totals	**375**

Stadium Station - Preferred Alternative

Daily Totals By Mode	
Transit Trips	3,584
Auto Trips	14,448
Parking Demand	3,354

Parking Needs by Area	
Ballpark Village	2,437
Cupples District	655
Mixed-Use E. of Stadium	263

Residential

800 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit
High-Rise Apartment - 222: 4.2 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	300	4.2	10%	1134	25%	20%	227	624	62
Cupples District	350	6.6	5%	2195	25%	20%	439	1207	121
Mixed-Use Building East of Stadium	150	6.6	5%	941	25%	20%	188	517	52
					Totals		**854**	**2348**	**235**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
Ballpark Village	300	1.2	360
Cupples District	350	1.2	420
Mixed-Use	150	1.2	180
		Totals	**960**

Office

650,000 sq. ft. Total

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	520,000	11	10%	5148	25%	15%	772	3089	309
Cupples District	100,000	11	5%	1045	25%	15%	157	627	63
Mixed-Use Building East of Stadium	30,000	11	5%	314	25%	15%	47	188	19
					Totals		**976**	**3904**	**390**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.25 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	520,000	2.25	1170
Cupples District	100,000	2.25	225
Mixed-Use	30,000	2.25	68
		Totals	**1463**

Retail

250,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	225,000	42.7	20%	7686	20%	15%	1153	4996	500
Cupples District	10,000	42.7	10%	384	50%	5%	19	173	17
Mixed-Use	15,000	42.7	10%	576	50%	5%	29	259	26
						Totals	**1201**	**5428**	**543**

Parking Demand

ITE Land Use Code Shopping Center - 820: 2.6 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
Ballpark Village	215,000	1.6	344
Cupples District	10,000	1.0	10
Mixed-Use	15,000	1.0	15
		Totals	**369**

Hotel

600,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Hotel - 310: 8.2 daily trips/room

Description	Rooms	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
Ballpark Village	750	8.2	10%	5535	40%	10%	554	2768	277
						Totals	**554**	**2768**	**277**

Parking Demand

ITE Land Use Code Hotel - 310: 0.9 vehicles/occupied room reduced for pedestrian and transit trips

Description	Rooms	Rate	Parking Spaces Needed
Ballpark Village	750	0.75	563
		Totals	**563**

Laclede's Landing Station - Revitalized Laclede's Landing Historic District

Daily Totals By Mode	
Transit Trips	728
Auto Trips	3,675
Parking Demand	880

Residential

250 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	250	6.6	0%	1650	15%	20%	330	1073	107
						Totals	**330**	**1073**	**107**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
South of Carr Street	250	1.2	300
		Totals	**300**

Office

200,000 sq. ft.

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	200,000	11	10%	1980	15%	15%	297	1386	139
						Totals	**297**	**1386**	**139**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.5 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	200,000	2.5	500
		Totals	**500**

Retail

50,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	50,000	42.7	5%	2028	35%	5%	101	1217	122
						Totals	**101**	**1217**	**122**

Parking Demand

ITE Land Use Code Shopping Center - 820: 3.2 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	50,000	1.6	80
		Totals	**80**

Laclede's Landing Station - Riverfront Mixed-Use District

Daily Totals By Mode	
Transit Trips	1,063
Auto Trips	6,538
Parking Demand	1,160

Residential

350 Total Units

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	350	6.6	0%	2310	15%	20%	462	1502	150
						Totals	**462**	**1502**	**150**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
South of Carr Street	350	1.2	420
		Totals	**420**

Office

200,000 sq. ft.

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	200,000	11	10%	1980	15%	15%	297	1386	139
						Totals	**297**	**1386**	**139**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.5 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	200,000	2.5	500
		Totals	**500**

Retail

150,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	150,000	42.7	5%	6085	35%	5%	304	3651	365
						Totals	**304**	**3651**	**365**

Parking Demand

ITE Land Use Code Shopping Center - 820: 3.2 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	150,000	1.6	240
		Totals	**240**

Laclede's Landing Station - Riverfront Regeneration

Daily Totals By Mode	
Transit Trips	2,320
Auto Trips	12,623
Parking Demand	2,640

Residential

1100 Total Units
900 South of Carr Street
200 North of Carr Street

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	900	6.6	0%	5940	15%	20%	1188	3861	386
North of Car Street	200	6.6	0%	1320	5%	10%	132	1122	112
						Totals	**1320**	**4983**	**498**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Spaces
South of Carr Street	900	1.2	1080
North of Car Street	200	1.2	240
		Totals	**1320**

Office

400,000 sq. ft.

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	400,000	11	10%	3960	15%	15%	594	2772	277
						Totals	**594**	**2772**	**277**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.5 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	400,000	2.5	1000
		Totals	**1000**

Retail

200,000 sq. ft. Total
160,000 South of Carr Street
40,000 North of Carr Street

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	160,000	42.7	5%	6490	35%	5%	325	3894	389
North of Carr Street	40,000	42.7	5%	1623	35%	5%	81	974	97
						Totals	**406**	**4868**	**487**

Parking Demand

ITE Land Use Code Shopping Center - 820: 3.2 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	160,000	1.6	256
North of Carr Street	40,000	1.6	64
		Totals	**320**

Laclede's Landing Station - Preferred Alternative

Daily Totals By Mode	
Transit Trips	1,863
Auto Trips	9,937
Parking Demand	2,065

Residential

1000 Total Units
800 South of Carr Street
200 North of Carr Street

Transportation Demand

ITE Land Use Code Apartment - 220: 6.6 daily trips per unit

Description	Units	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	800	6.6	0%	5280	15%	20%	1056	3432	343
North of Car Street	200	6.6	0%	1320	5%	10%	132	1122	112
						Totals	**1188**	**4554**	**455**

Parking Demand

ITE Land Use Code Mid-Rise Apartment - 221: 1.2 parked vehicles/unit

Description	Units	Rate	Parking Spaces Needed
South of Carr Street	800	1.2	960
North of Car Street	200	1.2	240
		Totals	**1200**

Office

250,000 sq. ft.

Transportation Demand

ITE Land Use Code General Office - 710: 11 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	250,000	11	10%	2475	15%	15%	371	1733	173
						Totals	**371**	**1733**	**173**

Parking Demand

ITE Land Use Code General Office - 701: 3 vehicles/1000 sq ft in an urban setting reduced to 2.5 due to station proximity

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	250,000	2.5	625
		Totals	**625**

Retail

150,000 sq. ft. Total

Transportation Demand

ITE Land Use Code Shopping Center - 820: 42.7 daily trips/1000 sq ft

Description	Sq. Ft.	Rate	Internal Capture	External Trips	Pedestrian Trip Rate	Transit Capture	Daily Transit Trips	Daily Auto Trips	Peak Hour Auto Trips
South of Carr Street	150,000	42.7	5%	6085	35%	5%	304	3651	365
						Totals	**304**	**3651**	**365**

Parking Demand

ITE Land Use Code Shopping Center - 820: 3.2 vehicles/1000 sq ft reduced for pedestrian and transit trips

Description	Sq. Ft.	Rate	Parking Spaces Needed
South of Carr Street	150,000	1.6	240
		Totals	**240**

E

Civil, Sustainability & Environmental Planning

M3 Engineering Group

Transit Oriented Development
Station Area Planning
Stormwater and Environmental Planning

Stadium/Arch/Laclede's Landing Stations

St. Louis Development Corporation

August 30, 2013

Prepared by ENGINEERING GROUP P.C.

for H3 Studio

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EXECUTIVE SUMMARY

The purpose of this report is to describe the potential impacts to stormwater quantity and quality resulting from proposed Transit Oriented Development (TOD) near the Stadium/Arch/Laclede Stations. The report also includes the steps required to mitigate the impacts, primarily through reducing stormwater runoff.

The Stadium and Arch/Laclede TOD areas operate using combined sewer systems located within the Bissell Watershed, which discharges directly to the Mississippi River. Both areas are highly developed and have a high degree of impervious surface. Examination of MSD records indicates that there is a history of basement backup complaints in both areas, suggesting a combined sewer system that lacks sufficient capacity to carry heavy rainfall events.

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. Regardless of whether a proposed development increases runoff, it is MSD's policy to require on-site storage for development in areas where the downstream combined sewer system lacks capacity. Therefore, the proposed development in both the Stadium and Arch/Laclede TOD areas will require water quality and quantity storage.

Best Management Practices (BMPs) control stormwater runoff and pollution by introducing a treatment method or technique to the project site. Some BMPs allow infiltration into the soil, some store runoff to reduce hydraulic impact on receiving sewers, and some do both. There are many types of BMPs, but preferred BMPs for the TOD project are bioretention, permeable pavement, rainwater harvesting, green roofs, disconnection and buffer strips. Calculations indicate that approximately 20% of each site should be set aside for storage and other BMPs. Based on broad assumptions regarding the total extent of development and BMP construction, the estimated cost to build BMPs is $2.2M in the Stadium TOD area and $7.2M in the Arch/Laclede TOD area.

For development projects located within the Bissell Watershed, which includes both the Stadium and Arch/Laclede TOD areas, MSD is offering a program to help with funding for new BMPs. This program is part of MSD's effort to satisfy the terms of the Federal Consent Decree that was negotiated with the EPA in 2012. MSD's *Green Infrastructure Program Financial Partnering for Early Action Projects* is part of MSD's goal of spending $100M for green infrastructure in watersheds that discharge to the Mississippi River.

Prior to construction of BMPs, formal agreements should be prepared that detail the responsibility and extent of maintenance.

1.0 INTRODUCTION

1.1 Purpose of the Report

The purpose of this report is to describe the potential impacts to stormwater quantity and quality resulting from proposed Transit Oriented Development (TOD) near the Stadium and Arch/Laclede Stations. The report also includes the steps required to mitigate the impacts, primarily through reducing stormwater runoff.

1.2 Stormwater Runoff Control Objectives

There are several reasons to reduce stormwater runoff from urban sites, including:

- Reduce the pollutants that enter waterway systems
- Reduce the cost of building and maintaining public stormwater infrastructure
- Reduce the stormwater volume contributing to flooding
- Restoration of aquatic habitat
- Improve groundwater recharge
- Enhance neighborhood aesthetics

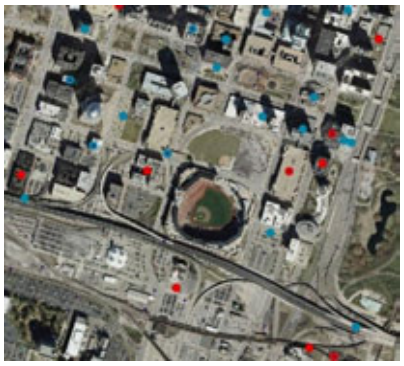
In general, the practices that can help achieve the goal of stormwater runoff reduction include:

- Minimize land disturbance
- Preserve and recreate natural landscape features
- Reduce impervious cover
- Disconnect direct stormwater paths from enclosed piping systems
- Provide offline storage
- Provide detention and infiltration opportunities

Techniques that can help achieve a reduction in stormwater runoff are referred to as Best Management Practices (BMPs). Several BMPS are described later in this report.

2.0 EXISTING CONDITIONS

The MetroLink station currently located at the Stadium is in the Mississippi Watershed, which is a sub watershed to the Bissell Watershed.



MSD Basement Backup Complaints Indicate Combined Sewer Capacity Issues at the Stadium Station

2.1 Surface Conditions

Stadium - This project area defined by the ½ mile Transit Shed has a percent impervious of 95.3%. This level of imperviousness is typical of highly developed and dense urban areas. Stormwater runoff from urban surfaces (parking lots, streets, etc.) carries pollutants such as oil, grease and heavy metals.

Arch/Laclede - This project area defined by the ½ mile Transit Shed, including the Arch grounds, has a percent impervious of 53.91%. If we exclude the Arch grounds, the percent impervious increases to 68.98%. This level of imperviousness is typical of highly developed and dense urban areas. Stormwater runoff from urban surfaces (parking lots, streets, etc.) carries pollutants such as oil, grease and heavy metals.

2.2 Subsurface Conditions

Stormwater runoff for the Stadium/Arch/Laclede Station area is captured by inlets and is directed to an enclosed combined sewer system (carries both storm and sanitary flow) that heads eastward toward the Mississippi River. Runoff from buildings typically flows directly into the combined system through downspouts or roof drains. During dry weather (no rainfall), the sanitary flow is intercepted and carried to a wastewater treatment plant. During wet weather (rainfall), some of the combined storm and sanitary flow is intercepted, while the excess is discharged directly to the Mississippi River. Pervious surfaces, such as grassy areas, infiltrate some of the rainfall, while excess runs off into the combined sewer system. Based on a review of flooding complaint records, it appears that there are downstream sewer capacity issues in the area of the proposed TOD.

MSD Basement Backup Complaints Indicate Combined Sewer Capacity Issues at the Arch/Laclede Station

3.0 STORMWATER REGULATORY ISSUES

3.1 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 2 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 2 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 twenty (20) percent 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.

Some development planned within the TOD areas may increase the percent impervious, thus requiring water quality and quantity remediation measures. Because of the downstream combined sewer capacity issues,

MSD will require the developers to construct remediation measures regardless of whether imperviousness is increased.

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.

3.1.1 Water Quality Volume

According to the MSD Rules and Regulations handbook, "The Water Quality Volume is the storage needed to capture and treat the runoff from 90% of the recorded daily rainfall events." In order to calculate the water quality volume (in acre-feet), 1.14 inches of rainfall (P) must be multiplied by the volumetric runoff coefficient and drainage area.

3.1.2 Channel Protection Storage Volume

A 24-hour extended detention of the one-year, 24-hour storm event is required in order to protect downstream channels. In order to protect the downstream channels, runoff must not be released quickly, but rather stored and then gradually released into the system.

3.1.3 Flood Protection Volume

To protect downstream sites from flooding, release rates must not exceed the rates for the 2-year and 100-year, 24-hour storm event. The release rates vary by watershed and can be located in Table 4-5 of the MSD Rules and Regulations handbook.

4.0 PROPOSED STORMWATER QUALITY IMROVEMENTS

4.1 Methods to Address Permitting Requirements

Best Management Practices (BMPs) control stormwater runoff and pollution by introducing a treatment method or technique to the project site. Some BMPs allow infiltration into the soil, some store runoff to reduce hydraulic impact on receiving sewers, and some do both. There are many types of BMPs, but preferred BMPs for the TOD project are bioretention, permeable pavement, rainwater harvesting, green roofs, disconnection and buffer strips. Because of the downstream combined sewer capacity issues at both the Stadium and Arch/Laclede TOD sites, water quality and quantity measures will be required. Calculations indicate that approximately 20% of each site should be set aside for storage and other BMPs.

4.1.1 Bioretention Facilities

Bioretention facilities reduce stormwater runoff and improve water quality. They consist of a depressed landscaped area that can store runoff above grade and allow it to infiltrate through prepared soils that filter out pollutants. The facility includes plantings that remove the pollutants from the soil through the root structure. Bioretention facilities should be strategically located to accept runoff from impervious areas on the site. Flows that exceed the above-grade capacity of the facility are directed into an overflow inlet. Infiltration that exceeds the below-grade capacity is directed into a perforated underdrain.

4.1.2 Permeable Pavement

There are three types of permeable pavement: Permeable Interlocking Concrete Pavement (PICP), Porous Asphalt, and Pervious Concrete. The pavement is designed to absorb rainfall and filter it through a reverse-graded aggregate subbase which is above a storage area consisting of large aggregate with 40% voids. The stormwater that does not infiltrate into the native soil is carried away through a perforated underdrain.

4.1.3 Rainwater Harvesting

Rainwater harvesting captures runoff (typically from roofs) and stores it for future uses such as irrigation. Rain barrels are a typical example of this, but larger and more ornate facilities have been used in urban areas and can be used as an aesthetic feature or as a water quality educational tool.

4.1.4 Green Roofs

Living roofs, or in more common terms green roofs, are roofs that are partially or fully covered with vegetation. They provide advantages to the building itself, such as climate control, and also absorb rainfall to reduce the amount of runoff and improve water quality.

4.1.5 Disconnection

Disconnection simply refers to disconnecting a downspout or roof drain that flows directly to an enclosed sewer system. The flow is redirected onto a permeable surface or is captured in a Rainwater Harvesting or Bioretention facility.

4.1.6 Buffer Strips

Buffer strips are strips of vegetation (grassy area, for example) that are placed at the downstream edge of an impervious surface. The runoff is forced to cross the strip, where infiltration reduces volume and filters pollutants. Removal of existing pavement may be required to accommodate a Buffer Strip.

4.2 Recommended BMP Locations

Bioretention Facilities – Could be placed in the medians of parking lots, within street “bump-outs”, adjacent to buildings as planter boxes, within roadway medians and within public parks.

Permeable Pavement – Could be used for parking lots, sidewalks, driveways and alleys.

Rainwater Harvesting – Could be used at new and existing buildings.

Green Roofs – Could be used on new buildings.

Disconnection – Could be used for existing buildings.

Buffer Strips – Could be used adjacent to new and existing streets and parking lots.

4.3 Maintenance for BMPS

It is important to factor in the responsibility and cost of maintaining BMPs. Planted BMPs, such as Bioretention Facilities, will require annual plant maintenance and replacement of perennials. The infiltration capacity of the soil may diminish over several years and will require amendment or replacement. Permeable Pavement must be vacuumed at least once per year to remove solids that are trapped in the pavement. Prior to construction of BMPs, formal agreements should be prepared that detail the responsibility and extent of maintenance.

5.0 ESTIMATED CONSTRUCTION COST

5.1 Unit Costs

Based on recent local projects, following are estimates for construction of various BMPs:

Bioretention Facilities – $20 to $25/sf

Permeable Pavement – $15 to $20/sf

Rainwater Harvesting –$150 and up (depends on the aesthetic nature of the BMP).

Green Roofs – $15 to $20/sf

Disconnection – $500 to $1,000 per disconnection.

Buffer Strips – $5 to $10/sy

Based on broad assumptions regarding the total extent of development and BMP construction, the estimated cost to build BMPs is $2.2M in the Stadium TOD area and $7.2M in the Arch/Laclede TOD area.

5.2 Financial Partnering Opportunities

For development projects located within the Bissell Watershed, MSD is offering a program to help with funding for new BMPs. This program is part of MSD's effort to satisfy the terms of the Federal Consent Decree that was negotiated with the EPA in 2012.

MSD's *Green Infrastructure Program Financial Partnering for Early Action Projects* is part of MSD's goal of spending $100M for green infrastructure in watersheds that discharge to the Mississippi River. The Partnering Program is being introduced in conjunction with MSD's Green Infrastructure CSO Volume Reduction Pilot Program. As with the Pilot Program, the goal of the Partnering Program is to reduce CSO (combined sewer overflow) by 10%. It should be noted that projects must be located upstream from a combined sewer's "interceptor" and overflow weir in order to qualify for the program. Some areas of the TOD nearest the Mississippi River may be downstream from the interceptor and may not qualify.

More information on this program can be found in the Appendix.

APPENDIX

METROPOLITAN ST. LOUIS SEWER DISTRICT | 2350 MARKET STREET | ST. LOUIS, MO 63103-2555 | (314) 768-6200 | WWW.STLMSD.COM | WWW.PROJECTCLEARSTL.ORG

Metropolitan St. Louis Sewer District
Project Clear - Rainscaping Program
Early Action Projects Grant Program
Application Instructions
August 1, 2013

Introduction and Background Information

MSD's Long Term Control Plan (LTCP) outlines a green infrastructure, or Rainscaping, program as part of the selected long-term Combined Sewer Overflow (CSO) controls. The overall goals of this green infrastructure program, as stated in the LTCP, are to "identify and implement projects and programs that will significantly reduce CSOs and provide additional environmental benefit," as well as reduce CSO overflow volumes to the Mississippi River. Rainscaping projects will redirect stormwater from reaching the combined sewer system by capturing and diverting it to locations where it is detained, infiltrated into the ground, evaporated, taken up by plants and transpired, or reused.

MSD's Project Clear, the 23 year, $4.7 billion initiative to plan, design, and build system-wide improvements to address water quality and alleviate many wastewater concerns in the St. Louis region, includes $100 million in green infrastructure investments. The 23 years will be divided into an initial 5-year $3 million pilot program and a full-scale program for the remaining 18 years and $97 million. MSD anticipates a 5-year period for complete implementation and reporting on the pilot program. In general, work to be done to implement the full-scale Rainscaping program will be based on the green infrastructure plan. However, there may be projects that are identified by MSD and can be agreed upon as being high priority projects suitable for early implementation even before the green infrastructure plan is finalized and approved. When MSD identifies a project or a group of projects that it believes is appropriate for early implementation, the District will propose these projects as an early action project(s) by submitting a written proposal to the EPA. The EPA must approve the project(s) before MSD will proceed.

While the core of MSD's Rainscaping pilot program will be stormwater retrofitting conducted in partnership with the City of St. Louis, MSD will continue to seek to build partnerships with other municipalities, schools, community development organizations, and private developers. The goal is

to engage partners to identify joint opportunities to incorporate Rainscaping into ongoing programs and future redevelopment projects.

Potential Eligible Project Elements
The following list shows eligible project elements. Other elements related to the green infrastructure program may be eligible if they are in accordance with the program objectives.

- Impervious area reduction
- Porous pavement
- Reinforced turf
- Amended soils
- Planter boxes
- Bioretention/Rain gardens
- Impervious area sheet flow to buffer
- Rooftop disconnection to rain barrel
- Rooftop disconnection to cistern: irrigation reuse
- Rooftop disconnection (splash to grade)
- Green roofs
- Blue roofs
- Green streets
- Curb extensions/Street bumpouts
- Educational Signage for Green Infrastructure
- Other techniques as approved by MSD

Eligible Recipients
The following entities are eligible for financial partnering:

- Municipalities and local government agencies
- Schools
- Non-profit organizations
- Community development organizations
- Business owners
- Private developers

Funding Considerations
This is a reimbursement program. Grantees must have adequate funding available to cover all aspects of their green infrastructure project. MSD construction approval of the green infrastructure facility, including stabilization of the tributary area upstream of the green infrastructure facility, is required prior to reimbursement. MSD plans to spend approximately $5 million per year on the green infrastructure program. Some of the funds may be allocated to MSD projects, and it has not been determined how much funding will be available for the grant program. Allocations will be based on a priority ranking system. Projects that provide a funding match will receive a higher priority ranking. However, providing a match is not required. Costs that may be eligible for reimbursement by MSD include the following: engineering, soils assessment and/or restoration, legal costs associated with deed restrictions and/or easements, property acquisition, demolition, construction of green infrastructure, public participation activities, and monitoring of green infrastructure and associated

laboratory analyses. Costs for maintenance of green infrastructure facilities are not eligible. Projects that are completed or have already started construction are not eligible.

Required Activities

Preference shall be given to projects that can manage at least 1.14 inches of stormwater rainfall from the contributing drainage area. A reduction of runoff volume must be demonstrated and supported with calculations. Applicants should reference the Maximum Extent Practicable (MEP) spreadsheet and calculation tool available at the MSD website stlmsd.com/engineering/planreview/bmptoolbox/calctools. Upon approval, all projects chosen for financial assistance shall be submitted for review per the District's plan review process. The cost categories listed in the above paragraph plus maintenance cost for green infrastructure (during the first five years of operation) must be tracked and reported.

Evaluation Criteria and Process

General

Evaluators from MSD will score projects based on the application information submitted by the applicants. Project ranking will be primarily based on their potential for anticipated reduction of CSO overflow volume. Eligible projects must be located upstream of a CSO outlet that discharges directly to the Mississippi River. Projects that are located downstream of the interceptor will not be eligible. Wherever opportunities exist for MSD to make informed choices between different properties available for stormwater retrofitting with green infrastructure, MSD will prioritize these projects based on their expected CSO reductions from previous hydrologic modeling. For example, properties in the Harlem, Baden, and Rocky Branch citysheds would receive a higher ranking than those in the Mill Creek cityshed because of the greater response rate of CSOs to changing imperviousness in the former three citysheds.

Project Specific

Benefit points will be awarded for each 100 cubic feet of runoff volume reduced and each 100 square feet of impervious area removed or redirected to a BMP. Projects proposed by municipalities and local governmental agencies will receive more benefit points than non-profit entity projects, which will receive more benefit points than private entity projects. Additional benefit points may be awarded for proposed activities such as: public education, information, and communication; innovative green infrastructure technologies; stormwater monitoring and analysis program; location of CSO; project visibility; feasibility of future expansion; maintenance capability; long term sustainability; and environmental justice considerations. The total benefit points will be divided by MSD's cost (in thousands of dollars) to calculate the priority ranking. This will yield the most benefit points per MSD dollar spent.

Award of Funds

MSD will award funds through a Green Infrastructure Grant Program Agreement executed by MSD and the Grantee. The Agreement will describe the project, specify the funding amount and outline additional terms and conditions, and will serve as the legal commitment of both parties as to the scope and quality of work and the amount of funds committed. A BMP Expense Form, listing the amount of reimbursement for each BMP, will be attached to the Agreement. The BMP Expense Form must be completed prior to execution of the Agreement.

Disbursement of Funds and Progress Reports
Funds will be disbursed on a cost-incurred basis and supported with original receipts verifying costs. MSD construction approval of the green infrastructure facility, including stabilization of the tributary area upstream of the green infrastructure facility, is required prior to reimbursement. Progress reports are due with each payment request. Progress reports are required each month regardless of the level of work completed during the period unless otherwise specified by the District. Progress reports are required for timely processing of payment requests.

Application and Submittal Process

FY 2014 Submittals

- The application period is from August 1, 2013 to October 31, 2013.
- Applications are due to MSD by October 31, 2013 at 5:00 p.m.
- MSD will notify the applicants of their decision by March 1, 2014.
- Construction must begin prior to September 1, 2014.

FY 2015 Submittals

- The application period is from August 1, 2014 to October 31, 2014.
- Applications are due to MSD by October 31, 2014 at 5:00 p.m.
- MSD will notify the applicants of their decision by March 1, 2015.
- Construction must begin prior to September 1, 2015.

Please direct all questions and submittals for this grant opportunity to Mark Koester of MSD's Program Planning Section. Interested applicants are encouraged to discuss possible proposals with Mr. Koester as soon as possible to facilitate good proposals and efficient reviews.

Mark A. Koester, P.E.
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103
(314) 768-6327
makoes@stlmsd.com

METROPOLITAN ST. LOUIS SEWER DISTRICT | 2350 MARKET STREET | ST. LOUIS, MO 63103-2555 | (314) 768-6200 | WWW.STLMSD.COM | WWW.PROJECTCLEARSTL.ORG

Metropolitan St. Louis Sewer District
Project Clear – Rainscaping Program
Early Action Projects Grant Program
Application Form

Project Title_____

Contact Person_____

Name of Organization_____

Address_____

City_____ State_____ Zip Code_____

Telephone Number – Office_____ Cell_____

Email Address_____

1. Please describe the purpose of the project in 3 pages or less using Times New Roman 12 point font and provide information on the following items:
   - Describe the work that will be done using the MSD funding.
   - Identify the specific deliverables and the anticipated outcomes associated with the major project components.
   - Describe in detail the tasks and schedule for the project. Include milestones and timelines for accomplishing tasks for the project time period.
   - Explain how the project will reduce runoff volume and if it is ready for implementation. Include calculations using the MEP spreadsheets.
   - Include a copy of the site plan and a drainage area map.
   - Include why the project will work and, if applicable, what makes it innovative.
   - Describe the maintenance plan for the green infrastructure to ensure sustainability.
   - If applicable, explain how you will engage partners and other stakeholders in the project.
   - Five (5) bound hard copies shall be submitted.

2. Dollar amount requested_____

Please attach a budget for the project, including matching funds, if applicable. If other funding will be used, list funding sources and note if those funds are secured. If they are not, describe the likelihood of securing those funds. The following categories of cost must be tracked and reported on: engineering, soils assessment and/or restoration, legal costs associated with deed restrictions and/or easements, property acquisition, demolition, construction of green infrastructure, maintenance of green infrastructure (during the first five years of operation), public participation activities, and monitoring of green infrastructure and associated laboratory analyses.

3. List of project parameters

Impervious area removed or redirected to BMP_____ square feet

Runoff volume reduction_____ cubic feet

Address of project_____

Cityshed_____

Applicant is a Municipality or Local Government Agency or Non-Profit or Private Entity (circle one)

Green Infrastructure Technology Proposed_____

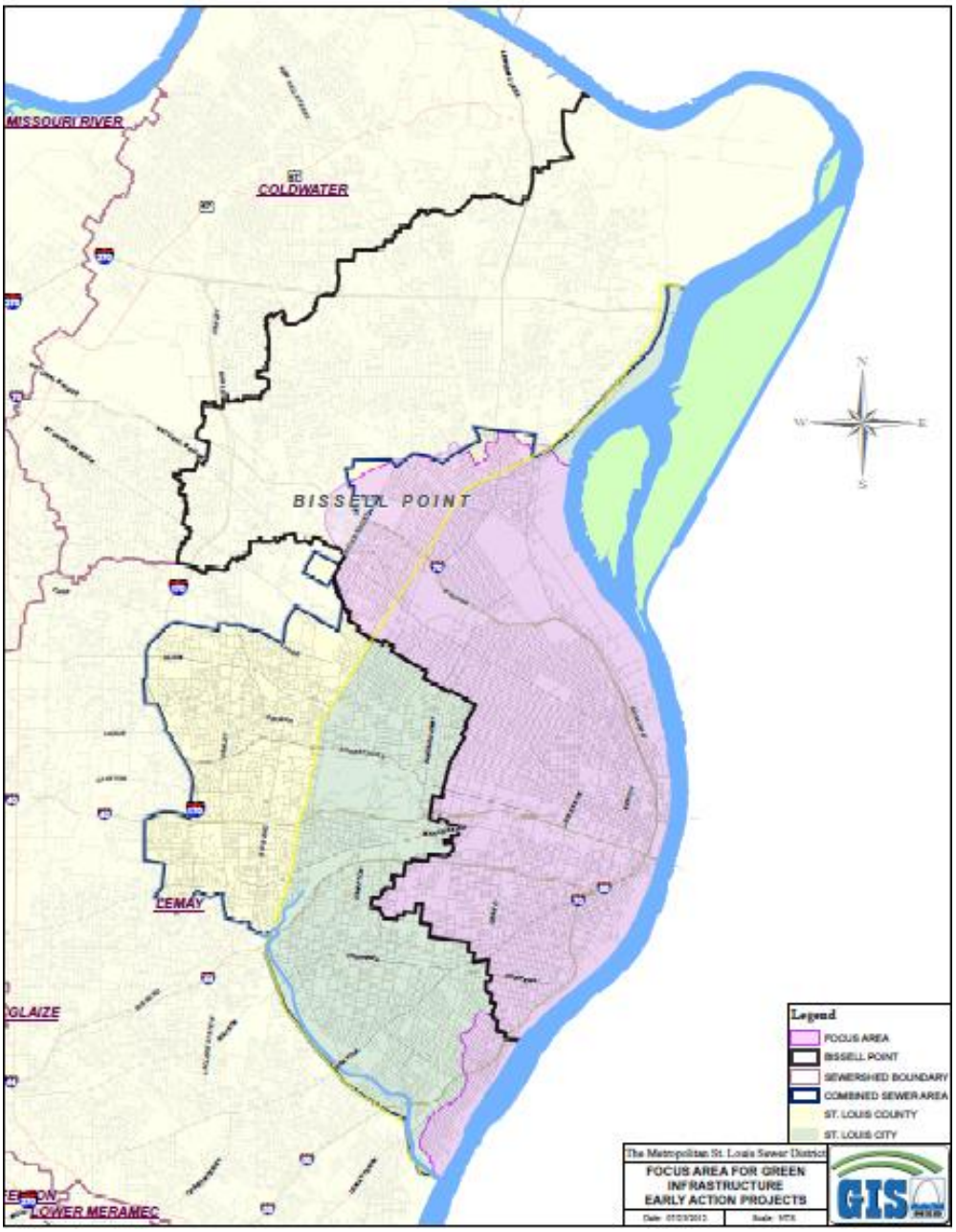
Proposal contains a public education component Yes or No (circle one)

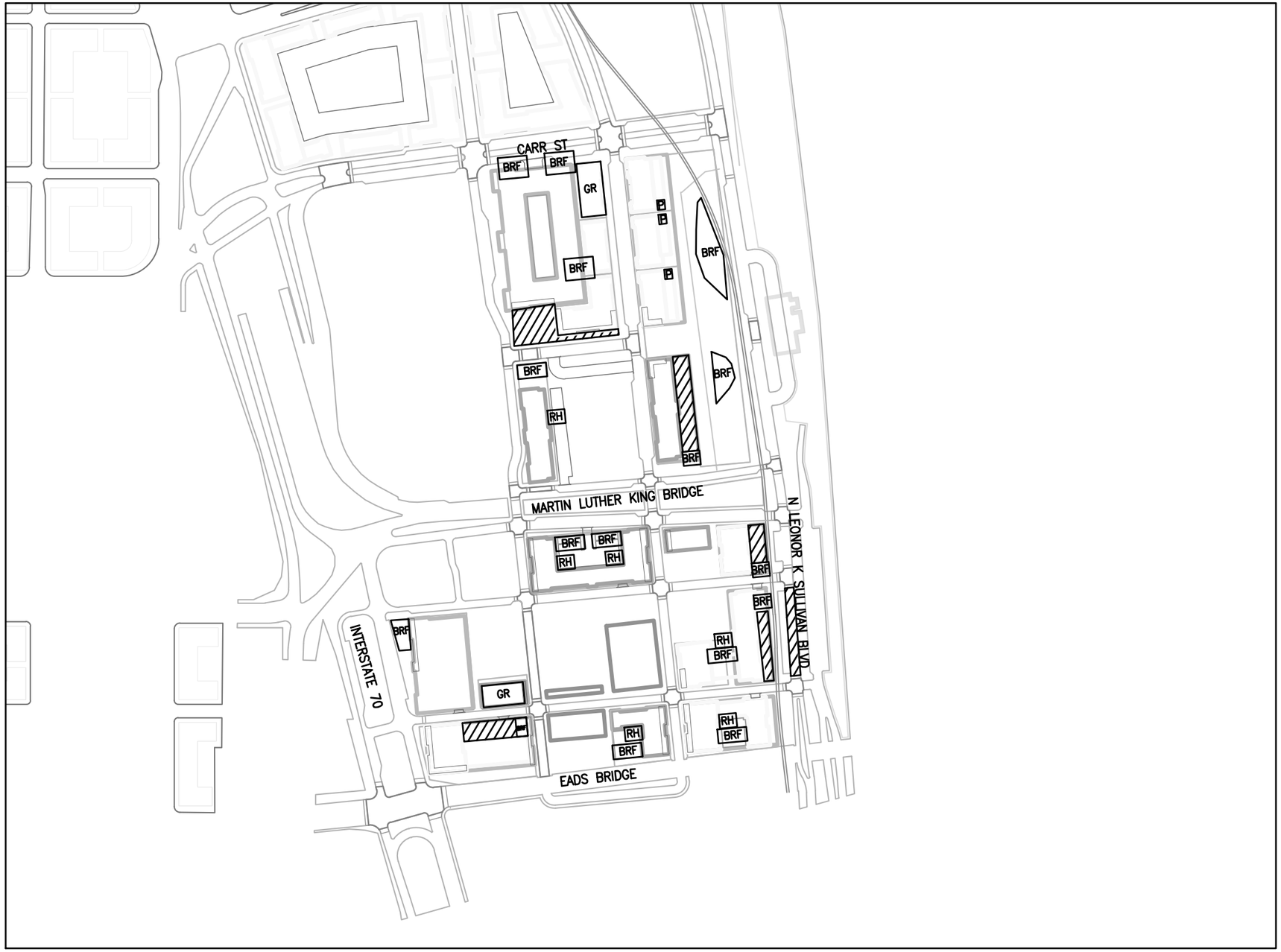
Entity responsible for maintenance_____

4. Certification by applicant

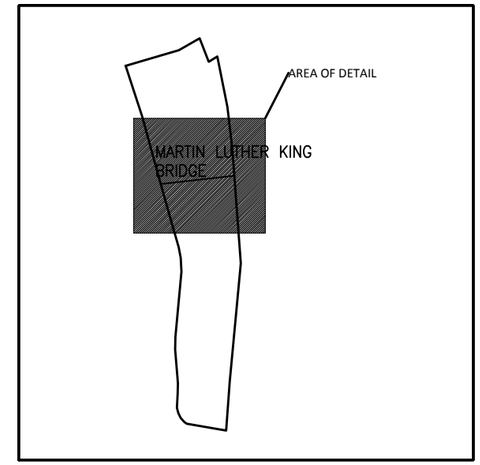
The applicant certifies that all information in this application, and all information furnished in support of the application is true and complete to the best of the applicant's knowledge and belief. The applicant understands that the EPA and MDNR must approve the project before MSD can commit funds.

_____	_____	_____
Applicant Signature	Print Name	Date


MISSOURI RIVER
COLDWATER
BISSELL POINT
CEMAY
GLAIZE
LOWER MERAMEC
Legend
FOCUS AREA
BISSELL POINT
SEWERSHED BOUNDARY
COMBINED SEWER AREA
ST. LOUIS COUNTY
ST. LOUIS CITY
The Metropolitan St. Louis Sewer District
FOCUS AREA FOR GREEN INFRASTRUCTURE EARLY ACTION PROJECTS
GIS



1/2 MILE TRANSIT SHED
LOCATION MAP



NOTES:
1. APPROXIMATELY 20% OF EACH DEVELOPMENT PARCEL SHOULD BE SET ASIDE FOR WATER QUALITY AND QUANTITY DETENTION.
2. CALCULATIONS WERE PERFORMED FOR A VARIETY OF POSSIBLE SCENARIOS FOR NEW BUILDING CONSTRUCTION AND THE CORRESPONDING REQUIRED AREA OF BIORETENTION FACILITIES (BRF). THE BRFs CAN BE SPLIT AND PLACED THROUGHOUT THE SITE, IF NECESSARY. RAIN GARDENS, BIORETENTION SWALES AND PLANTER BOXES ARE EXAMPLES OF BRFs. PLACEMENT OF PERVIOUS PAVEMENT, GREEN ROOFS OR SIMPLE GREEN SPACE IN CONJUNCTION WITH THE BRF WILL REDUCE THE NECESSARY REQUIRED BRF AREA. PONDING DEPTH IN THE BRF IS ASSUMED TO BE 36" BEFORE OVERFLOW IS DIRECTED TO THE COMBINED SEWER SYSTEM. THE BRFs WILL ALSO ACT AS DETENTION STORAGE FACILITES IN ORDER TO ALLEVIATE FLOODING DOWNSTREAM IN UNDERSIZED COMBINED SEWERS.
3. THE SIZE OF THE BMP DESIGNATOR DOES NOT REPRESENT THE ACTUAL SIZE RECOMMENDED FOR CONSTRUCTION. SEE THE "SAMPLE SUMMARY OF BIORETENTION/STORAGE FACILITY SIZES" TABLE FOR DIRECTION ON REQUIRED SIZES.

KEY

BRF	BIORETENTION FACILITY
	PERMEABLE PAVEMENT
P	PLANTER BOX
RH	RAINWATER HARVESTING
GR	GREEN ROOF

0 150 300

SAMPLE SUMMARY OF BIORETENTION/STORAGE FACILITY SIZES

BUILDING(s) FOOTPRINT (Ac) =	0.28	0.34	0.46	0.69
TOTAL LOT SIZE (Ac) =	0.61	1.00	1.21	1.98
PERCENT IMPERVIOUS (%) =	90.0	86.0	86.0	88.0
BIORETENTION/STORAGE REQUIRED (sf) =	4,350	6,700	8,150	13,550
% OF SITE USED FOR BIORETENTION/STORAGE =	16	15	15	16

ARCH–LACLEDE'S AND STADIUM STATIONS SITE PLAN

STORMWATER AND ENVIRONMENTAL PLANNING

H3

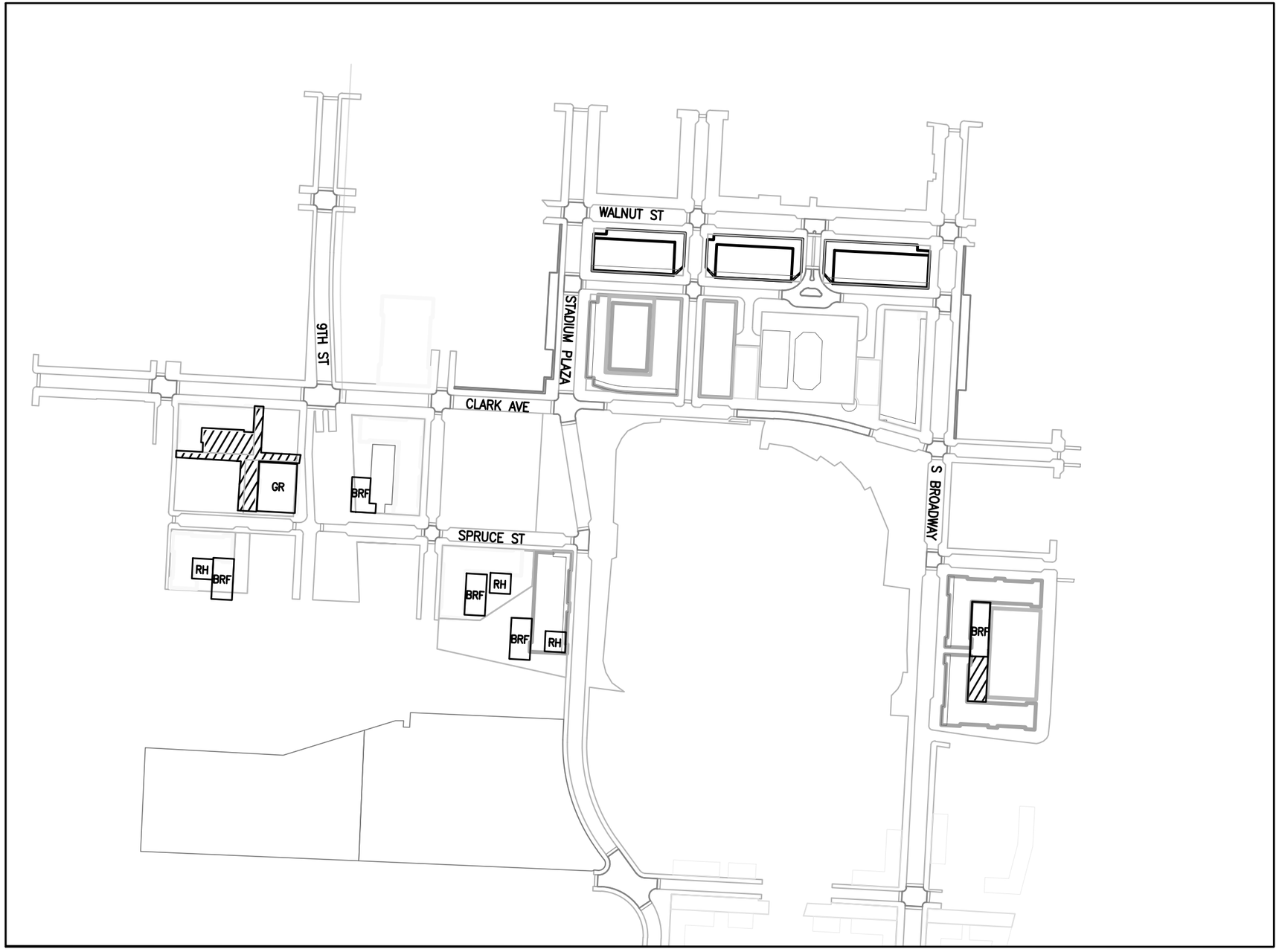
TRANSPORTATION ORIENTED DEVELOPMENT STATION AREA PLANNING

m3 ENGINEERING GROUP P.C.
911 Washington Avenue
Suite 620
St. Louis, Missouri 63101
www.m3eg.com
PH: 314.588.0699
FX: 314.588.9442

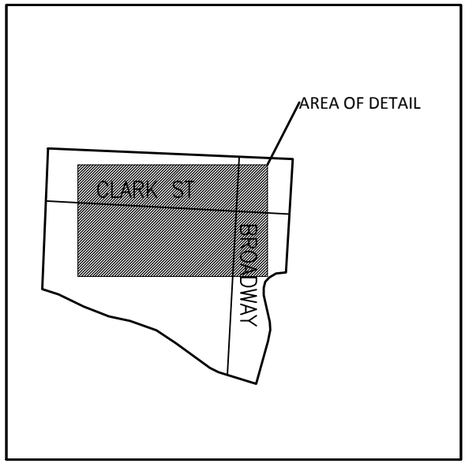
Project No.
013/SLDC/001–003

Date
08/30/2013

SW–1



1/2 MILE TRANSIT SHED
LOCATION MAP



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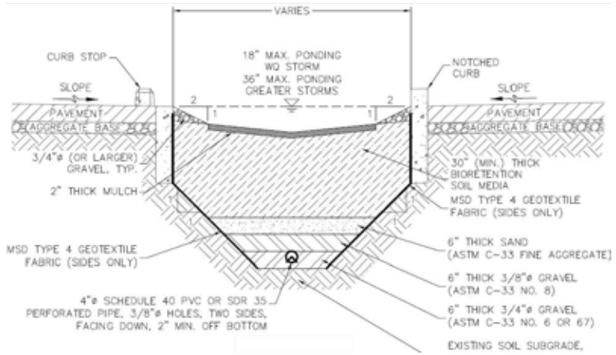
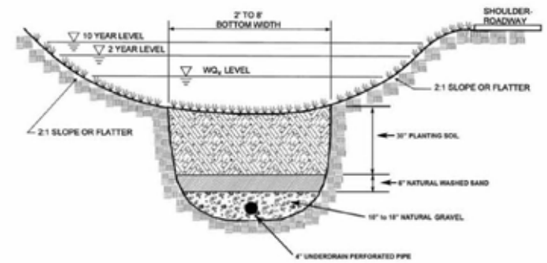
Project No.
013/SLDC/001–003

Date
08/30/2013

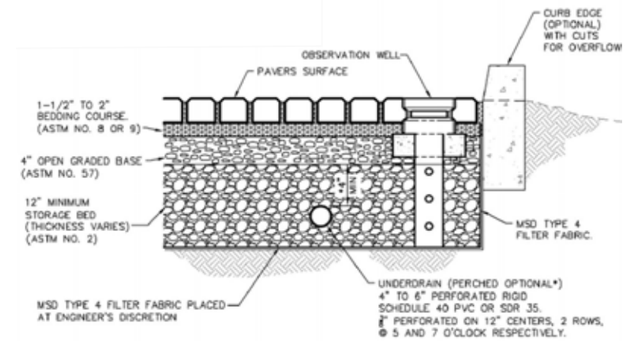
SW-2



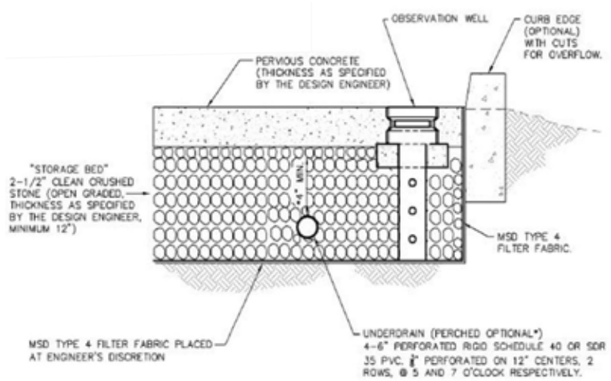
BIORETENTION FACILITY



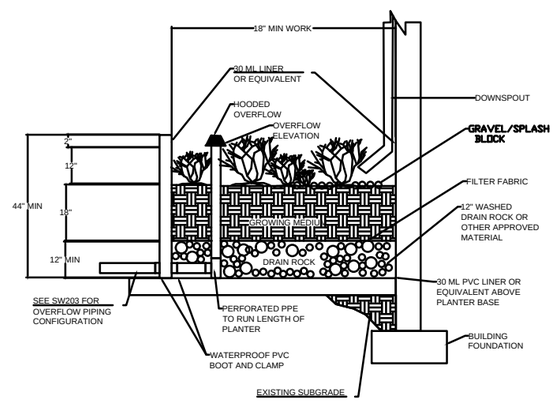
BIORETENTION ROADWAY SWALE



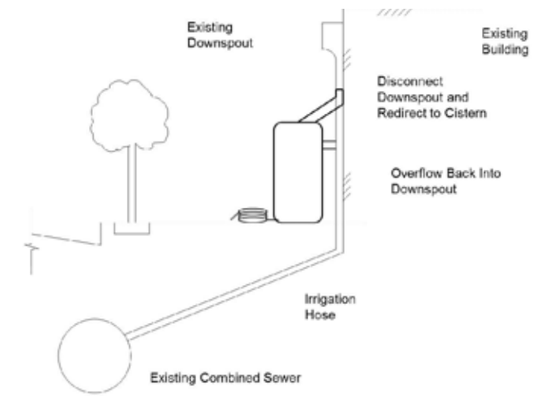
PERMEABLE INTERLOCKING CONCRETE PAVEMENT



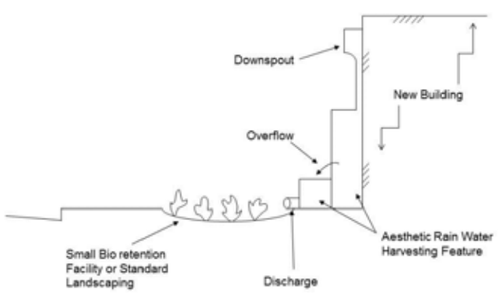
PERVIOUS CONCRETE PAVEMENT



PLANTER BOX



RAINWATER HARVESTING – EXISTING BUILDING



RAINWATER HARVESTING – NEW BUILDING

NOTES:
1. THE DESIGN AND CONSTRUCTION OF THE STORMWATER BMPs MUST MEET THE WATER QUALITY REQUIREMENTS OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT (MSD).
2. THE DETAILS SHOWN ARE FOR INFORMATION PURPOSES ONLY. EACH BMP MUST BE DESIGNED TO MEET THE SPECIFIC NEEDS OF THE INDIVIDUAL SITES.

DETAIL SHEET
SITE PLAN

STORMWATER AND ENVIRONMENTAL PLANNING

H3

TRANSPORTATION ORIENTED DEVELOPMENT STATION AREA PLANNING

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PH: 314.588.0699
FX: 314.588.9442

Project No.
013/SLDC/001-003

Date
06/24/2013

SW-4

ENGINEERING CALCULATIONS

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: August 9, 2013

Calculations were performed for a variety of possible scenarios for new building construction and the corresponding required area of bioretention facilities (BRF). The BRFs can be split and placed throughout the site, if necessary. Rain gardens, bioretention swales and planter boxes are example of BRFs. Placement of pervious pavement, green roofs or simple green space in conjunction with the BRF will reduce the necessary required BRF area. Ponding depth inthe BRF is assumed to be 36" before overflow is directed to the combined sewer system. The BRFs will also be utilized for detention to help alleviate downstream flooding due to undersized combined sewers.

Sample Summary of Bioretention/Storage Facility Sizes

Building(s) Footprint (Ac) =	0.28	0.34	0.46	0.69
Total Lot Size (Ac) =	0.61	1.00	1.21	1.98
Percent Impervious (%) =	90	86	86	88
Bioretention/Storage Required (sf) =	4,333	6,688	8,134	13,550
% of Site Used for Bioretention/Storage =	16%	15%	15%	16%

ENGINEERING CALCULATIONS

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: August 9, 2013

m3 ENGINEERING GROUP P.C.

Proposed TOD at Stadium/Arch/Laclede Stations.
Calculate Water Quality and Detention Volume Required.
Due to DS flood complaints, assume existing site is undeveloped.

	SF	Ac	% Imp WQv	Ac x% imp	20 yr 20 min Pre PI	Post PI	Differen RO cfs
Building Roof (Splash to Grade)	12,000	0.28	100	0.28	1.78	3.70	0.53
Parking Lot/Pavement	12,000	0.28	100	0.275	1.78	3.70	0.53
Bioretention Facility	1,500	0.03	5	0.00	1.78	1.78	
Greenscape	1,200	0.03	5	0.00	1.78	1.78	
Total	26,700	0.61		0.5541			1.058

Composite % Imp = 0.5541 / 0.61
Composite % Imp = 90.39%

Building(s) Footprint =	0.28	Acres
Total Lot Size =	0.61	Acres
Percent Impervious =	90.39%	

Calculate WQv required

WQv=[(P)(Rv)(A)]/12 P= 1.14/12 = 0.095 ft of rainfall
Composite Percent Impervious = 90.39%

Rv = 0.05 + 0.009 x 90.39% = 0.8635
WQv = 0.095 x 0.8635 x 0.613 = 0.05028 Ac-ft
= 2,190 cf

Calculate Detention Volume Required

Diff RO x 1800 x 5 = Storage Volume Required in cf
Diff RO = 1.058 cfs

Detention Volume Required = 9,521 cf

Calculate Area Required for WQv and Detention BMP

Total Volume Required = 11,711 cf
Allowable ponding depth = 3 ft
Approx Increase in Area for Side Slopes = 20 %
Area Required W/O non-structural BMPs = 4,684 sf
Area Required W/non-structural BMPs = 4,333 sf (Assume 7.5% reduction due to other on site non-structural BMPs)

ENGINEERING CALCULATIONS

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: August 9, 2013

Proposed TOD at Stadium/Arch/Laclede Stations.
Calculate Water Quality and Detention Volume Required. 20 yr 20 min
Due to DS flood complaints, assume existing site is undeveloped.

	SF	Ac	% Imp WQv	Ac x% imp	Pre PI	Post PI	Differen RO cfs
Building Roof (Splash to Grade)	15,000	0.34	100	0.34	1.78	3.70	0.66
Parking Lot/Pavement	22,000	0.51	100	0.505	1.78	3.70	0.97
Bioretention Facility	3,900	0.09	5	0.00	1.78	1.78	
Greenscape	2,500	0.06	5	0.00	1.78	1.78	
Total	43,400	1.00		0.8567			1.631

Composite % Imp = 0.8567 / 1.00
Composite % Imp = 85.99%

Building(s) Footprint =	0.34	Acres
Total Lot Size =	1.00	Acres
Percent Impervious =	85.99%	

Calculate WQv required

WQv=[(P)(Rv)(A)]/12 P= 1.14/12 = 0.095 ft of rainfall
Composite Percent Impervious = 85.99%

Rv = 0.05 + 0.009 x 85.99% = 0.8239
WQv = 0.095 x 0.8239 x 0.996 = 0.07798 Ac-ft
= 3,397 cf

Calculate Detention Volume Required

Diff RO x 1800 x 5 = Storage Volume Required in cf
Diff RO = 1.631 cfs

Detention Volume Required = 14,678 cf

Calculate Area Required for WQv and Detention BMP

Total Volume Required =	18,075	cf
Allowable ponding depth =	3	ft
Approx Increase in Area for Side Slopes =	20	%
Area Required W/O non-structural BMPs =	7,230	sf
Area Required W/non-structural BMPs =	6,688	sf

(Assume 7.5% reduction due to other on site non-structural BMPs)

ENGINEERING CALCULATIONS

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: August 9, 2013

ENGINEERING GROUP P.C.

Proposed TOD at Stadium/Arch/Laclede Stations.

Calculate Water Quality and Detention Volume Required. 20 yr 20 min

Due to DS flood complaints, assume existing site is undeveloped.

	SF	Ac	% Imp WQv	Ac x% imp	Pre PI	Post PI	Differen RO cfs
Building Roof (Splash to Grade)	20,000	0.46	100	0.46	1.78	3.70	0.88
Parking Lot/Pavement	25,000	0.57	100	0.574	1.78	3.70	1.10
Bioretention Facility	4,900	0.11	5	0.01	1.78	1.78	
Greenscape	3,000	0.07	5	0.00	1.78	1.78	
Total	52,900	1.21		1.0421			1.983

Composite % Imp = 1.0421 / 1.21
Composite % Imp = 85.81%

Building(s) Footprint =	0.46	Acres
Total Lot Size =	1.21	Acres
Percent Impervious =	85.81%	

Calculate WQv required

WQv=[(P)(Rv)(A)]/12 P= 1.14/12 = 0.095 ft of rainfall
Composite Percent Impervious = 85.81%

Rv = 0.05 + 0.009 x 85.81% = 0.8223
WQv = 0.095 x 0.8223 x 1.214 = 0.09487 Ac-ft
= 4,133 cf

Calculate Detention Volume Required

Diff RO x 1800 x 5 = Storage Volume Required in cf
Diff RO = 1.983 cfs

Detention Volume Required = 17,851 cf

Calculate Area Required for WQv and Detention BMP

Total Volume Required =	21,984	cf
Allowable ponding depth =	3	ft
Approx Increase in Area for Side Slopes =	20	%
Area Required W/O non-structural BMPs =	8,794	sf
Area Required W/non-structural BMPs =	8,134	sf

(Assume 7.5% reduction due to other on site non-structural BMPs)

ENGINEERING CALCULATIONS

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: August 9, 2013

Proposed TOD at Stadium/Arch/Laclede Stations.
Calculate Water Quality and Detention Volume Required. 20 yr 20 min
Due to DS flood complaints, assume existing site is undeveloped.

	SF	Ac	% Imp WQv	Ac x% imp	Pre PI	Post PI	Differen RO cfs
Building Roof (Splash to Grade)	30,000	0.69	100	0.69	1.78	3.70	1.32
Parking Lot/Pavement	45,000	1.03	100	1.033	1.78	3.70	1.98
Bioretention Facility	8,200	0.19	5	0.01	1.78	1.78	
Greenscape	3,000	0.07	5	0.00	1.78	1.78	
Total	86,200	1.98		1.7346			3.306

Composite % Imp = 1.7346 / 1.98
Composite % Imp = 87.66%

Building(s) Footprint =	0.69	Acres
Total Lot Size =	1.98	Acres
Percent Impervious =	87.66%	

Calculate WQv required

WQv=[(P)(Rv)(A)]/12 P= 1.14/12 = 0.095 ft of rainfall
Composite Percent Impervious = 87.66%

Rv = 0.05 + 0.009 x 87.66% = 0.8389
WQv = 0.095 x 0.8389 x 1.979 = 0.15771 Ac-ft
= 6,870 cf

Calculate Detention Volume Required

Diff RO x 1800 x 5 = Storage Volume Required in cf
Diff RO = 3.306 cfs

Detention Volume Required = 29,752 cf

Calculate Area Required for WQv and Detention BMP

Total Volume Required =	36,622	cf
Allowable ponding depth =	3	ft
Approx Increase in Area for Side Slopes =	20	%
Area Required W/O non-structural BMPs =	14,649	sf
Area Required W/non-structural BMPs =	13,550	sf

(Assume 7.5% reduction due to other on site non-structural BMPs)

Project: TOD SAP Stadium/Arch/Laclede
Project Number:
Engineer: MWE
Date: July 25, 2013

Proposed TOD at Stadium/Arch/Laclede Stations.

PRELIMINARY Estimated Cost of Construction for Water Quality and Water Quantity

Bioretention Facilities – $20 to $25/sf
Permeable Pavement – $15 to $20/sf
Rainwater Harvesting –$150 and up (depends on the aesthetic nature of the BMP).
Green Roofs – $15 to $20/sf
Disconnection – $500 to $1,000 per disconnection.
Buffer Strips – $5 to $10/sy

Arch/Laclede

	Unit	No.	Unit Cost	Cost
Bioretention Facilities	SF	176,000	$25	$4,400,000
Permeable Pavement	SF	100,000	$20	$2,000,000
Rainwater Harvesting	EA	8	$20,000	$160,000
Green Roofs	SF	24,000	$25	$600,000
			Total	**$7,160,000**

Stadium

	Unit	No.	Unit Cost	Cost
Bioretention Facilities	SF	40,000	$25	$1,000,000
Permeable Pavement	SF	40,000	$20	$800,000
Rainwater Harvesting	EA	3	$20,000	$60,000
Green Roofs	SF	13,000	$25	$325,000
			Total	**$2,185,000**

Note: The above costs are based on broad assumptions. The costs represent BMPs built on both public and private property.

F

Opinion of Probable Costs
M3 Engineering Group

TRANSPORTATION ORIENTED DEVELOPMENT
PLANNING LEVEL OPINION OF PROBABLE CONSTRUCTION COST
FOR PUBLIC IMPROVEMENTS
AT THE EXISTING
ARCH/LACLEDE'S LANDING STATION

		INTERSECTION IMPROVEMENTS	PEDESTRIAN/BIKE IMPROVEMENTS	ROADWAY IMPROVEMENTS	STREETSCAPE IMPROVEMENTS	UTILITIES (INCLUDES SEWERS)	ITEM TOTAL	IMPROVEMENT TOTAL	TIER TOTAL
TIER 1 PROJECTS									$ 1,100,300.00
A: WASHINGTON AVE PEDESTRIAN CONNECTION								$ 353,990.00	
i.	*CREATE AN INVITING PEDESTRIAN CONNECTION ALONG EAST OF MEMORIAL DR ALONG THE NORTH SIDE OF THE EADS BRIDGE*	*$ -*	*$ -*	*$ -*	*$ 353,990.00*	*$ -*	*$ 353,990.00*		
B: INTERNAL STREET IMPROVEMENTS								$ 484,390.00	
i.	*MAINTAIN THE SAME SECTION OF 1ST, 2ND, LUCAS, AND MORGAN STREETS [6]*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
ii.	*REBUILD CURB RAMPS AND CROSSWALKS TO BE ADA ACCESSIBLE*	$ -	$ -	$ 170,690.00	$ -	$ 162,500.00	*$ 333,190.00*		
iii.	*SURFACE MAINTENANCE AND DAMAGED COBBLE REPLACEMENT*	*$ -*	*$ -*	*$ 151,200.00*	*$ -*	*$ -*	*$ 151,200.00*		
C: STATION IMPROVEMETNS								$ 261,950.00	
i.	*LIGHTING AND AESTHETIC IMPROVEMENTS*	*$ -*	*$ -*	*$ -*	*$ 261,950.00*	*$ -*	*$ 261,950.00*		
TIER 2 PROJECTS									$ 2,090,700.00
A: NORTHBOUND 3RD ST/MEMORIAL DR IMPROVEMENTS								$ 1,355,256.40	
i.	*UTILIZE THE RECOMMENDATIONS FROM THE DOWNTOWN MULTIMODAL ACCESS STUDY TO IMPROVE THE COLE/CARR INTERSECTION AND FORCE ALL NORTHBOUND TRAFFIC ONTO MEMORIAL DR*	*$ 589,378.40*	*$ 68,328.00*	*$ -*	*$ -*	*$ 142,250.00*	*$ 799,956.40*		
ii.	*CYCLE TRACK ON DISUSED SECTION OF 4TH ST THAT CONNECTS WASHINGTON AVE TO BIDDLE ST AND ALONG BIDDLE ST TO THE NORTH RIVERFRONT TRAILHEAD*	*$ -*	*$ 388,050.00*	*$ -*	*$ -*	*$ 167,250.00*	*$ 555,300.00*		
B: LACLEDES LANDING BLVD IMPROVEMENTS								$ 735,404.30	
i.	*IMPROVE PEDESTRIAN CONNECTIONS BETWEEN THE LANDING AND THE CASINO AREA BY IMPROVING THE PARK UNDER THE MLK BRIDGE*	*$ -*	*$ 213,427.50*	*$ -*	*$ -*	*$ 33,000.00*	*$ 246,427.50*		
ii.	*ADD PARALLEL PARKING TO THE SIDE OF THE STREET*	*$ -*	*$ 70,543.20*	*$ 196,133.60*	*$ 222,300.00*	*$ -*	*$ 488,976.80*		
TIER 3 PROJECTS									$ 1,232,300.00
A								$ -	
	STRONG VEHICULAR CONNECTION ON 2ND ST FROM BIDDLE ST NORTH TO BROADWAY [6]	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
B: BIDDLE ST ROAD DIET								$ 1,232,285.00	
i.	*REMOVE ONE LAND IN EACH DIRECTION FROM I-70 TO L.K. SULLIVAN BLVD*	*$ 416,000.00*	*$ 636,558.00*	*$ -*	*$ -*	*$ 179,727.00*	*$ 1,232,285.00*		
OTHER									$ -
A								$ -	
	1ST ST WILL BE MAINLY A RESIDENTIAL STYLE STREET [6]	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
B								$ -	
	2ND ST WILL BE THE MAIN ENTERTAINMENT STREET [6]	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
C								$ -	
	MAINTAIN THE EXISTING ONE-WAY CIRCULATION BETWEEN THE EADS BRIDGE AND THE MLK BRIDGE [6]	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
D								$ -	
	LEONOR K. SULLIVAN IMPROVEMENTS FROM THE ARCH GROUNDS TO THE NORTH RIVERFRONT TRAILHEAD BEING DONE WITH THE CAR 2015 IMPROVEMENTS [6]	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*		
TOTALS		$ 1,005,400.00 23%	$ 1,376,900.00 31%	$ 518,000.00 12%	$ 838,200.00 19%	$ 684,700.00 15%			$ 4,423,200.00

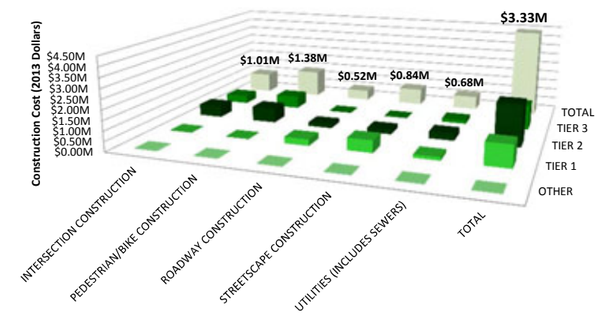
NOTES:
[1] ALL COSTS ARE IN 2013 DOLLARS
[2] ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)
[3] PROPERTY ACQUISITION COSTS ARE NOT INCLUDED
[4] DEMOLITION OF BUILDING COSTS NOT INCLUDED
[5] SITE REMEDIATION COST NOT INCLUDED
[6] NO PUBLIC IMPROVEMENTS COSTS WITH THIS TIER

1676440.19

ENGINEERING GROUP P.C.

REV. 0 - 8/9/2013
DD,SLM,MSM

Arch/Laclede's Landing Station Public Improvement Cost by Construction Type and Improvement Type for All Tiers



	INTERSECTION CONSTRUCTION	PEDESTRIAN/BIKE CONSTRUCTION	ROADWAY CONSTRUCTION	STREETSCAPE CONSTRUCTION	UTILITIES (INCLUDES SEWERS)	TOTAL
OTHER	$0.00M	$0.00M	$0.00M	$0.00M	$0.00M	$0.00M
TIER 1	$0.00M	$0.00M	$0.32M	$0.62M	$0.16M	$1.10M
TIER 2	$0.59M	$0.74M	$0.20M	$0.22M	$0.34M	$2.09M
TIER 3	$0.42M	$0.64M	$0.00M	$0.00M	$0.18M	$1.23M
TOTAL	$1.01M	$1.38M	$0.52M	$0.84M	$0.68M	$4.42M

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 1 -A1: WASHINGTON AVE. PEDESTRIAN CONNECTION - CREATE PEDESTRIAN CONNECTION ALONG EAST OF MEMORIAL DRIVE ALONG THE NORTH SIDE OF THE EADS BRIDGE

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ 353,990.00	100%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 353,990.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

ASSUMED 2000 FT STREETSCAPE

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
STREETSCAPE IMPROVEMENTS	TRASH RECIPTICALS	EA	0	$ 390.00	5	$ 1,950.00	0.6%	PER EACH	1	5	5				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	TREES AND GRATES	EA	0	$ 4,550.00	40	$ 182,000.00	51.4%	PER EACH	1	40	40				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	BENCHES	EA	0	$ 1,300.00	10	$ 13,000.00	3.7%	PER EACH	1	10	10				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	20	$ 156,000.00	44.1%	PER EACH	1	20	20				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	SIGN (INCLUDES MOUNTING)	EA	0	$ 260.00	4	$ 1,040.00	0.3%	PER EACH	1	4	4				0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

ARCH/LACLEDE'S LANDING

TIER 1-B2: INTERNAL STREET IMPROVEMENTS - REBUILD CURB RAMPS AND CROSSWALKS TO BE ADA ACCESSIBLE

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 170,690.00	51%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 162,500.00	49%
TOTAL	$ 333,190.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

STORM INLETS 4 EVERY 300 LF

2 STORM MANHOLES EVERY 300 LF

6 UTILITY ADJUSTMENTS EVERY 100 LF

SIDEWALK WIDTH=8 FT

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	2340	$ 15,210.00	4.6%	AREA			0				0		8	LF	8	SF/LF	0.111111111	SY/SF	0.9	SY/LF	2600	FT	2340	SY									0				0	
ROADWAY IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	780	$ 10,140.00	3.0%	VOLUME			0				0				0				0				0		16	FT	*	1	FT	*	0.04	CY/SY	0.6	CY/LF	1300	LF	780	CY
ROADWAY IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	0	$ -	0.0%	AREA									8	LF		SF/LF	0.111111111	SY/SF		SY/LF	2600	FT		SY														
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	0	$ -	0.0%	AREA									8	LF		SF/LF	0.111111111	SY/SF		SY/LF	2600	FT		SY														
ROADWAY IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	2600	$ 118,300.00	35.5%	LENGTH					2600	1	2600	LF																										
ROADWAY IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	2600	$ 27,040.00	8.1%	LENGTH			0		2600	1	2600	LF			0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	16	$ 41,600.00	12.5%	PER EACH	4	4	16	EA			0				0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	8	$ 15,600.00	4.7%	PER EACH	2	4	8	EA			0				0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	300	$ 27,300.00	8.2%	LENGTH			0		75	4	300	LF			0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	78	$ 78,000.00	23.4%	PER EACH	6	13	78	EA			0				0				0				0										0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A										#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 1-B3: INTERNAL STREET IMPROVEMENTS - SURFACE MAINTENANCE AND DAMAGED COBBLE REPLACEMENT

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 151,200.00	100%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 151,200.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

ROAD WIDTH=	25	FEET
LENGTH OF IMPROVMENTS =	2800	FEET

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	SURFACE MAINTENANCE/DAMAGED COBBLE REPLACEMENT	SY	0	$ 18.00	8400	$ 151,200.00	100.0%	AREA			0				0		25	FT	25	SF/LF	0.111111111	SY/SF	3	SY/LF	2800	LF	8400	SY							0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 1-C1: STATION IMPROVEMENTS - LIGHTING AND AESTHETIC IMPROVEMENTS

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ 261,950.00	100%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 261,950.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
STREETSCAPE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	20	$ 156,000.00	59.6%	PER EACH	4	5	20				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	BENCHES	EA	0	$ 1,300.00	10	$ 13,000.00	5.0%	PER EACH	2	5	10				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	TREES AND GRATES	EA	0	$ 4,550.00	20	$ 91,000.00	34.7%	PER EACH	4	5	20				0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	TRASH RECIPTICALS	EA	0	$ 390.00	5	$ 1,950.00	0.7%	PER EACH	1	5	5				0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 2-A1: NORTHBOUND 3RD ST./MEMORIAL DR. IMPROVEMENTS - IMPROVE THE COLE/CARR INTERSECTION AND FORCE ALL NORTHBOUND TRAFFIC ONTO MEMORIAL DR.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 589,378.40	74%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 68,328.00	9%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 142,250.00	18%
TOTAL	$ 799,956.40	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

STORM INLETS 4 EVERY 300 LF

2 STORM MANHOLES EVERY 300 LF

6 UTILITY ADJUSTMENTS EVERY 100 LF

LENGTH OF IMPROVEMENTS = 510 FEET

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	1	$ 260,000.00	32.5%	PER EACH	1	1	1	EA			0				0				0				0								0				0	
INTERSECTION IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	3519	$ 68,620.50	8.6%	AREA			0				0		62	LF	62	SF/LF	0.111111111	SY/SF	6.9	SY/LF	510	LF	3519	SY							0				0	
INTERSECTION IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	2346	$ 30,498.00	3.8%	VOLUME			0				0				0				0				0		62	FT	* 2	FT	* 0.04	CY/CF	4.6	CY/LF	510	LF	2346	CY
INTERSECTION IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	3519	$ 22,873.50	2.9%	AREA			0				0		62	LF	62	SF/LF	0.111111111	SY/SF	6.9	SY/LF	510	LF	3519	SY							0				0	
INTERSECTION IMPROVEMENTS	CURB, CONCRETE	LF	0	$ 28.60	1020	$ 29,172.00	3.6%	LENGTH			0		510	2	1020	LF			0				0				0								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	714	$ 37,128.00	4.6%	AREA			0				0		6	LF	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	1020	LF	714	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIGNALIZATION, PEDESTRIAN	EA	0	$ 3,900.00	8	$ 31,200.00	3.9%	PER EACH	8	1	8	EA			0				0				0		0		0								0				0	
INTERSECTION IMPROVEMENTS	PAVEMENT, ASPHALT ROADWAY, 10-INCHES THICK	SY	1	$ 62.40	2856	$ 178,214.40	22.3%	AREA			0				0		50	LF	50	SF/LF	0.111111111	SY/SF	5.6	SY/LF	510	LF	2856	SY							0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	8	$ 20,800.00	2.6%	PER EACH	4	2	8	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	4	$ 7,800.00	1.0%	PER EACH	2	2	4	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	150	$ 13,650.00	1.7%	LENGTH			0		75	2	150	LF			0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	100	$ 100,000.00	12.5%	PER EACH	20	5	100	EA			0				0				0				0								0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 2-A2: CYCLE TRACK ON 4TH FROM WASHINGTON TO BIDDLE AND ON BIDDLE TO NORTH RIVERFRONT TRAILHEAD

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 388,050.00	70%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 167,250.00	30%
TOTAL	$ 555,300.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	3000	$ 58,500.00	10.5%	AREA			0				0		9	FT	9	SF/LF	0.111111111	SY/SF	1	SY/LF	3000	LF	3000	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	1200	$ 15,600.00	2.8%	VOLUME			0				0				0				0				0		9	LF	*	1	LF	*	0.04	CY/SF	0.4	CY/LF	3000	LF	1200	CY
PEDESTRIAN/BIKE IMPROVEMENTS	CURB, CONCRETE	LF	0	$ 28.60	6000	$ 171,600.00	30.9%	LENGTH			0		3000	2	6000	LF			0				0				0										0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT, ASPHALT MULTI-USE TRAIL, 6-INCHES THICK	SY	1	$ 45.50	2700	$ 122,850.00	22.1%	AREA			0				0		8	FT	8	SF/LF	0.111111111	SY/SF	0.9	SY/LF	3000	LF	2700	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	3000	$ 19,500.00	3.5%	AREA			0				0		9	FT	9	SF/LF	0.111111111	SY/SF	1	SY/LF	3000	LF	3000	SY									0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	60	$ 60,000.00	10.8%	PER EACH	2	30	60	EA			0				0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	20	$ 52,000.00	9.4%	PER EACH	1	20	20	EA																														
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	5	$ 9,750.00	1.8%	PER EACH	1	5	5	EA																														
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	500	$ 45,500.00	8.2%	LENGTH					500	1	500	LF																										

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 2-B1: LACLEDE'S LANDING BLVD. - IMPROVE THE PEDESTRIAN CONNECTIONS BETWEEN THE LANDING AND THE CASINO AREA BY IMPROVING THE UNDER THE MLK BRIDGE

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 213,427.50	87%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 33,000.00	13%
TOTAL	$ 246,427.50	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS													
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	1650	$ 32,175.00	13.1%	AREA			0				0		9	FT	9	SF/LF	0.111111111	SY/SF	1	SY/LF	1650	LF	1650	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	660	$ 8,580.00	3.5%	VOLUME			0				0				0				0				0		9	LF	*	1	LF	*	0.04	CY/SF	0.4	CY/LF	1650	LF	660	CY
PEDESTRIAN/BIKE IMPROVEMENTS	CURB, CONCRETE	LF	0	$ 28.60	3300	$ 94,380.00	38.3%	LENGTH			0		1650	2	3300	LF			0				0				0										0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT, ASPHALT MULTI-USE TRAIL, 6-INCHES THICK	SY	1	$ 45.50	1485	$ 67,567.50	27.4%	AREA			0				0		8	FT	8	SF/LF	0.111111111	SY/SF	0.9	SY/LF	1650	LF	1485	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	1650	$ 10,725.00	4.4%	AREA			0				0		9	FT	9	SF/LF	0.111111111	SY/SF	1	SY/LF	1650	LF	1650	SY									0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	33	$ 33,000.00	13.4%	PER EACH	2	16.5	33	EA			0				0				0				0										0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 2-B2: LACLEDE'S LANDING BLVD. - ADD PARALLEL PARKING TO THE SIDE OF THE STREET

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 70,543.20	14%
ROADWAY IMPROVEMENTS	$ 196,133.60	40%
STREETSCAPE IMPROVEMENTS	$ 222,300.00	45%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 488,976.80	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	1360	$ 14,144.00	2.9%	LENGTH			0		1360	1	1360	LF			0	SF/LF	0.111111111	SY/SF	0	SY/LF		LF	0	SY							0				0	
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	952	$ 18,564.00	3.8%	AREA			0				0		6	LF	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	1360	LF	952	SY							0				0	
ROADWAY IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	1088	$ 14,144.00	2.9%	VOLUME			0		8	91	728	LF			0				0				3350		14.5	FT/LF	1.5	FT	0.04	CF/CY	0.8	CY/LF	1360	LF	1088	CY
ROADWAY IMPROVEMENTS	SIGN (INCLUDES MOUNTING)	EA	0	$ 260.00	5	$ 1,300.00	0.3%	PER EACH	5	1	5	EA			0				0				0				1600								0				0	
ROADWAY IMPROVEMENTS	PAVEMENT, ASPHALT ROADWAY, 10-INCHES THICK	SY	1	$ 62.40	1224	$ 76,377.60	15.6%	AREA			0				0		8	LF	8	SF/LF	0.111111111	SY/SF	0.9	SY/LF	1360	LF	1224	SY							0				0	
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	1496	$ 9,724.00	2.0%	AREA			0				0		9.5	LF	9.5	SF/LF	0.111111111	SY/SF	1.1	SY/LF	1360	LF	1496	SY							0				0	
ROADWAY IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	1360	$ 61,880.00	12.7%	LENGTH			0		1360	1	1360	LF			0				0				655								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, DECORATIVE CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 67.60	952	$ 64,355.20	13.2%	AREA			0				0		6	LF	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	1360	LF	952	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	952	$ 6,188.00	1.3%	AREA			0				0		6	LF	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	1360	LF	952	SY							0				0	
STREETSCAPE IMPROVEMENTS	TREES AND GRATES	EA	0	$ 4,550.00	18	$ 81,900.00	16.7%	PER EACH	1	18	18	EA			0				0				0				0								0				0	
STREETSCAPE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	18	$ 140,400.00	28.7%	PER EACH	1	18	18				0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				400				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 3-A: STRONG VEHICULAR CONNECTION OF 2ND STREET FROM BIDDLE STREET NORTH TO BROADWAY

NO COSTS AT THIS STAGE - SCOPE NEEDS TO BE DEFINED

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	#DIV/0!
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	#DIV/0!
ROADWAY IMPROVEMENTS	$ -	#DIV/0!
STREETSCAPE IMPROVEMENTS	$ -	#DIV/0!
UTILITIES (INCLUDES SEWERS)	$ -	#DIV/0!
TOTAL	$ -	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A												#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				500				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

ARCH/LACLEDE'S LANDING

TIER 3-B: BIDDLE STREET ROAD DIET FROM I-70 TO L.K. SULLIVAN BLVD.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 416,000.00	34%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 636,558.00	52%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 179,727.00	15%
TOTAL	$ 1,232,285.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

STREET LIGHT SPACING =	75 FT
SIDEWALK WIDTH =	11 FT
LANE WIDTH =	12 FT
NO. OF LANES =	2

CONVERSION OF ONE LANE IN EACH DIRECTION TO SIDEWALK

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS													
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT		AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	3267	$ 63,706.50	5.2%	AREA			0				0		24	LF		24	SF/LF	0.111111111	SY/SF	2.7	SY/LF	1210	LF	3267	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	1210	$ 15,730.00	1.3%	VOLUME			0				0					0				0				0		24	FT	*	1	FT	*	0.04	CY/CF	1	CY/LF	1210	LF	1210	CY
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	3267	$ 21,235.50	1.7%	AREA			0				0		24	LF		24	SF/LF	0.111111111	SY/SF	2.7	SY/LF	1210	LF	3267	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	2420	$ 110,110.00	8.9%	LENGTH			0		1210	2	2420	LF				0				0				0										0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	2420	$ 25,168.00	2.0%	LENGTH			0		1210	2	2420	LF				0				0				0										0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	2904	$ 151,008.00	12.3%	AREA			0				0		11	LF	0	11	SF/LF	0.111111111	SY/SF	1.2	SY/LF	2420	LF	2904	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	32	$ 249,600.00	20.3%	PER EACH	2	16	32	EA			0					0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	16	$ 41,600.00	3.4%	PER EACH	2	8	16	EA			0					0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	8	$ 15,600.00	1.3%	PER EACH	1	8	8	EA			0					0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	797	$ 72,527.00	5.9%	LENGTH			0		1	797	797	LF				0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	50	$ 50,000.00	4.1%	PER EACH	1	50	50	EA			0					0				0				0										0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION, PEDESTRIAN	EA	0	$ 3,900.00	40	$ 156,000.00	12.7%	PER EACH	8	5	40	EA			0					0				0				0										0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	1	$ 260,000.00	21.1%	PER EACH	1	1	1	EA			0					0				0				0										0				0	

TRANSPORTATION ORIENTED DEVELOPMENT
PLANNING LEVEL OPINION OF PROBABLE CONSTRUCTION COST
FOR PUBLIC IMPROVEMENTS
AT THE EXISTING
STADIUM STATION

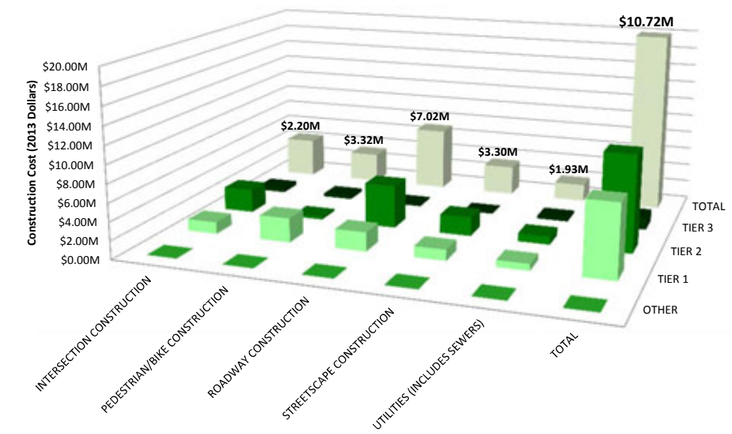
		INTERSECTION IMPROVEMENTS	PEDESTRIAN/BIKE IMPROVEMENTS	ROADWAY IMPROVEMENTS	STREETSCAPE IMPROVEMENTS	UTILITIES (INCLUDES SEWERS)	ITEM TOTAL	IMPROVEMENT TOTAL	TIER TOTAL
TIER 1 PROJECTS									$ 8,004,300.00
A: CLARK ST ROAD DIET FROM FIVE LANES TO THREE FROM THE STADIUM TO TUCKER								$ 3,849,132.80	
i.	*CREATE A STRONG PEDESTRIAN CONNECTION*	$ 1,300,000.00	$ 1,336,816.00	$ 195,696.80	$ 537,680.00	$ 478,940.00	$ 3,849,132.80		
ii.	*CONSISTENT WITH THE BALLPARK VILLAGE DESIGN ON CLARK FROM 8TH TO BROADWAY [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
B: SPRUCE STREET IMPROVEMENT								$ 1,872,204.60	
i.	*CREATE A "NEIGHBORHOOD STREET" CHARACTER [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
ii.	*EXTEND STREETSCAPE IMPROVEMENTS MADE AT THE WESTIN TO TUCKER BLVD.*	$ -	$ 931,504.60	$ 123,760.00	$ 581,620.00	$ 235,320.00	$ 1,872,204.60		
C: 8TH STREET SHARE THE ROAD								$ 13,000.00	
i.	*IMPLEMENT NEW SHARE THE ROAD SIGNAGE*	$ -	$ -	$ 13,000.00	$ -	$ -	$ 13,000.00		
ii.	*REFERENCE THE BIKE ST LOUIS PLAN THAT DEDICATES 8TH AS SHARE THE ROAD [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
D: GRG CHOUTEAU'S GREENWAY								$ 2,270,004.00	
i.	*CREATE TUNNEL ON CERRE ST ALIGNMENT UNDER EB I-64 RAMPS WITH VEHICULAR TRAFFIC LANES AND A CYCLE TRACK ON THE SOUTH SIDE*	$ -	$ -	$ 1,760,000.00	$ -	$ -	$ 1,760,000.00		
ii.	*CREATE A PED/BIKE BRIDGE THROUGH THE I-64/I-70/I-44 INTERCHANGE FROM CERRE ST TO SOUTHWEST CORNER OF THE ARCH GROUNDS.*	$ -	$ 200,000.00	$ -	$ -	$ -	$ 200,000.00		
iii.	*CITY GARDEN CONNECTION ALONG 10TH ST FROM GREENWAY TO MARKET ST*	$ -	$ 201,344.00	$ -	$ 88,660.00	$ 20,000.00	$ 310,004.00		
TIER 2 PROJECTS									$ 10,610,100.00
A: 9TH AND 10 ST RAMP CONNECTION								$ 8,266,704.00	
i.	*CONNECT THE 9TH ST EXIT RAMP TO THE 10TH ENTRANCE RAMP TO CREATE MORE DEVELOPABLE SPACE AT 9TH ST AND CLARK ST*	$ 520,000.00	$ -	$ 3,864,342.00	$ 2,080,000.00	$ 482,550.00	$ 6,946,892.00		
ii.	*TWO-WAY CONVERSION OF 9TH AND 10TH STREETS TO CHESTNUT ST*	$ 1,300,000.00	$ -	$ 19,812.00	$ -	$ -	$ 1,319,812.00		
iii.	*10TH ST REMAINS ONE WAY SOUTHBOUND SOUTH OF CLARK ST DUE TO RAMP CONNECTION [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
B: 4TH AND BROADWAY IMPROVEMENTS								$ 825,529.60	
i.	*REMAIN ONE-WAY ARTERIALS WITH THREE CONSISTENT THROUGH LANES [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
ii.	*CREATECURB BUMP-OUTS AT INTERSECTIONS*	$ 520,000.00	$ 101,337.60	$ -	$ -	$ 138,672.00	$ 760,009.60		
iii.	*DEDICATED BIKE INFRASTRUCTURE THAT MAY REQUIRE EITHER A LANE REDUCTION OR LOSS OF PARKING SPACES*	$ -	$ 65,520.00	$ -	$ -	$ -	$ 65,520.00		
C: REALIGNMENT OF POPLAR STREET								$ 1,517,820.00	
i.	*ALIGN POPLAR STREET BETTER WITH THE WB I-64 ENTRANCE RAMP ON BROADWAY TO CREATE MORE OF A 4-WAY INTERSECTION AND SLOW DOWN TRAFFIC*	$ 260,000.00	$ 81,900.00	$ 866,320.00	$ -	$ 278,088.00	$ 1,486,308.00		
ii.	*INCLUDE CROSSWALKS ON ALL FOUR SIDES OF THIS INTERSECTION [6]*	$ -	$ 31,512.00	$ -	$ -	$ -	$ 31,512.00		
TIER 3 PROJECTS									$ 1,334,500.00
A: POPLAR STREET CONNECTION BETWEEN 9TH ST AND 11TH ST								$ 84,168.50	
i.	*MUST BE DONE AFTER 9TH AND 10TH ST RAMP REALIGNMENT [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
ii.	*TWO-WAY STREET BEHIND CUPPLES BUILDINGS TO CONNECT 9TH, 10TH, AND 11TH STREETS*	$ -	$ -	$ 84,168.50	$ -	$ -	$ 84,168.50		
B: NEW STADIUM STATION ENTRANCE								$ 300,000.00	
i.	*NEW STATION ENTRANCE ON THE EB SIDE FROM THE NORTH SIDE OF THE PLATFORM UNDER 8TH ST TO THE SE CORNER OF 8TH ST AND CLARK ST*	$ -	$ 300,000.00	$ -	$ -	$ -	$ 300,000.00		
C: GRATIOT CONNECTION TO CHOUTEAU'S LANDING								$ 446,832.25	
i.	*REALIGN GRATIOT SO THAT VEHICLES CAN TRAVEL STRAIGHT THROUGH THE INTERSECTION AT 4TH ST TO CHOUTEAU'S LANDING*	$ 260,000.00	$ 54,892.50	$ 88,539.75	$ -	$ 43,400.00	$ 446,832.25		
D: ROUNDABOUT AT EB I-64 RAMPS AND GRATIOT								$ 503,457.50	
i.	*REALIGN GRATIOT SO THAT VEHICLES CAN TRAVEL STRAIGHT THROUGH THE INTERSECTION AT 4TH ST TO CHOUTEAU'S LANDING*	$ 220,777.50	$ 17,680.00	$ -	$ 7,800.00	$ 257,200.00	$ 503,457.50		
OTHER									$ -
A: WALNUT ST TWO-WAY CONVERSION								$ -	
i.	*BEING DONE AS PART OF CAR 2015 IMPROVEMENTS [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
ii.	*TWO-WAY CONVERSION FROM MEMORIAL DR TO 8TH ST [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
iii.	*VEHICULAR ARTERIAL WITH LIMITED PEDESTRIAN FACILITIES [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
B: NEW ROUTE ALIGNMENT OF DOWNTOWN SHUTTLE								$ -	
i.	*AS CLARK ST DEVELOPS IT MIGHT BE A GOOD IDEA TO RE-ROUTE THE SOUTH LEG THE DOWNTOWN SHUTTLE FROM MARKET ST TO CLARK ST [6]*	$ -	$ -	$ -	$ -	$ -	$ -		
TOTALS		$ 4,380,800.00 22%	$ 3,322,500.00 17%	$ 7,015,600.00 35%	$ 3,295,800.00 17%	$ 1,934,200.00 10%			$ 19,948,900.00

NOTES:
[1] ALL COSTS ARE IN 2013 DOLLARS
[2] ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)
[3] PROPERTY ACQUISITION COSTS ARE NOT INCLUDED
[4] DEMOLITION OF BUILDING COSTS NOT INCLUDED
[5] SITE REMEDIATION COST NOT INCLUDED
[6] NO PUBLIC IMPROVEMENTS COSTS WITH THIS TIER

ENGINEERING GROUP P.C.

REV. 0 - 8/9/2013
DD,SLM,MSM

Stadium Station Public Improvement Cost by Construction Type and Improvement Type for All Tiers



	INTERSECTION CONSTRUCTION	PEDESTRIAN/BIKE CONSTRUCTION	ROADWAY CONSTRUCTION	STREETSCAPE CONSTRUCTION	UTILITIES (INCLUDES SEWERS)	TOTAL
OTHER	$0.00M	$0.00M	$0.00M	$0.00M	$0.00M	$0.00M
TIER 1	$1.30M	$2.67M	$2.09M	$1.21M	$0.73M	$8.00M
TIER 2	$2.60M	$0.28M	$4.75M	$2.08M	$0.90M	$10.61M
TIER 3	$0.48M	$0.37M	$0.17M	$0.01M	$0.30M	$1.33M
TOTAL	$4.38M	$3.32M	$7.02M	$3.30M	$1.93M	$19.95M

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1 -A: Clark Street Road Diet from 5 Lanes to 3 Lanes from Stadium to Tucker

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 1,300,000.00	34%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 1,336,816.00	35%
ROADWAY IMPROVEMENTS	$ 195,696.80	5%
STREETSCAPE IMPROVEMENTS	$ 537,680.00	14%
UTILITIES (INCLUDES SEWERS)	$ 478,940.00	12%
TOTAL	$ 3,849,132.80	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS

TOTAL WIDTH OF PAVEMENT REMOVAL =	22	FEET
CURB WIDTH =	0.5	FEET
STREET LIGHT SPACING =	75	FEET
STORM INLETS EVERY	150	FEET
EXISTING SIDEWALK WIDTH=	15	FEET
PROPOSED SIDEWALK WIDTH =	25	FEET
WIDTH OF PROP. RDWY. PVMT. =	1	FOOT
EXISTING LANE WIDTH =	10	FEET

NUMBER OF SIGNALIZED INTERSECTIONS = 5

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS											VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT		AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	8642	$ 168,519.00	4.4%	AREA			0				0		26	FT	*	26	SF/LF	0.111111111	SY/SF	2.9	SY/LF	2980	FT	8642	SY								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	4470	$ 58,110.00	1.5%	VOLUME			0				0					0				0				0		26.5	FT	*	1.5	FT	* 0.04	CY/SY	1.5	CY/LF	2980	FT	4470	CY
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	8642	$ 56,173.00	1.5%	AREA			0				0		26.5	FT		26.5	SF/LF	0.111111111	SY/SF	2.9	SY/LF	2980	FT	8642	SY								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	2980	$ 135,590.00	3.5%	LENGTH			0		1490	2	2980	LF			*	0				0				0									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	8344	$ 433,888.00	11.3%	AREA			0				0		25	FT		25	SF/LF	0.111111111	SY/SF	2.8	SY/LF	2980	FT	8344	SY								0				0	
STREETSCAPE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	40	$ 312,000.00	8.1%	PER EACH	2	20	40	EA			0					0				0				0									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIGNALIZATION, PEDESTRIAN	EA	0	$ 3,900.00	40	$ 156,000.00	4.1%	PER EACH	8	5	40	EA			0					0				0				0									0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	5	$ 1,300,000.00	33.8%	PER EACH	1	5	5	EA			0					0				0				0									0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	20	$ 52,000.00	1.4%	PER EACH	2	10	20	EA			0					0				0				0									0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	10	$ 19,500.00	0.5%	PER EACH	1	10	10	EA			0					0				0				0									0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	1840	$ 167,440.00	4.4%	LENGTH			0		1840	1	1840	LF				0				0				0									0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	240	$ 240,000.00	6.2%	PER EACH	8	30	240	EA			0					0				0				0									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	2980	$ 30,992.00	0.8%	LENGTH			0		1490	2	2980	LF				0				0				0									0				0	
ROADWAY IMPROVEMENTS	MEDIAN, CONCRETE, 6-INCHES HIGH	SY	1	$ 71.50	1364	$ 97,526.00	2.5%	AREA			0				0		10	FT		10	SF/LF	0.111111111	SY/SF	1.1	SY/LF	1240	FT	1364	SY								0				0	
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	1612	$ 31,434.00	0.8%	AREA			0				0		12	FT		12	SF/LF	0.111111111	SY/SF	1.3	SY/LF	1240	FT	1612	SY								0				0	
ROADWAY IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	496	$ 6,448.00	0.2%	VOLUME			0				0					0				0				0		12	FT	*	1	FT	* 0.04	CY/SY	0.4	CY/LF	1240	FT	496	CY
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	0	$ -	0.0%	AREA			0				0					0				0				0									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	INTERSECTION BUMP-OUT (COMPLETE, IN-PLACE)	EA	0	$ 12,667.20	20	$ 253,344.00	6.6%	PER EACH	4	5	20	EA			0					0				0				0									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT MARKINGS, SHARE THE ROAD "SHARROW" ARROW SYMBOL	EA	0	$ 260.00	16	$ 4,160.00	0.1%	PER EACH	4	4	16	EA			0					0				0				0									0				0	
ROADWAY IMPROVEMENTS	ROTOMILL, ASPHALT SURFACE, 2-INCH DEPTH	SY	1	$ 2.60	2728	$ 7,092.80	0.2%	AREA			0				0		20	FT		20	SF/LF	0.111111111	SY/SF	2.2	SY/LF	1240	FT	2728	SY								0				0	
ROADWAY IMPROVEMENTS	RESURFACE PAVEMENT, ASPHALT, 2-INCH DEPTH	SY	1	$ 19.50	2728	$ 53,196.00	1.4%	AREA			0				0		20	FT		20	SF/LF	0.111111111	SY/SF	2.2	SY/LF	1240	FT	2728	SY								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT, ASPHALT, COLORED W/ STAMPED PATTERN, 2-INCHES THICK	SY	1	$ 65.00	616	$ 40,040.00	1.0%	AREA			0				0		10	FT		10	SF/LF	0.111111111	SY/SF	1.1	SY/LF	560	FT	616	SY								0				0	
STREETSCAPE IMPROVEMENTS	TRASH RECIPTICALS	EA	0	$ 390.00	32	$ 12,480.00	0.3%	PER EACH	1	32	32				0					0				0				0									0				0	
STREETSCAPE IMPROVEMENTS	TREES AND GRATES	EA	0	$ 4,550.00	40	$ 182,000.00	4.7%	PER EACH	1	40	40				0					0				0				0									0				0	
STREETSCAPE IMPROVEMENTS	BENCHES	EA	0	$ 1,300.00	24	$ 31,200.00	0.8%	PER EACH	2	12	24				0					0				0				0									0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1 -B: EXTEND STREETSCAPE IMPROVEMENTS MADE AT THE WESTIN TO TUCKER BLVD.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 931,504.60	50%
ROADWAY IMPROVEMENTS	$ 123,760.00	7%
STREETSCAPE IMPROVEMENTS	$ 581,620.00	31%
UTILITIES (INCLUDES SEWERS)	$ 235,320.00	13%
TOTAL	$ 1,872,204.60	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS

ROADWAY WIDTH =	36	FEET	CROSS WALK WIDTH =	10 FEET
AVG. SIDEWALK WIDTH =	15	FEET		
CURB WIDTH =	0.5	FEET		
STREET LIGHT SPACING =	75	FEET	COMPLETE REMOVAL AND REPLACEMENT OF ALL SIDEWALKS EXCEPT NORTH SIDE BETWEEN 8TH AND 9TH	
TREE SPACING =	50	FEET	COMPLETE REMOVAL AND REPLACEMENT OF CURBS	
NO. OF PED. X-INGS AT INTERSECTIONS =	12		MILL AND RESURFACE ROADWAY	
NO. OF MID-BLOCK PED. X-INGS =	3		ADD BUMP-OUTS AT INTERSECTIONS AND MID-BLOCK CROSSINGS	
LENGTH OF SIDEWALK TO REMAIN =	300	FEET	NO SIGNALIZED INTERSECTIONS	
NO. OF FULL INTERSECTIONS =	3		NO PEDESTRIAN SIGNALS	

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT		AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	4250	$ 82,875.00	4.4%	AREA			0				0		15	FT	*	15	SF/LF	0.111111111	SY/SF	1.7	SY/LF	2500	FT	4250	SY		FT	*		FT	*	0.04	CY/SY	0	CY/LF		FT	0	CY
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	5000	$ 52,000.00	2.8%	LENGTH			0		2500	2	5000	LF				0				0				0										0	CY/LF		FT	0	CY
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	840	$ 10,920.00	0.6%	VOLUME			0				0					0				0				0		15	FT	*	0.5	FT	*	0.04	CY/SY	0.3	CY/LF	2800	FT	840	CY
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, DECORATIVE CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 67.60	4250	$ 287,300.00	15.3%	AREA			0				0		15	FT	*	15	SF/LF	0.111111111	SY/SF	1.7	SY/LF	2500	FT	4250	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	5000	$ 227,500.00	12.2%	LENGTH			0		2500	2	5000	LF				0				0				0										0	CY/LF		FT	0	CY
PEDESTRIAN/BIKE IMPROVEMENTS	INTERSECTION BUMP-OUT (COMPLETE, IN-PLACE)	EA	0	$ 12,667.20	18	$ 228,009.60	12.2%	PER EACH	1	18	18	EA			0				*	0				0				0										0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT, ASPHALT, COLORED W/ STAMPED PATTERN, 2-INCHES THICK	SY	1	$ 65.00	660	$ 42,900.00	2.3%	AREA			0				0		10	FT	*	10	SF/LF	0.111111111	SY/SF	1.1	SY/LF	600	FT	660	SY									0				0	
STREETSCAPE IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	38	$ 296,400.00	15.8%	PER EACH	1	38	38	EA			0					0				0				0										0				0	
STREETSCAPE IMPROVEMENTS	TREES AND GRATES	EA	0	$ 4,550.00	56	$ 254,800.00	13.6%	PER EACH	1	56	56	EA			0					0				0				0										0				0	
STREETSCAPE IMPROVEMENTS	TRASH RECIPTICALS	EA	0	$ 390.00	18	$ 7,020.00	0.4%	PER EACH	1	18	18	EA			0					0				0				0										0				0	
STREETSCAPE IMPROVEMENTS	BENCHES	EA	0	$ 1,300.00	18	$ 23,400.00	1.2%	PER EACH	1	18	18	EA			0					0				0				0										0				0	
ROADWAY IMPROVEMENTS	ROTOMILL, ASPHALT SURFACE, 2-INCH DEPTH	SY	1	$ 2.60	5600	$ 14,560.00	0.8%	AREA			0				0		36	FT	*	36	SF/LF	0.111111111	SY/SF	4	SY/LF	1400	FT	5600	SY									0				0	
ROADWAY IMPROVEMENTS	RESURFACE PAVEMENT, ASPHALT, 2-INCH DEPTH	SY	1	$ 19.50	5600	$ 109,200.00	5.8%	AREA			0				0		36	FT	*	36	SF/LF	0.111111111	SY/SF	4	SY/LF	1400	FT	5600	SY									0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	24	$ 62,400.00	3.3%	PER EACH	4	6	24	EA			0					0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	12	$ 23,400.00	1.2%	PER EACH	2	6	12	EA			0					0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	720	$ 65,520.00	3.5%	LENGTH			0		40	18	720	LF				0				0				0										0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	84	$ 84,000.00	4.5%	PER EACH	6	14	84	EA			0					0				0				0										0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0			0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0					0				#N/A				#N/A										#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1-C: IMPLEMENT NEW SHARE THE ROAD SIGNAGE AND PAVEMENT MARKINGS ON 8TH STREET

B		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 13,000.00	100%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 13,000.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

"SHARROW" PAVEMENT MARKING SPACING =	200	FEET
SHARE THE ROAD SIGN SPACING =	200	FEET

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	PAVEMENT MARKINGS, SHARE THE ROAD "SHARROW" ARROW SYMBOL	EA	0	$ 260.00	25	$ 6,500.00	50.0%	PER EACH	1	25	25	EA			0				0				0				0								0				0	
ROADWAY IMPROVEMENTS	SIGN (INCLUDES MOUNTING)	EA	0	$ 260.00	25	$ 6,500.00	50.0%	PER EACH	1	25	25	EA			0				0				0				0								0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1 -D1: CREATE TUNNEL ON CERRE ST. ALIGNEMENT UNDER EB I-64 RAMPS WITH VEHICULAR TRAVEL LANES AND A CYCLE TRACK ON THE SOUTH SIDE

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 1,760,000.00	100%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 1,760,000.00	
ALL COSTS ARE IN 2013 DOLLARS		
ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)		

ASSUMPTIONS:

INCLUDES ALL INCIDENTAL CONSTRUCTION ITEMS (SUCH AS DRAINAGE, LIGHTING, VENTILATION, ETC.)

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	TUNNEL	LF	0	$ 8,000.00	220	$ 1,760,000.00	100.0%	LENGTH			0		220	1	220	LF			0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1-D2: CREATE A PED/BIKE BRIDGE THROUGHT THE I-64/I-70/I-44 INTERCHANGE FROM CERRE ST. TO SOUTHWEST CORNER OF THE ARCH GROUNDS

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 200,000.00	100%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 200,000.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

BRIDGE WIDTH = 10 FEET

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	PEDESTRIAN/BIKE BRIDGE	SY	0	$ 200.00	1000	$ 200,000.00	100.0%	AREA			0				0		10	FT	10	SF/LF	0.111111111	SF/SY	1	SY/LF	1000	LF	1000	SY							0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 1-D3: CITY GARDEN CONNECTION TO GRG'S CHOUTEAH TRAIL ALONG 10TH ST. FROM CLARK TO MARKET ST. IN EXISTING GREEN SPACE

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 201,344.00	65%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ 88,660.00	29%
UTILITIES (INCLUDES SEWERS)	$ 20,000.00	6%
TOTAL	$ 310,004.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

TRAIL WIDTH =	10	FEET
SOD WIDTH =	10	FEET
EXISTING SIDEWALK WIDTH (TO BE REPLACED) =	12	FEET
TRASH RECIPTICLES & BENCH =	6	TOTAL
TREES =	16	TOTAL

PEDESTRIAN SIGNALS AT 2 INTERSECTIONS

KEEP EXISTING CURB IN PLACE

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	1040	$ 20,280.00	6.5%	AREA			0				0		12	FT	12	SF/LF	0.111111111	SF/SY	1.3	SY/LF	800	FT	1040	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	640	$ 8,320.00	2.7%	VOLUME			0				0				0				0				0		22	FT/LF	1	FT	0.04	CF/CY	0.8	CY/LF	800	FT	640	CY *
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, DECORATIVE CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 67.60	1040	$ 70,304.00	22.7%	AREA			0				0	LF	12	FT	12	SF/LF	0.111111111	SF/SY	1.3	SY/LF	800	FT	1040	SY							0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

STADIUM

TIER 2-A1: CONNECT THE 9TH ST. EXIT RAMP TO THE 10TH ST. ENTRANCE RAMP

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 520,000.00	7%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 3,864,342.00	56%
STREETSCAPE IMPROVEMENTS	$ 2,080,000.00	30%
UTILITIES (INCLUDES SEWERS)	$ 482,550.00	7%
TOTAL	$ 6,946,892.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	RAMP CONNECTION	LF	0	$ 1,800.00	2000	$ 3,600,000.00	51.8%	LENGTH			0		2000	1	2000	LF			0				0				0								0				0	
ROADWAY IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	13	$ 101,400.00	1.5%	PER EACH	1	13	13	EA			0				0				0				0								0				0	
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	1680	$ 32,760.00	0.5%	AREA			0				0		50	FT	50	SF/LF	0.111111111	SF/SY	5.6	SY/LF	300	FT	1680	SY							0				0	
ROADWAY IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	1110	$ 14,430.00	0.2%	VOLUME			0				0				0				0				0		50	FT	2	FT	0.04	CF/CY	3.7	CY/LF	300	LF	1110	CY
ROADWAY IMPROVEMENTS	PAVEMENT, ASPHALT ROADWAY, 10-INCHES THICK	SY	1	$ 62.40	1680	$ 104,832.00	1.5%	AREA			0				0		50	FT	50	SF/LF	0.111111111	SF/SY	5.6	SY/LF	300	FT	1680	SY							0				0	
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	1680	$ 10,920.00	0.2%	AREA			0				0		50	FT	50	SF/LF	0.111111111	SF/SY	5.6	SY/LF	300	FT	1680	SY							0				0	
STREETSCAPE IMPROVEMENTS	DEMOLITION, BRIDGES	LF	0	$ 1,040.00	2000	$ 2,080,000.00	29.9%	LENGTH			0		2000	1	2000	LF			0				0				0								0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	2	$ 520,000.00	7.5%	PER EACH	1	2	2	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	10	$ 26,000.00	0.4%	PER EACH	1	10	10	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	8	$ 15,600.00	0.2%	PER EACH	1	8	8	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	450	$ 40,950.00	0.6%	LENGTH			0		450	1	450	LF			0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	400	$ 400,000.00	5.8%	PER EACH	1	400	400	EA			0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 2 - A2: 2-WAY CONVERSION OF 9TH ST. FROM SPRUCE ST. TO MARKET ST. AND 10TH STREET FROM CLARK ST. TO CHESTNUT ST.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 1,300,000.00	98%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 19,812.00	2%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 1,319,812.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

LENGTH OF IMPROVEMENTS FOR 9TH =	1200	FT
LENGTH OF IMPROVEMENTS FOR 10TH =	1100	FT
NUMBER OF INTERSECTIONS TO BE REPLACED =	5	EA
NUMBER OF LANES ON EACH ROAD =	4	

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	PAVEMENT MARKING REMOVAL, 4-INCH WIDE	LF	0	$ 5.20	1120	$ 5,824.00	0.4%	LENGTH			0		2300	6	1120	LF			0				0				0								0				0	
ROADWAY IMPROVEMENTS	PAVEMENT MARKINGS, 4" WIDE STRIPE	LF	0	$ 0.26	13800	$ 3,588.00	0.3%	LENGTH			0		2300	6	13800	LF			0				0				0								0				0	
ROADWAY IMPROVEMENTS	PAVEMENT MARKINGS, "BUS LANE ONLY" WORDS	EA	0	$ 325.00	16	$ 5,200.00	0.4%	PER EACH	1	16	16	EA			0				0				0				0								0				0	
ROADWAY IMPROVEMENTS	SIGN (INCLUDES MOUNTING)	EA	0	$ 260.00	20	$ 5,200.00	0.4%	PER EACH	4	5	20	EA			0				0				0				0								0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

STADIUM

TIER 2-B2: CREATE BUMP-OUTS AT INTERSECTIONS ON 4TH ST. AND BROADWAY

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 520,000.00	68%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 101,337.60	13%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 138,672.00	18%
TOTAL	$ 760,009.60	
ALL COSTS ARE IN 2013 DOLLARS		
ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)		

ASSUMPTIONS:

ASSUMED 2 SIGNALIZED INTERSECTION CHANGES

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	INTERSECTION BUMP-OUT (COMPLETE, IN-PLACE)	EA	0	$ 12,667.20	8	$ 101,337.60	13.3%	PER EACH	2	4	8	EA			0				0				0				0								0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	2	$ 520,000.00	68.4%	PER EACH	2	1	2	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	16	$ 41,600.00	5.5%	PER EACH	4	4	16	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	8	$ 15,600.00	2.1%	PER EACH	2	4	8	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	PIPE, RCP (ASSUME 24-INCH)	LF	0	$ 91.00	192	$ 17,472.00	2.3%	LENGTH			0		24	8	192	LF			0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	UTILITY ADJUSTMENTS	EA	0	$ 1,000.00	64	$ 64,000.00	8.4%	PER EACH	16	4	64	EA			0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

STADIUM

TIER 2-B3: 4TH STREET AND BROADWAY CREATE DEDICATED BIKE LANE INFRASTRUCTURE THAT MAY REQUIRE LANE REDUCTION OR LOSS OF PARKING SPACES

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 65,520.00	100%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 65,520.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT MARKING REMOVAL, 4-INCH WIDE	LF	0	$ 5.20	12000	$ 62,400.00	95.2%	LENGTH			0		300	40	12000	LF			0				0				0								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT MARKINGS, 4" WIDE STRIPE	LF	0	$ 0.26	12000	$ 3,120.00	4.8%	LENGTH			0		300	40	12000	LF			0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 2-C1: ALIGN POPLAR STREET WITH WB I-64 ENTRANCE RAMP OFF OF BROADWAY TO CREATE 4-WAY INTERSECTION

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 260,000.00	17%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 81,900.00	6%
ROADWAY IMPROVEMENTS	$ 866,320.00	58%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 278,088.00	19%
TOTAL	$ 1,486,308.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

LANE WIDTH =	12 FT
NO. OF LANES=	4
SIDEWALK WIDTH=	6 FT
ASSUME 1000 FT	

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	7100	$ 138,450.00	9.3%	AREA			0				0		63.5	FT	63.5	SF/LF	0.111111111	SY/SF	7.1	SY/LF	1000	LF	7100	SY							0				0	
ROADWAY IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	5100	$ 66,300.00	4.5%	VOLUME			0				0				0				0				0		63.5	FT	2	FT	0.04	CY/CF	5.1	CY/LF	1000	LF	5100	CY
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	5700	$ 37,050.00	2.5%	AREA			0				0		51	FT	51	SF/LF	0.111111111	SY/SF	5.7	SY/LF	1000	LF	5700	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	1400	$ 9,100.00	0.6%	AREA			0				0		6	FT	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	2000	LF	1400	SY							0				0	
ROADWAY IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	2000	$ 91,000.00	6.1%	LENGTH			0		1000	2	2000	LF			0				0				0								0				0	
ROADWAY IMPROVEMENTS	PAVEMENT, ASPHALT ROADWAY, 10-INCHES THICK	SY	1	$ 62.40	5300	$ 330,720.00	22.3%	AREA			0				0		48	FT	48	SF/LF	0.111111111	SY/SF	5.3	SY/LF	1000	LF	5300	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	1400	$ 72,800.00	4.9%	AREA			0				0		6	FT	6	SF/LF	0.111111111	SY/SF	0.7	SY/LF	2000	LF	1400	SY							0				0	
ROADWAY IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 7,800.00	26	$ 202,800.00	13.6%	PER EACH	2	13	26				0				0				0				0								0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	1	$ 260,000.00	17.5%	PER EACH	1	1	1	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 1,000.00	14	$ 14,000.00	0.9%	PER EACH	2	7	14				0				0				0				0								0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 2-C2: ADD CROSSWALKS TO ALL FOUR LEGS OF INTERSECTION OF BROADWAY AND RELOCATED POPLAR ST.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 31,512.00	100%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 31,512.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

PAVEMENT WIDTH = 60 FEET

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	PAVEMENT MARKINGS, 12" WIDE STRIPE	LF	0	$ 0.65	480	$ 312.00	1.0%	LENGTH			0		60	8	480				0				0				0								0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIGNALIZATION, PEDESTRIAN	EA	0	$ 3,900.00	8	$ 31,200.00	99.0%	PER EACH	8	1	8	EA			0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

STADIUM
TIER 3-A2

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ -	0%
ROADWAY IMPROVEMENTS	$ 84,168.50	100%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 84,168.50	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS											VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	ROTOMILL, ASPHALT SURFACE, 2-INCH DEPTH	SY	1	$ 2.60	3795	$ 9,867.00	11.7%	AREA			0				0		30	FT	30	SF/LF	0.111111111	SY/SF	3.3	SY/LF	1150	LF	3795	SY							0				0	
ROADWAY IMPROVEMENTS	RESURFACE PAVEMENT, ASPHALT, 2-INCH DEPTH	SY	1	$ 19.50	3795	$ 74,002.50	87.9%	AREA			0				0		30	FT	30	SF/LF	0.111111111	SY/SF	3.3	SY/LF	1150	LF	3795	SY							0				0	
ROADWAY IMPROVEMENTS	PAVEMENT MARKINGS, 4" WIDE STRIPE	LF	0	$ 0.26	1150	$ 299.00	0.4%	LENGTH			0		1150	1	1150				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 3-B1: NEW STADIUM ENTRANCE ON EB SIDE FROM THE NORTH SIDE OF THE PLATFORM UNDER 8TH ST. TO THE SE CORNER OF 8TH ST. AND CLARK ST.

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ -	0%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 300,000.00	100%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ -	0%
TOTAL	$ 300,000.00	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS										VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
PEDESTRIAN/BIKE IMPROVEMENTS	METROLINK PLATFORM	EA	0	$ 300,000.00	1	$ 300,000.00	100.0%	PER EACH	1	1	1				0				0				0				0								0				0	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		#N/A	#N/A	#N/A		#N/A	#N/A				0				0				0				#N/A				#N/A								#N/A				#N/A	
		EA	#N/A	$ 1,000.00		#VALUE!	#VALUE!				0				0				0				#N/A				#N/A								#N/A				#N/A	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

m3 ENGINEERING GROUP P.C.

REV. 0 - 6/26/2013 MSM

STADIUM

TIER 3-C1: GRATIOT CONNNECTION TO CHOUTEAU'S LANDING - REALIGN GRATIOT SO THAT VEHICLES CAN TRAVEL STRAIGHT THROUGHT THE INTERSECTION AT 4TH ST. TO CHOUTEAU'S LANDING

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 260,000.00	58%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 54,892.50	12%
ROADWAY IMPROVEMENTS	$ 88,539.75	20%
STREETSCAPE IMPROVEMENTS	$ -	0%
UTILITIES (INCLUDES SEWERS)	$ 43,400.00	10%
TOTAL	$ 446,832.25	

ALL COSTS ARE IN 2013 DOLLARS

ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)

ASSUMPTIONS:

COST FOR LENGTH OF STREET ONLY NOT ROW OR BUILDING PURCHASE OR BUILDING DEMOLITION OR SITE REMEDIATION.

WIDTH OF STREET=26FT

WIDTH OF SIDEWALK =8 FT

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS												VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT	DEPTH	UNIT	CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
ROADWAY IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	945	$ 18,427.50	4.1%	AREA			0				0		38	FT	38	SY/LF	0.111111111	SY/SF	4.2	SY/LF	225	LF	945	SY							0				0	
ROADWAY IMPROVEMENTS	REMOVAL OF CURBS	LF	0	$ 10.40	450	$ 4,680.00	1.0%	LENGTH			0		225	2	450	LF			0				0				0								0				0	
ROADWAY IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	652.5	$ 4,241.25	0.9%	AREA			0				0		26	FT	26	SY/LF	0.111111111	SY/SF	2.9	SY/LF	225	LF	652.5	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	405	$ 2,632.50	0.6%	AREA			0				0		8	FT	8	SY/LF	0.111111111	SY/SF	0.9	SY/LF	450	LF	405	SY												
ROADWAY IMPROVEMENTS	PAVEMENT, ASPHALT ROADWAY, 10-INCHES THICK	SY	1	$ 62.40	652.5	$ 40,716.00	9.1%	AREA			0				0		26	FT	26	SY/LF	0.111111111	SY/SF	2.9	SY/LF	225	LF	652.5	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	405	$ 21,060.00	4.7%	AREA			0				0		8	FT	8	SY/LF	0.111111111	SY/SF	0.9	SY/LF	450	LF	405	SY							0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIGNALIZATION, PEDESTRIAN	EA	0	$ 3,900.00	8	$ 31,200.00	7.0%	PER EACH	8	1	8	EA			0				0				0				0								0				0	
INTERSECTION IMPROVEMENTS	SIGNALIZATION (COMPLETE INTERSECTION)	EA	0	$ 260,000.00	1	$ 260,000.00	58.2%	PER EACH	1	1	1	EA			0				0				0				0								0				0	
ROADWAY IMPROVEMENTS	CURB, GRANITE	LF	0	$ 45.50	450	$ 20,475.00	4.6%	LENGTH			0		225	2	450	LF			0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	INLET, STORM	EA	0	$ 2,600.00	4	$ 10,400.00	2.3%	PER EACH	1	4	4	EA			0				0				0				0								0				0	
UTILITIES (INCLUDES SEWERS)	MANHOLE, STORM	EA	0	$ 1,950.00	2	$ 3,900.00	0.9%	PER EACH	1	2	2	EA			0				0				0				0								0				0	

PLANNING LEVEL ESTIMATE OF CONSTRUCTION COSTS

FOR TOD STUDY AREA PLANS

STADIUM

TIER 3-D: CONSTRUCT A ROUNDABOUT AT EB I-64 RAMPS AND GRATIOT

REV. 0 - 6/26/2013 MSM

COST SUMMARY		
INTERSECTION IMPROVEMENTS	$ 220,777.50	44%
PEDESTRIAN/BIKE IMPROVEMENTS	$ 17,680.00	4%
ROADWAY IMPROVEMENTS	$ -	0%
STREETSCAPE IMPROVEMENTS	$ 7,800.00	2%
UTILITIES (INCLUDES SEWERS)	$ 257,200.00	51%
TOTAL	$ 503,457.50	
ALL COSTS ARE IN 2013 DOLLARS		
ALL COSTS INCLUDE MOBILIZATION (5%) AND CONTINGENCY (25%)		

ASSUMPTIONS:

STORM INLET 2 PER 150 FT

STORM MANHOLES 2 PER 200 FT

CALCULATIONS CAN BE PROVIDED IF NECESSARY

NOTE:

* ASSUMED

									PER EACH CALCULATIONS				LENGTH CALCULATIONS				AREA CALCULATIONS											VOLUME CALCULATIONS											
CLASS	ITEM	UNIT	ACCURACY	UNIT COST	QTY	ITEM COST		CALC. TYPE	NUMBER PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	LENGTH PER OCCURANCE	NUMBER OF OCCURANCES	TOTAL	UNITS	WIDTH	UNIT	AREA	UNIT	CONV. FACTOR	UNIT	AREA	UNIT	LENGTH	UNIT	TOTAL AREA	UNIT	WIDTH	UNIT		DEPTH	UNIT		CONV. FACTOR	UNIT	VOL	UNITS	LENGTH	UNIT	TOTAL VOL	UNIT
INTERSECTION IMPROVEMENTS	REMOVAL OF CONCRETE PAVEMENT (24 INCHES OR LESS THICKNESS)	SY	1	$ 19.50	1670	$ 32,565.00	6.5%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	1670	SY									0				0	
INTERSECTION IMPROVEMENTS	EARTHWORK	CY	1	$ 13.00	1670	$ 21,710.00	4.3%	VOLUME			0				0				0				0				0		1	FT	*	1	FT	*	0.04	CY/CF	1	CY/LF	1670	FT	1670	CY
INTERSECTION IMPROVEMENTS	AGGREGATE BASE, 4-INCH DEPTH	SY	1	$ 6.50	1380	$ 8,970.00	1.8%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	1380	SY									0				0	
INTERSECTION IMPROVEMENTS	PAVEMENT, CONCRETE, NON-REINFORCED, 15-FT JOINTS, 9-INCHES	SY	1	$ 71.50	1245	$ 89,017.50	17.7%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	1245	SY									0				0	
INTERSECTION IMPROVEMENTS	CURB, CONCRETE	LF	0	$ 28.60	800	$ 22,880.00	4.5%	LENGTH			0		800	1	800	LF			0				0				0										0				0	
INTERSECTION IMPROVEMENTS	MEDIAN, CONCRETE, 6-INCHES HIGH	SY	1	$ 71.50	500	$ 35,750.00	7.1%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	500	SY									0				0	
PEDESTRIAN/BIKE IMPROVEMENTS	SIDEWALK, CONCRETE, 5-INCH THICK (INCLUDES CURB RAMPS)	SY	1	$ 52.00	340	$ 17,680.00	3.5%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	340	SY									0				0	
INTERSECTION IMPROVEMENTS	SOD	SY	1	$ 6.50	290	$ 1,885.00	0.4%	AREA			0				0		1	FT	1	SY/LF	0.111111111	SY/SF	0.1	SY/LF		LF	290	SY									0				0	
INTERSECTION IMPROVEMENTS	STREET LIGHTING, DECORATIVE (INCLUDES ALL INCIDENTALS)	EA	0	$ 1,000.00	8	$ 8,000.00	1.6%	PER EACH	1	8	8	EA			0				0				0				0										0				0	