



COMPREHENSIVE PLAN



CITY OF MARYLAND HEIGHTS COMMUNITY DEVELOPMENT



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INTRODUCTION



Maryland Heights is a vibrant city in the heart of St. Louis County, Missouri. The City is home to approximately 28,000 residents with over 50,000 people employed in Maryland Heights. Major employers include Edward Jones, Spectrum, World Wide Technology, and Magellan Health Services. Maryland Heights attracts millions of visitors each year to regional draws such as Creve Coeur Lake Memorial Park, Hollywood Casino and Amphitheatre, Centene Community Ice Center, and St. Louis Music Park. Incorporated in 1985, Maryland Heights is a relatively young community that continues to grow and change. Change is inevitable and preparing for it is vital.

PURPOSE

This Comprehensive Plan is a document designed to guide the future actions of Maryland Heights. The Plan presents a vision for the future, with long-range goals and objectives to achieve that vision. Furthermore, the Plan provides guidance on how to best approach public and private land development proposals, the expenditure of public funds on infrastructure and parks, regionally cooperative efforts, and issues of pressing concern, including public health and neighborhood preservation.

This Comprehensive Plan's functions are aptly described by Gary Taylor, JD, of Iowa State University as follows:

- The Plan provides continuity across time, and gives current and future residents and business owners a common framework for addressing a variety of issues.
- The Plan acts as the intermediary, balancing competing interests while prioritizing the greatest benefits for individuals and the community.
- It protects the City's public investments. It is more efficient and sustainable to provide orderly and phased development patterns.
- The Plan encourages conservation of valued resources through the identification and recommendation of sustainable development strategies.
- The Plan provides guidance for shaping the character of the City, by setting forth policies that foster a distinctive sense of place.
- It promotes economic development. The Plan and the associated Data Book contain valuable information that help drive the location decisions for new and growing businesses.
- Perhaps most importantly, this Comprehensive Plan provides justification for decisions. The Plan provides a factual and objective basis to support zoning decisions and will be used by residents, businesses, and City staff to make appropriate development decisions based on known goals, objectives, and actions.



ADOPTION

In Missouri, the Comprehensive Plan is adopted by each city's Planning Commission, a volunteer board comprised of citizens appointed by the Mayor and approved by the City Council. With regard to the Plan's adoption, the Missouri Revised Statutes (89.360 RSMo) state:

The commission may adopt the plan as a whole by a single resolution, or, as the work of making the whole city plan progresses, may from time to time adopt a part or parts thereof, any part to correspond generally with one or more of the functional subdivisions of the subject matter of the plan. Before the adoption, amendment or extension of the plan or portion thereof the commission shall hold at least one public hearing thereon. Fifteen days' notice of the time and place of such hearing shall be published in at least one newspaper having general circulation within the municipality. The hearing may be adjourned from time to time. The adoption of the plan requires a majority vote of the full membership of the planning commission.

While the Comprehensive Plan is drafted by City staff and adopted by the Planning Commission, it is based on input from residents, landowners, business representatives, and other stakeholders such as school districts, public agencies, and public utilities.





ORGANIZATION

From an organizational standpoint, the Comprehensive Plan has nine chapters, plus the associated Data Book. These chapters are:

- 1) Introduction
- 2) Land Use and Development Strategies
- 3) Healthy and Vibrant Neighborhoods
- 4) Open Space, Parks, Recreation, and Wellness
- 5) Quality Community Services
- 6) Hazard Mitigation and Resiliency
- 7) Economic Vitality
- 8) Active Community Engagement
- 9) Maryland Park Lake District Future Land Use Plan

Each chapter is organized around goals, objectives, and actions (or strategies). For the purposes of this Plan, these are defined as follows:

- ⇒ **Goal:** the purpose toward which an endeavor is directed
- ⇒ **Objective:** attainments that can be achieved by following a certain number of steps
- ⇒ **Action (strategy):** specific steps taken to achieve the goals and objectives

Each chapter contains the goals, objectives, and actions related to the chapter's subject matter. For quick reference, the Plan also includes a table with the goals and objectives. The table is included in the Plan's appendix.



ORGANIZATION

Generally, all of the goals, objectives, and actions in this Plan apply citywide. The exception is the portion of City known as the Maryland Park Lake District. This 12.7 square mile area represents a unique opportunity for future development and redevelopment but also presents challenges due to its unique stormwater management, transportation, and infrastructure constraints. As early as 1969 (well before the City's incorporation), St. Louis County developed a plan for the area then known as the Missouri Bottoms. The City's plan for this area has evolved over time as infrastructure improvements have been constructed, including the Howard Bend Levee, Missouri Route 364, and Missouri Route 141 (Maryland Heights Expressway). The Maryland Park Lake District Future Land Use Plan is included as Chapter 9 of the Comprehensive Plan. The intent of this chapter is to chart the course of future development within the Lake District, adding the specificity needed for development review and approval in this area.

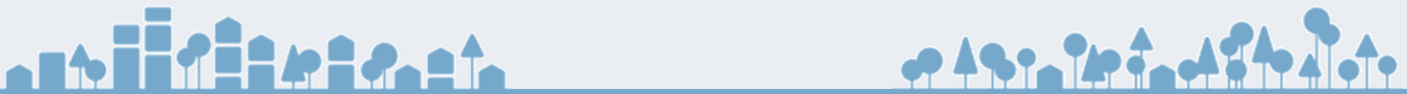
Finally, the City's Data Book is a collection of information regarding various aspects of the Maryland Heights community including a brief history of the City, location, population, demographics (income, race, age, gender, household composition, etc.), as well as the status and condition of housing stock (age, size, construction type). The document also assesses community amenities including school districts, fire protection, roadways and transportation access, and city services. The Data Book will be updated independently over time to ensure that the latest information and data are reflected. Updates will occur at a maximum of every ten years, when new U.S. Census data is available.



IMPLEMENTATION

Without implementation, the Comprehensive Plan is just an image of what might be. To make it a reality, it is vital to put its policies into practice. This is done through a number of ways:

- **Zoning Code** – The Zoning Code controls the development and use of private land to protect the public health, safety, and general welfare. The Comprehensive Plan can be implemented by adopting zoning regulations that further the goals and objectives of the Plan. The Maryland Heights Zoning Code has a strong relationship with the Comprehensive Plan as it requires potential development projects to be consistent with the Comprehensive Plan. The City Planner and Planning Commission must make such determination before the project can be approved for construction.
- **Subdivision Code** – Similar to the Zoning Code, the Subdivision Code promotes the public health, safety, and general welfare of the City by regulating the division and re-division of land. Subdivision regulations can be adopted that further the goals and objectives of the Plan as they relate to neighborhood design.
- **Capital Improvement Program** – Adopted each year, the Capital Improvement Program (CIP) is a plan for the City’s capital investments over the next five (5) year period. The CIP allows the City to project all capital costs, funding and timing. Each year the CIP is reviewed by the Planning Commission and City Council within the context of ongoing City, County and State planning, programs and policies, as well as the Comprehensive Plan.
- **Economic Development Program** – The City can encourage redevelopment and adaptive reuse projects that are consistent with the Comprehensive Plan by selective use of incentives through the Economic Development Program. An explanation of such incentives is included in Chapter 7, Enhancing Economic Vitality.
- **Other Programs** – The Comprehensive Plan can also be implemented through other programs which seek to empower citizens to be more active in their community. Such programs include Maryland Heights University and the Citizen Police Academy. These programs are intended to cultivate the next generation of volunteers including future Planning Commissioners and City Councilmembers.



LAND USE & DEVELOPMENT STRATEGIES



Essential Land Use and Development Strategies

Land is a limited resource. It is imperative to ensure that a variety of housing, employment, shopping, recreation, entertainment, open space, and other amenities are provided for the benefit of those who live, work, and play in Maryland Heights. It is essential to establish policies to guide future land use, development, and redevelopment to ensure that this aspiration is effectively achieved.

With regard to the land use policies contained in this document, it should be noted that the Comprehensive Plan is not a regulatory document. The goals, objectives, actions, and other discussion provide guidance to land use decisions. The Plan is then implemented through the regulations and standards of the Municipal Code, including the Zoning and Subdivision Codes which control the use and development of land. The City is also able to encourage desirable uses and developments on challenged properties through the use of economic development incentives.

Ideally, future development in Maryland Heights will be evaluated based on the concepts of sustainability and resilience. Sustainability is the belief that every decision should be made considering the full long-term implications of the choice. It further means that development choices will be required to consider the social, environmental and economic needs of today without reducing the ability of future generations to have their needs met. This requires acting in a way that simultaneously benefits the social, environmental, and economic well-being of city residents, property owners, and that of the development community. Thinking in terms of sustainability is an integrated process; many strategies that improve the City's sustainability are interwoven throughout this plan.

Resilience is generally viewed as a community's ability to bounce back after an economic downturn or a sudden natural disaster, and absorb the change. For communities and regions resilience measures the ability to return to normal performance levels following a high-impact but low probability disruption, and the speed at which they can do it. Similarly, community resilience can be described as "The capability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change."¹

¹[Sarah V. Ficenec \(2010\), "Building Regional Economic Resilience", George Washington Institute of Public Policy](#)



GOAL: ENCOURAGE PROJECTS AND FEATURES THAT ENHANCE THE IDENTITY AND IMAGE OF THE CITY.

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OBJECTIVES:

- *Ensure the character and image of the City of Maryland Heights is perpetuated in new development and redevelopment proposals.*
- *Encourage the expansion and strengthening of existing commercial areas.*
- *Encourage a better/improved range of retail and services, including hospitality and entertainment.*
- *Support the development of neighborhood retail and service opportunities.*
- *Encourage mixed-use developments that enhance the quality of life and community character by building efficient, compact, connected development.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Streamline review and approval processes for entertainment and hospitality uses.
- ⇒ Prepare corridor design guidelines for right-of-way improvements that may occur during any redevelopment or repair of the city rights-of-way.
- ⇒ Integrate the architecture and landscape along major streets and highway frontages to achieve a strong, unified appearance.
- ⇒ Ensure that new development along Dorsett Road is consistent with the Great Streets Plan.



GOAL: ENCOURAGE PROJECTS AND FEATURES THAT ENHANCE THE IDENTITY AND IMAGE OF THE CITY.



Development throughout the City of Maryland Heights should occur in a manner that creates character and adds value. This can be achieved through applying good design principles to site layout, access, landscaping, architecture, on-site stormwater management, connection to the regional stormwater management system, building scale, massing and orientation and the design and layout of parking. To implement the City’s Strategic Plan, as well as the vision of the Comprehensive Plan, regardless of the specific land use, projects should have architectural quality, be integral with both infrastructure and open space, and relate to adjoining land uses.

Objective: Ensure the character and image of the City of Maryland Heights is perpetuated in new development and redevelopment proposals.

While ensuring both an economically productive pattern of development for the City and providing increased value to land owners is important, it is also critical that land be developed in such a way that enhances both the regional image of the City and provides for the needs of the overall community. Development proposals in the form of rezoning applications will be expected to address the following general questions regarding their impacts:

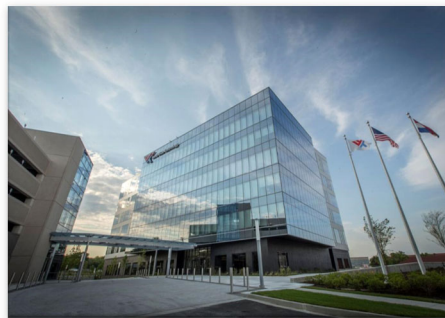
- DOES THE DEVELOPMENT IMPROVE MARYLAND HEIGHTS’ IMAGE?
- DOES THE DEVELOPMENT PROVIDE A NEEDED AMENITY TO THE COMMUNITY?
- DOES THE DEVELOPMENT ADHERE TO THE GOALS AND STRATEGIES ESTABLISHED IN THE PLAN?
- DOES THE DEVELOPMENT’S DESIGN ADD CHARACTER TO THE CITY?



Objective: Ensure the character and image of the City of Maryland Heights is perpetuated in new development and redevelopment proposals.

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What is the character and image of Maryland Heights? The City lacks the traditional character of some inner ring St. Louis suburbs or the historic downtown of places like the City of St. Charles. The emerging and future character of Maryland Heights, due to substantial public and private investment, is an image of quality. Quality public infrastructure like the Dorsett Road/Interstate 270 interchange, quality places to play like Creve Coeur Lake Memorial Park, quality places to work like the office campuses of the Westport area, quality places to stay like the modern hotels that now provide approximately 4,000 rooms, and quality places to live throughout the City whether multi-family or single-family homes. This image should be preserved, emphasized, and capitalized upon even as a variety of development and redevelopment is encouraged.



The first component that furthers development quality is quality begets quality; high quality development sets a tone that attracts additional high quality development that embodies sustainability and resiliency. It is envisioned that improved standards, planning of infrastructure improvements, and inclusion of amenities will attract even higher quality development, in which architecture, landscape, and urban design are fully integrated across new development and redevelopment throughout the City.

World Wide
Technology Global
Headquarters
(Source: St. Louis Post
Dispatch, 2017)



Objective: Ensure the character and image of the City of Maryland Heights is perpetuated in new development and redevelopment proposals.

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Quality is a difficult concept to define, especially when it relates to real estate development. Quality and character are often thought of as subjective ideas that on the surface appear difficult to quantify and seem intangible. However, the fact that subjective concepts cannot always be quantified does not mean that fair, reasonable, effective standards cannot be established. It is well demonstrated that design standards related to land use, public facilities, site planning, building configuration, materials and orientation, landscaping, pedestrian facilities, signage, lighting, and other aspects of public and private development can be established and development character can achieve a certain level of “quality.” At the same time, these standards must be administered efficiently and consistently without creating uncertainty and undue delay in the development review process.

“Public realm” is any publicly owned streets, sidewalks, right of ways, parks, and open spaces, as well as public and civic building and facilities.

However, the responsibility for quality does not solely rest within the private sector. It is equally important that the City apply the same high standards for the public realm as those to which private development is held. The manner in which streets are designed, development is integrated with public pedestrian facilities, and open spaces and public properties are maintained and operated are critical to community character.

“Streetscape” standards are particularly important: street landscaping, lighting, traffic control devices, signage, the location of utility lines, and other public infrastructure can be designed to achieve an overall aesthetic image, in addition to serving functional purposes.





Objective: Encourage the expansion and strengthening of existing commercial areas.

Objective: Encourage a better/improved range of retail and services, including hospitality and entertainment.

Objective: Support the development of neighborhood retail and service opportunities.

Within the City, commercial development (including potential for future commercial development) generally falls into four areas:

DORSETT ROAD COMMERCIAL CORRIDOR. Long considered the City’s “Main Street,” Dorsett Road offers an extremely wide variety of commercial uses. These include fast food and sit down restaurants, gas stations, automotive uses, and a number of other retail and service uses. As development is proposed along Dorsett Road, the City expects that it will comport with the principles set forth in Dorsett Road Great Streets Plan (June, 2013) and should provide both a local and regional appeal.



COMMERCIAL NODES. There are a number of smaller commercial nodes throughout Maryland Heights. These nodes primarily serve the local neighborhood and generally consist of small, locally owned businesses. Commercial development in these neighborhood nodes should offer a variety of goods and services to support nearby neighborhoods, but remain lower in intensity so as not to disrupt neighborhood character.



WESTPORT COMMERCIAL AREA. Serving as the City’s key economic engine, this area includes Westport Plaza and the office and hospitality uses surrounding it. In recent years, obsolete industrial and distribution buildings have transitioned to, or been redeveloped in favor of, offices and restaurants. This pattern of adaptive reuse and reinvestment should continue to be encouraged.



MARYLAND PARK LAKE DISTRICT. The Comprehensive Plan advocates commercial development within much of the district in the form of mixed-use developments, regional retail, and service retail depending on the location.



Commercial developments should be appropriate in their given contexts with an overall emphasis on creating a draw to both local residents and regional visitors by creating a place of destination. Residents of Maryland Heights have also indicated a desire for a greater variety of retail options within the City. Yet changes in economic conditions and retail trends have shifted the retail and services market. The following is a brief explanation of various retail types, based on an analysis by *Who's Who Legal*:

THE ENCLOSED REGIONAL MALL

The pace of regional mall development across the US has slowed to a virtual halt. This trend illustrates that, for the present, this formerly typical retail style of development has ceased to be built. The consolidation of the traditional department store industry has played an extremely important role in the shrinking construction of the traditional mall. Since the mid-1990s, the major department store chains have either disintegrated or merged. The traditional anchor tenant of the enclosed mall has diminished in number and impact. Given market conditions and consumer preferences, it is unlikely that an enclosed mall would be constructed in Maryland Heights.



Source: SLBJ, 2020

POWER CENTERS

The decline of the regional mall was hastened by the popularity of the power center. The power center started as a collection of value retailers in major categories such as apparel, books, bed and bath, sporting goods, electronics, movie theatres and home improvement coupled with a section of small conventional retailers occupying smaller or less significant spaces. Soon the needs of the major power center retailers to fuel their growth by expanding the number of stores led to the power center becoming a collection of the "category killers" - retailers with large square footage and inventory that use buying power to sell at prices not usually achievable by the small tenant in the same category. As a result, small tenant space was typically not developed.

As adjuncts to the large free-standing retailers grouped together or near one another, power center developers reserved pad sites for smaller users such as restaurants, banks and small-space users that were no less dominant in their retailing category. Power centers are usually located near major highway transportation access, which is deemed necessary by the dominant retailers. While it is possible to walk from one store to another, typical site designs often make this impractical and dangerous. Future developments of this type within Maryland Heights, however, should include provisions for internal walkability such as incorporating safe and effective pedestrian connections throughout.





Colonial Marketplace,
Rendering
(Source: SLBJ, 2012)

THE LIFESTYLE CENTER

A lifestyle center, while similar to a power center, typically attracts higher-end fashion-apparel mall tenants, restaurants, and high end home-furnishing stores. These centers are not typically enclosed and often try to emulate a traditional Main Street, placing a great emphasis on walkability. Successful lifestyle centers also include quality public spaces and landscaping.

BIG BOX RETAIL

A big-box store (also supercenter, superstore, or megastore) is a physically large retail establishment, usually part of a chain. Typical characteristics include the following:

- Retail stores selling a variety of goods and services, usually including clothing, consumer goods, and groceries
- Corporate ownership and nationwide chain presence
- Buildings of at least 50,000 square feet, ranging up to more than 200,000 square feet
- Mostly windowless, roughly rectangular, usually single-story buildings
- Standardized formats used by most or all stores in the chain
- Large, free, usually parking lots

To achieve the appropriate quality, any future development of this type must be consistent with the Building Design Standards of the Zoning Code which seek to minimize corporate architecture and create visual interest in building form. Also, and perhaps more importantly, the impact of large parking fields must be minimized through creative design approaches, proper building orientation, and landscaping.

STRIP MALLS



A strip mall (also a shopping plaza, shopping center, or mini-mall) is an open-air shopping mall where the stores are arranged in a row, typically with a sidewalk in front of the building. Strip malls are often developed as a unit and have large parking lots in front. They generally face major arterials and tend to be self-contained with few pedestrian connections to surrounding neighborhoods. Walkability to and within strip malls should be a priority, retrofitting existing centers and properly designing new ones, particularly those located within neighborhood commercial districts or along Dorsett Road.



SUPERMARKETS AND SUPERMARKET ANCHORED CENTERS

The supermarket-anchored neighborhood or community center (such as Dorsett Village) continues to be an important retail type. Supermarket types, however, have changed over the years from simple food sales to multi-department retail stores that contain pharmacies, florists, housewares, banks, and restaurants. In its own way, the supermarket has become an entertainment venue. Like big box retail, this development form often produces large visually obtrusive parking fields that should be improved by creative approaches to site design.

SUBURBAN IN-FILL RETAIL DEVELOPMENT

Opportunities exist throughout the City for infill retail within existing shopping venues. Market conditions, including changing preferences, mean that continued redevelopment and intensification of suburban infill sites are likely. This may include the adaptive reuse of some existing buildings and properties. This infill redevelopment should be encouraged by the City as a means of strengthening existing commercial areas.

Objective: Encourage mixed-use developments that enhance the quality of life and community character by building efficient, compact, connected development.

Suburban mixed-use projects are on the rise across the United States. The term “mixed-use development” holds a variety of meanings and can be applied to a wide range of community development projects.

Development projects may be classified as “mixed-use” if they provide more than one use or purpose within a shared building or development area. Mixed-use projects may include any combination of housing, office, retail, medical, recreational, commercial, light industrial, or other components.

A single owner and business operator might occupy a mixed-use building, or multiple housing and commercial tenants could lease space within a mixed-use development project. Mixed-use projects often involve the redevelopment of buildings and blocks located in aging inner-city commercial districts. However, new construction of mixed-use development is occurring in urban and suburban communities as well.

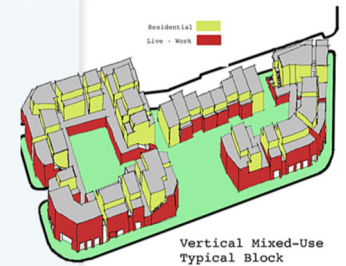


Objective: Encourage mixed-use developments that enhance the quality of life and community character by building efficient, compact, connected development.

While mixed-use can take on many forms, it is typically categorized as vertical mixed-use buildings, horizontal mixed-use blocks, or mixed-use walkable neighborhoods:

VERTICAL MIXED-USE BUILDING

Combines different uses in the same building. Lower floors should have more public uses with more private uses on the upper floors. For example, the ground floor could have retail, second floor and up having professional offices, and uppermost floors being some form of residential, such as flats or a hotel. In more urban areas, an entire block or neighborhood may be composed of vertical mixed-use buildings.



HORIZONTAL MIXED-USE BLOCKS

Combines single-use buildings on distinct parcels in a range of land uses within one block. In more urban areas, this approach avoids the financing and coding complexities of vertical layered uses while achieving the goal of placemaking that is made possible by bringing together complementary uses in one place. In less urban areas, horizontal mixed-use offers the advantage of sharing utilities and amenities while using conventional construction to create a mixture of uses within walkable blocks surrounded by an integrated street system.



Source:
Urban Development
Institute, 2013

MIXED-USE WALKABLE NEIGHBORHOODS

With the infinite number of various possibilities, these places combine vertical and horizontal use mixing in an area ideally within a five to ten minute walking distance (known as a pedestrian shed) or quarter mile radius of a neighborhood center.

Regardless of the form it takes, mixed-use development should be an integral part of most communities, creating unique places where people can live, work, play, and meet daily shopping and lifestyle needs within a single neighborhood. Mixed-use development is the preferred land use through the City and should be encouraged through the use of creative zoning procedures and economic development incentives.



GOAL: ENCOURAGE A SUSTAINABLE DEVELOPMENT PATTERN THAT ACCOMMODATES AND BALANCES BOTH ECONOMIC GROWTH AND COMMUNITY CHARACTER.

OBJECTIVES:

- *Reduce energy consumption through the application of energy efficient design techniques and technologies.*
- *Encourage environmentally friendly building practices such as green roofs and permeable pavers in new development and redevelopment.*
- *Encourage redevelopment of buildings and properties that are experiencing functional or economic obsolescence.*
- *Create development patterns that result in efficient connection to the regional stormwater and transportation system.*
- *Encourage public infrastructure and facilities including roads, pedestrian connections, and streetscapes that are designed to promote both aesthetic and functional quality.*
- *Encourage green infrastructure in all redevelopment and new development.*
- *Establish and strengthen focal points, such as schools, parks, commercial districts, and other community gathering spaces.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Modify the Zoning Code to encourage alternative energy efficient technologies, green infrastructure, and other sustainable measures.
- ⇒ Modify the Subdivision Code to encourage alternative energy efficient technologies, green infrastructure, and other sustainable measures
- ⇒ Modify the Zoning Code to facilitate redevelopment of obsolete properties and buildings.
- ⇒ Inventory existing vacant commercial space, including zoning, transportation, and available utilities.
- ⇒ Evaluate impacts of current and proposed development on existing community character and infrastructure.
- ⇒ Encourage applications for green building/site certifications such as *LEED*, *Green Globes*, and *PHIUS*.



GOAL: Encourage a sustainable development pattern that accommodates and balances both economic growth and community character.

There are many ways to improve the sustainability and performance of new development, as well as redevelopment. Building energy efficient buildings, creating walkable communities, protecting natural resources, and encouraging healthy lifestyles are all ways in which the sustainability of our lifestyles is extended. It is the responsibility of development to adhere to these ideals and it is the role of the city government to take the long-view of these issues and encourage development that furthers it.

Objective: Reduce energy consumption through the application of energy efficient design techniques and technologies.

On an annual basis, buildings in the United States consume 36% of America's energy and 65% of its electricity. Likewise, buildings emit 30% of the carbon dioxide (the primary greenhouse gas associated with climate change), 49% of the sulfur dioxide, and 25% of the nitrogen oxides found in the air. Currently, the vast majority of this energy is produced from non-renewable, fossil fuel resources.

(Source: US Environmental Protection Agency, 2018)



Image: Microsoft Publisher, 2016

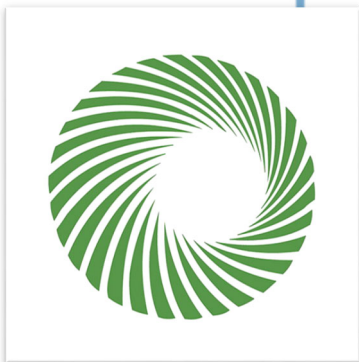
With the world's supply of fossil fuel dwindling, demand for fossil fuel rising, concerns for energy supply security increasing (both for general supply and specific needs of facilities), and the impact of greenhouse gases on the world's climate rising, it is essential to find ways to reduce load, increase efficiency, and utilize renewable fuel resources in facilities of all types.



Objective: Reduce energy consumption through the application of energy efficient design techniques and technologies.

According to the National Institute of Building Sciences, during the facility design and development process, building projects should have a comprehensive, integrated approach that seeks to:

- Reduce heating, cooling, and lighting loads through climate-responsive design and conservation practices;
- Employ renewable energy sources such as daylighting, passive solar heating, photovoltaics, geothermal, and groundwater cooling;
- Specify efficient HVAC and lighting systems that consider part-load conditions and utility interface requirements;
- Optimize building performance by employing energy modeling programs and optimize system control strategies by using occupancy sensors, CO² sensors, and other air quality alarms;
- Monitor project performance through a policy of commissioning, metering, annual reporting, and periodic re-commissioning; and
- Integrate water saving technologies to reduce the energy burden of providing potable water.



Courtesy of the National
 Institute of Building
 Sciences

This process should be applied to the reuse or renovation of existing buildings as well. In early 2015, the City adopted the 2015 International Code Council model codes. At the time of this Plan’s adoption, the City was in the process of adopting the 2021 codes. This body of codes covers all aspects of existing and new residential and commercial construction. Remaining current with these documents reinforces our ongoing effort to address many important concerns, including public health and safety, and environmental protection. The International Code Council publishes an updated code every three years. In order to maintain a favorable ISO rating which results in lower property insurance rates for the entire community, the City typically adopts the newest code on a six-year cycle. This affords staff the opportunity to monitor the needs of the community and amend the adopting ordinance if necessary.



Objective: Encourage environmentally friendly building practices such as green roofs and permeable pavers in new development and redevelopment.

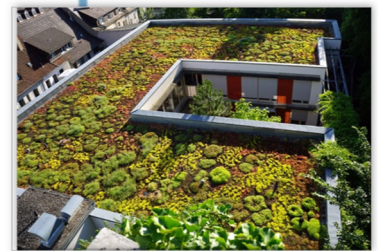
Low Impact Development (LID) is an approach to land development that works with nature to manage stormwater as close to its source as possible. LID helps improve area water quality by preventing harmful pollutants from being carried by stormwater runoff into local waterways. It attempts to preserve and recreate natural landscape features and minimize impervious surfaces to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product.

LID uses site planning and engineering to reduce or prevent the adverse impacts of stormwater runoff from both residential and commercial developments. LID relies on both structural and nonstructural practices to conserve the site's natural or predeveloped hydrologic response to rainfall – the way rainfall is distributed among runoff, infiltration, and evapotranspiration.

“Green” roofs or vegetated rooftops consist of waterproofing and drainage mats, a special growing media, and plants able to withstand extreme climates. They have been shown to reduce runoff, increase evapotranspiration, prolong roof life, reduce building temperature, decrease energy costs, and help reduce the overall heat island effect.

Permeable pavements are an alternative to asphalt and concrete and allow water to infiltrate or pass through them, reducing stormwater runoff.

These features should be encouraged in new developments or retrofits to existing developments by incentives like extra credit toward landscaping requirements and/or density bonuses.



Source: Smart Cities World, 2021.



Objective: Encourage redevelopment of buildings and properties that are experiencing functional or economic obsolescence.

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Functional obsolescence is the reduction in value due to the inability of the property to perform the function (or yield the periodic utility) for which it was originally designed. This also could be considered by a loss of building utility. If a building has reduced usefulness due to poor design or the presence of features that are no longer useful, the value of that building is reduced.

Photo Left: Before

Photo Right: After



Examples might include buildings that are too small, lack sufficient parking, or have low ceiling heights. If a building is thought to be out-of-place or poorly designed for its location, it could be considered functionally obsolete. Further if a house lacks a feature such as a side yard, or only contains one bathroom despite having five bedrooms, or lacks a garage, functional obsolescence occurs. Some instances of functional obsolescence can be fixed with building renovations or site improvements.



Objective: Encourage redevelopment of buildings and properties that are experiencing functional or economic obsolescence.

Economic obsolescence relates to the inability of property operations to generate a market-based rate of return on investment (ROI). This is also referred to as environmental, external, or locational obsolescence.

Typically, this form of obsolescence occurs sometime after the property is built, as the environment around the property changes.

Examples include increased airport noise, toxic waste, power plants, freeway noise, dust and air pollens, or changes in zoning. Therefore properties located next to the freeway or under a flight path will experience reductions in value. Economic obsolescence also can occur when market demand changes. An example might be a home with only one bathroom or small bedrooms. If newer properties in the area are being built with two or more bathrooms or large bedrooms, obsolescence can occur. Economic obsolescence is generally considered incurable, because it is out of the control of the owner of the property, and any effort to cure such a problem would be very costly and value depleting.

However, it could also be the fault of the property owner by failing to maintain or update the property in a manner in keeping with the current market or neighborhood.

“Redevelopment” in this context typically means demolition followed by new construction. In situations where buildings are adaptable and worth saving, it could be achieved through adaptive re-use. The Westport area has seen a number of obsolete buildings originally intended for manufacturing or distribution transition to office or hospitality uses. This pattern should continue to be encouraged by creative zoning procedures that ensure sufficient parking while not being overly burdensome and economic development incentives where necessary and appropriate.



Photo Top: Before

Photo Bottom: After



Objective: Create development patterns that result in efficient connection to the regional stormwater and transportation system.

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Within a multi-level/multi-jurisdictional environment, the City will participate in regional planning efforts. To that end, the design and construction of a regional stormwater conveyance system to manage internal flooding is a major element of regional infrastructure being planned for the Maryland Park Lake District. Without this regional approach to stormwater management, a substantial amount of property will continue to be constrained for development by an internal flood event. Additional transportation system improvements are planned as well, and are in response to future land development throughout the City.

The conceptual approach to stormwater management was developed and submitted to the City by the Howard Bend Levee District. This plan employs a regional approach and utilizes Best Management Practices (BMP's) to develop a multi-functional system of stormwater management. Developers will be responsible for on-site drainage and conveyance to the regional stormwater system.

Quality development in the Maryland Park Lake District will require both an efficient and effective transportation system. The City will continue to plan for the regional transportation system of which the District is a part, particularly as development pressure in the area grows. For the district to develop in a coordinated and integrated manner, the transportation system must function holistically. That is, all components of the system should be evaluated on their effect on the system as a whole; certain types of land uses have a greater impact upon the system and consequently, will require varying levels of improvements to the system as a requirement of the regulatory process. The transportation system however, should not only be oriented solely to the automobile, but should accommodate and integrate pedestrians, bikeways, and transit (bus and light rail) in both development and design.

The Howard Bend Levee District has financed, constructed, and will maintain the Missouri River Levee protecting the Maryland Park Lake District from Missouri River 500-year flood events.



Objective: Encourage public infrastructure and facilities including roads, pedestrian connections, and streetscapes that are designed to promote both aesthetic and functional quality.

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Good design and advanced materials can improve transportation, energy, water, and waste systems, and also create more sustainable suburban environments. Further, the general public is increasingly demanding aesthetic enhancements to existing and proposed public infrastructure facilities. Streetscape standards are particularly important: street landscaping, lighting, traffic control devices, signage, the location of utility lines, and other public infrastructure can be designed to achieve an overall aesthetic image, in addition to serving functional purposes - and without compromising safety.

However, the aesthetic properties of infrastructure have purpose beyond simply creating a pleasant view. Aesthetics is intertwined with the function of the facility. An aesthetically pleasing highway or other transport mode is one that provides its users with a clear picture of what is going on around them and what is expected of them. This is accomplished by using techniques and materials to provide better definition of the elements of the facility, to visually highlight important information, and to reduce the stress on users that results from operating a vehicle in a complex environment. An example of this concept is provided by the City's investment in the Dorsett Road/Interstate 270 interchange which provides both form and function.



Objective: Encourage green infrastructure in all redevelopment and new development.

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Green infrastructure uses natural hydrologic features to manage water and provide environmental and community benefits, and mimics natural water cycles. Green infrastructure incorporates both the natural environment and engineered systems to provide clean water, conserve ecosystem functions, and provide other benefits to people and wildlife.

Green infrastructure solutions can be applied on different scales, from the house or building level, to the broader regional level. At the local level, green infrastructure practices include rain gardens, permeable pavements, green roofs, infiltration planters, trees and tree boxes, and rainwater harvesting systems. At the scale of a neighborhood or development site, green infrastructure refers to stormwater management systems that mimic nature by absorbing and storing water. At the largest scale, the preservation and restoration of natural landscapes (such as forests, floodplains, and wetlands) are also critical components.

Green infrastructure can often provide more benefits at lesser cost than single-purpose “gray” infrastructure. A growing body of research and experience demonstrates the potential for green infrastructure to improve the water management at multiple scales, while also providing natural resources preservation and pleasant regional outdoor spaces. Green infrastructure could be encouraged by offering incentives like extra credit toward landscaping requirements and/or density bonuses.

Objective: Encourage green infrastructure in all redevelopment and new development.

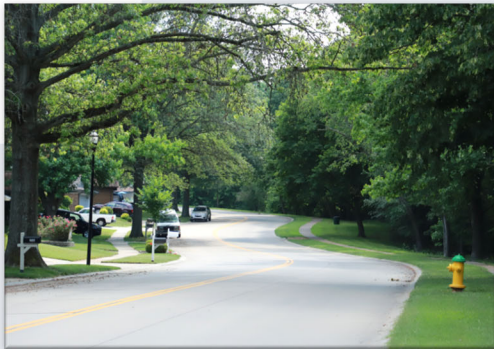
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A **focal point** has a variety of definitions, but for the purposes of this comprehensive plan, it refers to **a place where people are drawn as a community**. These public spaces can be a gathering spot or part of a neighborhood, park, special district, or other area within the public realm that helps promote social interaction and helps create a sense of community. These places capitalize on building design, scale, architecture, and proportionality to create interesting visual experiences, vistas, or other qualities. They accommodate multiple uses and multiple users, and often take advantage of the environment and natural features.



LAND USE DEFINITIONS

The following land use definitions are included to establish a common vocabulary and set of expectations for the consideration of future land uses in the City:





LAND USE DEFINITIONS

SINGLE-FAMILY RESIDENTIAL

CHARACTERISTICS: Includes detached dwellings, attached dwellings (villas), row houses and supporting features including, but not limited to, parks, playgrounds, walkways/bikeways, and other functional open space areas.

CRITERIA FOR DESIGNATION:

- ◆ Residentially zoned;
- ◆ Shown on future land use map; or
- ◆ Located within a mixed-use development under the following criteria:
 - ◇ Single-family dwellings are functionally and aesthetically integrated with compatible buildings and uses within the development;
 - ◇ Single-family dwellings are buffered from incompatible uses within or adjacent to the development;
 - ◇ Single-family dwellings will not adversely affect or conflict with adjacent uses or impede the development of surrounding property;
 - ◇ Adequate and integrated public and private facilities, such as roads, sidewalks, walkways, utilities, stormwater management, open space, landscaping, parking, and circulation, are provided or will be provided;
 - ◇ Open space areas are accessible to and integrated with adjacent commercial or business uses rather than freestanding.
 - ◇ There is safe and efficient access for the anticipated traffic levels.

PURPOSE: To create high quality neighborhoods that include a range of housing options for people in all stages of life with integrated public and open space.



DENSITY: 4 to 8 dwelling units per acre.



LAND USE DEFINITIONS

SINGLE-FAMILY RESIDENTIAL

DEVELOPMENT GUIDELINES:

Encourage a range of unit types within each project that results in a diversity of housing opportunities not only in form, but in price range.

Discourage housing types to be clustered in such a manner that creates the perception of income differences.

Encourage architectural details that establish and enhance the neighborhood's character.

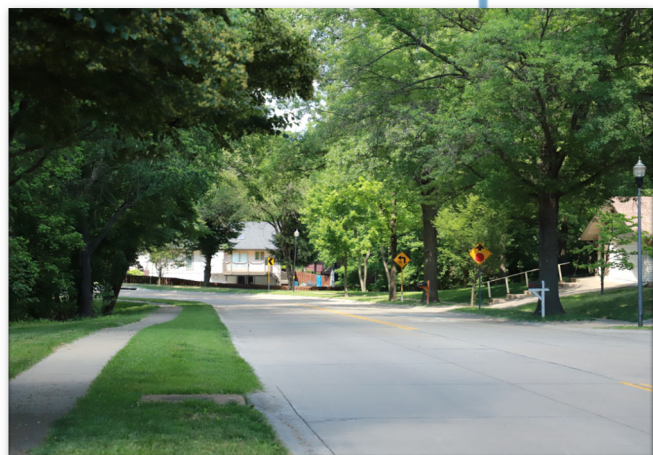
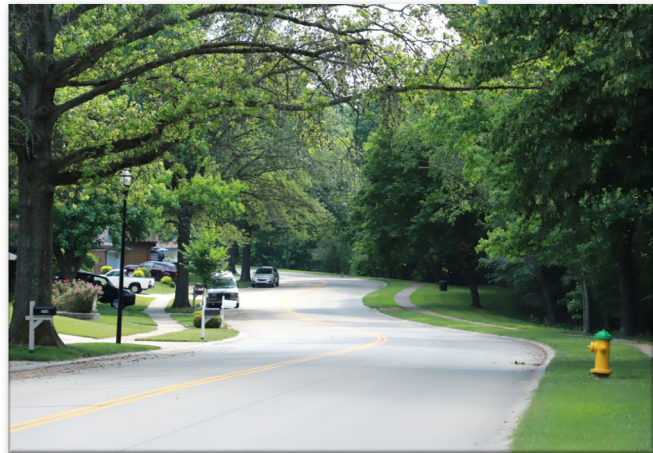
Encourage building materials that provide visual interest and texture to a building.

Encourage front yard features to be designed as part of the public realm, enhancing both the visual quality of the road system and walkability.

Encourage pedestrian connectivity within the project and to adjoining properties through sidewalks and walkways.

Encourage functional common ground areas that provide places to residents to gather, play, exercise, and/or relax.

Encourage the use of "green" infrastructure and energy efficient building materials and design.





LAND USE DEFINITIONS

MULTI-FAMILY RESIDENTIAL, COMMUNITY

CHARACTERISTICS: Structures designed to accommodate several unrelated households. Multi-family communities include garden apartments, townhouses, row-houses, mid-rise and high-rise apartment buildings, second-story (or higher) residential units over commercial space, and residential condominiums as well as the necessary development components to support the development as a community.

CRITERIA FOR DESIGNATION:

- ◆ Zoned for multi-family residential; shown on future land use map; or
- ◆ Located within a mixed-use development under the following criteria:
 - ◇ The proposed use will not be detrimental to the public health, safety, or general welfare;
 - ◇ The proposed use can be constructed in a manner that addresses the potential flood hazards on or adjacent to the site;
 - ◇ The proposed use will not adversely affect or conflict with adjacent uses or impede the development of surrounding property;
 - ◇ Adequate public and private facilities, such as infrastructure (roads, stormwater management, open space), landscaping, parking, and circulation, are provided or will be provided for the proposed use;
 - ◇ Availability or future availability of transit connections and the design of transit-oriented development;
 - ◇ There is safe and efficient access for the anticipated traffic levels.

PURPOSE: To provide for a residential community that creates a mix of unit types in appropriate locations by supporting variety and options in living environments while protecting and improving the community's property values.



DENSITY: 8 to 20 dwelling units per acre.



LAND USE DEFINITIONS

MULTI-FAMILY RESIDENTIAL, COMMUNITY

DEVELOPMENT GUIDELINES:

Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale.

Buildings are expected to include porches, varied rooflines and varied façade depths to create variety and individuality of dwelling units within the complex.

Freestanding garages and/or carports shall be designed to be integral with the building design or sited so as to avoid long monotonous rows of garage doors and building walls.





LAND USE DEFINITIONS

OFFICE FLEX

CHARACTERISTICS: Office space in combination with technology, research and development, retail, and/or clean, indoor fabrication/assembly uses; all uses contained within structure; limited number of employees. Office flex generally does not involve the primary storage or distribution of materials, which may be included as an accessory use that includes appropriate screening and mitigation of loading docks and other related site elements.

CRITERIA FOR DESIGNATION:

- ◆ Identify as buffer use between higher/more intensive uses (i.e., office campus) and office distribution/industrial uses.
- ◆ Must have, or be able to provide sufficient infrastructure (road, water, sewer, stormwater) capacity.
- ◆ Office uses should be located along the “public” face of the structure facing public ROW or the publicly oriented portion of the development.
- ◆ Should be in proximity to service retail.
- ◆ Architectural design and associated characteristics should primarily be reflective of office development types (i.e. variety of architectural materials, etc.).

PURPOSE: To provide locations for office flex buildings that allow opportunities for multiple business uses in conjunction with similar surrounding office flex uses.

BUILDING SIZE: Building sizes typically range from 10,000 to 50,000 square feet.

ROW: Right Of Way





LAND USE DEFINITIONS

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OFFICE FLEX

DEVELOPMENT GUIDELINES:

Promote building designs, systems, and practices that are sustainable and adoptable to multiple uses in the interest of extending the building life cycle.

Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale.

Provide gateway features and design elements along public ROW.

Integrated open space in coordination with stormwater management system designed as a site amenity.





LAND USE DEFINITIONS

OFFICE CAMPUS

CHARACTERISTICS:

Large-scale employment centers and a mix of single/multiple tenant office buildings; may include some institutional and public/quasi-public uses such as hospital/medical or government offices; personal service and accessory uses including restaurants, local retail, hotel/motel; multi-story buildings; integrated site design to encourage walkability, connections to parks and trails system and including public open spaces.

CRITERIA FOR DESIGNATION:

- ◆ Access to existing or proposed public facilities and infrastructure such as roads, stormwater, and sewer to serve buildings and occupants.
- ◆ Location at gateways, along major corridors, and at highway interchanges
- ◆ Incorporation of building and site design to minimize environmental impacts.
- ◆ Adjacent to employment-supportive land uses, including mixed-use, entertainment, and retail.

PURPOSE: To provide opportunities for corporate and regional offices and accessory uses in a well-designed and integrated campus setting.



Edward Jones, North Campus.



BUILDING SIZE: Overall building sizes typically range from 100,000 to 250,000 square feet; typical building footprints range from 30,000 square feet to 50,000 square feet for multiple story buildings



LAND USE DEFINITIONS

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OFFICE CAMPUS

DEVELOPMENT GUIDELINES:

Promote building designs, systems, and practices that are sustainable and adoptable to multiple uses in the interest of extending the building life cycle.

Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale.

Provide gateway features and design elements along public ROW.

Integrated open space in coordination with stormwater management system designed as a site amenity.

Provide the usability and connectivity of the pedestrian environment by enhancing internal access within the campus, providing access to the public realm of the street and/or open space features.



LAND USE DEFINITIONS

OFFICE DISTRIBUTION

CHARACTERISTICS:

Business services, warehousing, distribution center; typically a planned park or campus development; limited number of employees; may include wholesale uses with distribution but without a local retail outlet; all uses contained within structure; loading docks screened from public view.

CRITERIA FOR DESIGNATION:

- ◆ Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity.
- ◆ Sufficient land area for internal roadway network that can accommodate large over the road trucks.
- ◆ Access to a major roadway through a connector street.

PURPOSE: To provide for locations for combined office and distribution facilities.



SITE SIZE:

Minimum site size is typically 5 to 10 acres.



LAND USE DEFINITIONS

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OFFICE DISTRIBUTION

DEVELOPMENT GUIDELINES:

Architectural design to incorporate design features that create visual relief and shadow into the façade, articulation of building entrances as visual features and focal points, and allows for variety in building surface materials.

Gateway features utilized along public right-of-way.

Integrated open space in coordination with stormwater management system designed as a site amenity.

Provide connections to the open space system.

Adequate screening of loading docks from the public ROW.



LAND USE DEFINITIONS

LIGHT INDUSTRIAL

CHARACTERISTICS:

Large-scale employment centers and a mix of single/multiple tenant office buildings; may include some institutional and public/quasi-public uses such as hospital/medical or government offices; personal service and accessory uses including restaurants, local retail, hotel/motel; multi-story buildings; integrated site design to encourage walkability, connections to parks and trails system and including public open spaces.

CRITERIA FOR DESIGNATION:

- ◆ Access to existing or proposed public facilities and infrastructure such as roads, stormwater, and sewer to serve buildings and occupants.
- ◆ Location at gateways, along major corridors, and at highway interchanges
- ◆ Capable of building and site design to minimize environmental impacts, including low impact developments or Leadership in Energy and Environmental Design (LEED) standards.
- ◆ Adjacent to employment-supportive land uses, including mixed-use, entertainment, and retail.

PURPOSE: To provide opportunities for clean, indoor research, development, assembly, manufacturing, warehousing, and distribution, along with supportive goods and services at locations that allow for moderate transportation impacts.

BUILDING SIZE: Typical gross floor area of 50,000 to 250,000 square feet.





LAND USE DEFINITIONS

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LIGHT INDUSTRIAL

DEVELOPMENT GUIDELINES:

Architectural design to incorporate design features that create visual relief and shadow into the façade, articulation of building entrances as visual features and focal points, and allows for variety in building surface materials.

Integrated open space in coordination with stormwater management system designed as a site amenity.

Provide connections to the open space system.

Adequate screening of loading docks from the public right-of-way.



LAND USE DEFINITIONS

SERVICE RETAIL

CHARACTERISTICS: Retail, restaurant and personal service businesses that offer convenient access for employees and visitors of nearby development; primary trade area for service retail is three to six miles.

CRITERIA FOR DESIGNATION:

- ◆ Located along collector street or higher.
- ◆ May be located within office or industrial district as part of a larger development.
- ◆ Contains a variety of businesses and services at various scales, does not include large scale retail (“big-box”) uses.
- ◆ Ability to provide vehicle and pedestrian connections to surrounding uses.
- ◆ Compatible with surrounding neighborhood.
- ◆ Integrated into adjacent uses.

PURPOSE: To provide for local and community retail demand generated by surrounding land uses.



BUILDING SIZE:
 10,000 to 50,000 square feet, individual building footprints tend not



LAND USE DEFINITIONS

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SERVICE RETAIL

DEVELOPMENT GUIDELINES:

Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale.

Gateway features utilized along public right-of-way.

Integrated open spaces and public spaces, such as outdoor patios with restaurant seating.

Stormwater management designed as a site amenity and integrated into the open space system.

Buildings that derive their image solely from applied treatments that express corporate identity are discouraged.



LAND USE DEFINITIONS

REGIONAL RETAIL

CHARACTERISTICS: Intensity may range from smaller scale to large-scale retail and may include a combination of use sizes; no residential uses; mix of auto-oriented and pedestrian oriented uses; often includes pad sites along major roadways for convenience goods, restaurants and services. The primary trade area for regional retail is five to fifteen miles.

CRITERIA FOR DESIGNATION:

- ◆ Interchange or intersection of arterial streets or higher.
- ◆ High visibility location.
- ◆ May include ancillary office uses but no residential uses.
- ◆ Must have or provide for sufficient infrastructure (road, water, sewer, stormwater) capacity.
- ◆ Sufficient land area for internal roadway network.



PURPOSE: To provide opportunities for regional as well as local retail and service demand at a destination site with proximity to many users and accessibility locally and regionally.

BUILDING SIZE: 10,000 to 50,000 square feet, individual building footprints tend not to exceed 50,000 square feet.



LAND USE DEFINITIONS

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REGIONAL RETAIL

DEVELOPMENT GUIDELINES:

Present an integrated connected appearance.

Designed to front on access roads with parking primarily located behind the buildings.

Facades should be articulated to reduce the massive scale and the uniform appearance of large retail buildings, provide visual interest, and introduce human scale elements along the walkways fronting the building.

Building design and entrances should be designed to reduce walking distances from parking lots and facilitate pedestrian access.

Signage consolidated and integrated into the architecture.

Stormwater management and open space will be integrated into the development and utilized as a multi-functional site amenity.

Parking areas should promote safe, convenient, and efficient access for vehicles and pedestrians.



LAND USE DEFINITIONS

ENTERTAINMENT

CHARACTERISTICS: State-licensed gaming facilities; hotels/motels; restaurants; specialty retail; entertainment and hospitality uses; recreation-oriented uses; administrative services; convention and exhibition spaces.

CRITERIA FOR DESIGNATION:

- ◆ Adjacent to existing entertainment uses.
- ◆ Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity.
- ◆ Sufficient land area for internal roadway network.
- ◆ Connections to and integration with adjacent uses.



PURPOSE: To provide opportunities for entertainment and hospitality uses in prominent accessible locations that complements and enhances existing entertainment uses.

BUILDING SIZE: 10,000 to 100,000 square feet, individual building footprints tend not to exceed 100,000 square feet (buildings may be larger when integrating multiple tenants into a single structure).



LAND USE DEFINITIONS

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ENTERTAINMENT

DEVELOPMENT GUIDELINES:

Present an integrated connected appearance.

Facades should be articulated to provide human scale and reduce the uniform appearance of large scale buildings and provide visual interest.

Building design and entrances should be designed to reduce walking distances from parking lots and facilitate pedestrian access.

Signage consolidated and integrated into the architecture.

Stormwater management and open space will be integrated into the development and utilized as a multi-functional site amenity.

Parking areas should promote safe, convenient, and efficient access for vehicles and pedestrians.



Centene Community Ice Center)



LAND USE DEFINITIONS

MIXED-USE

CHARACTERISTICS: Broad mix of uses with compatibility ensured through site design; integrated pedestrian circulation throughout site and to surrounding uses; building size and use intensity can vary across development; can be tourist and/or recreation oriented; general and specialty retail; mix of multifamily housing types; open spaces and public spaces; seen as a catalyst for high quality development; useful in creating compact development nodes centered on plaza's and other public spaces.

CRITERIA FOR DESIGNATION:

- ◆ Sufficient access to support higher density of development.
- ◆ Connection between open space active recreation and other uses.
- ◆ Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity.
- ◆ Sufficient land area for internal roadway network.
- ◆ Increased access to the transportation network.
- ◆ Access to alternative modes of transportation.
- ◆ Promotes a sense of community and place.
- ◆ Provide increased access and connection to public places and open space.

PURPOSE: To provide for a dense, compatible mix of retail, residential, commercial business and hospitality land uses.





LAND USE DEFINITIONS

MIXED-USE

DEVELOPMENT GUIDELINES:

Mixed-use developments should create an inviting and attractive destination for local residents and region wide users. Buildings, and spaces between buildings, should be designed and oriented to create safe, pleasant, and active environments.

The development's circulation system should promote efficient movement of vehicles in a clear and well-defined manner that minimizes conflicts with pedestrians and bicycles. Pedestrian users should find that public spaces and gathering places are clearly identified and easy to access and locate.

Landscaped areas should be used to frame and soften structures, to define site functions, to enhance the quality of the environment, and to screen undesirable views. Landscaping should work with buildings and surroundings to make a positive contribution to the aesthetics and function of both the specific site and the area.

Visitors and residents should be able to locate and identify major attributes of the development through a unified signage concept.

Visitors and residents should find that the development provides the best possible design to protect their personal safety and safety of their property.



LAND USE DEFINITIONS

INSTITUTIONAL

CHARACTERISTICS: Multi-functional uses that serve the immediate neighborhood or greater community. May include housing facilities that are accessory to a civic use, such as student dormitories.

CRITERIA FOR DESIGNATION:

- ◆ Accessible and useable for neighborhood residents.
- ◆ Civic uses that are permitted throughout the city, such as day care centers and religious assembly, should not be limited to only the civic land use designation.
- ◆ Must have or provide for sufficient infrastructure (road, water, sewer, stormwater) capacity.

PURPOSE: Provide necessary civic activity to a community, these uses typically include governmental, educational, and cultural activities. Located throughout the community, institutional land uses take a variety of forms from single buildings to campuses.



Maryland Heights Community Center



BUILDING SIZE:
25,000 to 75,000 square feet.



LAND USE DEFINITIONS

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INSTITUTIONAL

DEVELOPMENT GUIDELINES:

Manage the expansion of major institutional uses to prevent unnecessary impacts on established neighborhood areas.

Preserve the availability of sites for civic facilities to ensure that facilities are adequate for population growth.

Promote building designs, systems, and practices that are sustainable and adoptable to multiple uses in the interest of extending the building life cycle.

Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale.

Provide gateway features and design elements along public right-of-way.

Integrated open space in coordination with stormwater management system designed as a site amenity.

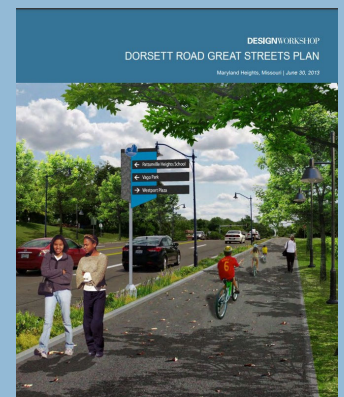
Provide the usability and connectivity of the pedestrian environment by enhancing internal access within the campus, providing access to the public realm of the street and/or open space features.



ADDITIONAL RESOURCES

DORSETT ROAD GREAT STREETS PLAN (2019)

Download the plan at: https://www.marylandheights.com/departments/community_development/planning_and_zoning.php





HEALTHY AND VIBRANT NEIGHBORHOODS



Creating and Maintaining Healthy and Vibrant Neighborhoods

HOUSING

Maryland Heights is a city of subdivisions and neighborhoods. These neighborhoods are essential components of the physical and social character of the City, providing a variety of housing choices in density, style, and price. Some neighborhoods also include commercial or institutional uses, in varying quantities, providing goods and services to residents, and potentially to the larger community. These uses, in combination with such things as parks, open spaces, mature trees, and religious and other institutions, represent community assets that establish the distinctive identity of each subdivision and neighborhood.



While diverse and well-maintained, much of the housing in Maryland Heights does not meet the expectations of current homebuyers. The National Association of Realtors reports on the characteristics of homes purchased. Those purchased, compared to characteristics of a typical Maryland Heights home are shown in the following table:

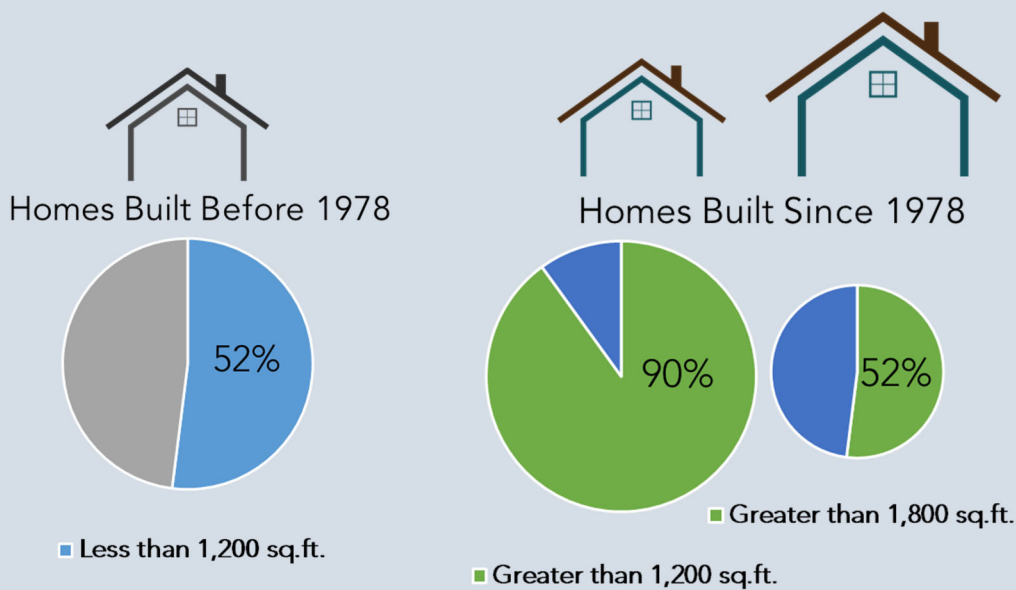
	Typical Home Purchased ¹	Maryland Heights Housing
Age	23 years	40 years
Bedrooms	Three	Three
Bathrooms	Two	Two
Square Feet	1,900	1,357

¹2020 data.



HOUSING

A substantial majority (over 70%) of the City’s single-family housing stock was built after World War II, with most of the homes being constructed between 1945 and 1978. While likely not a direct result of the postwar housing boom, housing development likely boomed in this area due to newly accessible and inexpensive land. Many homes are 1,200 square feet or smaller, limiting the number of homes available that feature one or two additional bedrooms and bathrooms. This gap pushes growing families out of the Maryland Heights community and into the newer suburbs. While the homes in the City are often well-maintained, they no longer satisfy the preferences of many homebuyers in the current housing market.



Approximately 52% of homes built before 1978 are less than 1,200 square feet in gross floor area. Of these older homes, approximately 51% have fewer than two full bathrooms. In contrast, 90% of the homes built in Maryland Heights since 1978 are greater than 1,200 square feet in gross floor area (total living space on all floors) and 52% of them are greater than 1,800 square feet. Further, over 99% of the homes built since 1978 have at least two full bathrooms.



HOUSING

While one challenge is to sustain the integrity of existing neighborhoods, another is to address future housing needs. Having a diverse housing stock including new and old, big and small, is critical to offer a choice and to provide for the individual needs of all households, regardless of household composition or economic stature.

Besides price and location, another consideration is the design of neighborhoods. Much of the residential development pattern characterized in Maryland Heights is typical of mid- to late- 20th century suburban development. New housing needs to reflect growing demand for neighborhood-style patterns that are once again integrated to the existing fabric of the community. This new development should be located near other uses for ease of access, accessible to local services, offering transportation options, and preserving resources through innovative subdivision design (such as clustering homes, low impact design, and green infrastructure).





GOAL: ENCOURAGE QUALITY HOUSING AND NEIGHBORHOODS THAT INCLUDE A HIGH QUALITY PUBLIC REALM.

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OBJECTIVES:

- *Support residential uses within mixed-use developments.*
- *Provide a range of housing options for all stages of life.*
- *Develop a diverse housing stock in form and price range.*
- *Interconnect residential subdivisions where possible and feasible.*
- *Encourage the development of functional common ground areas.*
- *Consider residential land use categories and regulations that reflect distinct neighborhood patterns rather than a “one size fits all” approach.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Consider amendments to the Zoning Code to reflect the unique character of specific neighborhoods where applicable.
- ⇒ Develop and prioritize a list of improvements to public spaces, including streets and landscaping, which can serve to enhance neighborhood visual character.
- ⇒ Require streetscape treatments in new developments.
- ⇒ Continue support for “Tree City USA” designation.





GOAL: ENCOURAGE QUALITY HOUSING AND NEIGHBORHOODS THAT INCLUDE A HIGH QUALITY PUBLIC REALM.



Housing is an integral part of Maryland Heights' present and future. It is one of the largest components of the existing land use and is an important community asset. A healthy mix of housing stock is important to retain existing residents and to attract new residents. Studying housing conditions in Maryland Heights provides a basis for understanding existing housing options and types, promoting modernization of the housing stock, maintaining affordability, and supporting attractive neighborhoods. Good quality, sustainable housing development has the following characteristics:

Accessible and Adaptable

There should be ease of access and circulation for all residents, including people with limited mobility, enabling them to move as freely as possible within and through the development, to gain access to buildings and to use the services and amenities provided. Future homes should be designed to be capable of adaptation to meet changing needs of residents during the course of their lifetime.

Affordable

The scheme should be capable of being built, managed, and maintained at reasonable cost, with consideration of the nature of the development.

Architecturally Appropriate

The development should provide a pleasant living environment, which is aesthetically pleasing and human in scale. For new construction, the design should understand and respond appropriately to its context as to enhance the greater community.

Durable

The best available construction techniques should be used, and key elements of construction should have a long service life avoiding the need for untimely repair or replacement.

Efficient

Dwellings should be designed and oriented to conserve energy, use land efficiently, and minimize strain on public infrastructure. Their location should be convenient to transportation, services, and amenities.

Safe, Secure, and Healthy

Neighborhoods should be safe and healthy places to live. It should be possible for pedestrians and cyclists to move within and through the area with reasonable ease and in safety. Providing for automobile circulation should not compromise these goals.



Objective: Support residential uses within mixed-use developments.

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As Maryland Heights begins to incorporate mixed-use into what historically has been a suburban residential land use pattern, it is important to consider how this type of development fits within the city. Successful mixed-use projects can be created on many scales and in many locations including in an individual building, a series of buildings grouped together, or as a predominant new “greenfield” development. Whatever the scale, there must be a readily identifiable mix of functions which work well together.² Further, the effect must be more than just an aesthetic one.



Aventura
at
Maryland Oaks

²Types of mixed-use development are discussed in the Land Use and Development Strategies chapter.



Objective: Support residential uses within mixed-use developments.

Mixed-use development can contribute to a variety of objectives, including providing a variety of housing options, revitalized town centers, and more sustainable suburban environments. The benefits of mixed-use include:

•**CREATING A LOCAL SENSE OF PLACE.**

Mixed-use areas can create a vibrant sense of place and community. This can be not just on a city-wide scale, but it can also be a tool that helps to differentiate neighborhoods and create a sense of identity. They also can provide increased opportunities for neighbors to meet and interact. They further can provide a wider variety in the types of environments to be found in the City, adding interest and diversity.

•**CREATING AREAS THAT ARE ACTIVE**

THROUGHOUT THE DAY. A mix of uses eliminates the problems of residential areas that are largely unpopulated during the day, and commercial areas that are desolate after business hours. Mixed-use areas have populations and activities that take place throughout the day, making them more vibrant and safe.

•**INCREASING HOUSING OPTIONS FOR**

DIVERSE household types. Mixed-use areas often have higher density housing types, such as apartments and townhouses, close to amenities and add to the variety of housing options available within the City. This is especially important to meet the needs of the City’s increasingly diverse population.

•**REDUCING AUTO DEPENDENCE.**

Mixed-use areas provide a variety of services and activities within a walkable distance of housing, allowing residents to conduct more of their daily activities without depending on automobiles. Reduced auto dependence especially provides greater independence for seniors and children who can be marginalized simply because they cannot drive.

•**INCREASING TRAVEL OPTIONS.**

Mixed-use areas, if well designed, can comfortably support pedestrian, bicycle, transit, and automobile traffic.

Mixed-use projects can work in a variety of settings throughout the City. However, careful consideration must be given to the character of the area and surrounding land uses. Future mixed-use development in Maryland Heights will be reviewed to ensure proper compatibility of uses, and location and context, density, pedestrian orientation, connectivity internally and externally, and quality of public spaces.



Objective: Provide a range of housing options for all stages of life.

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Objective: Develop a diverse housing stock in form and price range.

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Housing diversity refers to the range of housing options available to current and prospective residents of Maryland Heights. Much of the single-family housing in Maryland Heights fails to provide the space or amenities preferred by growing families, making it difficult to retain residents and attract new ones. Similarly, multi-family housing is mostly limited to garden-style apartments although more modern urban-style apartments with parking garages and substantial amenities are beginning to be constructed. The City is also lacking in independent senior living options. Offering a diverse mix of housing, in cost, type of unit, and neighborhood setting is important to meet the needs and preferences of current and future residents.



Closely related to housing diversity is housing affordability. While the St. Louis region overall ranks well in housing affordability compared to other regions, there tends to be a shortage in suburban municipalities where new residential construction typically consists of large, detached single-family units offered at prices out of reach for low to moderate income families.



Housing diversity is also related to housing accessibility. Universal design is an important consideration for the elderly as well as for other individuals with disabilities. New construction housing should include some number of homes that meet the standards, at a minimum, for “visitability” or ideally be fully compliant with the Americans with Disabilities Act. In addition, for seniors who prefer to age-in-place, accessibility modifications to the home may increase the ability of these residents to stay in their neighborhoods longer and delay the move to more communal housing, such as an assisted living facility.



Objective: Develop a diverse housing stock in form and price range.

Creating a range of housing types for all stages of life provides a variety of advantages:

- **Economic Development.** Providing a range of housing choices is vitally important to the long-term growth of Maryland Heights. A diversity of housing choices appeals to the increasing diversity of the City - from young adults, to growing families, to long-time residents who want to age in place. Further, housing that is affordable to the workforce is critical to the local economy, and directly impacts the ability of employers to recruit and retain staff. Businesses, the hospitality industry, retailers, school districts, universities, and local governments that employ workers at moderate-income levels will benefit from more diverse housing choices.
- **Sustaining Families.** Diverse, affordable housing is critically important to the health and well-being of children and families as they grow.
- **Commuting and Traffic.** The shortage of diverse housing may cause families to locate in outlying areas, requiring lengthy commutes to and from their jobs. Transportation costs and traffic congestion can be reduced when diverse housing options, close to employment centers, are provided.
- **Accommodating our Aging Population.** The growing population of seniors living longer, healthier lives, suggests that demands for diverse housing options will increase. Housing that addresses the spectrum of income levels and lifestyle choices or limitations will allow seniors to remain in Maryland Heights.

*It is **important to note** that housing diversity can be achieved through a multi-directional approach that includes both new development and rehabilitation.*

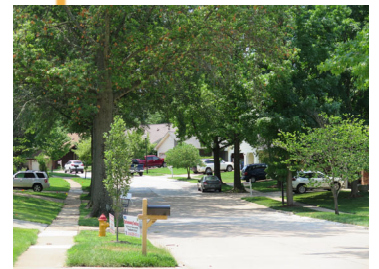


Objective: Interconnect residential subdivisions where possible and feasible.

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The City of Maryland Heights seeks to create a transportation network that will establish safe, continuous corridors throughout the community that promote outdoor recreation, facilitate non-motorized transportation, and highlight the natural and open space resources of the community. A walkway and bikeway network should complement the City's parks system and serve to make Maryland Heights a great place to live, work, and raise a family. Opportunities are encouraged to identify and promote bicycle and pedestrian access for residents and visitors throughout the existing suburban network, and new development as it arises. These opportunities should seek to connect the local & regional trail system, schools, bus stops, employment, shopping, parks, and cultural amenities.

Frequently, the layout of typical subdivision streets makes distances much longer than they need to be. Long neighborhood block lengths and cul-de-sacs further contribute to this problem. When feasible, neighborhoods should be designed with short block lengths, numerous three and four-way intersections, and minimal dead-ends or cul-de-sacs. A network of streets, sidewalks, bicycle lanes and paths in which all parts are well-connected to each other reduces the distance individuals have to travel, allows for the use of more local streets rather than major roadways, and provides a greater choice of routes.





Objective: Encourage the development of functional common ground areas.



Common ground is the land set aside for open space, including storm water, retention lakes, ponds, or recreational use for the owners of lots in a subdivision, conveyed in trust for the benefit, use, and enjoyment of the lot owners. Playgrounds and parks can be in common ground areas in private subdivisions. Portions of a homeowner’s annual and special assessments are typically allocated for the maintenance and upkeep of the common ground.



In the past, typical common ground in a subdivision was not accessible to residents and served primarily as a catchment for stormwater. Future residential developments will be encouraged to use the common ground as an amenity for residents, including facilities such as playgrounds, opportunities for exercise, or public gathering spaces.

Objective: Consider residential land use categories and regulations that reflect distinct neighborhood patterns rather than a “one size fits all” approach.



The Zoning Code employs a broad-brush approach to residential zoning. While it includes six zoning districts based on minimum lot area (“R-1” through “R-6”), it does not address the unique character of some neighborhoods. The Planning Commission could consider amendments to add specificity, but this would likely require the establishment of new zoning classifications and the rezoning of neighborhoods.



GOAL: PROMOTE, PRESERVE, AND ENHANCE THE CHARACTER OF THE SINGLE-FAMILY RESIDENTIAL AREAS OF THE CITY.

.....

Objectives:

- *Ensure that infill development is compatible with the established neighborhood.*
- *Encourage additions and renovations to existing homes.*
- *Ensure that properties are maintained through proactive code enforcement.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Require infill development to be consistent with or complement the character of the surrounding neighborhood.
- ⇒ Consider Zoning Code amendments to further facilitate additions or renovations to existing homes.
- ⇒ Monitor housing conditions, supply, and trends.
- ⇒ Educate the community about code requirements related to housing.



GOAL: PROMOTE, PRESERVE, AND ENHANCE THE CHARACTER OF THE SINGLE-FAMILY RESIDENTIAL AREAS OF THE CITY.

.....

Maryland Heights' future as a community is inextricably tied to its housing conditions. Housing is central to almost any discussion about City affairs, no matter whether the focus is on economic development opportunities or simply the ability to walk from one neighborhood to another. Further, the amount of maintenance performed on housing and property can impact neighborhood appearance and create a lasting impression. Well-maintained homes and properties are indicative of a promising future. Appearance can also be correlated to community pride in ownership, perception, property values, maintenance costs, and quality of life.





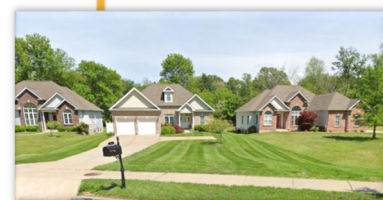
Objective: Ensure that infill development is compatible with the established neighborhood.

.....

The City of Maryland Heights does not have a great deal of land available for large-scale infill development. Any significant residential infill development would likely require a land developer to assemble contiguous parcels of land. The Zoning Code allows for a flexible approach to development, known as a Planned District, on sites over two acres in area. This process grants the developer additional flexibility in unit types, density, and design while allowing the City to craft site-specific conditions and parameters. The process also requires public hearings which are particularly beneficial in an infill setting.



By absorbing some growth in existing neighborhoods, infill can provide for efficient use of land, infrastructure, services, and can improve quality of life in older, more established communities. Infill can enhance the character, viability, and function of existing neighborhoods, and these benefits are evident in many Maryland Heights neighborhoods. A successful infill strategy maintains or restores spatial continuity to streetscapes, strengthens neighborhoods, and introduces compatible uses that complement existing community attributes and needs. Infill can inject new life into communities and help neighborhoods become more connected and sociable places, and ultimately increase property values, without altering their overall character.





Objective: Encourage additions and renovations to existing homes.

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In some cases, homes that are functionally obsolete (e.g. do not meet current trends in housing needs) or have become too small for a growing family can benefit from remodeling or an addition. In 2009, students from Washington University completed a class project to identify remodeling ideas and plans for a typical home in a Maryland Heights neighborhood. Their work suggested different schemes, ranging from small remodels to large expansions, which could be explored depending on the desires and budget of the homeowner. The City could consider expanding their work by working enlisting architects and contractors to develop other plans. Some of the primary alterations suggested were:

- Creating a formal entrance without encroaching on the living room
- Reorganizing the kitchen to create a more open floor plan
- Rearranging the garage to create a dining area
- Add closet space
- Add master bathroom
- Add bedroom
- Expand/add garage
- Utilize basement space
- Create "exterior living"



Objective: Encourage additions and renovations to existing homes.

.....



The City Council has established a strategic goal to encourage housing options for residents in all stages of life. One objective intended to achieve this goal is to evaluate the Zoning Code to determine whether additional flexibility can be provided while maintaining and improving neighborhood character. In 2014, the Zoning Code was amended to eliminate residential lot coverage limitations. They had previously been capped at 25% which precluded additions to existing homes on smaller lots. The minimum setbacks are now the only zoning requirements that dictate the extent of development on each lot. Any further amendments should be carefully considered to ensure that they do not disrupt neighborhood character in an attempt to maximize the developable area of the lot. For example, if front yard setbacks (which are as little as twenty feet) are to be lessened, the impact on the streetscape and overall feel of the neighborhood should be considered. Such analyses are often subjective. Depending on the point of view, a front porch might be appropriate closer to the roadway but a garage might not.



Objective: Ensure that properties are maintained through proactive code enforcement.

.....

The role of code enforcement is to sustain safe, healthy living and working conditions for residents and businesses of the City. Code Enforcement Officers have a very visible role in the community from the standpoint that the decisions they make and how effectively they perform their duties can have a major impact on the property values and image of the City. Code Enforcement Officers support and enhance property values through effective enforcement of property standards, while working to keep aging buildings, homes, and properties from deteriorating and detracting from neighborhood character or, worse, negatively impacting health and safety. Every community faces struggles with vacant buildings, trash, tall grass and weeds, and inoperable vehicles. Studies have shown that communities that have areas of blight and deteriorated properties may eventually see an increase in the amount of crime and a significant decrease in property values.



Objective: Ensure that properties are maintained through proactive code enforcement.

.....

Effective code enforcement initiatives seek to achieve voluntary compliance as a means of avoiding other punitive methods of enforcement, while still accomplishing what is best for the City in terms of public health and safety. It can be, and often is, a very arduous and intensive task. The City has chosen a proactive approach to code enforcement. This involves addressing issues that may become code enforcement cases or complaints before they escalate to a point of mandated abatement or referral to the court system. This can be achieved by implementing many different techniques, but the primary means to achieving a more proactive code enforcement approach is through education. Educating the community about what the ordinance and code requirements and standards are is one of the best ways that communities and code enforcement officers can prevent violations from occurring or reoccurring. Education should be the first step to providing effective and proactive code enforcement and will generally garner more favorable results on behalf of the property owner and the City as a whole.

The professionalism and approach of the Code Enforcement Officer could shape community notion of local government and municipal experience. Building relationships and knowledge of the community is integral to a proactive and professional code enforcement approach.





OPEN SPACE, PARKS, RECREATION, AND WELLNESS



Open Space, Parks, Recreation, and Wellness

No single park, no matter how large and how well designed, would provide citizens with the beneficial influences of nature; instead parks need to be linked to one another and to surrounding residential neighborhoods.

~Frederick Law Olmsted

Full-service parks and recreation systems encourage outdoor exercise, participation in athletic and other wellness programs, and foster community gatherings. Beyond leisure activities, these open spaces and gathering spaces improve the quality of life for Maryland Heights’ residents, enhance community character, attract economic development, and can serve environmental functions such as flood control and habitat protection. For residents, employees, and visitors to Maryland Heights, the enhancement of its parks system and conservation of green spaces will continue to enhance the City’s vibrancy. It should also be noted that open spaces are more broadly defined than parks. They include uses such as conservation areas, habitat preservation, golf courses, subdivision common ground, wetlands, and stormwater areas. Vacant land that is in private ownership, while perceived by some as “open new requests and initiatives are considered in light of existing commitments.

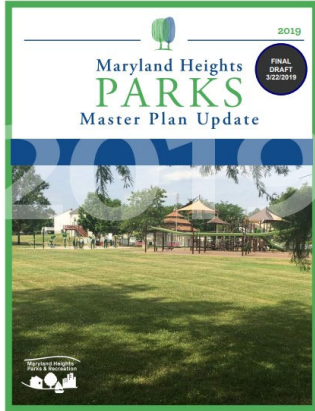
The City’s recreation facilities are some of the best in the state. Many have won

- Aquaport Family Aquatic Center
- Centene Community Ice Center
- Dogport at McKelvey Woods Nature Park
- Eise Neighborhood Park
- Maryland Heights Community Center
- McKelvey Woods Nature Park
- McKelvey Woods Trail
- Parkwood Park
- Quiet Hollow Park
- Sportport Athletic Complex
- Vago Community Park





Open Space, Parks, Recreation, and Wellness



“Click” Image for
Hyperlink to Plan.

The City’s Department of Parks and Recreation creates and maintains its own master plan, last updated in 2019. The purpose of the master plan is to develop a community-supported plan that provides guidance for future development and redevelopment of the City’s parks, recreation programming, open space, trails, and facilities. The plan guides policy development, prioritizes demands and opportunities, and generates a strategic action plan to be updated every three years. Moreover, it creates of a clear set of goals, policies, and objectives thus providing direction to City staff, the Parks and Recreation Committee and the City Council. Implementation measures include short-term, mid-term, and long-term goals.

The intent of this chapter of the Comprehensive Plan is to support and encourage the goals, objectives, and policies of the Parks Master Plan, particularly when making land use decisions. While the Parks Master Plan pertains to City owned and operated parks, these policies should also be implemented within private developments to the greatest extent practical. The top three priorities identified as most important to the community in 2019 were:

- 1. Expand trails and improve connectivity.**
- 2. Provide natural areas for passive recreation and wildlife.**
- 3. Promote physical activity and wellness.**

Furthermore, the community identified the following park amenities as being most important:

- 1. Paved Trails**
- 2. Nature Trails**
- 3. Natural areas for passive recreation & wildlife benefit**
- 4. Playgrounds**
- 5. Picnic Shelters**
- 6. Restrooms**



GOAL: ENCOURAGE AND REQUIRE OPEN SPACE THAT IS BOTH ACCESSIBLE AND SUSTAINABLE, AND THAT RESULTS IN A QUALITY PLACE.

OBJECTIVES:

- *Create adaptable, multiuse spaces for community gathering, play, and social activity for all ages and abilities.*
- *Ensure compatibility between potential development and the existing natural environment.*
- *Support the integration of open space to create transitions in mixed-use developments and residential neighborhoods.*
- *Ensure the accessibility of recreational facilities.*
- *Ensure the character and image of the City of Maryland Heights is perpetuated in open space and recreational areas.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Incentivize the planting of native species while managing invasive plant species.
- ⇒ Upgrade existing recreational facilities to be accessible to the extent feasible.
- ⇒ Research public and open space design standards for possible inclusion in City regulations.
- ⇒ Coordinate development proposals with the City's public art policy.
- ⇒ Encourage interactive gathering places and public art.



GOAL: ENCOURAGE AND REQUIRE OPEN SPACE THAT IS BOTH ACCESSIBLE AND SUSTAINABLE, AND THAT RESULTS IN A QUALITY PLACE.

.....

Parks and open spaces enhance the quality of life in Maryland Heights by:

- ◆ Enhancing neighborhoods by providing spaces to socialize, play, exercise, or simply relax.
- ◆ Promoting a healthy lifestyle by providing connections to bikeways, walkways, and trail systems.
- ◆ Contributing to biodiversity and animal habitats, particularly when designed and planted with native plants while managing invasive plant species.
- ◆ Providing buffers between developments or providing relief between parking lots, streets, and other urban features.
- ◆ Mitigating the impacts of development, such as stormwater runoff.

Objective: Create adaptable, multiuse spaces for community gathering, play, and social activity for all ages and abilities.

.....

Providing quality recreational opportunities begins with proper planning. To assure adequacy and maximum usability, recreation areas and facilities should be developed with regard for the needs of the people and the area they serve. Proper planning should also take into consideration a number of factors, including but not limited to, location of existing recreational areas (for example, proximity to the area served, separation from incompatible land uses), adequacy of existing facilities, site planning for the location of future facilities, access to current and future facilities, provisions for recreation programs, and financing, maintenance and management of existing and proposed parks, trails and recreational facilities.

Opportunities for community gathering should be provided within private developments, particularly residential ones, to the greatest extent practical. While the City, County, and State provide larger scale opportunities, smaller, closer-to-home facilities are essential. These can be something as extravagant as a neighborhood playground within common ground or as simple as a landscaped area with seating.





Objective: Ensure compatibility between potential development and the existing natural environment.

.....

An integral part of land use planning is attempting to ensure newly planned land uses are not incompatible with, or even detrimental to, existing land uses. This is particularly true with protecting the natural environment, parks, and open space. New development could have substantial impacts on the quality and quantity of a community’s air, land, water, and biological resources and those impacts must be considered and appropriately mitigated as warranted. The review process should include an acknowledgement of the existing natural environment so that development decisions reflect the range of community values.

Objective: Support the integration of open space to create transitions in mixed-use developments and residential neighborhoods.

.....

Well-planned open space integrated into mixed-use developments and residential neighborhoods can be used to buffer and screen less compatible uses and features, serve an important function such as stormwater management, provide a space for gatherings and events, foster a sense of place, and improve the overall health and wellness of residents. Common ground and stormwater areas have historically been afterthoughts in the development process, spaces unusable for development and devoid of character or accessibility. Such areas must be carefully planned, designed, and located to serve as amenities for residents and visitors or purposeful preservation of natural resources.

Besides following existing open space, landscaping, and tree preservation regulations, new development in Maryland Heights should attempt to integrate into the existing park and trail network, as feasible.





Objective: Ensure the accessibility of recreational facilities.

Use of the Maryland Heights' parks and recreational facilities by residents and visitors is important for relaxation and health benefits. Where feasible, the City should continue to increase the accessibility of its parks and recreational facilities for all ages and physical abilities. New facilities and development must also comply with all applicable American's with Disabilities Act laws and policies.



Objective: Ensure the character and image of the City of Maryland Heights is perpetuated in open space and recreational areas.

As a relatively new City, Maryland Heights has struggled to establish a definitive sense of character and place. For instance, Creve Coeur Lake Memorial Park is located in Maryland Heights, but many visitors are unaware that the park is located in Maryland Heights. The City should take every opportunity to bring awareness to the fact that Creve Coeur Lake Memorial Park is located within Maryland Heights, whether it be through gateway signage, marketing, or an alternative. Well-designed open space and recreational facilities can provide gathering places that improve the character of a development, neighborhood, or community. Places like parks, plazas, gazebos, shelters, and entry features can become places where residents and visitors interact, but also create a greater sense of community and a clear awareness that they are in Maryland Heights.





GOAL: ENCOURAGE WELLNESS AND ACTIVE LIVING THROUGH GREEN INFRASTRUCTURE, PHYSICAL ACTIVITY, AND RECREATION.

.....

OBJECTIVES:

- ***Support the creation of pedestrian linkages for existing development, redevelopment, and infill.***
- ***Enhance, reinforce, and connect to local and regional open space and recreation facilities.***
- ***Encourage walkable developments and neighborhoods.***

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Prepare a green infrastructure study that considers stormwater management, conservation easements, current zoning, and public/private partnerships.
- ⇒ Develop and maintain a map of existing and future sidewalks, paths, trails, and bicycle routes within the City, and identify linkages into the regional system.
- ⇒ Require that developments include interconnected functional open space and pedestrian/bicycle linkages.
- ⇒ Add sidewalks and bicycle lanes to connect gaps between existing facilities.
- ⇒ Identify future connections to the regional parks and trails system.
- ⇒ Support the I-70 Eastbound Blanchette Bicycle and Pedestrian Crossing, linking it to the local and regional trail system.



GOAL: ENCOURAGE WELLNESS AND ACTIVE LIVING THROUGH GREEN INFRASTRUCTURE, PHYSICAL ACTIVITY, AND RECREATION.

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The design of the built environment can encourage or discourage the wellness of its residents. For example, community design focused on the automobile tends to discourage walking as a means of transportation or pleasure while design focused on the pedestrian facilitates it. Policies and community design that foster more active forms of transportation and daily living can combat rising obesity rates as well as problems related to pollution, environmental degradation, and energy consumption.

WHAT IS GREEN INFRASTRUCTURE?

The U.S. Environmental Protection Agency (EPA) defines green infrastructure as:

“... a cost-effective, resilient approach to managing wet weather impacts that provides many community benefits. While single-purpose gray stormwater infrastructure - conventional piped drainage and water treatment systems - is designed to move urban stormwater away from the built environment, green infrastructure reduces and treats stormwater at its source while delivering environmental, social, and economic benefits.”

Images Source:
EPA, 2021





WHAT IS GREEN INFRASTRUCTURE?

Stormwater runoff is a major cause of water pollution in urban areas. When rain falls on roofs, streets, and parking lots the water cannot soak into the ground as it should because of the hard surfaces. Stormwater then drains through gutters, storm sewers, and other engineered collection systems and is discharged into nearby water bodies. The runoff can carry trash, bacteria, heavy metals, and other pollutants from the impermeable surfaces. Higher flows resulting from heavy rains also can cause erosion and flooding in streams, damaging habitat, property, and infrastructure.

In contrast, when rain falls in natural, undeveloped areas, the water is absorbed and filtered by soil and plants. Stormwater runoff becomes cleaner and less of a problem. Green infrastructure uses vegetation, soils, and other elements and practices to mimic some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure can be a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water in the immediate area. The key principles to achieve a connected system of green infrastructure include protecting existing public open space and natural areas, connecting large blocks of natural areas with corridors, and mimicking natural processes where development does occur.

Images Source:
EPA, 2021



Urban Rain Garden



Permeable Pavement



Tree Canopy



Objective: Support the creation of pedestrian linkages for existing development, redevelopment, and infill.

Objective: Enhance, reinforce, and connect to local and regional open space and recreation facilities.

It is crucial for new or infill developments to provide linkages from sidewalks or trails within the project to adjoining sidewalks and/or the regional trail system. On a large scale, this practice prevents isolated, stand-alone projects or neighborhoods and on a small scale it provides pedestrians a travel route into and through the site without having to walk in drive lanes meant for vehicles.



Open space linkages are corridors that connect open space features such as parks, trails, and natural resources. Linkages can consist of trails, sidewalks, streets, and stream corridors. They provide a physical connection between people and open space resources. Open space linkages can connect neighborhoods with other regional parks and serve as safe and accessible routes for people of all abilities. They can allow movement from place to place without having to confront auto and truck traffic. They also allow wildlife to move from one isolated natural area to another. Identifying opportunities to develop regional open space linkages is important for Maryland Heights to connect to the larger regional parks system.

The following organizations are actively working to expand the regional parks, trails, and open space system in the St. Louis metropolitan area:

- **Great Rivers Greenway**
- **St. Louis County Department of Parks and Recreation**
- **Bike St. Louis**
- **Trailnet**
- **St. Louis Open Space Council**



Objective: Encourage walkable developments and neighborhoods.

Recent studies¹ have shown that homebuyers want neighborhoods with a sense of community, an abundance of civic amenities, convenient access to goods and services, and a connection to nature. They prefer walkable, attractive neighborhoods with desirable public and private spaces that are compact, yet livable, with a safe, quiet, and peaceful atmosphere.

The concept of walkability is defined in many ways. It is often referred to it as a mixture of physical and perceptual elements that make an area conducive to walking. This definition emphasizes the dual elements of walkability:

- Physical elements - walkways, adjacent uses
- Perceived elements - safety, comfort, enjoyment

A 2015 Harvard University Study defined walkability in the following:

In professional, research, and public debates the term is used to refer to several quite different kinds of phenomena. Some discussions focus on environmental features or means of making walkable environments, including areas being traversable, compact, physically-enticing, and safe. Others deal with outcomes potentially fostered by such environments, such as making places lively, enhancing sustainable transportation options, and inducing exercise. Finally some use the term walkability as a proxy for better design whether composed of multiple, measurable dimensions or providing a holistic solution to urban problems.²

From an economic perspective, it can be defined as the degree to which an area within walking distance of a property encourages walking trips to destinations that satisfy most everyday needs. This would include school, work, shopping, and recreation.

Despite the variety of ways in which walkability is defined, there is consensus on the important characteristics that make a neighborhood walkable. These characteristics are:

- A discernable center or focal point (i.e. town center, main street, plaza)
- Compact development
- Mixed use and mixed income
- Public spaces
- Pedestrian centered design
- Access to jobs, goods, services, and opportunities for social interaction

Besides economic benefits, walkable neighborhoods promote health, encourage community, and improve property values.

¹ [Brookings Report \(2012\), "Walk this Way: The Economic Promise of Walkable Places in Metropolitan Washington, D.C."](#).

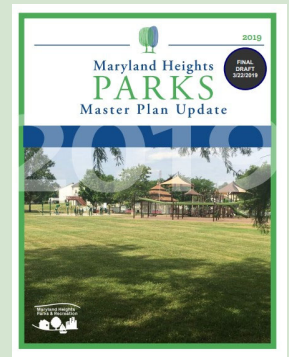
² [A. Forsyth. \(2015\) "What is a Walkable Place? The Walkability Debate in Urban Design". Urban Design International 20, 4: 274-292.](#)



ADDITIONAL RESOURCES

Maryland Height Parks Master Plan (2019)

https://www.marylandheights.com/Document_Center/Department/Parks%20&%20Recreation/MH_ParksMasterPlan_2019.pdf



Environmental Protection Agency, (2020) "What is Green Infrastructure?"

<https://www.epa.gov/green-infrastructure/what-green-infrastructure>





QUALITY COMMUNITY SERVICES



Delivering Quality Community Services

The City of Maryland Heights provides residents with an array of community services, as do other public, private, and non-profit agencies in the region. These services are delivered to the public through a series of facilities spread throughout the City. Some facilities, such as parks, serve a neighborhood or limited area, while other facilities, such as the Government Center and the Community Center, serve the entire community.

Ensuring accessibility to quality municipal services for the population being served is critical. This includes residents, visitors, business owners, and other guests. This chapter is about how Maryland Heights seeks to develop and improve public services in the community. This can mean anything from getting a streetlight bulb replaced to starting a community-wide initiative that may involve several new programs. Either might be effective in solving a problem and improving the quality of life in a neighborhood. An improvement in services in a community may or may not be an intervention in itself, but it may be an important part of the foundation for community change.



Screen capture from City's Website.

"Click" Image for Hyperlink.



GOAL: CREATE VALUE AND CHARACTER FOR THE CITY, PROPERTY OWNERS, AND THE DEVELOPMENT COMMUNITY THROUGH INNOVATIVE DESIGN OF THE STORMWATER MANAGEMENT SYSTEM.

OBJECTIVES:

- *Encourage stormwater management practices that reduce peak flows while improving water quality.*
- *Encourage stormwater management systems that mimic natural processes.*
- *Utilize the stormwater management system as a visual, environmental, and functional amenity.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Require stormwater management systems to provide functional green space for the subdivision and associated neighborhood.
- ⇒ Keep the impervious coverage of land to a minimum
- ⇒ Work with the Metropolitan St. Louis Sewer District (MSD) and levee districts (as applicable) to review and approve stormwater management areas.
- ⇒ Require the use of low-impact development practices to reduce and filter stormwater runoff.
- ⇒ Incentivize bio-retention facilities, such as rain gardens with native plant species, for passive treatment of stormwater.



GOAL: CREATE VALUE AND CHARACTER FOR THE CITY, PROPERTY OWNERS, AND THE DEVELOPMENT COMMUNITY THROUGH INNOVATIVE DESIGN OF THE STORMWATER MANAGEMENT SYSTEM.

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All stormwater management systems proposed to be constructed, altered or reconstructed by any person or corporation (public or private) within Maryland Heights require review and approval by the Metropolitan St. Louis Sewer District (MSD). This includes the altering of any storm drainage channel, site drainage, or floodplain. MSD seeks to balance water quality protection and Clean Water Act compliance with economic growth and help provide a sustainable path to stormwater management for the region. Within areas served by levee districts, such as the Riverport Levee District and the Howard Bend Levee District, the levee district reviews proposed stormwater management systems for water quantity and MSD reviews them for water quality.



While MSD and/or the applicable levee districts set minimum standards for stormwater management design, performance, and maintenance, the City of Maryland Heights seeks to ensure that stormwater management is developed as a functional amenity that adds character and value. Stormwater management facilities that enhance the site, the community, and the environment, should be encouraged. Gardens, plazas, rooftops, and even parking lots function as amenities and provide visual interest while performing stormwater quality functions and reinforcing design goals. The integration of water quality features and associated landforms, walls, landscape, and materials can reflect the standards and patterns of a neighborhood and help to create lively, safe, and pedestrian-oriented districts.



Objective: Encourage stormwater management practices that reduce peak flows while improving water quality.

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Objective: Encourage stormwater management systems that mimic natural processes.

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In an undeveloped watershed, vegetation-covered soil soaks up rainfall. The water filters through the soil before reaching the groundwater table or being released slowly into streams. In contrast, a developed watershed is characterized by impervious surfaces such as parking lots, roads, and rooftops. Rainfall cannot soak through these hard surfaces. Instead, it flows quickly across them, picking up pollutants along the way. The stormwater then enters gutters and storm drains, which often empty directly and without treatment into area waterways. Local streams then become overwhelmed by flash flooding and stream habitats are smothered by sediments carried by the excessive flows.

A response to make developed areas less impactful is an engineering approach known as low-impact development (LID). According to the Environmental Protection Agency (EPA), LID includes a variety of practices that mimic or preserve natural drainage processes to manage stormwater. LID practices typically retain rain water and encourage it to soak into the ground rather than allowing it to run off into ditches and storm drains where it would otherwise contribute to flooding and pollution problems.

In parking lots and around buildings, construction of planters and infiltration basins can provide attractive green space while improving water quality and reducing runoff volume. Rain gardens, small ponds, and catchment areas hold and slowly release water to the environment. A design may also use several small-scale catch basins, instead of one large detention pond, reducing the need for earthmoving and enables preservation of a more natural landscape. Low impact development benefits and characteristics can include: improvement in water quality, reduced number of costly flooding events, restored aquatic habitat, improved groundwater recharge, and enhanced neighborhood beauty.



Green Roof Example.
Image Source:
EPA, 2020



Objective: Utilize the stormwater management system as a visual, environmental, and functional amenity.



Image Source,:

EPA, 2020

Maryland Heights seeks to seamlessly incorporate LID practices into everyday landscapes, which add both beauty and functionality.

Minimalist stormwater retention options using only pipes and catch basins are not aesthetically pleasing and do not add value to a development. Well-integrated green infrastructure facilities, including landscaped rain gardens and conveyance swales, provide green space that enhances site aesthetic. For a business owner in the City, this means increased marketability, increased property values, and healthier environments for their tenants.



GOAL: SUPPORT COMPLETE STREETS THAT ARE CONVENIENT AND ACCESSIBLE FOR ALL USERS OF THE TRANSPORTATION SYSTEM INCLUDING MOTORISTS, TRANSIT USERS, PEDESTRIANS, AND CYCLISTS
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OBJECTIVES:

- *Assure that new development is responsive to pedestrian needs.*
- *Consider the mobility-impaired population of Maryland Heights in all planning and construction phases.*
- *Establish and expand the planning, implementation, and operation of a multi-modal transportation system, including transit, roadways, bikeways, and pedestrian facilities.*
- *Ensure the visual quality of transportation networks and their support facilities.*
- *Ensure the functional compatibility of the transportation system and adjacent land uses.*
- *Reduce the impact of parking facilities on public rights-of-way.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Require new development incorporate an interconnected network of local streets with efficient and adequate connections to the regional system.
- ⇒ Provide amenities such as bike racks, street lighting, public art, street trees and landscaping, benches, and bus shelters in the public realm.
- ⇒ Continue to seek funding for implementation of the recommendations outlined in the Dorsett Road Great Streets study.
- ⇒ Leverage shared parking opportunities where possible.
- ⇒ Establish a workable set of guidelines for exemptions from parking regulations.
- ⇒ Use buffer zones, where appropriate, to ensure the compatibility of transportation and adjacent areas.
- ⇒ Require parking areas to be placed behind buildings where feasible. Where infeasible, require substantial screening.
- ⇒ Through proper location and design, ensure that the development of major transportation routes produces minimum negative impact on neighborhoods.



GOAL: SUPPORT COMPLETE STREETS THAT ARE CONVENIENT AND ACCESSIBLE FOR ALL USERS OF THE TRANSPORTATION SYSTEM INCLUDING MOTORISTS, TRANSIT USERS, PEDESTRIANS, AND CYCLISTS OF ALL AGES AND ABILITIES.

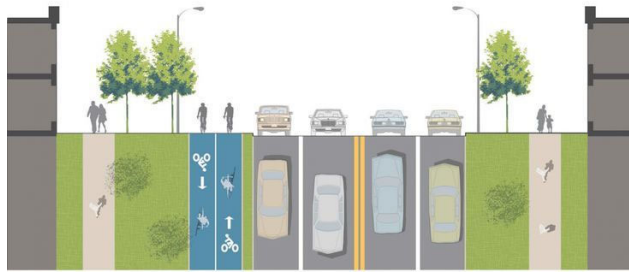


Image Source:
Oregon Metro, 2019

According to the U.S. Department of Transportation, Complete Streets are defined as streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient. Complete Street policies are set at the state, regional, and local levels and are frequently supported by roadway design guidelines.

Complete Streets approaches vary based on community context. They may address a wide range of elements, such as sidewalks, bicycle lanes, bus lanes, public transportation stops, crossing opportunities, median islands, accessible pedestrian signals, curb extensions, modified vehicle travel lanes, streetscape, and landscape treatments. Complete Streets reduce motor vehicle-related crashes and pedestrian risk, as well as bicyclist risk when well-designed bicycle-specific infrastructure is included. They can promote walking and bicycling by providing safer places to achieve physical activity through transportation. A 2003 study by K. Powell, L. Martin, and P. Chowdhury included in the *American Journal of Public Health* found that 43% of people reporting having “a place to walk” were significantly more likely to meet current recommendations for regular physical activity than were those reporting having no place to walk.

Complete streets can contribute to better health outcomes in Maryland Heights, improve safety, lower transportation costs, and reduce air pollution.



Objective: Assure that new development is responsive to pedestrian needs.

.....

Objective: Consider the mobility-impaired population of Maryland Heights in all planning and construction phases.

.....

Objective: Establish and expand the planning, implementation, and operation of a multi-modal transportation system, including transit, roadways, bikeways, and pedestrian facilities.

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Like most suburban communities, Maryland Heights is predominately characterized by a development pattern designed around the automobile. Moving forward, an emphasis must be placed upon ensuring that new developments and transportation infrastructure improvements support multiple modes of transportation. This is critical to ensure the health, safety, and general welfare of the community.



Images Source, :
MoDOT, 2020



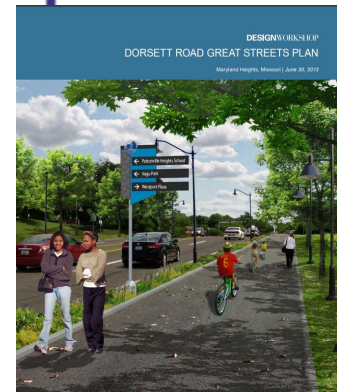
Objective: Ensure the visual quality of transportation networks and their support facilities.

Objective: Ensure the functional compatibility of the transportation system and adjacent land uses.

These objectives pertain to the relationship between the transportation system and adjacent land uses. This relationship is a key part of the Dorsett Road Great Streets Plan. As a matter of background, in August 2012, East-West Gateway Council of Governments selected Dorsett Road for funding in their Great Streets Initiative’s second round of regional demonstration projects. The intent of the effort is to support a fully functional multi-modal suburban environment that sets a framework for future development in the corridor. The plan, available on the City’s website, includes provisions for sidewalks, street trees, and wayfinding signage. It also seeks to encourage land uses along the corridor that are pedestrian oriented and encourage public gathering.

Objective: Reduce the impact of parking facilities on public rights-of-way.

Reducing the impact of parking facilities on public-rights-of way is difficult in suburban corridors such as Dorsett Road because the properties along the roadway are shallow in depth, offering limited area between the roadway and the development. In response, newer developments along Dorsett Road have employed a combination of masonry columns and landscaping such as shrubs or ornamental grasses to serve as a screen and provide visual interest. The continued use of this design element along the corridor, and elsewhere in the City, serves to improve the image of Maryland Heights and establish a sense of place.



“Click” Image for Link to plan.





GOAL: MANAGE ACCESS AND TRAFFIC TO PROMOTE SAFETY, MAXIMIZE EFFICIENCY, AND AVOID CONGESTION.

.....

OBJECTIVES:

- *Encourage the efficient use of roadways and other existing transportation elements.*
- *Create internal street systems that are coordinated and integrated, including multiple interconnections between individual developed area, avoiding freestanding development areas unrelated to each other.*
- *Encourage future road improvements that provide both a local and regional benefit.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Monitor roadway levels of service (LOS) and strive for LOS of E or better on all roadway segments at peak times and prioritize improvements on those roads that are rated LOS F.
- ⇒ Work with the Missouri Department of Transportation (MoDOT) and the St. Louis County Department of Highways and Traffic (as applicable) to review and approve access and roadway improvements.
- ⇒ Continue to require traffic studies for development projects.
- ⇒ Participate in regional approaches to land use and transportation issues.



GOAL: MANAGE ACCESS AND TRAFFIC TO PROMOTE SAFETY, MAXIMIZE EFFICIENCY, AND AVOID CONGESTION.

Maryland Heights strives to balance economic development with safety and efficiency in its overall transportation network. The Zoning Code requires traffic studies to be submitted for projects that could produce adverse traffic impacts or warrant roadway improvements. These studies are reviewed by the City Engineer and partners such as the Missouri Department of Transportation (MoDOT) and St. Louis County Department of Transportation.

Objective: Ensure the visual quality of transportation networks and their support facilities.

Objective: Create internal street systems that are coordinated and integrated, including multiple interconnections between individual developed area, avoiding freestanding development areas unrelated to each other.

Frequently, the layout of streets makes distances much longer than they need to be. Long neighborhood block lengths and cul-de-sacs further contribute to this problem. When feasible, neighborhoods should be designed with short block lengths, numerous three and four-way intersections, and minimal dead-ends or cul-de-sacs. A network of streets, sidewalks, bicycle lanes and paths in which all parts are well-connected to each other reduces the distance individuals have to travel, allows for the use of more local streets rather than major roadways, and provides a greater choice of routes.

Objective: Encourage future road improvements that provide both a local and regional benefit.

Maryland Heights is a leader in constructing roadway improvements that provide both a local and regional benefit. The City originally constructed Maryland Heights Expressway between Interstate 70 and Missouri Route 364 (Page Avenue). As part of the regional infrastructure plan, federal funding was authorized to extend Missouri Route 141 from Interstate 64 to Missouri Route 364. In addition to the federal funding, the City of Maryland Heights contributed substantial funds toward the project. The new roadway, as well as the previous Maryland Heights/Earth City Expressway, was transferred to Missouri Department of Transportation (MoDOT) control and redesignated as Missouri Route 141. The new section of Missouri Route 141 was completed in 2012.



Source:
Google Maps, 2019



GOAL: ENCOURAGE TRANSPORTATION IMPROVEMENTS TO INCLUDE AESTHETIC ENHANCEMENTS THAT ADD CHARACTER AND FURTHER CITY IMAGE.

OBJECTIVES:

- *Require high level and quality design standards that create character along roadways.*
- *Ensure the character and image of the City of Maryland Heights is perpetuated in transportation improvements.*
- *Design roads, bridges, and overpasses to enhance the surrounding area and larger community.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Use landscaping and tree planting to enhance roadways and encourage a pedestrian friendly environment.
- ⇒ Design and locate street lighting and other transportation support devices so transportation safety and nearby aesthetic features are mutually enhanced.
- ⇒ Incorporate unique design elements into the City’s infrastructure, where practical.



GOAL: ENCOURAGE TRANSPORTATION IMPROVEMENTS TO INCLUDE AESTHETIC ENHANCEMENTS THAT ADD CHARACTER AND FURTHER CITY IMAGE.

.....

Objective: Require high level and quality design standards that create character along roadways.

.....

Objective: Ensure the character and image of the City of Maryland Heights is perpetuated in transportation improvements.

.....

Objective: Design roads, bridges, and overpasses to enhance the surrounding area and larger community.

.....

Maryland Heights will continue to build on the aesthetics and character in transportation improvements. More recent projects include the diverging diamond interchange at Dorsett and I-270, the entrance markers located along Page Avenue and Missouri Route 141, street trees throughout the City, the aesthetic improvements envisioned the Dorsett Road Great Streets plan, and neighborhood improvements such as the stamped crosswalks at many intersections throughout the City.



Source:
Google Maps, 2019



GOAL: ENCOURAGE THE PROVISION OF ADEQUATE PUBLIC UTILITIES WHILE BALANCING THE NEEDS OF THE ENVIRONMENT, PUBLIC HEALTH, SAFETY, AND GENERAL WELFARE.

.....

OBJECTIVES:

- *Support a strong infrastructure system that supports new, sustainable technologies.*
- *Support renewable energies that are easily scalable, environmentally sound, efficient, and adaptable to environmental change and community demand.*
- *Promote the conservation and re-use of water to the maximum extent practical.*
- *Ensure that provisions for the layout and delivery of utilities consider the potential impacts on the layout, value, and character of adjacent future development opportunities.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Annually review and update the capital improvement program in order to maintain existing systems and integrate new infrastructure technologies.
- ⇒ Coordinate with Missouri American Water Company and the Howard Bend Levee District in the evaluation of providing potable water to proposed development in both an effective and efficient manner.
- ⇒ Coordinate with Spire to efficiently plan for natural gas infrastructure in the Maryland Park Lake District.
- ⇒ Coordinate with the school district(s) and fire district(s) in the zoning and development review process.
- ⇒ Work with local utility service providers to facilitate the appropriate siting and location of utility substations.



GOAL: ENCOURAGE THE PROVISION OF ADEQUATE PUBLIC UTILITIES WHILE BALANCING THE NEEDS OF THE ENVIRONMENT, PUBLIC HEALTH, SAFETY, AND GENERAL WELFARE.

Objective: Support a strong infrastructure system that supports new, sustainable technologies.

Objective: Support renewable energies that are easily scalable, environmentally sound, efficient, and adaptable to environmental change and community demand.

Objective: Promote the conservation and re-use of water to the maximum extent practical.

Objective: Ensure that provisions for the layout and delivery of utilities consider the potential impacts on the layout, value, and character of adjacent future development opportunities.

The City of Maryland Heights’ Department of Public Works is responsible for the repair, care and maintenance of all public streets, alleys and driveways, bridges, storm sewer collection systems owned or maintained by the City, street lighting and street signalization, plus the care of all property of the City that is not assigned to the care or custody of any other department. The department’s mission is to “strive to provide superior municipal services that offer proactive infrastructure improvement and maintenance, while enhancing the quality of life for the community in a safe, economical, and environmentally sound manner.” Further, the department’s vision is to be a well-respected organization that is considered a model public works department. To achieve this, they will provide superior municipal services through teamwork, professionalism, and hard work while offering innovative solutions to resolve challenges.

To that end, the Public Works Department is an American Public Works Association (APWA) accredited agency. According to the [APWA website](#):

The purpose of the accreditation program is to provide a means of formally verifying and recognizing public works agencies for compliance with the recommended practices set forth in the Public Works Management Practices Manual. It is a voluntary, self-motivated approach to objectively evaluate, verify, and recognize compliance with the recommended management practices. The objectives of the accreditation program are to:

- *Create impetus for organization self-improvement and stimulate general raising of standards.*
- *Offer a voluntary evaluation and education program rather than government-regulated activity.*
- *Recognize good performance and provide motivation to maintain and improve performance.*
- *Improve public works performance and the provision of services.*
- *Increase professionalism.*
- *Instill pride among agency staff, elected officials and the local community*





HAZARD MITIGATION AND RESILIENCY



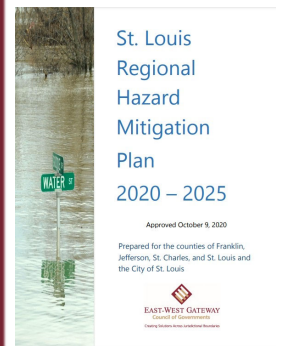
Hazard Mitigation & Resiliency

GOAL: ENCOURAGE RESILIENCY AND SUSTAINABLE DEVELOPMENT BY PROTECTING DEVELOPMENT FROM NATURAL HAZARDS.

In Maryland Heights, the Comprehensive Plan is the responsibility of the Planning and Zoning Section of the Department of Community Department. Hazard mitigation planning is coordinated by the Building and Codes Section of the Department, in conjunction with East-West Gateway (EWG) Council of Government's 2020-2025 Regional Hazard Mitigation Plan. In order to continue to make sound planning decisions related to future growth that is resilient and sustainable, hazard impacts are being incorporated into the comprehensive planning process.

The goals of the Comprehensive Plan are implemented through various local planning instruments such as the Zoning Code, Subdivision Code, and Capital Improvements Program. Integrating hazard mitigation principles into the Comprehensive Plan highlights the value the City places on community resilience. Further it allows the City to manage current and future development in a way that does not lead to an increase in the community's vulnerability to hazards.

"Click" Image for
Hyperlink to Plan



The relationship between sound land use planning and the reduction of a community's exposure, risk, and vulnerability to hazards is clear. Experience has shown that those communities that carefully plan the location, type, and structural requirements of development to avoid hazard areas and vulnerable structures to the maximum extent possible suffer much less disaster-related damage and impact than do communities that do not consider hazard mitigation as a part of the Comprehensive Plan. From a disaster recovery standpoint, the benefits of sound hazard mitigation and resiliency planning include the following:

- Less disruption to the City's economic, social, and physical structure
- Less impact on the area's tax base
- Less impact on the provision of essential services
- Less financial impact in terms of local participation in disaster program cost-sharing

Through the hazard mitigation planning process, EWG is encouraging local communities to include hazard mitigation planning as well as disaster response planning in their local comprehensive plans. The intent of this chapter of the Comprehensive Plan is to support and encourage the goals and objectives of the Regional Hazard Mitigation Plan.



Objective: Raise public awareness concerning hazards, including measures that can be taken to promote mitigation and increase disaster preparedness, response, and recovery capabilities.

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The Federal Emergency Management Agency (FEMA) has a variety of printed pamphlets and guides that encourage the integration of hazard mitigation with planning, with the idea that it will increase resiliency from natural disasters. FEMA suggests that local community leaders and elected officials play a central role in setting the community’s priorities, providing overall policy direction, and bringing stakeholders together. Maryland Heights’ leaders can spearhead initiatives that promote the importance of integrating hazard mitigation to achieve overall community safety and resilience. Further, they have the ability to communicate with a broad base of constituents and partners. These abilities are important for the success of an integrated, interdepartmental, multi-jurisdictional hazard mitigation strategy. FEMA recommends the following for achieving this strategy:



FEMA

- 1) **Frame the issue.** Integrating hazard mitigation and safe growth policies can seem like an obscure topic to decision makers and the general public. Planners can frame the issue in terms that resonate with the community, such as economic development, environmental protection, or providing essential public services.
- 2) **Make safety and resilience a priority.** Ensure that public safety and community resilience are considered in all decisions. When deliberating or voting on an issue, providing policy direction, or setting budgets, ask how that decision affects safety and resilience, and ask which hazard mitigation practices may strengthen the decision.
- 3) **Build partnerships.** Bring stakeholders to the planning table to encourage partnerships among City departments, agencies, and nearby communities. Include representatives from the community, residents, civic organizations, and technical experts as well.
- 4) **Get the message out.** Local leaders can be a champion for the importance of hazard mitigation and community resilience by highlighting successful actions and return on investment. Be repetitive and consistent with the message through multiple channels of communication.



Objective: Evaluate options to mitigate the impacts of gradual and catastrophic natural hazards.

The City of Maryland Heights has a Class 7 rating in the National Flood Insurance Program’s Community Rating System (CRS) for its efforts to reduce loss of lives and mitigate property damage from floods in its quest to create a disaster resistant community. A CRS Class 7 rating enables residents of Maryland Heights who have flood insurance and live in a Special Flood Hazard Area (SFHA) to receive a five percent discount on their flood insurance premiums. Those who do not live in a SFHA can also receive a five percent reduction.

In addition from the time of the City’s incorporation in 1985, it has taken an active interest in the areas prone to flash flooding and erosion. With the help of the Stormwater Advisory Commission, many dangerous locations have been identified and addressed. This Commission consists of seven members. Not less than five (5) members shall be residents of the City. They meet quarterly or more often if circumstances dictate. They are tasked with identifying the problems of damaged storm sewers, erosion, and flooding throughout the city. This includes the maintenance of storm sewers and open channels. The city budgets funds for this purpose as capital expenditures.

Every year, the Commission develops a program of projects to address small and large issues. All new projects must provide mitigation measures to ensure that there will be no adverse effects, such as increased velocity or peak discharge upstream or downstream of the project. For instance, eroding creek beds are often stabilized with rip rap or a loose application of broken stones.



© SoccerSTL.net



For additional information on CRS Activities in Maryland Heights, go to the Community Development Department link [HERE](#).

Roadway Flooding
North of Route 141
(2019)

Source: SoccerSTL.net



Objective: Evaluate options to mitigate the impacts of gradual and catastrophic natural hazards.

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In response to the lessons learned from natural and human-made disasters, building codes are continuously being reviewed and modified to mitigate the effects of these events. The Community Development department participates in the code development process to assure the City remains current with best planning and construction practices. Adopting and enforcing the updated codes will enhance the community's resilience.

Further, examples of integrated hazard mitigation solutions might include:

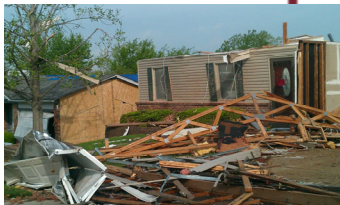
- Establish goals, policies, and objectives that are linked to risk reduction and resiliency in the Comprehensive Plan
- Incorporate hazard mitigation standards in permit reviews and encourage homeowners to enhance their homes with storm shelters
- Use community improvement district (CID), transportation development district (TDD), or other public funding mechanisms to help pay for hazard mitigation measures
- Use the Capital Improvement Program to fund hazard mitigation measures
- Use infrastructure improvements to guide growth away from known hazard areas
- Use zoning and other land use controls to prohibit or discourage hazardous development patterns
- Encourage green infrastructure and low impact development
- Preserving or restoring natural functions that minimize hazard impacts, such as wetland restoration
- Incorporate structural retrofits or relocation of mission critical buildings or infrastructure
- Incorporate the awareness of hazard risks and hazard mitigation into public outreach practices, including using the Maryland Heights Chamber of Commerce to help reach out to the business community
- Enforce the City's stream buffer protection requirements
- Identify at-risk populations



Damage from 2011 tornado.



Damage from Tornado,
2011.



Objective: Support efforts that will assist with the continuity of critical business operations.

Natural hazards are deadly and expensive: the United States averages 500 deaths per year and nearly \$14 billion in damage from weather-related natural hazards. Between 1980 and 2020, the U. S. has sustained 18 wildfire, 28 drought, 48 tropical cyclone, 126 severe storm, 33 flooding, 17 winter storm, and 9 freeze billion-dollar disaster events affected the United States (CPI-adjusted)¹. Yet, building or enhancing community resilience does not need to mean expensive structural protection measures.

Decisions that are made relating to land use, environmental protection, economic development, capital improvements, government operations, and budgets all have a role to play in mitigating hazard risks. The most effective way to promote resilience at the community level is to integrate the consideration of risk and ways to reduce or eliminate risk, into all decisions. **Preventive planning reduces the need for reactive planning.**

Mitigation measures reduce risk for individual homeowners and businesses, as well as essential critical facilities such as hospitals, public safety and transportation facilities, civic institutions, and water and power utilities. While individual citizens and property owners have an important role to play in mitigation, local governments have a major responsibility.

The most effective mitigation measures are implemented at the local government level, where most decisions on the regulation, timing, and location of development are made. Through comprehensive planning, communities can manage development to build resilience to natural hazards and thus better “weather the storm” of natural disasters.

The City can also implement policy and adopt temporary regulatory measures to promote business continuity after or during disasters or similar events. For example, after the tornado of 2011, the Zoning Code was temporarily amended to allow non-conforming residential structures to be rebuilt without penalty. Similarly, during the COVID-19 pandemic, temporary regulations were put into place that would assist restaurants and other small City businesses.

¹[NOAA National Climatic Data Center](https://www.noaa.gov/data/monitoring-assessments/climate-atmosphere/analyses-reports/analyses-reports/2020-report-card-for-the-u-s-climate)



Objective: Form working relationships to leverage and share resources.

As mentioned previously, the City of Maryland Heights participates with EWG in the Regional All-Hazard Mitigation Plan. Federal Statute requires that the All Hazard Mitigation Plan be updated and readopted every five years. In Missouri, the State Emergency Management Agency (SEMA) has funded EWG to prepare an update to the regional plan, on behalf of the five Missouri Counties (City of St. Louis, and Franklin, Jefferson, St. Charles, and St. Louis counties) and for 135 participating municipalities and 50 school districts. Planning partners included STARRS, county emergency managers, Municipal League representatives, St. Louis Area Regional Coalition of Community Organizations Active in Disaster (SLARCC), and EducationPlus².

The All-Hazard Mitigation Plan is intended to help protect public safety and prevent loss of life or injury in the event of a natural disaster. It is also designed to reduce risk to existing and future development and to prevent damage to each community's unique economic, cultural, and environmental assets. The plan will also help to improve the operational effectiveness of local governments and school districts following any natural disaster, by providing recommendations for advance preparation. Advanced planning should prepare first responders as well as local government leaders and school personnel and thus serve to reduce costs, save lives, and improve efficiency of disaster response and recovery.

Current rules require that local governments and school districts applying for federal pre-natural disaster mitigation funding must have a FEMA approved plan. Any community and/or school district seeking pre-natural disaster mitigation funding must formally adopt the plan by resolution in order to be eligible for FEMA/SEMA funding.



Source: East-West Gateway, 2020

²EducationPlus is a non-profit education consortium that serves teachers, administrators, support staff, and school board members in 60 public school districts in eight Missouri counties and three Illinois counties.



Objective: Minimize the loss of life and injuries that could be caused by natural hazards to the greatest extent practical.

.....

By developing and implementing a hazard mitigation plan before disaster strikes, the City of Maryland Heights will be better able to prevent or minimize loss of life and property. Regional early warning systems, public education, and improved construction techniques, can provide the opportunity for reductions in the number of injuries, reduction in property damage, and loss of life.

In the last five years, and in partnership with the EWG St. Louis Area Regional Response System (STARRS), the American Red Cross of Eastern Missouri, Paraquad, and LINC have been promoting the All Ready Campaign. This program encourages those with functional and access needs to be prepared to address their own needs in the aftermath of a disaster. Advance preparation of this type can be a significant factor in reducing loss of life. In addition to supporting the functional and access needs population, municipalities can publicize advance preparation for all citizens.





GOAL: ENCOURAGE RESILIENCY AND SUSTAINABLE DEVELOPMENT BY PROTECTING DEVELOPMENT FROM NATURAL HAZARDS.

.....

OBJECTIVES:

- *Raise public awareness concerning hazards, including measures that can be taken to promote mitigation and increase disaster preparedness, response, and recovery capabilities.*
- *Evaluate options to mitigate the impacts of gradual and catastrophic natural hazards.*
- *Support efforts that will assist with the continuity of critical business operations.*
- *Form working relationships to leverage and share resources.*
- *Minimize the loss of life and injuries that could be caused by natural hazards to the greatest extent practical.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

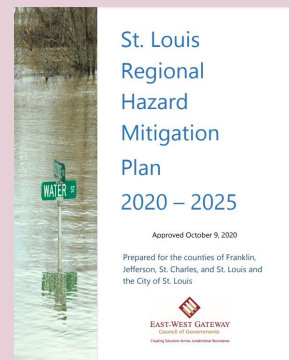
- ⇒ Continue to participate in regional emergency preparedness activities.
- ⇒ Participate in the Community Rating System (CRS) program.
- ⇒ Work with first responders in the development review process to ensure that hazard mitigation and public safety are considered.



ADDITIONAL RESOURCES

The Regional Hazard Mitigation Plan (2020-2025)

<https://www.ewgateway.org/wp-content/uploads/2020/12/2020-StLRegHazMitPlan-Approved-12-2020.pdf>



Floodplain Management, Community Development

https://www.marylandheights.com/departments/community_development/building_codes/floodplain_management.php





ECONOMIC VITALITY



Enhancing Economic Vitality

Maryland Heights is home to more than 27,000 residents and 2,000 businesses, making it a major employment center for the region. These businesses represent a wide range of industries, including financial services, distribution, biomedical, education/career development facilities, and advanced manufacturing, which make up more than 50,000 quality jobs in the St. Louis region. With close proximity to the Lambert - St. Louis International Airport, the City is host to around 4,000 hotel rooms and numerous dining, recreation and entertainment opportunities. As a hospitality and entertainment destination, Maryland Heights hosts Westport Plaza, Hollywood Casino and Amphitheater, Centene Community Ice Center, Creve Coeur Lake Memorial Park, a variety of other sports and recreational facilities, and a variety of hiking and biking trails available to all types of users.

Maryland Heights has many advantageous qualities that provide business with opportunities for growth and success. The City of Maryland Heights is accessible by Interstate 70, Missouri Route 364 (Page Avenue Extension), Missouri Route 141 (Maryland Heights Expressway), and Interstate 270. These major highways provide commuters with a variety of travel options from many other local municipalities, which can encourage people to travel to the City for employment.

In addition to being highly accessible, Maryland Heights is affordable for both residents and business owners. The City does not levy a property tax on homes or businesses, and the utility tax is ~5.5%. In addition, the business license fee is approximately \$0.02 per square foot of usable space, which is reasonable for a business of any size.



Enhancing Economic Vitality

Each city has its own unique set of strengths, weaknesses, opportunities, and challenges - and Maryland Heights is no exception. Being able to identify the current economic trends of the community can help the City move forward with their economic success. Further, businesses that enhance the social, environmental, and economic qualities of Maryland Heights are necessary for creating a sustainable and resilient community. These types of communities promote unity, diversity, health, flexibility, and growth, which are qualities that can help promote and sustain a high quality of life for all citizens living and working within the region. This chapter of the Comprehensive Plan strives to provide current and future business owners and developers with a framework for increasing the economic vitality of Maryland Heights.





GOAL: INCREASE ECONOMIC RESILIENCY AND INNOVATION AS PART OF A GLOBALLY COMPETITIVE, BUSINESS-FRIENDLY REGION, COMPRISED OF HEALTHY COMMUNITIES THAT SUSTAIN A HIGH QUALITY OF LIFE.

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OBJECTIVES:

- *Encourage a diversified mix of businesses to support a vibrant local economy.*
- *Provide efficient government services to all citizens of the community.*
- *Encourage and support redevelopment and adaptive reuse of the Westport industrial area, as well as at Westport Plaza.*
- *Encourage new hospitality oriented businesses to complement existing venues.*
- *Provide opportunities for existing businesses to expand and grow.*
- *Promote appropriate new commercial development or redevelopment of existing properties where market-supported opportunities occur.*
- *Consider incentives for renovation projects.*
- *Encourage projects that produce quality jobs.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Create a comprehensive economic development policy and program to attract and retain targeted businesses and industries within the Westport Industrial area and Westport Plaza.
- ⇒ Evaluate and report on the status and trend of the local economy with particular emphasis given to the impact of existing and proposed municipal policies upon economic growth and stability.
- ⇒ Work with the Maryland Heights Chamber of Commerce and the Maryland Heights Convention and Visitor’s Bureau.
- ⇒ Participate in regional efforts regarding land use, transportation, hazard mitigation, and environmental issues that benefit the region as a whole.



GOAL: INCREASE ECONOMIC RESILIENCY AND INNOVATION AS PART OF A GLOBALLY COMPETITIVE, BUSINESS-FRIENDLY REGION, COMPRISED OF HEALTHY COMMUNITIES THAT SUSTAIN A HIGH QUALITY OF LIFE.

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A community is said to be resilient when it is able to respond to and recover from adverse situations. A resilient community facilitates this ability through careful assessment, anticipation, and planning. With proper planning these communities are able to offer a high quality of life for residents and successfully adapt to changes in market trends, technology, or major sources of revenue. For Maryland Heights, it is imperative to think critically to plan for any situation which it may encounter. In strengthening the City's economic resiliency and diversity, Maryland Heights strives to produce a unique, resilient, and sustainable community for both businesses and residents.

Maryland Heights can increase its economic resiliency, while remaining competitive in the global market, through fostering a strong and diverse business community. Providing opportunities for businesses of all sizes and degrees of establishment can create a welcoming environment for future development. Supporting a diverse business network further helps the City support vibrant regional growth. A diverse business community can provide opportunities for seasoned workers, while also generating new jobs for younger generations.

In addition to drawing a strong workforce to the area, creating a diverse business sector that produces quality jobs for residents of all levels of education and skill is essential to provide a high quality of life in Maryland Heights. Having businesses that provide opportunity for growth can incentivize residents to work and live in Maryland Heights. A diverse business sector also provides goods and services to local and regional residents, which helps to keep revenue local. Through their employment, the community will remain economically balanced and resilient to economic shifts.



Objective: Encourage a diversified mix of businesses to support a vibrant local economy.

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A city with employment across a wide range of industries creates an environment that is better able to handle fluctuations in the economy. Creating a diverse business network that does not rely on one type of industry provides economic security for Maryland Heights. If the City were to rely on one business type for revenue and attraction, it would create a hazardous financial situation. If that industry were to prove unsuccessful, it would be assumed that related businesses would fail as well. This would be detrimental to Maryland Heights, and cause economic struggle for other businesses and community members. Bringing in a diverse variety of businesses will increase economic security in Maryland Heights, while providing residents a strong mix of goods and services.

As Maryland Heights continues to grow, the City must evaluate the advantages and disadvantages of newly proposed developments. Developments should bring diversity to the area, while providing fiscal and social benefits to the City and its residents. It is important that the City look for opportunities to use the zoning process to encourage a diversity of businesses.

In addition to economic benefit, a diverse business network keeps Maryland Heights competitive with other municipalities. Supporting everything from local shops, industrial developments, entertainment and recreational facilities, and global corporations helps to diversify the character of the community and create a desirable environment for future development. While Maryland Heights strives to promote new business opportunities, the City understands that it is equally as important to support existing businesses within the community.



Objective: Encourage a diversified mix of businesses to support a vibrant local economy.

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SMALL & LOCAL BUSINESS

Small-scale and local businesses help create a sense of place within a large community. These businesses are known and cherished by community members, and provide residents with access to unique goods and services.

LIGHT INDUSTRIAL

The diversity of light industrial and manufacturing businesses in Maryland Heights is astounding, developing, producing, and distributing a wide variety of goods from food products to commercial and industrial machinery. Light industrial buildings can be mixed-use developments housing both the manufacturing as well as office or distribution (warehousing) space. Due to the size of these companies they often provide high levels of employment and offer diverse opportunity for local residents.

OFFICE

Like the City's light industrial businesses, office use runs the gamut between Fortune 500 companies like World Wide Technology and Edward Jones and start-up businesses with great potential. It is extremely important for the City to retain office uses of all sizes to ensure a strong employment base. Providing opportunities for small and start-up companies to grow and evolve within the City is crucial.

INSTITUTIONAL AND COMMUNITY FACILITIES

Institutional and community facilities provide services and educational opportunities for visitors and residents within the community. Facilities including libraries, hospitals, museums, schools, and other related entities support the growth of these industries and create community that meets the needs of local residents.



Objective: Encourage a diversified mix of businesses to support a vibrant local economy.



Source:
Visit Maryland
Heights.org

TOURISM & HOSPITALITY

Tourism is a key aspect of Maryland Heights' economic makeup. Tourism facilities provide a welcoming atmosphere for residents and workers, while incentivizing people to visit Maryland Heights. With major corporations located in Maryland Heights, and their close proximity to the airport, the City should provide a desirable destination for business travelers to stay. In addition to hotels, ensuring that the City has a growing number of restaurants and entertainment venues can create a place that travelers want to stay. With many choices of places to eat and things to do, visitors would be encouraged to return to enjoy new experiences.

CREVE COEUR AIRPORT

Creve Coeur Airport is a valuable asset to the City of Maryland Heights. Located on Creve Coeur Mill Road between Page Avenue and the Maryland Heights Expressway, the airport serves the needs of St. Charles County and St. Louis County residents. According to their website, the airport is designated Type II General Aviation under the FAA's NIPIAS program, which enables them to accommodate a variety of small aircrafts. In addition to the airport, the Historic Aircraft Restoration Museum is located here. Since this entity is valuable to Maryland Heights, future developments in the Maryland Park Lake District should be mindful of the airport, and ensure that development does not impede with airport operations.



Objective: Provide efficient government services to all citizens of the community.

Government services are a basic need for every resident living and working in Maryland Heights. Ensuring that all citizens have adequate access to government services helps to create a healthy, safe, and connected community. These services are expected by all residents, and can have a direct effect on their quality of life. Ensuring that these systems work efficiently and effectively is a vital part of any current or future development. Services Include:

✦ **Police Department:** The Police Department works to enforce the law, protect the people, and maintain a high quality of life for all residents and visitors of Maryland Heights. The Police Department is located within the Maryland Heights Government Center, and is internationally accredited.

✦ **Public Works:** The Public Works Department is responsible for the repair and maintenance of all public streets, alleys, driveways, storm sewer collection systems, and other amenities owned or maintained by the City. Collaborating with the Parks Maintenance Division, both departments are responsible for salting and plowing the streets during the winter months. In 2016, the Department was awarded a prestigious American Public Works Association (APWA) Accreditation. The APWA Accreditation program recognizes public works agencies that go beyond the requirements of the management practices established nationally in the public works industry, as contained in the APWA Public Works Management Practices Manual.

✦ **Fire Protection:** Maryland Heights is served by four fire protection districts: Maryland Heights, Pattonville, Monarch, and Creve Coeur.

✦ **Education:** The City of Maryland Heights is served by three main school districts: Pattonville, Parkway, and the Special School District of St. Louis County. These districts are consistently rated among the highest in the State.

✦ **Garbage Collection:** Maryland Heights has a contract with Allied Waste (dba Republic Services) to collect all residential trash, yard waste, and recyclable materials within the City at no cost to residents.

✦ **Community Center:** The Maryland Heights community center is located along McKelvey Road near I-270. Completed in 2017, the 92,000 square foot facility provides residents and their guests with a fitness center, athletic courts, swimming pool, meeting rooms, event space, and a senior center. This space helps to create a sense of community within the City, and provides unique and beneficial services and opportunities to local residents.

✦ **Community Development:** The Community Development Department of Maryland Heights is responsible for code enforcement, plan reviews, and managing all non-public land development within the City. They work to improve the safety and appearance of the City, and make Maryland Heights a desirable place to live and work.



Objective: Encourage and support redevelopment and adaptive reuse of the Westport industrial area, as well as at Westport Plaza.

Westport Plaza, a mixed-use business and entertainment district located along I-270 and Page Avenue, has brought financial success to Maryland Heights and has served as a landmark for the City. Comprised of approximately 300,000 annual visitors and 3,000 employees who work in a variety of industries ranging from restaurants to corporate headquarters, this area is a vital part of the local economy, and serves as a perfect location for new and continued development.

Westport Plaza, and the surrounding Westport industrial area, is highly developed. Therefore, adaptive reuse of existing structures is encouraged in situations where buildings are adaptable and worth saving. Oftentimes, buildings or land parcels are abandoned and become obsolete as market trends or the economy changes. When appropriate, adaptive reuse allows businesses and developers to creatively use an existing structure to serve a new purpose. Sometimes, however, complete redevelopment of a property is necessary to cure obsolescence. The zoning process can be used to provide flexibility in either situation.

When considering an adaptive reuse or redevelopment project, it is important to improve upon the existing space beyond the physical building. Consideration should be given to including usable greenspace and connecting new walkways with existing sidewalks to make the building accessible and attractive.

As Maryland Heights continues to grow, the City must evaluate the advantages and disadvantages of newly proposed developments. Developments should bring diversity to the area, while providing fiscal and social benefits to the City and its residents. It is important that the City look for opportunities to use the zoning process to encourage a diversity of businesses. The City should encourage such creative design approaches. Incorporating green infrastructure or low impact development (LID) designs can improve upon the aesthetics of the property while serving as a valuable asset to manage stormwater runoff. These features can help new businesses look and feel connected with the surrounding business community.



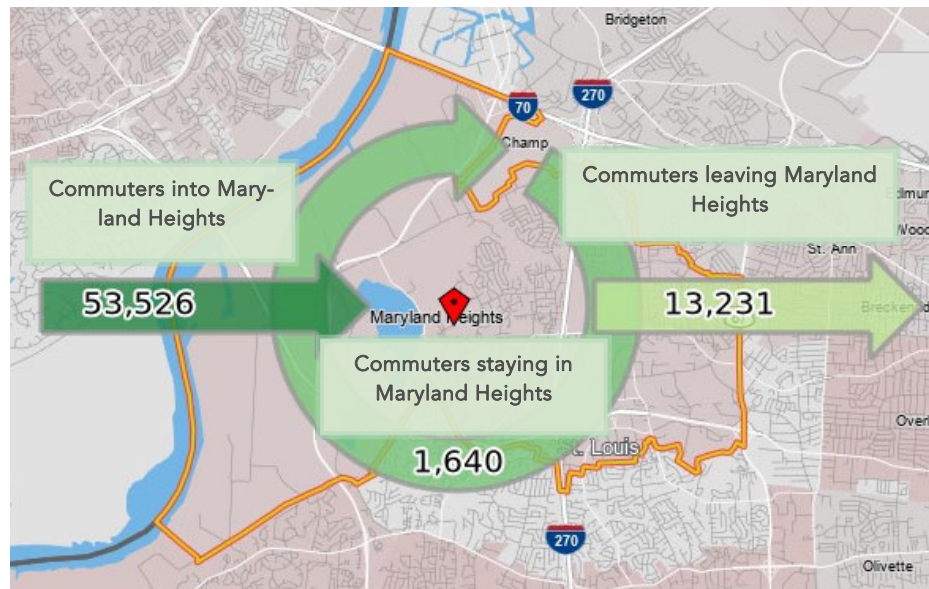


Objective: Provide opportunities for existing businesses to expand and grow.

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Business expansion and retention is vital to the economic success of Maryland Heights. Every day, Maryland Heights competes with other municipalities to maintain and expand their business repertoire. Obtaining and retaining quality businesses that bring value to the City is important for creating a space where people enjoy working. If a resident works for a company they enjoy, then they are more likely to stay in the area and not seek work elsewhere. This provides residents with more disposable income, which can be put back into the local economy through local restaurants and retail developments.

Oftentimes, workers must commute outside of their cities in order to find a job that allows them to maintain their lifestyle and support their families. When local businesses stay and expand, this allows more opportunities for workers of all skill levels to be able to live within a reasonable distance of their work. This incentivizes residents to stay or make the move to Maryland Heights, which maintains the economic stability of the City.



Source: OnTheMap, U.S Census Bureau, 2018



Objective: Provide opportunities for existing businesses to expand and grow.

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Further, most people who work in Maryland Heights do not live in the City. This is likely due to a lack of diverse housing options. Figures from 2018 U.S. Census Data show that of the approximately 55,000 people who work in Maryland Heights, only 3% live in the City, while over 53,000 residents of other municipalities commute to Maryland Heights for work. The majority of people employed in Maryland Heights, therefore, choose to live elsewhere in the region. This suggests a sizeable number of potential households that might be attracted to the City if higher value and more diverse housing options were more prevalent, also creating opportunities for economic development.

As of 2014, over half (52%) of people who are employed in Maryland Heights earn \$40,000 or more per year, higher than the St. Louis County proportion of 42%. However, residents of the City have a median income that is approximately \$9,000 less than residents in the region, suggesting that high-wage workers are choosing to live in communities other than Maryland Heights.

Moreover, when compared to the study area, Maryland Heights' housing stock is generally older and of lower value than housing in the surrounding communities. Notably, nearly 90% of housing units in Maryland Heights are 25 years old or older. Since 2000, Maryland Heights has added just over 400 units of new housing, while the surrounding communities in the study area have added nearly 11,000 units. 2017 saw the beginning of construction of Maryland Oaks, a new residential development consisting of single family homes, townhouses, and luxury apartments.





Objective: Provide opportunities for existing businesses to expand and grow.

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Still, the average age of Maryland Heights' housing stock is higher than the study area and will continue to increase unless the supply is renewed through additional new construction. Further, as a result of age-related housing depreciation as well as shifting consumer preferences, the median home price in Maryland Heights is worth nearly \$28,000 less than homes in the larger region.

This demographic analysis demonstrates both an opportunity and a need for newer, higher value housing in Maryland Heights, particularly aimed at the market of thousands of higher paid people employed in the City but who have chosen not to reside in the City. Yet any new development should be located within the appropriately zoned land, and should not negatively impact the daily functions of currently existing businesses and residents. Adaptive reuse and redevelopment projects are highly encouraged due to the high volume of developed land within the City.





Objective: Promote appropriate new commercial development or redevelopment of existing properties where market-supported opportunities occur.

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Since it was incorporated in 1985, Maryland Heights has had a thriving commercial life. Commercial development in Maryland Heights is concentrated along two major thoroughfares –Page Avenue and Dorsett Road, and one major area referred to as the Westport Industrial area or Westport Business Park.

As opportunities arise, new commercial development in Maryland Heights will be supported and encouraged. Developments should strive to fill a gap in the business community that will bring success and benefit to the City and its residents. New commercial developments should strive to provide quality jobs that increase the quality of life for Maryland Heights’ residents.

In addition to striving for quality jobs, developers should take into account retail leakage. Retail leakage, or the lost revenue of a city due to lack of retail outlets and resources within the city, is an important factor to consider when planning and developing new commercial properties. In order to be most effective, developers must work to identify the industries within Maryland Heights that must suffer from retail leakage and work to create developments to reduce the lost revenue.





Objective: Promote appropriate new commercial development or redevelopment of existing properties where market-supported opportunities occur.

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In a 2016 study along Dorsett Road, the consulting firm PGAV analyzed industries within Maryland Heights to identify the greatest areas of retail leakage. The study focused on two main corridors: the area around Dorsett Road and Fee Fee Road and at Dorsett Road and I-270. The study revealed that leakage was greatest at gas stations, clothing and accessory stores, and general merchandise retailers in the Fee Fee Road area. Along Dorsett and I-270 the study found that leakage was more wide-spread, affecting motor vehicles and parts dealers, health and personal care stores, gas stations, clothing and accessory stores, general merchandise stores, and other miscellaneous store retailers. In both study areas, the City has an oversupply of restaurants and eating establishments. It should be noted that this study reflects current market demand and is not reflective of the types of desirable and sustainable businesses the City encourages. As such, this information should help Maryland Heights work to create new developments to fill economic gaps, therefore strengthening the City's economy while providing additional service and benefit to local residents. The City has several areas to accommodate future development and redevelopment. These include:

- ✦ Maryland Park Lake District
- ✦ Westport Area
- ✦ Dorsett Road Commercial Corridor

Leakage measures the difference between the potential retail sales for an area (based on the population and buying power of that area) and actual sales. This demonstrates whether money is coming into a community or "leaking" out of it.



Objective: Consider incentives for renovation projects.

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The City of Maryland Heights understands the importance of providing incentives to redevelopment and adaptive reuse projects around the City. In applicable situations, the City will aid developers interested in seeking funding, and will guide them through the application process. Many of these renovation projects may deal with an area of land that is considered blighted. Before seeking financial assistance for such areas, developers should provide evidence of a finding of blight to City officials.

A “blighted area” is defined by the Missouri Revised Statutes as follows:

“An area which, by reason of the predominance of defective or inadequate street layout, unsanitary or unsafe conditions, deterioration of site improvements, improper subdivision or obsolete platting, or the existence of conditions which endanger life or property by fire and other causes, or any combination of such factors, retards the provision of housing accommodations or constitutes an economic or social liability or a menace to the public health, safety, morals, or welfare in its present condition and use.” ([Revisor of Missouri](#), 2018)

Blighted areas, usually created by an economic downturn, cause businesses to leave which was once a vibrant community. The redevelopment of these areas is of interest to the City of Maryland Heights due to its ability to reuse and restore an existing space. A site that has become physically and economically obsolete can be transformed into a usable space that helps to revitalize both the neighborhood and the economy.



Objective: Consider incentives for renovation projects.

Incentives, which may be available through the City, are as follows:

TAX ABATEMENT UNDER CHAPTER 353 RSMO

- Requires a finding of blight. Tax abatement reduces the tax burden of a property by freezing the property taxes of the redevelopment area for a certain period of time - up to 25 years.

COMMUNITY IMPROVEMENT DISTRICT (CID)

- Requires a finding of blight. CIDs are a separate political subdivision, meaning the district is a single-purpose local government, with a board of directors, budget, voters, etc.
- CIDs have the authority to levy sales taxes, property taxes, and special assessments within their boundaries - among other things. The revenues generated by these additional taxes can then be used to finance certain public improvements and services.

TRANSPORTATION DEVELOPMENT DISTRICT (TDD)

- TDDs are a separate political subdivision, meaning the district is a single-purpose local government, with a board of directors, budget, voters, etc.
- TDDs have authority to levy sales taxes, property taxes, and special assessments within their boundaries, among other things. They operate much like a CID, where the revenues created from these additional taxes can then be used to finance certain public improvements and services associated with a development. TDDs also have less flexibility in terms of what type of projects may be funded. Typically, they are limited to projects that are related to transportation.

TAX INCREMENT FINANCING (TIF)

- TIFs require a finding of blight. TIF districts capture a portion of the incremental tax revenue generated by a project for a certain number of years. That incremental revenue is then used to pay for eligible project costs.

PROPERTY ASSESSED CLEAN ENERGY (PACE)

- PACE is an economic development tool that enables property owners to finance energy efficiency or renewable energy projects through an annual property tax assessment. This may be advantageous to the property owner as it reduces the amount of cash needed up front to undertake a redevelopment project. Additionally, the assessment is tied to the property - so the current owner is not required to pay off the outstanding loan if they wish to sell. Instead, the obligation transfers to the new owner - who also benefits from the energy improvements.



Objective: Encourage projects that produce quality jobs.

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The key component in economic growth is people. People need jobs to provide for their families. People need decent shelter in which to house their families. Without quality jobs, many families may not choose to stay in Maryland Heights, which would hurt both the economy and local community.

Although more often considered in terms of its impact on the community's tax base, commercial and industrial development, and the resultant level of job opportunities, is a key determinant of growth. The availability of jobs or lack thereof, has a direct impact on whether the community's population expands or contracts. Maryland Heights has a widely diversified economic base, thus, broadening the employment opportunities for those in the labor market area.

The residents of Maryland Heights are educationally diverse and hold a variety of jobs in and around the City. According to the U.S. Census Bureau, 2018 American Community Survey, at least 26.5% of residents have achieved at least a Bachelor's Degree, with an additional 21.2% having some college level education. See below for a complete list of percentages of education level.



World Wide
Technology



Objective: Encourage projects that produce quality jobs.

Educational Attainment (population 25 years of age or older)

Education Level	Maryland Heights
Less than 9th grade	2.0%
9th to 12th grade, no diploma	4.3%
High school graduate (includes equivalency)	19.7%
Some college, no degree	21.2%
Associate's degree	8.1%
Bachelor's degree	26.5%
Graduate or professional degree	18.2%
High school graduate or higher	93.7%
Bachelor's degree or higher	44.7%

This chart depicts the broad level of education of Maryland Heights' residents. These highly skilled workers need jobs in order to support their family, and the more jobs the City is able to foster the more likely it is to retain these residents; if Maryland Heights does not continue to maintain their diverse business network, many of these skilled workers may seek opportunities outside the City, hurting the local economy.

Providing quality jobs is essential to maintaining a high quality of life for citizens living and working in the City. Although there is no one definition for a "quality job," it has often been described as jobs that provide a sustainable wage, benefits, job security, and/or the opportunity for advancement. Quality jobs may incentivize employees to stay with a company for an extended period of time, creating a stable and reliable business environment for both employees and the City. New developments within Maryland Heights should strive to provide quality jobs for all people, while meeting the needs of residents living within the City.

When a City provides jobs for people of all skill levels, it creates a desirable and diverse community. In Maryland Heights, it is important to focus on all levels and job types as working residents have a range in skillsets and work in a number of different industries. By balancing the existing job market, while simultaneously bringing in new employers, the City will preserve its diverse workforce and continue to foster a positive climate for employment within the community.



ACTIVE COMMUNITY ENGAGEMENT



Active Community Engagement

Public engagement is a process that brings people together to address issues of common importance, to solve shared problems, and to bring about positive community change. Effective public engagement invites citizens to get involved in deliberation and dialogue on public issues that may impact themselves or their community. It further helps leaders and decision makers better understand the perspectives, opinions, and concerns of citizens and stakeholders.

The City of Maryland Heights strives to be a regional leader in promoting community, diversity, inclusion, equity, and active citizenship. Efforts such as Maryland Heights University help all citizens understand their local government, and there are ample opportunities for citizens to participate on various boards and commissions. This helps residents learn to know, respect, and help each other regardless of differences. By embracing diversity and inclusion, and recognizing marginalized voices, community leaders successfully find common ground on complex issues by respecting differences and seeking out shared goals.

Successful comprehensive plans, in part, owe their success to communication and the degree that public interest and awareness is created for the process, for policy development, and for implementation. Elected and appointed officials are wise to promote the use of extensive public consultation throughout the planning process. Further, robust public engagement greatly reduces public apprehension and concern through ongoing listening and learning.



GOAL: ENCOURAGE AN ENVIRONMENT THAT PROMOTES COMMUNITY AWARENESS AND INVOLVEMENT IN NEIGHBORHOOD ENHANCEMENT.

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OBJECTIVES:

- *Enhance resident and civic organization capacity to shape their communities.*
- *Explore ways to offer improved access to City services through enhanced technologies.*
- *Encourage involvement by residents and business owners in the planning process.*
- *Involve residents in the creation of their neighborhood plans.*
- *Investigate and implement appropriate activities to assist in creating a sense of community identity.*
- *Support the efforts of the “creative class” as they work to enhance the vibrancy of the City’s neighborhoods.*
- *Continue to recognize the importance of the arts.*

ACTIONS

The following actions may be undertaken to implement the objectives of this goal:

- ⇒ Continue to support citizen organizations in their efforts to improve their communities.
- ⇒ Expand civic outreach efforts to more effectively involve traditionally underserved individuals, such as youth and marginalized voices.
- ⇒ Work with schools, places of worship, and non-profit organizations to promote involvement and improve neighborhoods.
- ⇒ Provide a forum for residents to provide input on residential planning issues.
- ⇒ Add additional entrance features along the City’s arterial roadway and interstate highway networks.
- ⇒ Pursue opportunities for public art throughout the community.
- ⇒ Coordinate with, and promote the activities of, local and regional arts organizations.
- ⇒ Promote the City’s diversity and learn from residents of different cultures.



Objective: Enhance resident and civic organization capacity to shape their communities.

The City will strive to support neighborhood organizations and other local civic groups in their efforts to facilitate local events hosted and attended by residents. The City will further support efforts that foster interaction between generations of Maryland Heights residents. The City will continue to support and encourage volunteering for public service in a variety of capacities, support the Maryland Heights University and Citizens Police Academy, and participation in parks and recreation programs.

Objective: Explore ways to offer improved access to City services through enhanced technologies.

The City will continue efforts to notify, inform, consult, or collaborate with community members through websites, web applications, and innovative social media applications, as appropriate. Combined with traditional engagement techniques, online engagement strives for an equitable and inclusive planning process. In 2020, the COVID-19 pandemic changed the rules and the process for public engagement. The Department of Community Development had to quickly implement a plan to provide essential services without direct contact with the public. The City will continue to evolve service provision as technology evolves.

Objective: Encourage involvement by residents and business owners in the planning process.

The City will utilize existing and future communication networks, including neighborhood organizations, not-for-profits, government mailing lists, etc., as avenues for creating awareness about decision-making, policies, and programs. In conversations involving all units of local government, the City will ensure that a diversity of opinions are respected and that collaborative efforts focus on actions to advance an overall common good. Efforts will be ongoing to determine what communication channels are the most effective, recognizing that preferences may change over time, among different demographic groups, and technology advancements.

We will continuously utilize a variety of methods to outreach to members of the community - those who live, work, and play in Maryland Heights. We are aware that not every resident has access to technology and will make sure that avenue of communication stays open. Further, the City will actively engage the business community in the development of local policies and regulations that may impact their ability to invest in the City while providing important services to residents.





**GOAL: ENCOURAGE AN ENVIRONMENT THAT
PROMOTES COMMUNITY AWARENESS AND INVOLVEMENT
IN NEIGHBORHOOD ENHANCEMENT.**

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When the public is directly and continually involved in the deliberation process, the resulting decisions are:

INCLUSIVE

Robust public participation is intended to be inclusive and to engage a diverse cross-section of the community. Maryland Heights strives to reshape the engagement model, taking outreach in new directions and using innovative approaches, platforms, and events, all with a focus on more diverse and ongoing participation. This is accomplished through the identification of key leaders and stakeholders, actively reaching out to the many diverse communities in the City, and seeking out and removing barriers to participation.

MEANINGFUL

The plan seeks to maximize meaningful participation by moving beyond typical public meetings and encouraging dialogue and deliberation among participants. As appropriate, this can be achieved through larger stakeholder/ community workshops and public meetings, combined with smaller focus groups, where stakeholders representing different perspectives may have the opportunity to discuss issues and concerns with one another.

PROACTIVE

Maryland Heights will be proactive in disseminating information to the public regularly through the web site, regular newsletter updates, and other online activities. Being proactive also means that we will try to identify and address issues and concerns before they become unmanageable. The intent is to keep a dialogue going with the public on occasional issues that arise or large-scale projects as they arise.

RESPONSIVE

Maryland Heights will be responsive and react quickly to comments and questions from the public. Any individual that has taken the time to participate should find out how their input has influenced the direction of a study, plan, or project especially when it comes time to develop recommendations. For example, email sent to planning@marylandheights.com is disseminated to the entire planning staff and is generally answered quickly.





Objective: Involve residents in the creation of their neighborhood plans.

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The recommendations of residents related to distinctive neighborhoods are intended to help the City of Maryland Heights capitalize on its future growth. Deliberate and strategic planning efforts in neighborhoods may include the re-designation of some future land uses, encouragement of high-quality urban design with a focus on placemaking, transportation considerations, and economic development through inclusion of and equitable treatment for all neighborhood residents, while recognizing marginalized voices.

Objective: Investigate and implement appropriate activities to assist in creating a sense of community identity.

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Over the years, the City of Maryland Heights has taken proactive steps to establish and promote its unique identity. This effort is evident in the two Maryland Heights entry signs, the new Community Center, and throughout the City's park system. Residents want to see this trend continue with additional focus on enhancing city gateways, gathering spaces, retail venues (particularly Westport Plaza), entertainment venues, and the Dorsett Road Great Streets Project to continue to create an inviting presence and enhance the City's connectivity and sense of place. Residents, visitors, and business owners alike seek out and value opportunities to connect and interact, and there is strong support for preserving and expanding neighborhood gathering spaces, community events, and engagement of the City's diverse populations.





Objective: Support the efforts of the “creative class” as they work to enhance the vibrancy of the City’s neighborhoods.

The City has, and will continue to foster the arts and culture sector. In doing so, the City’s image becomes more defined, visitors become interested in the City, and a synergy between residents, business owners, and visitors is created. Further, capitalizing on local assets allows for improved and sustainable economic outcomes.



Objective: Continue to recognize the importance of the arts.

At the heart of these objectives is the recognition of the vital role that art and culture play in enhancing Maryland Heights’ character and image. The Maryland Heights Cultural Arts Commission is comprised of residents and business members appointed by the Mayor and City Council to:

- Recommend programs that encourage and aid appreciation of, awareness of, participation in and utilization of the cultural arts benefiting all citizens of Maryland Heights.
- Encourage cooperation and coordination among individuals, organizations, and institutions concerned with the cultural arts.
- Make recommendations to the city council as to desirable legislation concerning actions, plans, or programs designed to promote cultural arts in the city.
- Assist in disseminating news and information to, and securing the cooperation of, the residents and businesses of Maryland Heights concerning the cultural arts.





MARYLAND PARK LAKE DISTRICT

FUTURE LAND USE PLAN

ADOPTED MAY 24, 2016
AMENDED MARCH 24, 2020

comprehensive plan

CITY OF MARYLAND HEIGHTS



SECTION 9.1 - OVERVIEW

MARYLAND PARK LAKE DISTRICT

OVERVIEW



INTRODUCTION

All opportunities come with great responsibility. The first decisions made in the development process establish the direction and quality for subsequent projects. The Maryland Park Lake District represents not only a unique opportunity for the City of Maryland Heights and the region, but also presents a unique set of challenges. The area represents one of the last greenfield “infill” development opportunities within the St. Louis Region. Its greenfield status coupled with significant private-public infrastructure investment and its strategic location in the region make this area highly marketable. While the prospects of a large development area is generally a desirable opportunity for a community, it does come with significant responsibility in balancing the welfare of the community with that of the economic interests of property owners and potential developers.

Given these challenges, the City’s role is to guide development in an efficient, sustainable and responsible manner. The City believes this plan is an opportunity to create a place of destination in the region. Defined by its significant amount of open space, recreational opportunities, hospitality options and ease of access the Maryland Park Lake District is envisioned to attract quality development that results in both added value and character.

OVERVIEW

The Maryland Park Lake District is strategically located between the Missouri River in the west and its bluffs that represent the initial manifestation of the Ozark Plateau in the east, the northern boundary of the area is formed by Interstate 70 and the southern edge is formed by the boundary between the City of Maryland Heights and the City of Chesterfield. It is one of the four primary planning areas in the City (refer to Figure 9.1.1 CITY PLANNING AREAS). The total area of the City is 23.4 square miles with The Maryland Park Lake District containing approximately 54% of the City’s land area or 12.7 square miles (it should be noted that the City’s corporate limits extend to the center of the Missouri River, however for planning purposes the area that lies within The Maryland Park Lake District and the Missouri River has been subtracted from these calculations).

This area draws benefit from its strategic location within the St. Louis region and its proximity to transportation routes; I-70, Missouri Route 141 (Earth City Expressway/ Maryland Heights Expressway) and Missouri Route 364 (Page Avenue Extension). The presence of these roadways and the high level of access to the area provides the first component of development opportunity. The second component was the completion of the Howard Bend Levee that protects the area from a 500-year Missouri River flooding event.

The Howard Bend Levee District (a separate political subdivision from the City) is the responsible entity for this 500-year levee. The levee extends from the Missouri-American Water Treatment Plant in the south to the Riverport levee in the north. Financed by an assessment of property owners within the levee district, the addition of flood plain protection and transportation enhancements have created a situation of “ripeness” in the area. Thus, this plan is largely reactionary to decisions made by other entities and jurisdictions that lie outside the City’s purview.

PLANNING APPROACH

The future land use plan for the Maryland Park Lake District is not a traditional plan with parcel-specific recommendations. Instead, it provides a range of land uses derived from the opportunities and constraints of each planning district together with the vision of the overall plan and each district.

Implementation of the land use plan necessitates the creation of performance standards that guide development and its character in each planning district.

It is the City’s objective to allow property owners in this area to attain the highest and best use of their property while complying with standards designed to ensure high quality development.

For the purposes of these policies, highest and best use is defined as the reasonably probable and legal use of land that is physically possible, appropriately supported, financially feasible, and that results in the highest value. The concept of “highest and best use” is intended to balance the importance of obtaining a high value for individual land owners with the importance of complying with the policies, plans, and regulations of the community, such as those embodied in the plan.

Infrastructure will be planned and developed in a manner that fosters high quality development.

While the City can help facilitate solutions, the provision of infrastructure to serve individual development, including sewer, water and streets, will be the financial responsibility of the developers.

The recommendations within this plan are predicated upon the primary goal of adding both value and character to the community and the Maryland Park Lake District.



MARYLAND PARK LAKE DISTRICT

CITY PLANNING AREAS

WESTPORT

Includes all community commercial, business and light industrial districts east of I-270. It is the business center of the City containing approximately 20 million square feet of commercial space including nearly 4,000 hotel rooms.

EAST RESIDENTIAL

Includes all residential and neighborhood commercial districts, east of I-270 and north of the Dorsett Road Corridor. It contains an older housing stock of approximately 2,700 single-family dwellings and 950 multi-family dwellings.

WEST RESIDENTIAL

Includes all residential, neighborhood and community commercial districts west of I-270. Developed in the last 25 years, the residential distribution is approximately 4,100 single-family dwellings and 4,500 multi-family dwellings.

PLAN NOMENCLATURE

PLANNING AREA OR DISTRICT

An area or section of the City of that shares common planning elements (i.e., land use, socioeconomic characteristics of residents and housing).

PLANNING SUB-DISTRICT

An area or section of a planning area that shares unique and significant planning elements (i.e., zoning, type of development, etc.).

CITY'S ROLE IN THE PLANNING PROCESS

The City recognizes the leadership role it will play in managing growth in the Maryland Park Lake District. However, the City is one of several public agencies influencing the form and intensity of future land development. The way in which the property owners, developers, county, state and federal governments, and other regional agencies come together as partners with the City to plan for this area will be a critical factor in the plan's success.

The City recognizes that its primary responsibility is defining and establishing a development vision for the area; consequently, it must serve as a facilitator and as a catalyst to achieve that vision of development. Through its leadership, management and facilitation roles the City strives to balance the competing public interests of the community with the private interests of land owners, developers and businesses.

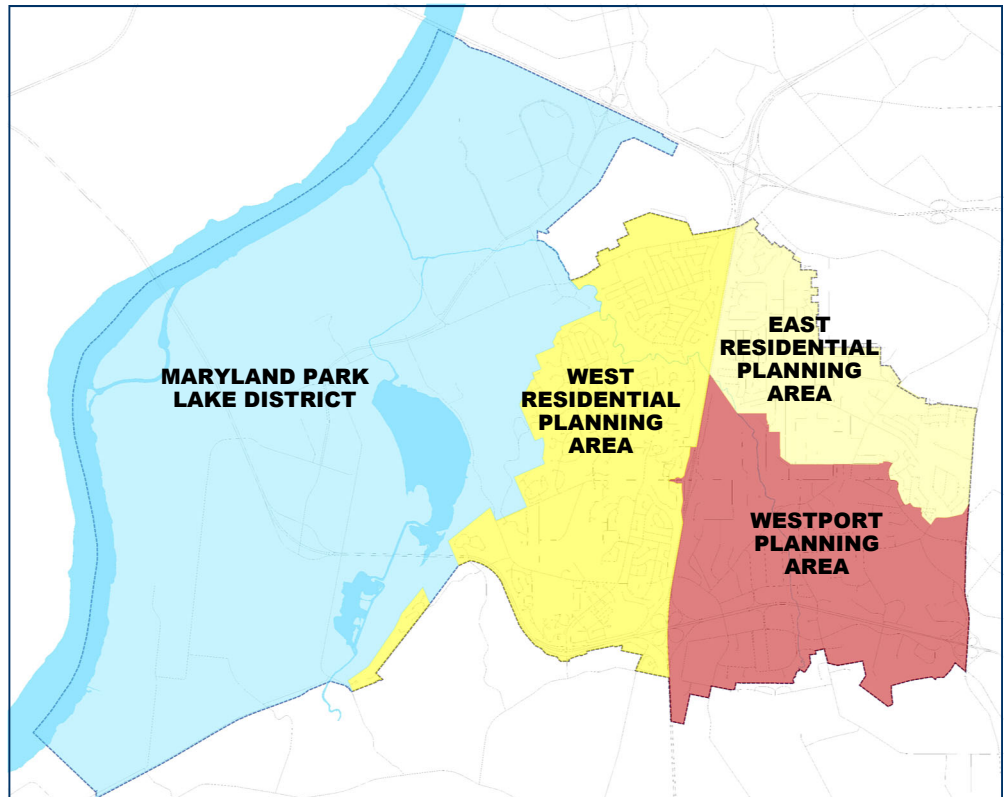


FIGURE 9.1.1 CITY PLANNING AREAS

OVERVIEW



RELATIONSHIP TO THE CITY STRATEGIC PLAN

The City Council maintains a strategic plan to serve as a guide for City policy. This plan has five strategic goals dealing with economic development, transportation, hospitality, fiscal responsibility and quality of life. Evaluated on an annual basis, the Strategic Plan is founded in the City's mission statement and set of organizational core values.

These goals are presented in the context of formulating the future land use plan for the Maryland Park Lake District.

STRATEGIC GOAL: WE WILL ENHANCE AND DIVERSIFY OUR ECONOMIC BASE IN ORDER TO MAKE AVAILABLE QUALITY EMPLOYMENT OPPORTUNITIES, MAINTAIN THE FINANCIAL STRENGTH OF LOCAL GOVERNMENTAL JURISDICTIONS SERVING OUR RESIDENTS, AND IMPROVE THE QUALITY AND APPEARANCE OF OUR COMMUNITY.

The development of the Maryland Park Lake District has the potential to increase the existing commercial base equivalent to the scale of that now existing in the Westport Industrial Planning Area. Enhancing the City's economic base is but one of the underlying objectives driving the land use planning approach in The Maryland Park Lake District.

STRATEGIC GOAL: WE WILL PROVIDE SAFE, EFFICIENT AND ATTRACTIVE TRANSPORTATION SYSTEMS IN ORDER TO INCREASE ACCESS AND MOBILITY FOR THOSE WHO LIVE IN, WORK IN AND VISIT OUR CITY.

The City is committed to funding the construction of regional transportation infrastructure within the City. Evidenced in the construction of the Maryland Heights Expressway (and the financing of its extension in both design and construction) represents a major improvement to the regional transportation network that advances this goal. The Expressway, now Route 141, not only provides regional access to the planning area, but relieves traffic congestion on I-270 and I-70 by providing a north-south connection to Route 364 (Page Avenue Extension).

STRATEGIC GOAL: WE WILL PROVIDE RESPONSIVE, PROACTIVE AND EFFECTIVE ENFORCEMENT OF LAWS AND CODES IN ORDER TO HAVE A SAFE ENVIRONMENT FOR THOSE WHO LIVE IN, WORK IN AND VISIT OUR CITY.

The planning area will include a regulatory process that accounts for safety in all site design aspects. Issues related to natural hazards and their mitigation will be considerations in site design and building construction as well as providing a transportation system that affords effective and efficient access for emergency management agencies.

STRATEGIC GOAL: WE WILL SUPPORT SOUND FISCAL POLICIES AND PRUDENT BUDGETING IN ORDER TO ENSURE THE CONTINUATION OF SUPERIOR MUNICIPAL SERVICES AND OUR LONG-TERM FINANCIAL SUSTAINABILITY.

The planning area will be planned in a manner that promotes "sustainability". Sustainability in this sense equates to development that will last and promotes the efficient delivery of municipal services. Infrastructure needs generated by commercial development need to be financed by the private sector and constructed according to established standards. The design of new infrastructure should consider the

CITY MISSION STATEMENT

THE CITY OF MARYLAND HEIGHTS WILL PROVIDE SUPERIOR MUNICIPAL SERVICES IN A SAFE AND APPEALING SETTING IN ORDER TO ATTRACT AND RETAIN RESIDENTS COMMITTED TO OUR CITY, THRIVING BUSINESSES, AND PREMIER HOSPITALITY VENUES.

CITY CORE VALUES

RESPONSIBILITY

WE WILL MANAGE OUR FINANCIAL AND HUMAN RESOURCES PRUDENTLY AND EFFICIENTLY.

PLANNING

WE REALIZE CHANGE IS INEVITABLE; IT IS OUR RESPONSIBILITY TO PREPARE FOR IT.

BALANCE

WE BELIEVE CONSIDERATION OF THE INTERESTS OF RESIDENTS, BUSINESSES, AND VISITORS ARE IMPORTANT TO OUR FUTURE.

COMMUNICATION

WE EMPHASIZE CLEAR, TIMELY TWO-WAY COMMUNICATION BETWEEN THE CITY AND THOSE WE SERVE.

EQUITY

WE TREAT ALL THOSE RECEIVING CITY SERVICES FAIRLY AND EQUITABLY.

"Growth is inevitable and desirable, but destruction of community character is not. The question is not whether your part of the world is going to change. The question is how."

The Conservation Fund
Edward T. McMahon



maintenance costs of that improvement.

STRATEGIC GOAL: WE WILL ENHANCE OUR IDENTITY AND VISUAL APPEARANCE IN ORDER TO STRENGTHEN OUR POSITION AS A DESIRABLE RESIDENTIAL COMMUNITY, AS A MAJOR COMMERCIAL CENTER AND AS THE HOSPITALITY CENTER OF THE REGION.

This plan will address the importance of a positive image for not only the planning area but the City as a whole. The Maryland Park Lake District presents a unique opportunity for the City to define itself and reflect its personality into the areas development character. The development, design and aesthetic improvements will be planned and evaluated with this positive local and regional image in mind. Waterway features and aesthetic improvements to all public facilities will be an integral component of this plan.

HISTORICAL PLANNING EFFORTS

St. Louis County, in 1969, prepared a Plan that dealt with the entire Missouri River flood plain area within the County. In this plan all future development was based on the premise of constructing a 500-year levee being built from the Missouri River's confluence with the Mississippi southward to the southern limits of Chesterfield.

The land uses projected for the Maryland Park Lake District were that of intensive industrial due to its close proximity to Interstates, railroad, the airport, and the river. In fact, the recommended rate of impervious coverage in the area was 70%. The node surrounding the intersection of Creve Coeur Mill Road and Page Avenue Extension was projected as intensive commercial with a visitor/tourist center and associated hotels. Creve Coeur Park was projected to expand slightly in size. A scenic roadway was proposed on top of the levee system and was seen as an integral linkage from land outside of the levee to land projected within. The river side of the levee was planned for non-structural recreational uses (e.g. hunting, fishing, and boating). The proposed road network was recommended to be built as a parkway system with associated aesthetic improvements. A marina was planned just south of Interstate 70, at the present location of the Hollywood Casino complex. Expansion of the Metropolitan Sewer District facilities was projected as well as expansion of the Water Company. This plan was never implemented, and never progressed past the planning stage.

The City was incorporated in 1985 and adopted its Comprehensive Plan and Zoning Code in 1987. Within the 1987 version of the Comprehensive Plan two growth scenarios were considered in the development of the Land Use Plan for the City:

GROWTH SCENERIO 1: PRIMARY LAND USE PLAN

This scenario assumed that no protective levee would be constructed in the floodplain areas of the City along the Missouri River, with the exception of the Riverport Business Park, and focuses essentially on infill development. New land use expansion would be limited to those remaining vacant parcels within the existing developed area of the City, as well as the redevelopment of some currently underutilized properties. As a result of these constraints, this strategy would result in a relatively low increase in population and expanded employment opportunities over the planning period, as compared to the City's historical trends.

GROWTH SCENARIO 2: FUTURE LAND USE CONCEPT

In this scenario, the construction of a 500-year levee from the Riverport Business Park south, along the Missouri River, is assumed. A further assumption concerns potential development opportunities of regional or national significance, with some possibilities being a dog or horse racing track, a domed sports stadium and a world trade center. This scenario was projected to create demand or need for subsequent projects to serve related interests.

Within this scenario, substantial additional vacant land becomes available for the further expansion of all land use types. The proposed stadium in conjunction with the Riverport development would create spin-off development in the northwestern portion of the area. Construction of a full interchange at the intersection of Earth City Expressway and Page Avenue, along with subsidiary service roads and controlled access points, would create a major development generator in

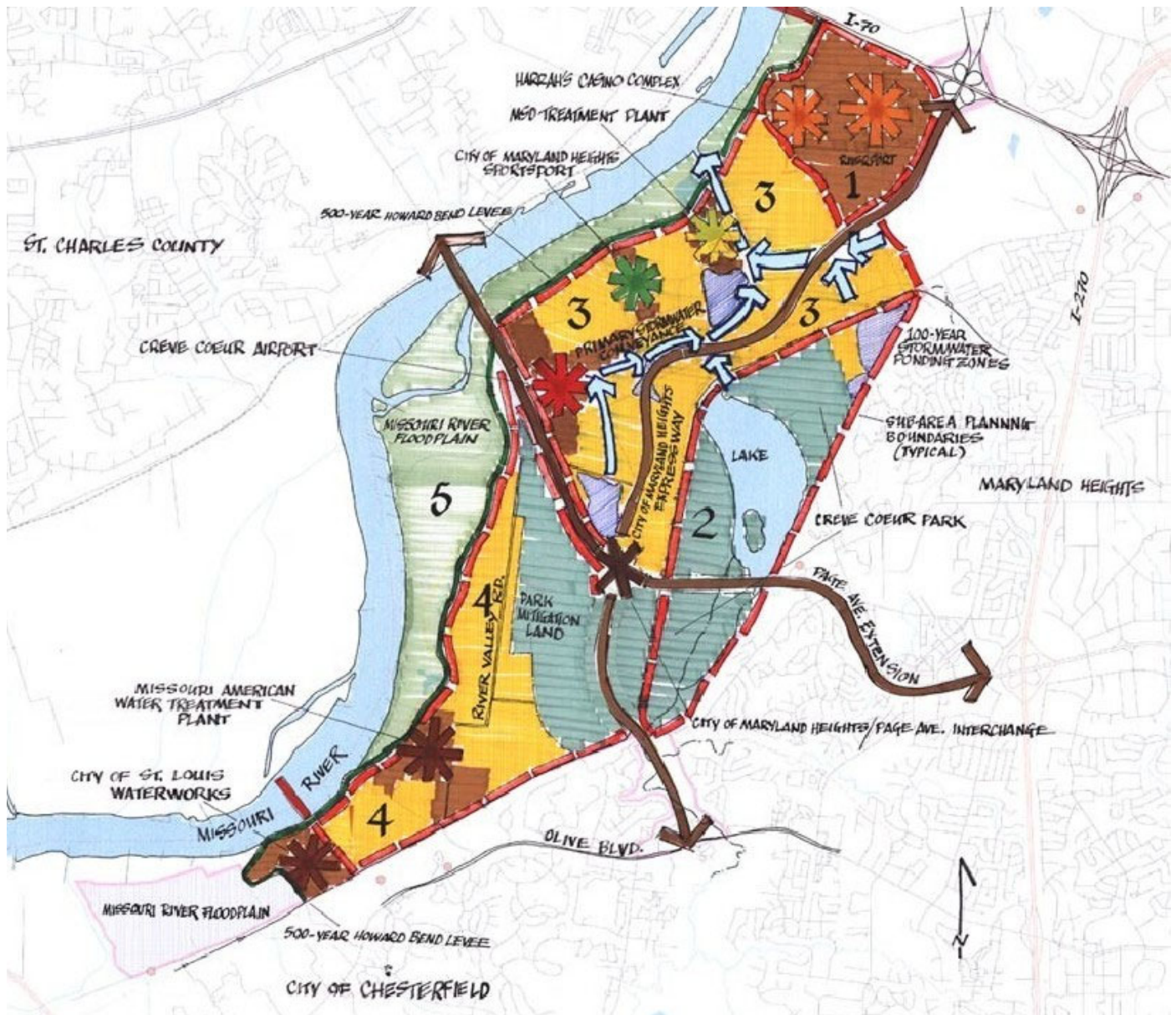
OVERVIEW



the southern portion of the area. As a result of the substantial amount of vacant land that would become available for additional residential development, as well as the significant potential for expanded employment opportunities, this strategy could result in a relatively high growth scenario more in keeping with the City's recent development trends.

2002 FUTURE LAND USE PLAN

In addition to these historical planning efforts, the City amended the Comprehensive Plan in 2002 to deal with the forecasted development of the Maryland Park Lake District. This planning effort was primarily a reaction to two major infrastructure decisions; that of the Howard Bend Levee District to construct their Missouri River 500-year flood protection levee and of the decision of the Missouri Department of Transportation to extend Missouri Route 364 (Page Avenue) into St. Charles County. The 2002 plan established a development vision reflecting approximately 15-18 million square feet of office campus development and expansion of recreational land uses for the area predicated on high quality design, significant amounts of integrated open space, integrated connected transportation improvements and the design of a multi-functional stormwater management system.





PUBLIC MEETINGS

AUGUST 21, 22, 2006
KEY PERSON INTERVIEWS
PRESENTATION TO PLANNING
COMMISSION

SEPTEMBER 12-13, 2006
DISCUSSION OF BACKGROUND MAPS

OCTOBER 3-4, 2006
PRESENTATION OF DEVELOPMENT
ALTERNATIVES

OCTOBER 24-25, 2006
PRESENTATION OF REFINED
ALTERNATIVES

NOVEMBER 14, 2006
PUBLIC HEARING
LAND USE IMPLEMENTATION PLAN

NOVEMBER 28, 2006
PUBLIC HEARING
LAND USE IMPLEMENTATION PLAN

JUNE 28, 2011
PUBLIC HEARING
AMENDMENTS TO CRYSTAL SPRINGS
SUB-PLANNING AREA

FEBRUARY 11, 2015
COMMUNITY FORUM

SEPT. 22 AND OCT. 13, 2016
PUBLIC HEARING
NEW FUTURE LAND USE MAP

"For anything more than the most incremental change to occur, a reinvention of the manner in which all players in the development process talk to one another is imperative. The old model of the financier talking to the developer, who talks to the architect, who talks to the construction professional, who talks to the real estate broker, who talks to the tenant, in that linear a fashion, is counterproductive to the goals of sustainable development. Everyone needs to be communicating with one another simultaneously before a building or development project is actually considered."

- Neal Payton, AIA, LEED AP

2006-2009 PLANNING EFFORTS

The 2006 planning effort was yet another reaction to both infrastructure plans and decisions as well as a response to the marketplace. Progress was made on infrastructure plans and improvements in a more expedited manner than accounted for in the 2002 plan, while feedback from the market place indicated that the prescription for class "A" office space was an unrealistic expectation for the area. These factors necessitated the City's revisiting the 2002 plan for relevancy which culminated in the 2006/2007 planning effort in this area.

The 2006 effort was composed of three policy areas; land use, transportation and stormwater. This effort was more a refinement of the 2002 plan and may even be described as more of an implementation plan in scope. Consistent with the direction contained within the 2002 plan, the City turned its focus on furthering and refining the 2002 plan. Several planning firms were contracted with to aid in planning efforts for the area, they follow:

- Land Use Planning and Regulations: HNTB of Kansas City was contracted to assist in evaluating the 2002 plan and preparing recommendations for policy and regulatory change.
- Transportation Planning: Crawford Bunte Brammeier, the City's transportation consultants were retained to prepare a transportation management plan for the area.
- Stormwater Management: Wenk Associates of Denver, Colorado were retained under a joint contract between the City and the Howard Bend Levee District to prepare the stormwater management plan and regulations for the area.

PUBLIC PARTICIPATION APPROACH

A critical component in the planning process is obtaining and using public input. The Maryland Park Lake District, while representing approximately 40% of the City's land mass, has a limited amount of property owners, and even fewer residents. These property owners, as members of the Howard Bend Levee District, funded the levee construction through a dedicated property tax assessment and will subsequently fund the regional stormwater infrastructure and development. As a directly impacted portion of the community, the planning team determined that these owners should be brought directly into the process (a similar process was followed in the 2002 planning effort).

The approach to obtaining community input was three-fold. The first consisted of interviewing members of the public that were identified as stakeholders in the process. These stakeholders were property owners, developers, public utility representatives and City staff. These interviews provided a key foundation for establishing a realistic approach to future land use and development. These interviews occurred over two days with separate accommodations made for those who were unavailable during those two days.

The second was the traditional approach of workshops with the Planning Commission and interested public. The workshops were facilitated by HNTB. They were held on



regularly scheduled Planning Commission meeting nights. The principal focus of the presentations was to members of the Planning Commission, however, members of the public were afforded opportunities to comment during the workshop.

The third was a workshop at which the presentation was directed to the public with the Commission invited as an interested party, but not the focus of the discussion. The purpose of the second workshop was to afford the public the opportunity to participate outside the setting of a Planning Commission meeting. These meetings were conducted the morning after the Plan Commission workshop providing an enhanced opportunity for members of the public to attend at least one workshop session.

Four workshops occurred between October and November 2006. Both the public and Planning Commission worked through the planning process with the planning team, moving through an examination of resources, determination of constraints and opportunities and development of goals and strategies. The result of these discussions was a refined approach to both future land use and the implementation element in the Maryland Park Lake District.

Subsequent to the adoption of the 2006 Future Land Use Plan, staff has prepared numerous framework documents, conducted workshops, and held public hearings with regard to the future development of the Maryland Park Lake District. Most recently, in the Fall of 2015, a new Future Land Use Map was adopted based in part upon input obtained from the public at the February 11th Community Forum.

comprehensive plan

CITY OF MARYLAND HEIGHTS



SECTION 9.2 - EXISTING CONDITIONS

MARYLAND PARK LAKE DISTRICT

EXISTING CONDITIONS



OVERVIEW

An area's existing conditions provide a framework for the planning process. Components of existing conditions are geographic location, existing land use, transportation, stormwater, utilities, open space and recreational opportunities, wetlands, sensitive species, and historical resources. This section reviews the existing conditions considered in the formulation of the Future Land Use Plan for the Maryland Park Lake District.

As the planning area is an agricultural flood plain, the resource inventory focuses more on the natural environment and infrastructure requirements. The principal elements in the resource inventory are overviewed below.

GEOGRAPHIC LOCATION

The Maryland Park Lake District is an area of approximately 8,100 (8,600 acres when counting areas within the Missouri River) acres that is located between the Missouri River and the Missouri River Bluffs, bounded on the north by Interstate 70 and on the south by the City limits. The area has historically been used for agricultural and recreational uses.

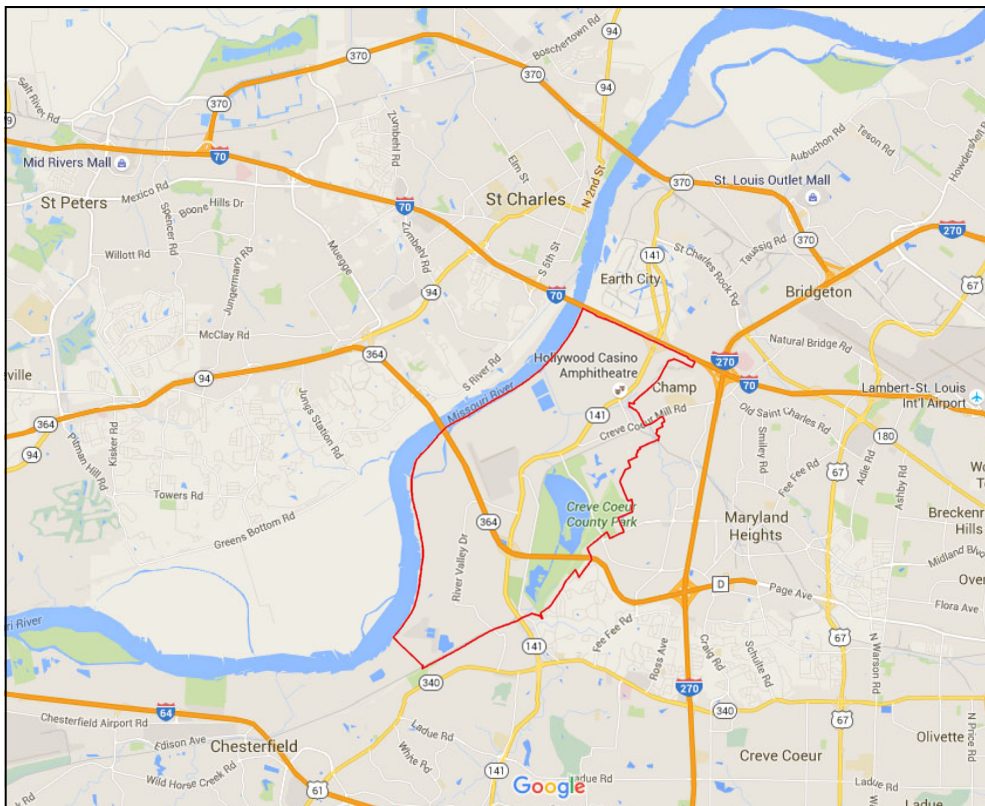


FIGURE 9.2.1: REGIONAL LOCATION—MARYLAND PARK LAKE DISTRICT

RESOURCE DEFINITION

1. Something that can be used for support or help;
2. An available supply that can be drawn on when needed;
3. The ability to deal with a difficult or troublesome situation effectively;
4. Means that can be used to cope with a difficult situation.

EXISTING DEVELOPMENT

RIVERPORT BUSINESS PARK is an office and service park at 70% built out with approximately 1.25 million square feet to be constructed. It contains over 2,770,000 square feet of developed space.

Corporations in the park include, but are not limited to:

- Magellan Behavioral Health Care
- Elsevier
- Scattdecor
- Sun Edison
- United Healthcare

Hospitality/Entertainment

- Dave and Buster's (550 seats)
- Hollywood Casino Amphitheatre (20,000 Seats)
- Holiday Inn Riverport, 175 Rooms
- Wingate Inn, 120 Rooms
- Homewood Suites, 104 Rooms

Harrah's Riverside Planned Development: Nearly 25% developed with a projected 1.5 million square feet of future development; containing approximately 493,000 square feet of developed space.

Hollywood Casino Planned District: Casino and hotel composed of 500 rooms and 120,000 square feet of gaming space, restaurants, and entertainment.



RECREATIONAL FACILITIES

CRYSTAL SPRINGS QUARRY GOLF COURSE

18-Hole Tournament Golf Course, expanded to 18 Holes in 1999; 6,562 yards on championship play. Facility includes full service restaurant - Limestone Bar and Grill (32,320 square feet) and snack bar at driving range.

SPORTPORT

64-acre multi-purpose (soccer, rugby lacrosse, field hockey, shows, recreation league) sports facility with twelve lighted fields (eight grass and four turf) and three unlighted fields, designed to accommodate high school, collegiate and other tournament events.

GOLFPORT

27.7-acres of golf instruction and driving range, with athletic recreational facilities.

LOU FUSZ SOCCER CLUB

Private soccer club located on approximately 40 acres of land within Creve Coeur Park offering training to club membership.

SCOTT GALLAGHER SOCCER CLUB

Private soccer club located on approximately 15 acres of land within Creve Coeur Park offering training to club membership.

OPEN SPACE DEFINITIONS

ACTIVE OPEN SPACE: Land or water areas that are improved and set aside, dedicated, designated, or reserved for recreational facilities and activities, including but not limited to playgrounds, ball fields, swimming pools, court games, and picnic areas.

DEVELOPED OPEN SPACE: Land or water areas substantially free of structures but possibly containing improvements that are part of a development plan or are appropriate for the residents, patrons or tenants of any development.

NATURAL OPEN SPACE: Land and water areas retained for use as passive recreation areas or for resource protection areas in an essentially undeveloped state.

As the “center of gravity” of the St. Louis region has moved west with the development of St. Charles County, this area has gone from being on the edge of the region to being one of the last large assemblages of undeveloped property near the center of the metropolitan area. Given this shift of the region, the area is viewed as a regional “infill” opportunity. Rather than promoting the continued outward growth of the metropolitan region, the development of the Maryland Park Lake District is an opportunity for future regional growth to occur and be captured within the existing metropolitan area.

Because of its strategic location near Lambert St. Louis International Airport, the intersection of I-270 and I-70, and Westport, the Maryland Park Lake District is well positioned as a unique regional development opportunity. However, this area is physically constrained by its topography (internal flooding), and lack of public and private infrastructure (roads, sewer and other utilities).

EXISTING LAND USE

Its attractiveness as a development site is primarily due to its location; near recent business and industrial developments, the presence of air, road and rail transportation and proximity to prime residential areas. The development of Riverport and Earth City Business Parks and Hollywood Casino all demonstrate the attractiveness of this location within the region of this area for a future commercial development.

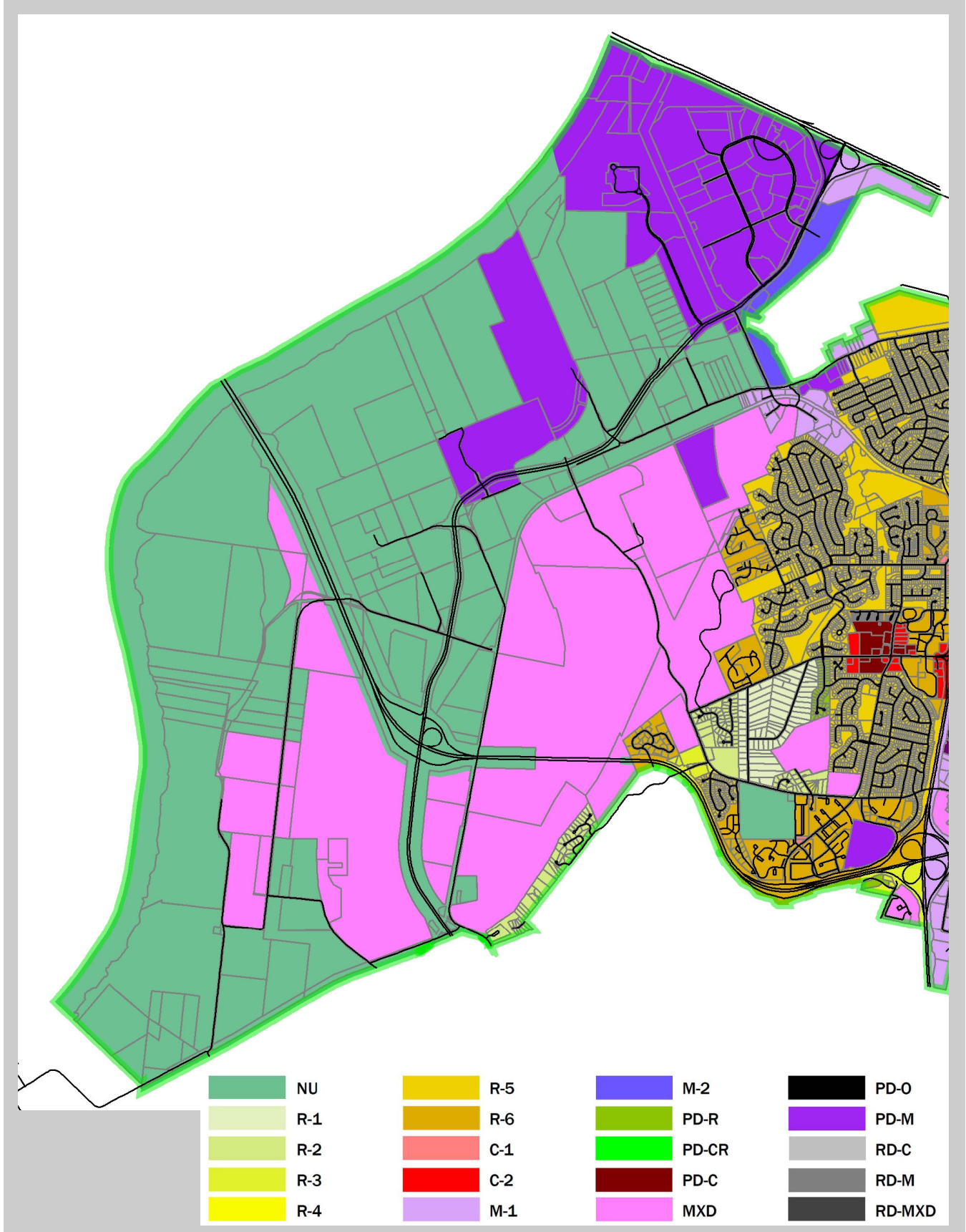
While the planning area is largely undeveloped, at least in the commercial sense, existing land uses must be considered prior to looking to the future land use. The predominance of agricultural lands together with the substantial recreational uses (both public and private) in the area, shape future land use decisions. Public and quasi-public facilities, such as Creve Coeur Airport, Sportport, MSD and the Missouri-American Water Treatment plants also should be considered.

The planning area is primarily zoned “NU” (Non Urban). As stated in the Zoning Code *“this district is composed of those areas of the City whose principal use is and ought to be agricultural and single-family dwellings on large sized lots”* (Section 25-4.1.A PURPOSE). Application of the “NU” zoning designation in this area emanated from the 1987 Comprehensive Plan which states that *“In the absence of a 500-year levee, the Primary Land Use Plan recommends no urban development for this designated flood plain area”*. The balance of the planning area is zoned “PD-M” (Planned District—Manufacturing) and “MXD” (Mixed Use District). Refer to Figure 9.2.3.

In addition to the agricultural uses, comprising nearly 40% of the planning area, recreation uses are the next predominant land use. This is due to the presence of Creve Coeur Park, Sportport, Crystal Springs Quarry Golf Course, and Golfport Recreation Center. The District also includes Hollywood Casino, Riverport Business Park, Creve Coeur Airport, MSD Missouri River Treatment Plant and the Missouri-American Water Company Plant. Refer to Figure 9.2.2



MARYLAND PARK LAKE DISTRICT



EXISTING CONDITIONS



TRANSPORTATION SYSTEM

Since Howard Bend is largely undeveloped; roads, sewer and water infrastructure, and stormwater management systems are not in place to serve future development.

Therefore, the resource analysis must deal with what services are absent, planned for and what is available. Future land use will be constrained by the availability and/or the capacity of public infrastructure, so it becomes a critical point of analysis for this land use plan.

The planning area is primarily accessible by three major roadways: I-70, Missouri Route 364, and Missouri Route 141 (Earth City/Maryland Heights Expressway). Missouri Route 141 provides proximate access to the majority of major land tracts uses the planning area. This roadway also connects with Missouri Route 370, and Interstates 64, 44, and 55.

For planning purposes, each interchange/intersection along Route 141 has been classified into a hierarchy: regional, destination, and community. Regional interchanges provide access to longer trip makers into and out of the planning area using regional connections such as Interstates 70 and 270. Destination intersections provide direct access to a major land use (i.e., Hollywood Casino and Hotel, Creve Coeur Airport), but little connectivity to other routes. Community intersections provide local access to the City of Maryland Heights, the City of Chesterfield, and St. Louis County. These characterizations follow:

Regional interchanges:

- Interstate 70 and Route 141; and
- Missouri Route 364 and Route 141.

Destination intersections:

- Route 141 and Riverport Drive (north);
- Route 141 and Riverport Drive (south);
- Route 141 and Casino Center Drive;
- Route 141 and Creve Coeur Mill Road North/MSD Access Road;
- Route 141 and Sportport Road;
- Route 141 and Creve Coeur Mill Road South/Airport Road.

Community intersections:

- Route 141 and Prichard Farm Road;
- Route 141 and Marine Avenue;
- Route 141 and River Valley Drive.

Community access into the planning area is currently available through Creve Coeur Mill Road, Marine Avenue, Hog Hollow Road and River Valley Drive. Four roadways

LEVEL OF SERVICE

A Level-of-Service (LOS) is an "A-B-C-D-E-F" grading system whereby the quality of operation on a street system can be identified. LOS's range from an "A", typified by a free-flow type condition with high operating speeds, to "F", typified by an urban forced-flow type condition with slow and intermittent operating speeds. In the Maryland Park Lake District, LOS "D" is the generally accepted standard, with acceptance of LOS "E" on a case by case basis.

"Continuous planning is needed for the conservation and wise development of our natural resources - both natural and human. With new inventions, new ideals, and new discoveries, no fixed plan, if strictly adhered to, may restrict or our freedom rather than enlarge it...we must constantly make new plans to meet new conditions."

U.S. National Resource Committee,
PLANNING OUR RESOURCES, 1938.



terminate at activity centers: Casino Center Drive, MSD Road, Sportport Drive, and Airport Road. Other than the connections that have been constructed to serve existing developments, very few local circulatory roadways exist in the planning area. Thus, a local street system will need to be constructed, almost in its entirety, to support the development recommendations within this plan.

EXISTING ACCESS MANAGEMENT FOR ROUTE 141

Route 141 is a limited access highway currently maintained by the Missouri Department of Transportation (MoDOT) with access allowed only at its signalized intersections. MoDOT’s access management guidelines recommend a distance of ½ mile (2,640 feet) between two signalized intersections. When these guidelines are applied, only two of the eight existing intersection pairs conform. The roadway was previously under the jurisdiction of St. Louis County. County access management guidelines specify a distance of only one quarter mile (1,320 feet) between signalized intersections. Six of the eight existing intersection pairs conform to these guidelines.

INTERSECTION SPACING REQUIREMENTS			
EXISTING INTERSECTION	DISTANCE BETWEEN INTERSECTIONS (FT)	MEETS COUNTY'S GUIDELINES?	MEETS MoDOTS GUIDELINES?
Riverport Dr. (north) and (south)	2,100	Yes	No
Riverport Dr. (south) and Prichard Farm Rd.	1,050	No	No
Prichard Farm Rd. and Casino Center Dr.	1,050	No	No
Casino Center Dr. and Creve Coeur Mill Rd. /MSD Rd.	4,150	Yes	Yes
Creve Coeur Mill Rd./MSD Rd. and Marine Ave.	1,600	Yes	No
Marine Ave. and Sport Port Dr.	2,500	Yes	No
Sportport Rd. and Creve Coeur Mill Rd./Airport Rd.	1,550	Yes	No
Creve Coeur Mill Rd./Airport Rd. and River Valley Dr.	3,250	Yes	Yes

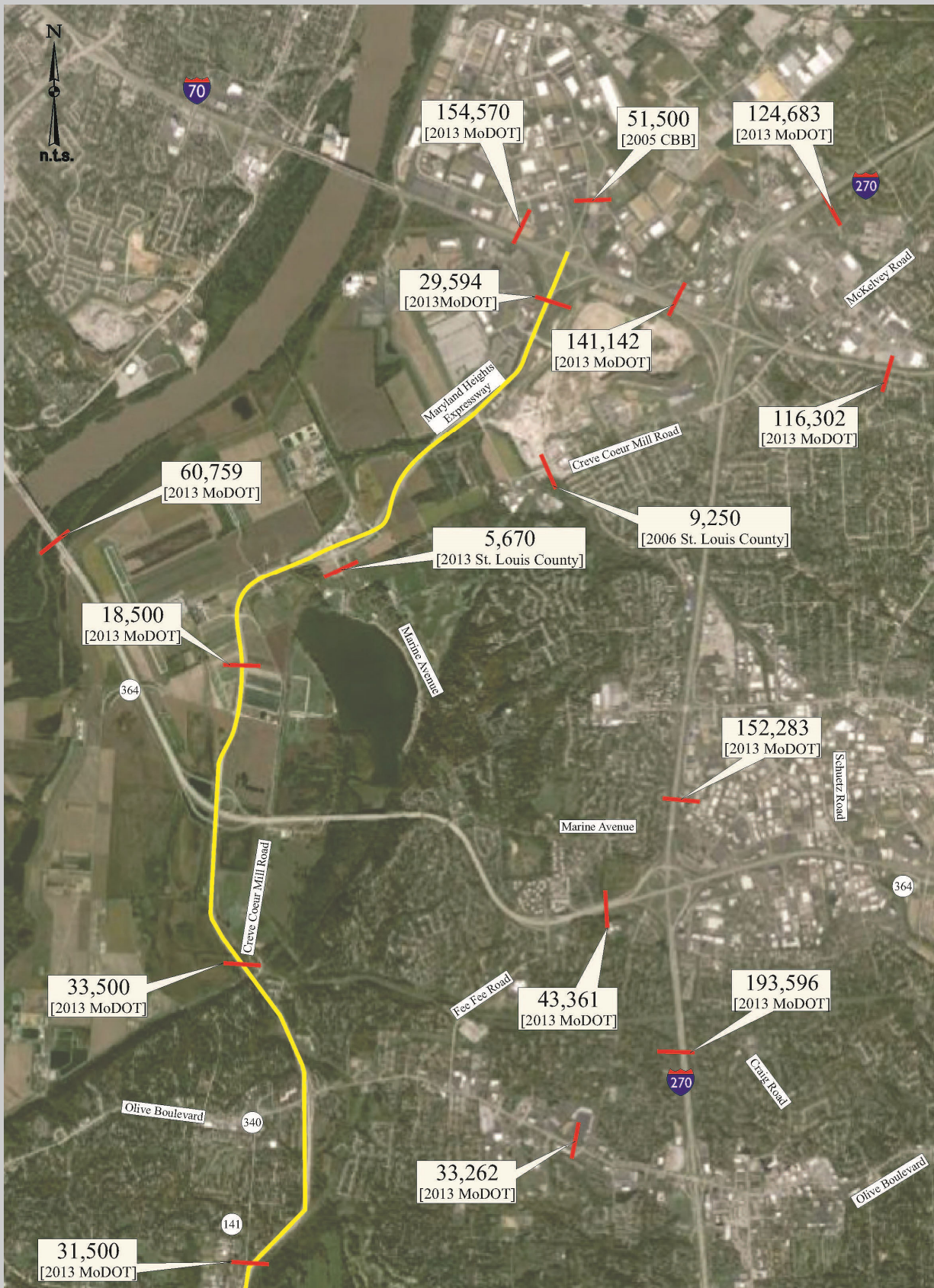
SOURCE: CRAWFORD, BUNTE, BRAMMEIER

EXISTING TRANSIT SERVICES

Metro is the regional transit provider. The MetroBus currently operates five routes that serve the study area. Routes located within the planning area include Route 33: Dorsett-Lackland; Route 34: Earth City; Route 91: Olive Boulevard; Route 94: Page Avenue; and Route 194: Page Avenue Limited. This service offers an equitable transportation alternative to the private automobile while providing benefits to everyone in the form of less congestion and air quality improvement. Transit service affords all individuals – including the elderly, low-income, and disabled – increased levels of access, mobility, and independence. Existing transit service provides a viable alternative to the private automobile; enhancing the planning area’s multi-modal nature.

Currently, there is no light rail service in the planning area. However, Metro has planned a light-rail connection to the Westport industrial area then extending to the Maryland Park Lake District as part of its master plan via the proposed Daniel Boone corridor. Light rail service in the area would help to alleviate traffic congestion in the area as well as produce potential economic development gains. Moreover, the inclusion of light rail would further enhance the planning area’s accessibility to workers and its overall image. As with bus service, light rail would provide an equitable and sustainable means of travel that would decrease the dependency on the private automobile.

EXISTING CONDITIONS



SOURCE: CRAWFORD, BUNTE, BRAMMEIER

FIGURE 9.2.4: AVERAGE DAILY TRAFFIC VOLUMES



FLOOD PROTECTION AND STORMWATER MANAGEMENT

The Maryland Park Lake District is bounded by the Missouri River to the west and northwest, and is crossed by several substantial creeks. The planning area is protected from Missouri River flooding at the 500-year storm level by the Howard Bend Levee District's Missouri River Levee. However, during significant storm events, the planning area experiences internal flooding from flows associated with these creeks that drain an urban watershed estimated at 44 square miles in size. Stormwater management issues are especially critical within the context of this land use plan.

MISSOURI RIVER FLOOD ISSUES

The Missouri River, as gauged at St. Charles just north of the planning area, drains an area of approximately 530,000 square miles. This area encompasses a major portion of central North America. About half of the upstream length of the Missouri has been regulated by main-stem Corps of Engineers reservoirs since 1958. Maximum river stages are available for every water year starting in 1926-27 and for several flood years back to 1844. A flood in 1844 resulted in the highest stage in history, although the 1993 flood stage was almost as high and would have been higher under 1844 conditions as a result of the lack of upstream reservoirs.

The planning area is protected by a 500-year levee financed and constructed by the Howard Bend Levee District (HBLD); a political jurisdiction separate from the City of Maryland Heights. Prior to 2006 the planning area was protected by a series of agricultural levees that were regulated by the HBLD. These agricultural levees would be "topped" intermittently by flooding conditions on the Missouri River. This degree of flooding occurred twice in the early 1990's in conjunction with larger Missouri River flood events. During the 1993 flood event, floodwater elevations exceeded 460 feet in the planning area. The Riverport Business Park is protected by a 500-year levee, constructed in 1986-87. Hollywood Casino is protected by a levee not certified by FEMA, which is characterized by a 500-year protection facing the Missouri River, and 100-year protection elsewhere. Construction on the 500-year Howard Bend Levee began in 2001 and was completed in 2006.

PUBLIC UTILITIES

Utilities are necessary to support the basic needs and requirements of development. The utilities required to support development are sewer, water, electric and natural gas; all of which have various levels of service within the area.

SANITARY SEWER TREATMENT CAPACITY

The Metropolitan Sewer District (MSD) is the service provider for wastewater treatment for the Maryland Park Lake District. The current Missouri River Treatment Plant (located in the Maryland Park Lake District) is designed for treating approximately 28 million gallons per day of wastewater, and serves approximately 150 square miles of Maryland Heights, Chesterfield, and parts of Creve Coeur, Hazelwood, Bridgeton, St. Ann, Ellisville, Ballwin, and unincorporated St. Louis County.

This treatment plant is currently operating at or near capacity. Improvements to the existing plant as well as expansion of the plant capacity are currently budgeted for fiscal year 2007. Infrastructure design and construction costs are currently estimated at over \$53 million. This will accommodate future development within the Missouri River Watershed, including the Maryland Park Lake District.

POTABLE WATER SUPPLY

The Missouri American Water Company will be the provider of potable water for any development within the Maryland Park Lake District. The Water Company has adequate water supply and treatment capabilities to meet any service demands that may be requested by future developments in the study area. The water supply would be provided from

EXISTING CONDITIONS



the Missouri American Water - St. Louis County Plant.

The primary criteria for water service to all areas are not based upon particular land use need, but upon adequate pressure and capacity to meet fire protection requirements. These requirements are generally for 1,500 gallons per minute (gpm) at the hydrant with no more than 4 feet head loss per 1-000 feet of length of pipe. The proximity of a 36-inch force main from the water plant, which traverses east to the bluffs, provides adequate capacity to meet these requirements in a 12 inch pipe. However, depending on land use type and fire district protection criteria, a guideline of 3,000 gpm at the hydrant may be required. This would require a 16-inch pipe and is the criteria utilized in Earth City. Water service to the northern study area including Hollywood Casino and Riverport is from 12-inch and 16-inch water mains from Dorsett and McKelvey. This system is connected to the water main system in Earth City.

Missouri American Water Company currently has capacity to treat and pump 217 million gallon per day and has an agreement with the City of St. Louis to purchase an additional 30 mgd if needed for peak demand. Normal demand is 120 to 140 mgd. The City of St. Louis Water Company does not supply water to this area with the exception of additional supply during peak demand via the Missouri American system. Three mains from the City of St. Louis plant (one 70-inch and two 60-inch mains) are used to carry treated water to the city and St. Charles County area. The 72-inch main is located under the Missouri River and services areas of St. Charles County. St. Charles has an agreement with the City of St. Louis for water treatment and supply. The two 60-inch mains proceed east of the City of St. Louis Plant along the railroad tracks and route through a series of easements to the city's Stacey Park Reservoir located near the intersection of Olive and Warson Road (east of Lindbergh). This reservoir services the City of St. Louis.

In the case of both sanitary sewer and potable water supplies, main lines and local service lines are not in place to serve major development in the area. The extension of these lines will be the responsibility of the development community.

ELECTRICAL

Ameren UE provides electrical service to the area. They currently have high tension lines located in the northern portion of the planning area providing service to the Riverport and Hollywood Casino planned districts. Additionally, Ameren UE posses an easement that will allow them to construct the infrastructure to deliver service to the remainder of the planning area. This easement is located along the Ameren Rail Road ROW that is generally located adjacent to and paralleling Creve Coeur Mill Road. This easement is approximately 250 feet in width measured from the edge of the Rail Road ROW. Current capacity exists to serve the low end of short term forecasted development. However, Ameren UE has indicated that a substation will need to be located along their utility easement at a to be determined location between Missouri Route 364 and Creve Coeur Mill Road's intersection with Missouri Route 141.

SURFACE WATER

Primary tributary streams within the project area include Fee Fee Creek, Creve Coeur Creek, Bonhomme Creek and Louiselle Creek. Each of these streams have regulatory floodplains that are inundated during localized storm events, regardless of surface water levels (i.e., river stage) on the Missouri River. Prior to settlement of the floodplain, Fee Fee Creek joined Creve Coeur Creek and drained to the north, in the vicinity of Riverport. However, Fee Fee and Creve Coeur Creeks were channelized to support the agricultural use of the floodplain, and were diverted to their present location just north of the MSD plant. Bonhomme Creek, the third major tributary stream within the project area, forms the southwestern limit of the project area. Like Fee Fee and Creve Coeur Creeks, Bonhomme Creek is a channelized stream that historically flowed within the floodplain to the northeast, before joining the Missouri River. Louiselle Creek is a smaller intermittent tributary that drains a small watershed northeast of Creve Coeur Lake before joining Fee Fee Creek. Within the Missouri River floodplain the lower reaches of each of these streams have been altered by channelization. Additionally, because of their low gradient, they are habitats in which sediments, carried by stormwater from adjacent uplands, are deposited. Consequently, they are of relatively low quality. They do however, represent an important riparian link between the larger bottomland forest of the Missouri River (outside the levee) and the ecological habitats associated with Creve Coeur Lake and the adjacent bluffs.

Creve Coeur Lake represents a significant non-flowing surface water environment within the planning area. It is used for a variety of recreational uses including boating. Additionally, the lake receives runoff from uplands via Creve Coeur Creek and Fee Fee Creek (under very significant unusual stormwater runoff conditions) and is therefore valuable in terms of stormwater detention and storage. It is an aquatic environment that is utilized by a wide variety of aquatic and water-dependent fauna including migratory waterfowl, wading birds, and other wildlife species. Additional open water habitats are present within the mitigation lands that are south and west of Page Avenue extension. This area is coincident with what formerly was Little Creve Coeur Lake. Open water habitats within this area also provide valuable functional support for flood and stormwater detention and waterfowl use.



NATURAL GAS

Laclede Gas Company is the service provider for natural gas in the St. Louis Region. It is assumed that they will extend services into the area to serve future development. Due to security concerns the availability of natural gas in the Maryland Park Lake District could not be confirmed.

NATURAL RESOURCES

An area's natural resources are extremely important when evaluating its development potential. An inventory was conducted for the planning area as part of background research for the 2002 land use plan. Wetlands, stream corridors, natural heritage resources, cultural resources, and sites with potential environmental liability were investigated. Existing mapping, archives, and databases maintained by local, state, and federal agencies were reviewed. These resources will also affect future land use and development decisions.

OPEN SPACE AND PARKS

Approximately 45% of the planning area exists in either open space or park status. Of this 45%, approximately 29% is currently owned by the St. Louis County Parks and Recreation Department in Creve Coeur Park with the remaining 16% falling in lands located outside of the Howard Bend Levee. Given the large presence of open space, this land use theme should be drawn upon to project a theme to the development of the planning area. Connections to these open space areas should be incorporated into future developments and open space incorporated into them.

The Maryland Park Lake District presently includes substantial lands dedicated to recreation use or open space preservation. As previously discussed, the lands in agricultural production were reduced by approximately 25% due to the acquisition by MoDOT as part of the mitigation plan for the extension of Missouri Route 364 (Page Avenue) through Creve Coeur Park. While the acquisition substantially impacted farming activity, recreational land, including natural open space, doubled within the levee protected portion of planning area.

Presently, there are a series of active recreational uses, in addition to Creve Coeur Park, that establish the character of the planning area. These include Crystal Springs Quarry Golf Course and Driving Range, Sportport, Golfport (formerly Creve Coeur Recreation Center), Lou Fusz Soccer Club, Scott Gallagher Soccer Club, and Go Ape treetop adventure course. The alignment of the 500-year levee resulted in the elimination of the Chesterfield Golf Course (18 hole public course). The mitigation acquisition included the Hale Irwin Golf Instructional Center and Driving Range, which was relocated into the Crystal Springs Quarry Golf Course.

The planning area also includes lands that will remain as natural open space on the water-ward side of the 500-year levee. Part of the Missouri River floodplain and floodway, these lands comprise approximately 16% of the planning area. Together with recreation (mitigation) land, over 3,600 acres, approximately 45% of the planning area will remain as natural open space or parkland.

The St. Louis County Parks Department owns approximately 2,300 acres in the Maryland Park Lake District. Based on information from St. Louis County, this includes approximately 1,170 acres of parkland, 330 acres of lake, and 800 acres of mitigation lands. St. Louis County has prepared an extensive Master Plan for Creve Coeur Park which governs its development and use.

WETLANDS

The climate in St. Louis County is characterized by cold winters and long, hot summers. Heavy rains occur mainly in spring and early in summer. Generally, wetlands in the region are seasonally flooded during winter and spring,



EXISTING TRAIL NETWORK

The area has an interconnected trail system (see Exhibit 9.2.5). This system, along with planning efforts of the Great Rivers Greenway District, serves an important role in providing multi-modal connections within the planning area.

Specifically, Creve Coeur Park has a system of trails that follow Creve Coeur Lake and the upper bluffs of the park. The trail system in this area is completely paved with the exception of a short section of the Millard Lake Loop. This system is also connected to the regional trail system via a trail connection along Missouri Route 364 and across the Missouri River that connects with the Katy Trail.

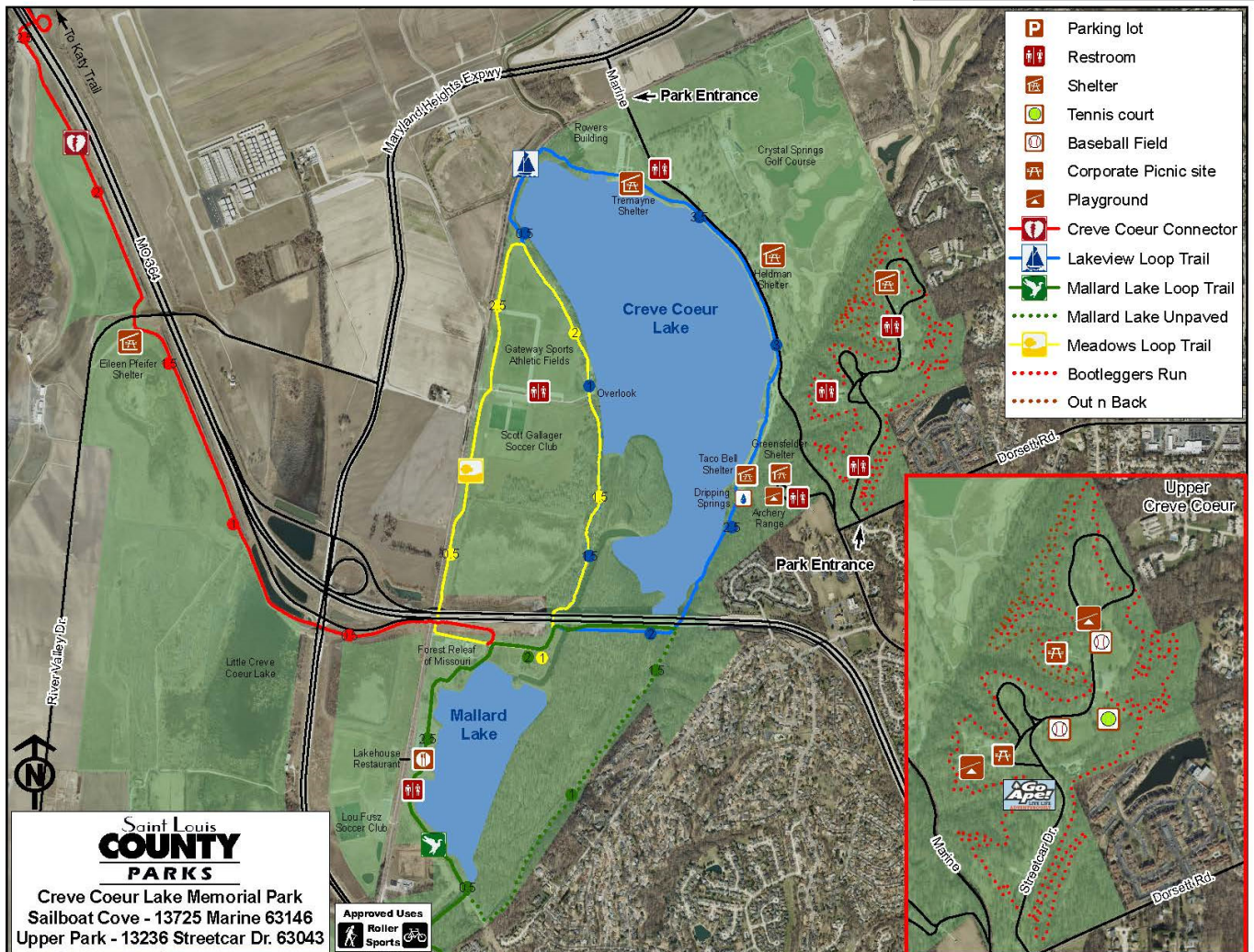


FIGURE 9.2.5: CREVE COEUR PARK TRAIL NETWORK



OPEN SPACE INTEGRATION

Cities and towns across the county have worked hard to improve their quality of life through developing trail systems -connecting individual trail segments to form larger recreation and transportation networks. While the benefits of any trail cannot be discounted, creating linkages among trails multiplies their effect.

These trails and trails networks have been providing opportunities for more people to walk to the store, bike to work, get some exercise, learn about their community, observe local wildlife, and experience the outdoors with their families. For example, the KATY trail that now crosses almost the entire state of Missouri has literally transformed the regions through which it passes, improving the economies of the local towns and providing a wonderful recreational attraction for millions of visitors from the local areas and nationwide. Similarly, major rail-trail corridors are improving the quality of life in Washington State, California, Florida, and Iowa, which include rail-trails, have left lasting legacies in both major and smaller metropolitan areas, and the movement continues. Towns such as Springfield, Missouri, are building trail networks, and Raleigh, North Carolina, has allocated funding for the "missing pieces" in its existing 30-mile system of trails. Denver now boasts a 200-mile network - one of the finest systems in the nation.

The trail and greenway movement has also evolved. While initially the focus was on trails and trail recreation, a new multi objective movement has emerged. Trail advocates now work in partnership with transportation engineers, drainage and flood control officials, ecologists, and open space advocates. We now think in terms of trail and greenway corridors that provide wildlife habitat and movement corridors, open space vistas, places for rivers and streams to meander in more natural landscapes, places to preserve and interpret history and culture, and many other benefits.

Indeed, trails and their associated greenway corridors are increasingly viewed as vital infrastructure, taking their place along with roads, parks, utilities, and storm drainage improvements as important and essential public assets and resources.

The trails movement has spawned a much larger range of benefits that will transform and enhance the urban landscapes of the new century.

Trails for the Twenty-First Century
Rails-To-Trails Conservancy

and become dry by mid-to late summer. Wetlands in the Maryland Park Lake District occur behind natural levees formed by the river, behind constructed levees, on flats, and in sloughs, which are shallow depressions in which water stands throughout the year except in periods of extreme drought. Approximately 356 acres of wetlands occur in small isolated patches over the planning area. In excess of 1,000 additional acres of wetland occur along natural or modified drainage channels.

A variety of wetland types varying in vegetative form (emergent, scrub shrub, forested) and hydrologic regime (seasonally flooded/saturated, temporarily flooded/saturated, etc.) have been found to occur within the planning area. In general, the wetland resources within the Maryland Park Lake District are concentrated in several areas:

- The complex in the upper reaches of Creve Coeur Lake
- The riparian corridors along Fee Fee, Creve Coeur, and Bonhomme Creeks
- The floodplain associated with the Missouri River outside of the proposed 500-year levee.

These resources provide important ecosystem function within the local context and offer valuable wildlife habitat, habitat for fish spawning and reproduction, flood storage and conveyance, shoreline stabilization and erosion control, and water quality enhancement.

Additional wetlands of varying quality are also located in isolated depressions and old channel scars throughout the floodplain. Many of these wetlands are farmed for agricultural row crops. While these wetlands are generally degraded and of low quality, they do represent a resource that has diminished significantly from that which existed prior to human settlement of the area. Consequently, they have a heightened importance in relation to their overall function within the floodplain, and provide intermittent and seasonal stormwater detention, wildlife habitat, water quality enhancement, and groundwater recharge functions.

Wetlands within the planning area are under the jurisdiction of the US Army Corps of Engineers ("the Corps") under the Clean Water Act. Development of any kind that affects these wetlands may be subject to the permitting authority of the Corps under Section 404 of the Act. Farmed wetlands and converted wetlands within the planning area are subject to the jurisdiction of the Natural Resources Conservation Service of the US Department of Agriculture.

SENSITIVE SPECIES

The Missouri River floodplain is a primary waterfowl area in St. Louis County. Large numbers of birds use the Missouri River corridor as a migratory route and return to this area each spring and fall. Nesting populations of blue wing teal, mallard and wood duck are found in the wetlands. The back water areas of the Missouri River, lakes and ponds support largemouth and white bass, crappie, and walleye fisheries. Ponds and lakes are generally stocked with largemouth bass, channel catfish, and bluegill.

The Missouri Department of Natural Resources (MoDNR) and U.S. Fish and Wildlife Service (FWS) were contacted for information regarding threatened and endangered

EXISTING CONDITIONS



species known to occur in the planning area. One federally listed endangered species, the Indian Bat, could inhabit the planning area during the spring and summer. In the spring, female bats establish small maternal colonies in suitable sites within wooded riparian areas, floodplain forests, or upland woods. Maternity roost sites tend to be in dead or dying trees greater than nine inches in diameter and with loose or exfoliating bark. Preferred roost sites are located in forest openings, at the forest edge, or where the tree canopy is sparse, and within 1 km of water.

The FWS identified several sensitive fish species as occurring within the vicinity; the endangered pallid sturgeon, and two candidate species; sturgeon chub and sicklefin chub. The FWS reported that these fish species occur in the Missouri River, especially where there are strong currents and sand or gravel bottoms. It is believed that they use shallow areas around islands and bars, chutes and quiet backwater habitats for spawning.

Bald eagles may occur in the project area and are known to have winter roosts along the Missouri River. They are common winter residents on large rivers and lakes where they fish. The American bittern, a state-listed endangered species, may also inhabit the planning area. The bittern is a secretive bird that inhabits freshwater marshes and marshy lake shores.

HISTORICAL RESOURCES

The area has a long and colorful history. Once serving the purpose of private recreation in the early 1900's by St. Louis's wealthy, it also provided a significant area for those who wished to indulge their vices. Housing makeshift gambling parlors and saloons, the area gained a fairly shady reputation in the early 1900's. However, its most significant historical asset is Creve Coeur Park. Once situated along the western bank of Upper Creve Coeur Creek and the eastern shore of Little Lake, Jacob Studt, Sr. created Upper Creve Coeur Park during the 1880's. Attractions beginning in 1899 were a racetrack, hotel and restaurant, dance hall, riding stable, merry-go-round, boat dock and open air pavilions. Beginning in 1900 and continuing over the next two decades an annual county fair was held at this site. Today only two stable foundations and traces of the race track remain. It is probable that foundations and other remains associated with the recreational facility are below the surface. Artifacts recorded at the site include porcelain, earthenware shards, vase fragments, window glass, bottle glass, cut bone and nails. This site occupies the entire area between Little Lake and the railway line at the southern end of the flood plain portion of the corridor. The site has previously been determined to be potentially eligible to the National Register of Historic Places. National Register eligibility would represent a substantial constraint to a future development proposal that would require any type of Federal approval or permit. Prior to any activity that would disturb the site, consultation with State Historic Preservation Officer (SHPO) within the Missouri Department of Natural Resources, Division of Parks, Recreation and Historic Preservation would be necessary. Construction of the Maryland Heights Expressway in this area would be subject to this regulatory constraint.

RESOURCE INTEGRATION

Within the development of a land use plan, the City must be mindful of its environmental resources as well as the need to respect the history of the hospitality and recreational use of the Maryland Park Lake District. There is a unique opportunity to allow large-scale business and development while maintaining the open space character through preservation or mitigation of environmentally sensitive lands, coordination with existing recreational facilities, and through the use of interconnected pedestrian and bicycle facilities. Through integration of new business development with existing environmental open space resources, the City has an opportunity to create a unique environment that is both more attractive for businesses and workers as well as fulfilling its desire to create a unique high quality business park area.

The management of stormwater, in particular, offers an opportunity to further environmental protection and open space preservation. The design of stormwater conveyance facilities and storage areas should consider ways in which they can be used to improve water quality as well as being integrated as open space resources. Similarly, streets can also be designed to incorporate green spaces through the uses of medians and boulevards.

Wetlands represent a constraint for any proposed development within the project area. Forested wetlands are generally considered to be a more severe constraint than emergent or scrub shrub wetlands due to the long time needed to reestablish a forested community and ecosystem. Fill actions within "waters of the United States" are regulated discharges and require permitting by the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act. Additionally, such actions also require the issuance of a Water Quality Certification by the Missouri Department of Natural Resources (MDNR) pursuant to Section 401 of the Clean Water Act.

comprehensive plan

CITY OF MARYLAND HEIGHTS



SECTION 9.3 - GOALS & STRATEGIES

MARYLAND PARK LAKE DISTRICT



WHAT HAS CHANGED?

When embarking on any planning document the first question to ask is obvious—why? Why did the community revisit the recommendations that were contained within the 2002/2006 plans? The simple answer is that while communities prepare long range plans typically dealing with 20 year timeframes, these plans realistically are relevant for only periods around three to five years based on changing conditions. The specific reasons were addressed in the previous chapters (namely changes in infrastructure and the market), but these reasons are really changes in the basic plan premises that we must rely on when embarking in a planning process.

PREMISES

Premises are defined as “...statements that are assumed to be true and from which a conclusion can be drawn”. A planning process is predicated upon premises regarding stated conditions and directions that are generally decided and fixed in outcome. The varying outcomes of a planning process are constructed on the bedrock of these premises. However, when these premises change then a community needs to evaluate the plan and its recommendations for trueness. This is the position that the City is now in.

When the City’s 1987 Comprehensive Plan was written, the status of the proposed 500-year levee for Howard Bend was uncertain. Consequently, two growth scenarios were examined for Howard Bend. The first scenario assumed that no protective levee would be constructed. The second scenario assumed construction of the 500-year levee, and that a substantial amount of vacant land would become available for development. In addition to construction of the 500-year levee, it also assumed construction of a full interchange at the intersection of the Maryland Heights/Earth City Expressway and Page Avenue.

In 2001, the Howard Bend Levee District commenced construction of the 500 year levee. This action prompted the City to undertake the planning effort that created the 2002 amendment to the Comprehensive Plan for this area. Funded through the assessment of property owners, the levee construction was independent of the municipal capital improvement plan. However, it was an infrastructure improvement that had major implications on the future land use in the planning area. While the 1987 Comprehensive Plan assessed the proposed levee as a potential growth strategy, it needed to be re-examined in relation to current development trends.

Several infrastructure premises from the 2002 plan have been completed and have had impact upon development premises, they are:

- Levee completion and certification in April of 2006; and
- Completed construction and opening of Missouri Route 364 (Buzz Westfall Memorial Highway) and Veterans Memorial Bridge; and
- The completion of Missouri Route 141.

Additional transportation system improvements are planned for the area, however they cannot at this point be considered premises as they are largely a reaction to

PLAN PREMISES

Quality of development in this area will affect the regional image of Maryland Heights.

Quality begets quality – if the standard of development is set high from the beginning and maintained at this high level throughout the development process, then additional high quality development will be attracted to the area.

Quality and character beget value – if the Howard Bend area develops a reputation as a first class venue for development creating a sense of place and character then value will be created.

Quality and character create value through all planning and development stages. Subsequently development proposals that create quality and character will add value to individual parcels, and consequently the community as a whole.

This plan and its recommendations and guidelines are intended to make the attainment of high quality development predictable (by setting an expected standard in advance); practical and economically feasible (by permitting flexibility in achieving quality design), and marketable (by recognizing accepted development types).

The public sector must lead by example. The design of improvements in the public realm must be viewed both from the standpoint of functionality as well as aesthetically.

Open space and hospitality uses establish the theme and image of the Maryland Park Lake District. This image should be encouraged, preserved and enhanced.

Systems theory is the “*modus operandi*” of the Maryland Park Lake District and this plan. All things are connected and present influences on other elements; nothing should be considered in isolation.



future land development in the planning area. The design and construction of a regional stormwater conveyance system to manage internal flooding is the other major element of regional infrastructure being planned for the Maryland Park Lake District. These components are critical underlying premises that will influence future land use and development decisions.

PLANNING AND IMPLEMENTATION

Within a multi-level/multi-jurisdictional environment, the City will facilitate development. To accomplish this the City will need to adopt and implement a comprehensive plan for the Maryland Park Lake District that creates a vision for future development, and establishes guidance for the regulatory framework and implementation of that vision.

FLOOD PROTECTION

The Howard Bend Levee District has financed, constructed and will maintain the Missouri River Levee protecting the Maryland Park Lake District from Missouri River 500-year flood events.

STORMWATER MANAGEMENT

While the Howard Bend Levee District is responsible for the finance, design, construction, and maintenance of the regional stormwater conveyance and storage system located within the planning area, the City's role is to ensure that the multi-functional intent of the system is carried through the development process. This partnership of interests remains as a core value throughout the planning and development process.

Siting and rights-of-way of conveyance channels and storage area decisions as part of the regional stormwater management plan will be established by the Howard Bend Levee District and will be designed to manage upland flow for 100-year joint frequency storm event and to serve the multi-functional purpose of creating open space and site amenities. Some land currently in private ownership may be identified for preservation as stormwater conveyance or storage areas; the location of these areas and addressing private property issues is the responsibility of the levee district. Without this regional approach to stormwater management, a substantial amount of property will continue to be constrained for development by an internal flood event.

The conceptual approach to stormwater management (including design parameters) is included in the resource inventory section of this plan. The management plan was developed and submitted to the City by the Howard Bend Levee District. This plan employs a regional approach and utilizes Best Management Practices (BMP's) to develop a multi-functional system of stormwater management. Developers will be responsible for on-site drainage and conveyance to the regional stormwater system.

DEFINITIONS

The dictionary definition of a goal is "the end toward which effort or ambition is directed; aim; purpose." In the planning process, a goal specifies a direction of intended movement, not a location.

Objectives and strategies are operational terms. They are the physical representations of goal concepts, and as such they should be derived from the goals established in the planning process.

IMPLEMENTATION TOOLS

In conjunction with the goals and strategies, a series of implementation tools and techniques were also adopted. They were re-examined and expanded as part of the 2006/2007 planning effort.

"Business and other human endeavors are bound by invisible fabrics of interrelated actions, which often take years to fully play out their effects on each other. Since we are part of that lacework ourselves, it's doubly hard to see the whole pattern of change. Instead, we tend to focus on snapshots of isolated parts of the system, and wonder why our deepest problems never seem to get solved."

Peter Senge, *The Fifth Discipline*



TRANSPORTATION

Quality development will require both an efficient and effective transportation system. The City has made a sizeable investment in the public transportation system within the planning area. For the area to develop in a coordinated and integrated manner, the transportation system must function holistically. That is, all components of the system should be evaluated on their effect on the system as a whole; certain types of land uses have a greater impact upon the system and consequently, will require varying levels of improvements to the system as a requirement of the regulatory process. The transportation system however, should not only be oriented solely to the automobile, but should accommodate and integrate pedestrian and bikeways and transit (bus and light rail) in both development and design.

PUBLIC UTILITIES

It is in the public interest to assure that adequate public facilities are available at the time that development comes on line. No significant development will be possible in the planning area without adequate provision for wastewater treatment and water supply. The Missouri River treatment plant operated by the Metropolitan St. Louis Sewer District (MSD) is currently at capacity. MSD is in the planning stage for plant expansion to accommodate the increased flows generated by new development. The design and construction of the plant expansion is in their capital improvement budget for fiscal year 2007. It should be noted that this treatment plant serves not only the City of Maryland Heights, but also portions of adjoining municipalities (Chesterfield, Bridgeton, etc.). Future development approval will be contingent on the availability of sanitary sewer.

The Howard Bend Levee District (HBLD) is financing the design and construction of the sanitary sewer pumping station and mains in the Expressway Planning District.

Potable water is available to support future development of the planning area. The provision of water and sewer mains and local service lines will be the responsibility of the developers to fund and construct, pursuant to applicable public standards.

DEVELOPMENT QUALITY

The development in Howard Bend will occur in a manner that creates character and adds value. This will be achieved through applying good design principles to site layout, access, landscaping, architecture, on-site stormwater management, connection to the regional stormwater management system, building scale, massing and orientation and the design and layout of parking. To implement the City's Strategic Plan, as well as the vision of the Comprehensive Plan, development, regardless of the specific land use, must have architectural quality, be integral with both infrastructure and open space, and relate to adjoining land uses.

SUSTAINABLE SOLUTIONS

Development in the Maryland Park Lake District will be evaluated based on its sustainability. It will be required to meet the social, environmental and economic needs of today without reducing the ability of future generations to have their needs met. Put simply, sustainability is the belief that every decision should be made considering the full long-term implications of the choice. This requires acting in a way that simultaneously benefits the social, environmental, and economic well-being of City residents, property owners and that of the development community. Thinking sustainable is an integrated process; many strategies that improve the City's sustainability are interwoven throughout the plan.

There are many ways to improve the sustainability and performance of development. Building energy efficient buildings, creating walkable communities, protecting natural resources and encouraging healthy lifestyles are all ways in which the sustainability of our lifestyles is extended. It is the responsibility of development to adhere to these ideals and it is the role of the city government to take the long-view of these issues and encourage development that furthers it.



DEVELOPMENT GOALS

1. ENCOURAGE A SUSTAINABLE DEVELOPMENT PATTERN THAT ACCOMMODATES AND BALANCES BOTH ECONOMIC GROWTH AND COMMUNITY CHARACTER.
2. REQUIRE DEVELOPMENT TO DESIGN AND BUILD IN CONSIDERATION OF LOCATIONAL AND INFRASTRUCTURE OPPORTUNITIES.
3. PLAN FOR A MIXTURE OF USES AND EXPERIENCES FOCUSED ON HOSPITALITY AND ENTERTAINMENT THAT DRAW BOTH LOCAL RESIDENTS AND REGIONAL VISITORS BY CREATING A PLACE OF DESTINATION.
4. ENHANCE, REINFORCE AND CONNECT TO LOCAL AND REGIONAL OPEN SPACE AND RECREATION FACILITIES.
5. CREATE DEVELOPMENT PATTERNS THAT RESULT IN EFFICIENT CONNECTION TO THE REGIONAL STORMWATER AND TRANSPORTATION SYSTEMS.
6. CREATE DEVELOPMENT PATTERNS THAT UTILIZE THE STORMWATER MANAGEMENT SYSTEM AS A VISUAL, ENVIRONMENTAL AND FUNCTIONAL AMENITY.
7. PROVIDE OPPORTUNITIES FOR EXISTING BUSINESSES TO EXPAND AND GROW WITHIN THE PLANNING AREA.
8. CREATE A DEVELOPMENT PATTERN THAT EFFICIENTLY AND EFFECTIVELY UTILIZES THE TRANSPORTATION SYSTEM AS AN INTEGRATED MULTI-MODAL COMPONENT.

DEVELOPMENT VISION

THE MARYLAND PARK LAKE DISTRICT WILL DEVELOP IN A SUSTAINABLE, COORDINATED AND INTEGRATED MANNER WHILE BALANCING THE INTERESTS OF THE RESIDENTS, LAND OWNERS AND BUSINESSES.

IMPLEMENTATION TOOLS

- Amended zoning and subdivision regulations refining the Planned District process and establishing improved design standards related to site planning and building construction, as well as public facilities.
- Amend zoning and subdivision regulations to require open space set-asides with new development, along with criteria for open space.
- Intergovernmental agreements with St. Louis County Parks and Metropolitan Sewer District to encourage collaboration and multiple use of facilities.
- Creation of a Open Space and Trail opportunity map for the Maryland Park Lake District.
- Intergovernmental agreement between the City, Metropolitan Sewer District and the Howard Bend Levee District for the evaluation of stormwater management systems.
- Require that all development proposals are consistent with the provisions contained within this plan.



DEVELOPMENT STRATEGIES

- Develop design standards that are predicable and reasonable.
- Establish standards for public infrastructure and facilities including roads, pedestrian connections, and streetscapes that are designed to promote both aesthetic and functional quality.
- Prepare and maintain a Future Land Use Map to guide and evaluate land use decisions in the Maryland Park Lake District.
- Enter into an intergovernmental agreement with the Howard Bend Levee District and MSD to ensure regional stormwater system connections are properly designed, reviewed, managed and constructed.
- Work with property owners, developers, the St. Louis County Department of Parks and Recreation, Great Rivers Greenway District, and the Howard Bend Levee District to identify appropriate park, trail and open space connection opportunities.
- Educate the public about the provisions and intent of this plan.
- Evaluate the scale and intensity of development in context of its effect on future development patterns and the image of the City .

“Sustainable development is a strategy by which communities seek economic development approaches that also benefit the local environment and quality of life. It has become an important guide to many communities that have discovered that traditional approaches to planning and development are creating, rather than solving, problems. Where traditional approaches can lead to congestion, sprawl, pollution and resource over-consumption, sustainable development offers real, lasting solutions that will strengthen our future.

Sustainable development provides a framework under which communities can use resources efficiently, create efficient infrastructures, protect and enhance quality of life, and create new businesses to strengthen their economies. It can help us create healthy communities that can sustain our generation, as well as those that follow ours.”

- Smart Communities Network



STORMWATER MANAGEMENT GOALS

1. CONSTRUCT A REGIONAL STORMWATER CONVEYANCE SYSTEM TO MANAGE UPLAND RUNOFF FROM A 100-YEAR JOINT FREQUENCY EVENT.
2. THE STORMWATER MANAGEMENT SYSTEM SHOULD BE BASED ON SOUND ENGINEERING PRACTICE AND ENVIRONMENTALLY SOUND PRACTICES AND POLICIES INCORPORATING BEST MANAGEMENT PRACTICES TO THE MAXIMUM EXTENT POSSIBLE.
3. CREATE VALUE AND CHARACTER FOR THE CITY, PROPERTY OWNERS, AND THE DEVELOPMENT COMMUNITY THROUGH INNOVATIVE DESIGN OF THE STORMWATER MANAGEMENT SYSTEM.
4. IMPACTED WETLANDS WILL BE IDENTIFIED AND APPROPRIATELY MITIGATED WITHIN THE REGIONAL STORMWATER MANAGEMENT SYSTEM.

VISION STATEMENT

THE MARYLAND PARK LAKE DISTRICT WILL UTILIZE STORMWATER MANAGEMENT SYSTEMS THAT ARE REGIONAL IN BOTH APPROACH AND APPLICABILITY, ARE MULTI-FUNCTIONAL IN DESIGN, AND SERVE THE PURPOSES OF STORMWATER MANAGEMENT, OPEN SPACE CREATION AND SITE AND REGIONAL AMENITIES.

IMPLEMENTATION TOOLS

- Develop and adopt guidelines for stormwater management.
- Require development proposals to include a comprehensive stormwater management plan.
- Require new developments to include appropriate Best Management Practices (BMP's).
- Create and enter into an Intergovernmental Agreement between the City, Howard Bend Levee District and Metropolitan Sewer District establishing the process for stormwater management evaluation.

**STORMWATER MANAGEMENT STRATEGIES**

- Collaborate with the Metropolitan Sewer District and the Howard Bend Levee District to regulate development to ensure that adequate storm water detention is provided on site.
- Participate in the permitting process for stormwater management facilities to encourage the use of these improvements for multi-functional community purposes beyond that of just stormwater management.
- Support the development of a network of open spaces that utilize the functional stormwater conveyance system.
- Support the Howard Bend Levee District in the creation, design and use of secondary storm water related channels as water features and amenities for development.
- Collaborate with Howard Bend Levee District and Metropolitan Sewer District to regulate development to ensure that adequate storm water management is provided on site.
- Use Best Management Practices that represent sound engineering practice to the maximum extent practical.
- Develop concepts illustrating how stormwater management can be developed as ancillary uses (trails, parks, habitat) that are "layered" on to the systems primary function of stormwater management.
- Use stormwater management concepts that optimize the value and add character to development proposals.
- Develop concepts that incorporate proposals for regional trails proposed by the Great Rivers Greenway.
- Support proposals that facilitate the enhancement of the Page Avenue mitigation area.
- Develop stormwater facilities that support a diverse aquatic and riparian habitat.
- Emphasize development proposals that include biotechnical, "soft" engineering solutions as a better alternative to traditional stormwater management approaches .
- Encourage facilities that support ecologically based methods for invasive species control.
- Require development to utilize site development practices that maintain and protect the natural resources of the site and region.



OPEN SPACE AND PARKS GOALS

1. THE MARYLAND PARK LAKE DISTRICT WILL INCLUDE A SYSTEM OF CONNECTED LINEAR OPEN SPACES THAT CONNECT PRIVATE DEVELOPMENT TO NEW AND EXISTING OPEN SPACE AND RECREATION FACILITIES.
2. DEVELOPMENT WITHIN HOWARD BEND WILL INCLUDE PUBLIC SPACES AND INTEGRATED OPEN SPACE.
3. PUBLIC SPACES WITHIN PLANNED DISTRICTS WILL BE INTERCONNECTED THROUGH A SERIES OF PEDESTRIAN AND BICYCLE LINKAGES TO THE MAXIMUM EXTENT POSSIBLE.
4. PEDESTRIAN AND BICYCLE FACILITIES WILL BE LINKED TO THE KATY TRAIL THROUGH CREVE COEUR PARK, ROUTE 364 (PAGE AVENUE), PLANNED DEVELOPMENTS AND THE HOWARD BEND LEVEE SYSTEM.
5. THE MARYLAND PARK LAKE DISTRICT WILL CONTINUE TO SERVE AS A REGIONAL DRAW FOR HOSPITALITY RELATED RECREATIONAL LAND USES, INCLUDING RECREATION, SPORTS, AND GAMING.
6. THE AREAS OUTSIDE OF THE 500-YEAR HOWARD BEND LEVEE WILL BE UTILIZED FOR PASSIVE RECREATIONAL OPPORTUNITIES.

OPEN SPACE AND PARKS STRATEGIES

- Develop a Howard Bend Open Space, Pedestrian, and Bicycle Plan as part of the Comprehensive Plan for a network of open spaces, and pedestrian and bicycle interconnection system.
- Prepare a “Pedestrian Catchability Plan” as development occurs focusing on five minute walk times (1/4 mile radius) from development centers.
- Require that development includes interconnected functional open space.
- Establish open space and landscaping requirements for future development within the Maryland Park Lake District.
- Incorporate open space within and along the public rights-of-ways to create parkways adding value and character.
- Collaborate with Great Rivers Greenway, St. Louis County Parks and the Howard Bend Levee District to develop and promote the implementation of open space and regional trails within the planning area.
- Continue to promote recreational activities and facilities in conjunction with the Maryland Heights Convention and Visitors Bureau.

VISION STATEMENT

THE MARYLAND PARK LAKE DISTRICT WILL MAINTAIN ITS STRONG IDENTITY AS A PLACE OF DESTINATION FOR OPEN SPACE AND RECREATIONAL OPPORTUNITIES BY INCLUDING INTEGRATED, CONNECTED REGIONAL AND LOCAL PARKS AND OPEN SPACE INTO FUTURE DEVELOPMENT AND INFRASTRUCTURE.

IMPLEMENTATION TOOLS

- Creation of a pedestrian and bicycle facilities standards for new construction.
- Creation of landscaping requirements for streets within planned developments.
- Develop design standards and guidelines for trails, walkways and bikeways.
- Require development to include integrated and connected open space elements.
- Require infrastructure, both private and public, to include elements of open space.
- Require minimum thresholds for functional open space within development proposals.



PUBLIC UTILITY GOALS

1. THE MARYLAND PARK LAKE DISTRICT WILL BE PROVIDED ADEQUATE DISPOSITION OF WASTEWATER AND BY-PRODUCTS WHILE BALANCING THE NEEDS OF GROWTH, ENVIRONMENT AND PUBLIC HEALTH, SAFETY AND WELFARE TO SERVE THE DEVELOPMENT OF THE AREA.
2. THE MARYLAND PARK LAKE DISTRICT WILL BE PROVIDED WITH ADEQUATE POTABLE WATER WHILE BALANCING THE NEEDS OF GROWTH, ENVIRONMENT AND PUBLIC HEALTH, SAFETY AND WELFARE TO SERVE THE DEVELOPMENT OF THE AREA.
3. THE MARYLAND PARK LAKE DISTRICT WILL BE PROVIDED WITH ADEQUATE ELECTRICAL UTILITIES WHILE BALANCING THE NEEDS OF GROWTH, ENVIRONMENT AND PUBLIC HEALTH, SAFETY AND WELFARE TO SERVE THE DEVELOPMENT OF THE AREA.
4. THE MARYLAND PARK LAKE DISTRICT WILL BE SERVED BY THE TELECOMMUNICATION AND DATA CARRIERS WHILE BALANCING THE NEEDS OF GROWTH, ENVIRONMENT AND PUBLIC HEALTH, SAFETY AND WELFARE TO SERVE THE DEVELOPMENT OF THE AREA.
5. BOTH SANITARY SEWER AND POTABLE WATER WILL MEET ALL APPLICABLE GOVERNMENT STANDARDS FOR SERVICE, INCLUDING FIRE PROTECTION REQUIREMENTS.
6. PROVISIONS FOR THE LAYOUT AND DELIVERY OF UTILITIES MUST CONSIDER THE POTENTIAL IMPACTS ON THE LAYOUT, VALUE AND CHARACTER OF ADJACENT FUTURE DEVELOPMENT OPPORTUNITIES.
7. DEVELOPMENTS SHOULD PROMOTE THE CONSERVATION AND RE-USE OF POTABLE WATER TO THE MAXIMUM EXTENT PRACTABLE.

VISION STATEMENT

THE MARYLAND PARK LAKE DISTRICT WILL DEVELOP IN A MANNER THAT ORDERLY AND EFFICIENTLY PUBLIC UTILITIES THROUGHOUT THE PLANNING AREA.

IMPLEMENTATION TOOLS

- Adopt zoning or subdivision regulation amendments that require adequate public facilities prior to or concurrent with development.
- Require development to address the area of public services to the development.
- Development must coordinate with all applicable public utilities regarding the siting, location and extension of said utilities and provide reasonable accommodations.

**PUBLIC UTILITY STRATEGIES**

- Coordinate with MSD and the Howard Bend Levee District in the evaluation of providing sanitary sewer service to proposed development in both an effective and efficient manner.
- Coordinate with MSD in efforts to reduce noxious odors related to the treatment of sanitary sewerage at the Missouri Treatment Wastewater plant.
- Coordinate with Missouri American Water Company and the Howard Bend Levee District in the evaluation of providing potable water to proposed development in both an effective and efficient manner.
- Encourage the use of low-volume plumbing devices to the maximum extent practical, consistent with the adopted building code.
- Discourage development that does not result in the orderly extension of public utilities.
- Consider the siting and accommodations for public utilities within the context of development proposals.
- Work with Ameren UE to facilitate the appropriate siting and location of utility substation(s).



TRANSPORTATION GOALS

1. THE MARYLAND PARK LAKE DISTRICT WILL INCLUDE FUTURE ROAD IMPROVEMENTS THAT PROVIDE BOTH A LOCAL AND REGIONAL BENEFIT.
2. THE INTERNAL STREET SYSTEM WILL BE COORDINATED AND INTEGRATED, INCLUDING MULTIPLE INTERCONNECTIONS BETWEEN INDIVIDUAL DEVELOPED AREAS, AVOIDING FREESTANDING DEVELOPMENT AREAS UNRELATED TO EACH OTHER.
3. ACCESS TO PLANNED DEVELOPMENTS WILL BE MANAGED TO MAXIMIZE TRAFFIC EFFICIENCY.
4. TRAFFIC WILL BE MANAGED WITHIN THE MARYLAND PARK LAKE DISTRICT SO AS TO AVOID TRAFFIC CONGESTION.
5. TRANSPORTATION IMPROVEMENTS WILL INCLUDE AESTHETIC ENHANCEMENTS THAT ADD CHARACTER AND FURTHER THE IMAGE OF THE AREA.
6. TRANSPORTATION IMPROVEMENTS WILL BE DESIGNED TO INCLUDE MULTI-FUNCTIONAL AND MULTI-MODEL ELEMENTS.

TRANSPORTATION STRATEGIES

- Require new development incorporate an interconnected network of local streets with efficient and adequate connections to the regional system.
- Establish acceptable transportation level of service standards.
- Establish access management principles for development that utilize access as a resource in an efficient manner.
- Establish appropriate regulatory approaches to assure adequate access to the planning area from the regional highway system.
- Require that new development incorporate the transportation system improvements identified in the Comprehensive Plan.
- Require high level and quality aesthetic design standards that create character along roadways.
- Design roads to provide for transit and pedestrian and bike traffic.

VISION STATEMENT

THE MARYLAND PARK LAKE DISTRICT WILL INCLUDE AN INTEGRATED, COORDINATED AND INTERCONNECTED TRANSPORTATION SYSTEM THAT EFFICIENTLY MANAGES TRAFFIC, IS DESIGNED MULTI-MODALLY WITH HIGH AESTHETIC STANDARDS SO AS TO AVOID TRAFFIC CONGESTION AND DISCOURAGE ISOLATED DEVELOPMENT AREAS AND PATTERNS.

IMPLEMENTATION TOOLS

- Develop a Traffic Management Plan to establish the needed transportation improvements for the public and private sectors.
- Amendments to zoning and/or subdivision regulations to incorporate requirements identified in the Traffic Management Plan, such as traffic impact study requirements, level of service standards and access management standards.
- Development proposals must include a Traffic Impact Study.



NATURAL HAZARD MITIGATION GOALS

1. MINIMIZE THE LOSS OF LIFE AND INJURIES THAT COULD BE CAUSED BY NATURAL HAZARDS.
2. ENCOURAGE GROWTH THAT IS COMPATIBLE WITH HAZARD MITIGATION STRATEGIES IDENTIFIED IN THIS PLAN.
3. ENCOURAGE SUSTAINABLE DEVELOPMENT BY PROTECTING DEVELOPMENT FROM NATURAL HAZARDS.
4. ENCOURAGE THE STRENGTHENING OF PUBLIC EMERGENCY SERVICES, ITS INFRASTRUCTURE, FACILITIES, EQUIPMENT, AND PERSONNEL TO NATURAL HAZARDS.
5. DEVELOP A COMMUNITY BASED MITIGATION EFFORT BY BUILDING STRONGER PARTNERSHIPS BETWEEN GOVERNMENT, BUSINESSES, AND THE COMMUNITY.
6. INCREASE PUBLIC AND PRIVATE UNDERSTANDING OF NATURAL HAZARD MITIGATION THROUGH THE PROMOTION OF MITIGATION EDUCATION AND AWARENESS OF NATURAL HAZARDS.
7. ENHANCE EXISTING OR DESIGN NEW POLICIES AND TECHNICAL CAPABILITIES THAT WILL REDUCE THE EFFECTS OF NATURAL HAZARDS.
8. ENHANCE EXISTING TECHNICAL AND GIS DATA AND CAPABILITIES THAT WILL REDUCE THE EFFECTS OF NATURAL HAZARDS.

VISION STATEMENT

THE MARYLAND PARK LAKE DISTRICT WILL DEVELOP IN A MANNER THAT FOSTERS THE REDUCTION THE IMPACTS OF NATURAL HAZARDS THUS PREVENTING THE LOSS OF LIFE AND MINIMIZING ILLNESS AND INJURY RESULTING FROM THESE HAZARDS.

IMPLEMENTATION TOOLS

- Encourage development of a public outreach program that ensures all members of the jurisdiction have access to information on hazards, consequences, and steps to be taken to reduce risk at home and work.
- Encourage businesses, governments and special districts to develop and distribute pertinent hazard mitigation measures for employees and visitors.
- Encourage appropriate jurisdiction agencies to identify all special needs populations in the jurisdiction, and develop a special outreach program for those at risk, and coordinate hazard mitigation measures (including backup power, evacuation and warning plans).
- Encourage development of evacuation plan for all disasters.
- Encourage placement of flash flood warning signs.
- Encourage the development of hazard mitigation measures.
- Participate in the National Flood Insurance Program, Community Rating System (CRS), Hazard Mitigation Plan.
- Encourage the protection and maintenance of natural river and stream channels and corridors.
- Encourage the utilization, design and/or build of systems to detain stormwater in ways to promote infiltration and replicate natural movement of water.



NATURAL HAZARD MITIGATION STRATEGIES

- Raise public awareness concerning hazards, including measures that can be taken to promote mitigation and increase disaster preparedness, response and recovery capabilities.
- Establish an early warning system for natural disasters.
- Decrease occurrence and impact of flooding.
- Reduce or prevent impacts from hazards on public and private properties.
- Develop collaborative hazard mitigation efforts across jurisdictional boundaries.
- Reduce impacts disasters and promote protection of natural resources.
- Encourage the development or amendment of laws so they may more effectively address hazard mitigation.
- Promote the installation of safe rooms and shelters.
- Reduce repetitive losses, especially those caused by flooding.
- Continue to conduct studies assessing flood hazards and risks.
- Reduce the vulnerability of structures and infrastructure to the effects of geologic hazards including landslides, earthquakes, and sinkhole collapse.
- Promote incentives for mitigation planning and actions.
- Support efforts that will assist with the continuity of critical business operations.
- Develop hazard mitigation policies that promote the protection of the environment.
- Form partnerships to leverage and share resources.
- Annually review existing natural hazard programs, plans, and policies to determine their effectiveness and efficiency in reducing risk and vulnerabilities to natural hazards.
- Disseminate useful information about geologic hazards to the general public and development professionals in order to assist in safe, appropriate development in hazard areas.
- Improve public knowledge of hazards and protective measures so individuals can appropriately respond during hazard events.
- As resources allow, develop, and promote outreach strategies designed to educate residents about local hazards, their associated risk and vulnerabilities, and the applicable mitigation actions.
- As resources allow, maintain an ongoing education and outreach effort to educate local officials about the importance of hazard mitigation.
- Increase the community's involvement in the Community Rating System (CRS) program; promoting better floodplain management while offering the incentive of lower flood insurance premiums.
- Promote the gathering and archiving of local data on the types and amount of damages after a natural hazard event.
- Support the development and use of disaster loss reduction related building codes and standards designed to reduce vulnerability and risk to all hazards.
- Improve hazard information, including databases and maps.
- Prepare a local Hazard Mitigation Plan.
- Participate in the Community Rating System (CRS) program.

IMPLEMENTATION TOOLS

- Encourage watershed planning that protect streams against flooding.
- Identify repetitive flood loss properties for buyout purposes; prioritize and implement buyouts.
- Strengthen floodplain regulations.
- Require utilities and communications businesses and developers to install underground electric and communications lines
- Develop and utilize greenways that parallel streams, rivers and stormwater management channels.



comprehensive plan

CITY OF MARYLAND HEIGHTS

SECTION 9.4 - FUTURE LAND USE

MARYLAND PARK LAKE DISTRICT



FUTURE LAND USE OVERVIEW

This section of the plan is an overview of the recommended future land use within the planning area. In this section the reader will find a discussion of land use recommendations and their associated land use definitions providing a common vocabulary for land use evaluation. Specific recommendations for land use are contained in Section 7.5 PLANNING SUB-DISTRICT POLICIES.

The future land use map is not the zoning map, but rather a guide for future land use, identifying preferred future land use patterns. The purpose of the map is to guide the decisions of property owners, developers and public policy makers over the life of the plan. The future land use map is designed to be used in conjunction with the goals and strategies and the development policies of the Maryland Park Lake District Future Land Use Plan. Development investment, infrastructure, and regulatory decisions should enable the Maryland Park Lake District to achieve the vision of this plan and the land uses shown on the map. The Land Use Map only identifies categories of land uses. Other aspects of site design and development, such as inclusion of green space, site layout, infrastructure needs, stormwater requirements, architectural and landscaping requirements, are not portrayed by the map. Other items related to site development are described in the goals and policies of the Maryland Park Lake District Future Land Use Plan and the City’s Zoning Code.

The Maryland Park Lake District is broken down into six “Planning Sub-Districts.” These sub-districts allow a focused and concise discussion of future land use and development policies. Based on common elements within each district, this approach sets up a simpler framework to address shared land use themes.

MAP DEFINITIONS

A *Land Use map* describes preferred future land uses. It is a guide for development decisions over a period of time.

A *Zoning map* identifies the boundaries of zoning districts. It is a legal document that identifies the current permitted uses of property.

POLICY DEFINITION

A specific statement of principle or of guiding actions that implies clear commitment but is not mandatory. A general direction that a governmental agency sets to follow in order to meet its goals and objectives before undertaking an action program.

PLANNING SUB-DISTRICT DESCRIPTION—AERIAL MAP

PLANNING SUB-DISTRICT # 1: RIVERSIDE:

Generally defined by the existing Hollywood Casino Planned District and the Riverport Business Park Planned Development, this sub-district is partially planned and zoned as Planned District with regulations specifying future land use. The balance of this district is land located on the eastern side of Route 141 and zoned “M-2” (Heavy Manufacturing) and the properties located southwest of the Hollywood Casino site that are zoned “NU”.

SUB-DISTRICT SIZE:

1,170 ACRES (14% OF PLANNING AREA)





PLANNING SUB-DISTRICT DESCRIPTION—AERIAL MAP

PLANNING SUB-DISTRICT # 2: CRYSTAL SPRINGS:

This sub-district surrounds Route 141 and includes its intersections with Marine Avenue and Creve Coeur Mill Road. The major developments include the privately owned portion of Crystal Springs Quarry Golf Course and the former West Continental Auto Salvage.

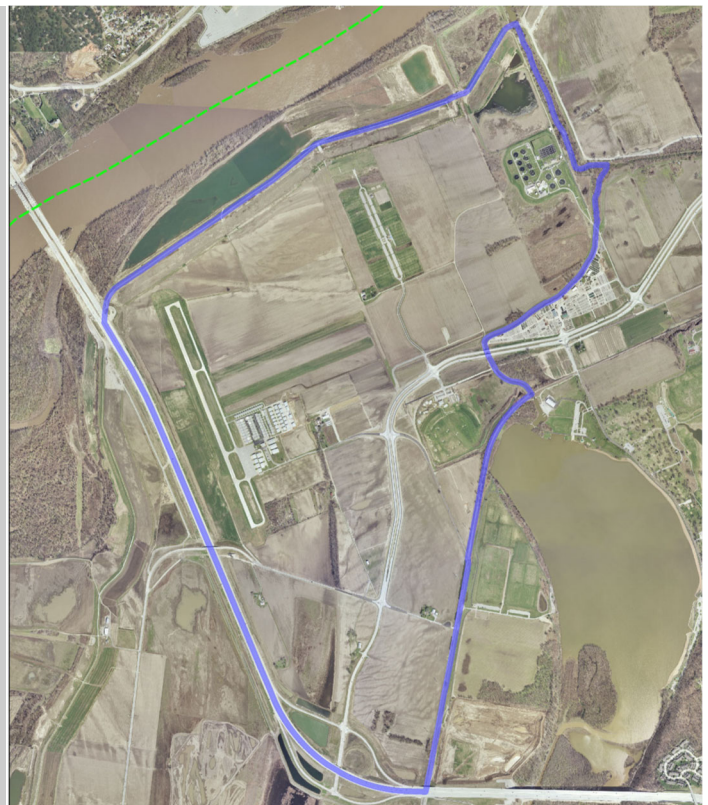
SUB-DISTRICT SIZE:
634 ACRES (8% OF PLANNING AREA)



PLANNING SUB-DISTRICT #3: EXPRESSWAY:

This sub-district surrounds the balance of Missouri Route 141 to its intersection with Missouri Route 364 and includes intersections with River Valley Drive, Sportport/Golfport Drive, Creve Coeur Mill Road and Morgan Road. The major developments in this area are Sportport, Creve Coeur Airport and the MSD Missouri River Treatment Plant.

SUB-DISTRICT SIZE:
1,620 ACRES (20% OF PLANNING AREA)

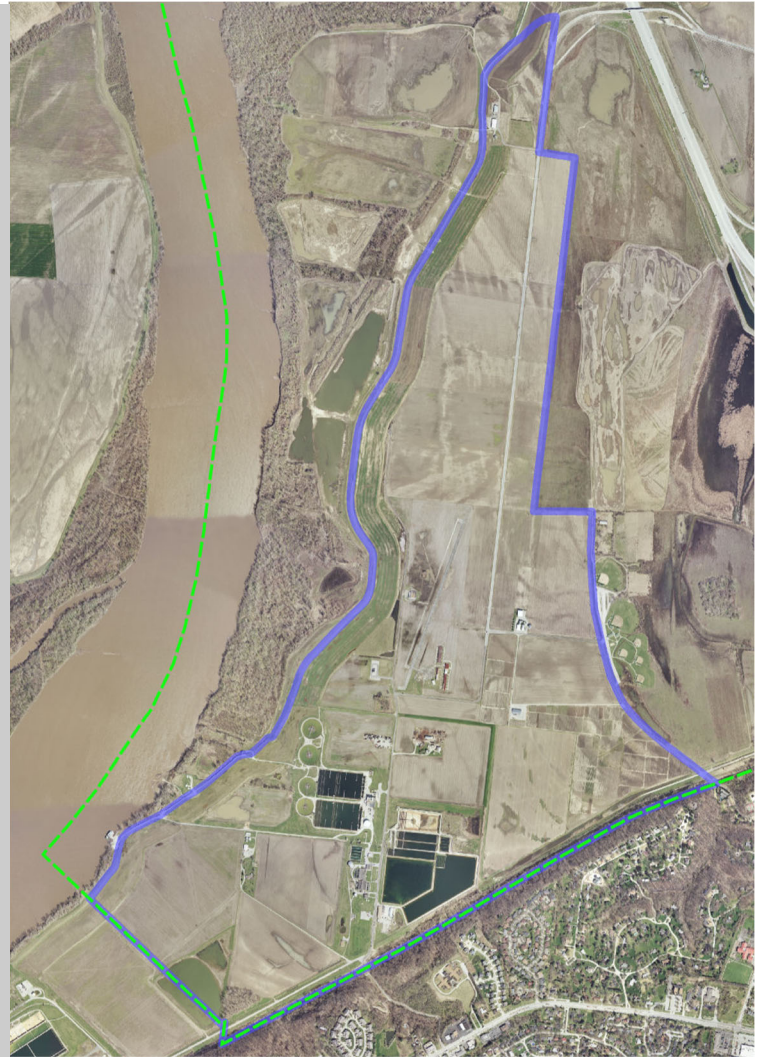




PLANNING SUB-DISTRICT DESCRIPTION—AERIAL MAP

PLANNING SUB-DISTRICT #4: RIVER VALLEY

This sub-district contains the property south of Missouri Route 364, east of the Howard Bend Levee and west of Creve Coeur Park generally surrounding River Valley Drive. The major development in this district is the Missouri American Water Treatment Plant.



SUB-DISTRICT SIZE:
996 ACRES (12% OF PLANNING AREA)

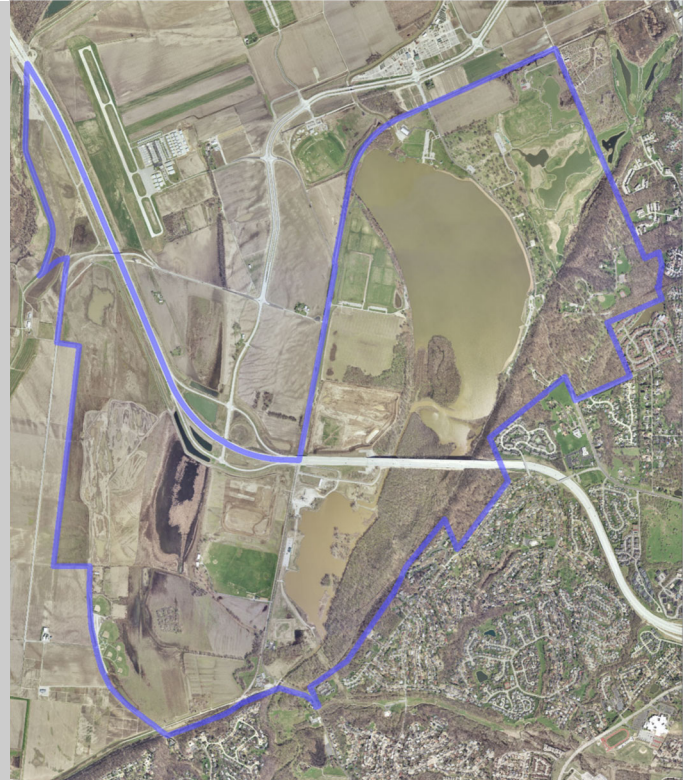


PLANNING SUB-DISTRICT DESCRIPTION AND GRAPHICS

PLANNING SUB-DISTRICT #5: CREVE COEUR LAKE

All of this planning sub-district is within the bounds of Creve Coeur Park. The future land use is directed by the County Park Master Plan and implemented by an “MXD” Mixed Use District Ordinance. This district is separate from, but integrated with, the land use plan for the planning area. Portions of this district are leased from St. Louis County to private recreational providers. These developments include the back nine holes of Crystal Springs Quarry Golf Course, Lou Fusz Soccer Club, Scott Gallagher Soccer Club, the Creve Coeur Lake House, and Go Ape.

SUB-DISTRICT SIZE:
2,374 ACRES (29% OF PLANNING AREA)



PLANNING SUB-DISTRICT #6: MISSOURI RIVER:

This sub-district is comprised of lands outside (west of) the proposed 500-year levee, this sub-district includes all lands in the Missouri River floodway and/or flood plain that are expected to remain undeveloped with the exception of passive recreational land uses.

SUB-DISTRICT SIZE:
1,314 ACRES (16% OF PLANNING AREA)

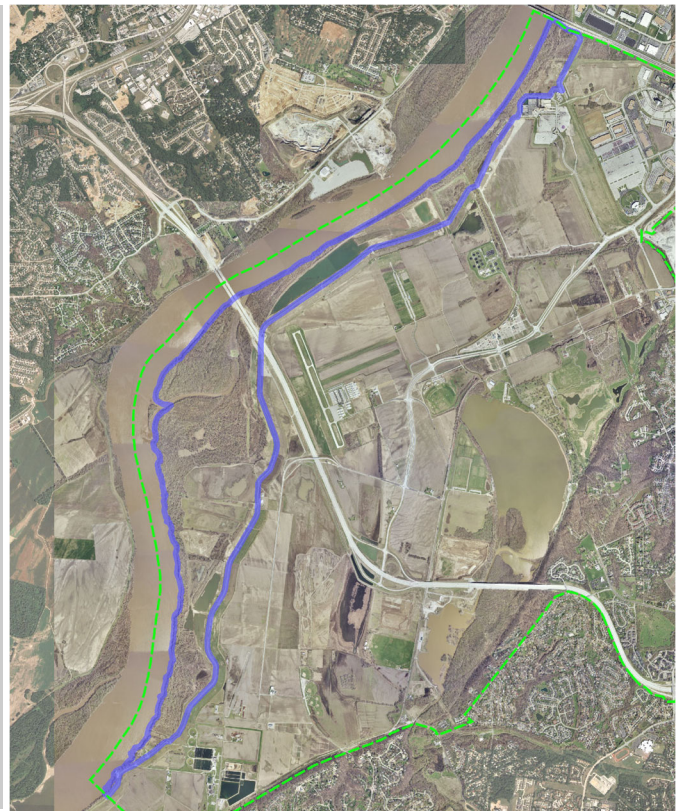




TABLE 9.4.A: LAND USE ACCEPTABILITY MATRIX

LAND USE CATEGORY	RIVERSIDE PLANNING SUB-DISTRICT	CRYSTAL SPRINGS PLANNING SUB-DISTRICT	EXPRESSWAY PLANNING SUB-DISTRICT	RIVER VALLEY PLANNING SUB-DISTRICT	CREVE COEUR LAKE PLANNING SUB-DISTRICT	MISSOURI RIVER PLANNING SUB-DISTRICT
SINGLE FAMILY RESIDENTIAL	❑	❑	❑	❑	❑	❑
MULTI-FAMILY RESIDENTIAL	❑	○	○	❑	❑	❑
MIXED-USE	●	●	●	❑	❑	❑
SERVICE RETAIL	○	○	○	○	○	❑
REGIONAL RETAIL	❑	❑	○	❑	❑	❑
ENTERTAINMENT	●	○	○	❑	❑	❑
OFFICE CAMPUS	●	●	●	○	❑	❑
OFFICE FLEX	○	●	●	○	❑	❑
OFFICE DISTRIBUTION	❑	❑	●	●	❑	❑
LIGHT INDUSTRIAL	❑	●	○	●	❑	❑
RECREATION	○	●	○	○	●	○
INSTITUTIONAL	○	○	○	○	❑	❑
AGRICULTURE	○	○	○	○	❑	❑

● ACCEPTED

The proposed use is acceptable and its purpose, location, design, and effect should be fostered and supported in the District. Development must still conform to applicable regulations.

○ CONDITIONALLY ACCEPTED

The proposed use is likely to be acceptable, provided that the applicable design guidelines, mitigation techniques, and performance standards are implemented as set forth in the Zoning Code.

❑ DISCOURAGED

The proposed use is likely to be rejected or denied because it is not in compliance with the future land use policies of the Maryland Park Lake District. While applicants will be dissuaded from proposing discouraged uses, consideration of these uses is dependent on the applicant's ability to demonstrate mitigating or compensating measures for the project's impact. These measures, when incorporated into the site plan, must result in a substantial gain in overall quality of development in the district.

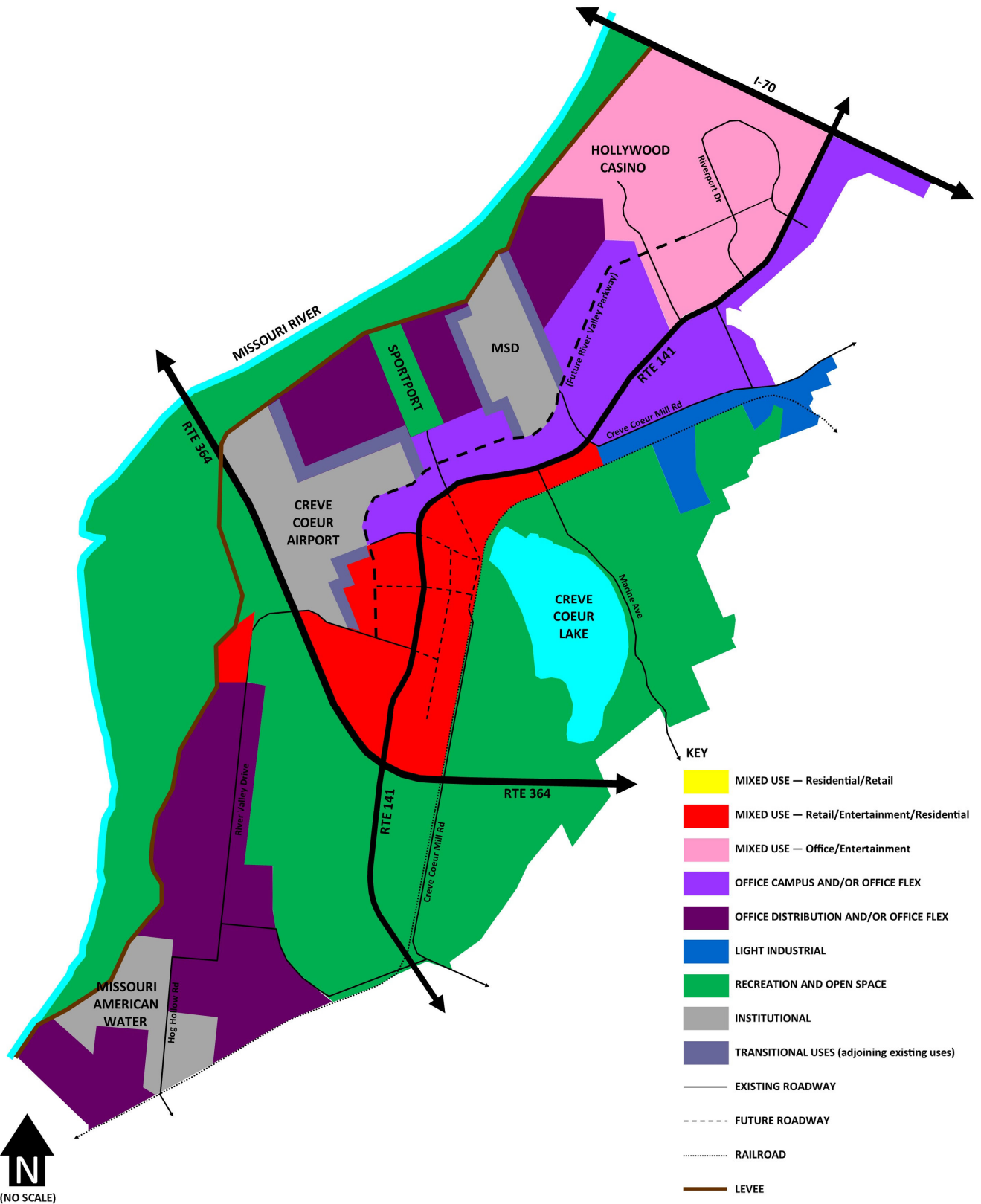


FIGURE 9.4.1: MARYLAND PARK LAKE DISTRICT FUTURE LAND USE MAP



LAND USE DEFINITIONS

SINGLE-FAMILY RESIDENTIAL



PURPOSE: TO CREATE HIGH QUALITY NEIGHBORHOODS THAT INCLUDE A RANGE OF HOUSING OPTIONS FOR PEOPLE IN ALL STAGES OF LIFE WITH INTEGRATED PUBLIC AND OPEN SPACE.

CHARACTERISTICS: INCLUDES DETACHED DWELLINGS, ATTACHED DWELLINGS (VILLAS), ROW HOUSES AND SUPPORTING FEATURES INCLUDING, BUT NOT LIMITED TO, PARKS, PLAYGROUNDS, WALKWAYS/BIKEWAYS, AND OTHER FUNCTIONAL OPEN SPACE AREAS.

DEVELOPMENT SIZE: 40+ acres

DENSITY: 4 to 8 Dwelling Units per Acre

CRITERIA FOR DESIGNATION:

- Location within the River Valley Sub-Planning District; and/or
- Located within a mixed-use development under the following criteria:
 - Single-family dwellings are functionally and aesthetically integrated with compatible buildings and uses within the development;
 - Single-family dwellings are buffered from incompatible uses within or adjacent to the development;
 - Single-family dwellings will not adversely affect or conflict with adjacent uses or impede the development of surrounding property;
 - Single-family dwellings in mixed-use developments outside the River Valley Sub-District consist of attached units a minimum of two-stories in height;
 - Adequate and integrated public and private facilities, such as roads, sidewalks, walkways, utilities, stormwater management, open space, landscaping, parking, and circulation, are provided or will be provided;
 - Open space areas are accessible to and integrated with adjacent commercial or business uses rather than freestanding.
 - There is safe and efficient access for the anticipated traffic levels.

DEVELOPMENT GUIDELINES

- Encourage a range of unit types within each project that results in a diversity of housing opportunities not only in form, but in price range.
- Discourage housing types to be clustered in such a manner that creates the perception of income differences.
- Encourage architectural details that establish and enhance the neighborhood's character.
- Encourage building materials that provide visual interest and texture to a building.
- Encourage front yard features to be designed as part of the public realm, enhancing both the visual quality of the road system and walkability.
- Encourage pedestrian connectivity within the project and to adjoining properties through sidewalks and walkways.
- Encourage functional common ground areas that provide places to residents to gather, play, exercise, and/or relax.
- Encourage the use of "green" infrastructure and energy efficient building materials and design.

SINGLE-FAMILY EXAMPLES





LAND USE DEFINITIONS

MULTIFAMILY RESIDENTIAL, COMMUNITY ■

PURPOSE: TO PROVIDE FOR A RESIDENTIAL COMMUNITY THAT CREATES A MIX OF UNIT TYPES IN APPROPRIATE LOCATIONS BY SUPPORTING VARIETY AND OPTIONS IN LIVING ENVIRONMENTS WHILE PROTECTING AND IMPROVING THE COMMUNITY’S PROPERTY VALUES.

CHARACTERISTICS: STRUCTURES DESIGNED TO ACCOMMODATE SEVERAL UNRELATED HOUSEHOLDS. MULTIFAMILY COMMUNITIES INCLUDE GARDEN APARTMENTS, TOWNHOUSES, ROW-HOUSES, MID RISE AND HIGH RISE APARTMENT BUILDINGS, SECOND-STORY (OR HIGHER) RESIDENTIAL UNITS OVER COMMERCIAL SPACE, AND RESIDENTIAL CONDOMINIUMS AS WELL AS THE NECESSARY DEVELOPMENT COMPONENTS TO SUPPORT THE DEVELOPMENT AS A COMMUNITY.

DEVELOPMENT SIZE: 20 acres or dependent on integration into Mixed Use District

DENSITY: 8-20 Dwelling Units per Acre (DUA)

CRITERIA FOR DESIGNATION:

- Location within: Crystal Springs, Expressway, or River Valley Sub-Districts, or
- Located within a mixed use development that meets the following criteria:
 - The proposed use is consistent with the Future Land Use Plan;
 - The proposed use will not be detrimental to the public health, safety, or general welfare;
 - The proposed use can be constructed in a manner that addresses the potential flood hazards on or adjacent to the site;
 - The proposed use will not adversely affect or conflict with adjacent uses or impede the development of surrounding property;
 - Adequate public and private facilities, such as infrastructure (roads, stormwater management, open space), landscaping, parking, and circulation, are provided or will be provided for the proposed use;
 - Availability or future availability of transit connections and the design of transit-oriented development;
 - There is safe and efficient access for the anticipated traffic levels.

DEVELOPMENT GUIDELINES

- Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale;
- Residential buildings are expected to include porches, varied rooflines and varied façade depths to create variety and individuality of dwelling units within the complex;
- Freestanding garages and/or carports shall be designed to be integral with the building design or sited so as to avoid long monotonous rows of garage doors and building walls.

MULTI-FAMILY EXAMPLES





CHARACTERISTICS

Garden apartments, townhouses, and mid-rise and high-rise apartment buildings.

TRAITS AFFECTING DESIGN APPROACH

- Access from secondary routes
- Importance of image and landscape setting
- Use of outdoor spaces for passive recreation activities
- Small to medium sized parking, perimeter parking interspersed with, and in proximity to medium to small footprint buildings

SITE PLANNING RECOMMENDATIONS

1. Develop PCS and ODS system as an integral part of site planning process; incorporate stormwater elements as buffers to adjacent incompatible uses as appropriate
2. Develop PCS/ODS as site amenities to add image, and identity, and recreational value; plan for multi-use above the 2-5 year storm level in conveyance/storage areas

RECOMMENDATIONS FOR CONVEYANCE / STORAGE / TREATMENT

3. Use flow attenuation, surface swales and localized BMP's to pre-treat parking runoff.
4. Locate WQ wetland treatment to pre-treat runoff into ponds as applicable
5. Direct roof runoff to localized PLD's

PCS - Primary Collection System
 ODS - On-Site Drainage System
 BMP's - Best Management Practices
 WQ - Water Quality
 PLD's - Porous Landscape Detention

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT



OFFICE CAMPUS



PURPOSE: TO PROVIDE OPPORTUNITIES FOR CORPORATE AND REGIONAL OFFICES AND ACCESSORY USES IN A WELL-DESIGNED AND INTEGRATED CAMPUS SETTING

CHARACTERISTICS: LARGE-SCALE EMPLOYMENT CENTERS AND A MIX OF SINGLE/MULTIPLE TENANT OFFICE BUILDINGS; MAY INCLUDE SOME INSTITUTIONAL AND PUBLIC/QUASI-PUBLIC USES SUCH AS HOSPITAL/MEDICAL OR GOVERNMENT OFFICES; PERSONAL SERVICE AND ACCESSORY USES INCLUDING RESTAURANTS, LOCAL RETAIL, HOTEL/MOTEL; MULTI-STORY BUILDINGS; INTEGRATED SITE DESIGN TO ENCOURAGE WALKABILITY, CONNECTIONS TO PARKS AND TRAILS SYSTEM AND INCLUDING PUBLIC OPEN SPACES.

DEVELOPMENT SIZE: Minimum project size is typically 15 acres.

BUILDING SIZE: Overall building sizes typically range from 100,000 - 250,000 square feet; typical building footprints range from 30,000 square feet to 50,000 square feet for multiple story buildings.

CRITERIA FOR DESIGNATION:

- Access to existing or proposed public facilities and infrastructure such as roads, stormwater, and sewer to serve buildings and occupants;
- Location at planning area gateways (Riverside Sub-District and Expressway Sub-District), along major corridors, and at highway interchanges;
- Capable of building and site design to minimize environmental impacts, including low impact developments or Leadership in Energy and Environmental Design (LEED) standards;
- Adjacent to employment-supportive land uses, including mixed-use, entertainment, and retail.

DEVELOPMENT GUIDELINES

- Promote building designs, systems and practices that are sustainable and adoptable to multiple uses in the interest of extending the building life cycle;
- Minimum amount of open space should be 35%;
- Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale;
- Provide gateway features and design elements along public ROW;
- Majority of the frontage occupied primarily by building;
- Integrated open space in coordination with stormwater management system designed as a site amenity;
- Provide the usability and connectivity of the pedestrian environment by enhancing internal access within the campus, providing access to the public realm of the street and/or open space features.

OFFICE CAMPUS EXAMPLES





CHARACTERISTICS

Office Campus: Large-scale employment centers and mix of single/multiple tenant office buildings; may include some institutional and public/quasi-public uses; cohesive site design to encourage walkability and connection to parks and trails systems.

Multi-Use: Dense, compatible mix of detail, residential, recreation and employment and (office/retail) activities. Broad mix of uses with compatibility ensured through site design; integrated pedestrian circulation throughout site and to surrounding uses.

TRAITS AFFECTING DESIGN APPROACH

- Generally bounded by Page Avenue / Maryland Heights Expressway
- Emphasis on outdoor pedestrian environments
- Importance of image and visibility
- Small to large building foot prints organized around pedestrian spaces and parking

PCS CHANNEL DESIGN REQUIREMENTS

High Importance

- When located adjacent to buildings and primary and secondary access routes

Medium Importance

- When located in parking lots, building service areas, or along service entry routes.

Low Importance

- Not applicable

SITE PLANNING RECOMMENDATIONS

- 1 Avoid locating PCS channels at the site perimeters except in service areas; orient PCS channels perpendicular to primary and highly visible roads to enhance building visibility.
- 2 Minimize building set backs to consolidate landscape areas; consolidate landscape perimeter islands and buffers to allow integration of water storage and treatment.
- 3 Orient building public spaces, patios and entrances to overlook ponds; create multi-functional open spaces above 5-year event level in PCS and ODS.

RECOMMENDATIONS FOR CONVEYANCE / STORAGE / TREATMENT

- 4 Use flow attenuation, surface swales and localized BMP's to pre-treat parking runoff.
- 5 Locate WQ wetland treatment / PLD to screen blank building facades, service areas, and perimeter parking
- 6 Direct roof runoff to localized PLD's

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT



OFFICE FLEX

PURPOSE: TO PROVIDE LOCATIONS FOR OFFICE FLEX BUILDINGS THAT ALLOW OPPORTUNITIES FOR MULTIPLE BUSINESS USES IN CONJUNCTION WITH SIMILAR SURROUNDING OFFICE FLEX USES.

CHARACTERISTICS: OFFICE SPACE IN COMBINATION WITH TECHNOLOGY, RESEARCH AND DEVELOPMENT, RETAIL, AND/OR CLEAN, INDOOR FABRICATION/ASSEMBLY USES; ALL USES CONTAINED WITHIN STRUCTURE; LIMITED NUMBER OF EMPLOYEES. OFFICE FLEX GENERALLY DOES NOT INVOLVE THE PRIMARY STORAGE OR DISTRIBUTION OF MATERIALS, WHICH MAY BE INCLUDED AS AN ACCESSORY USE THAT INCLUDES APPROPRIATE SCREENING AND MITIGATION OF LOADING DOCKS AND OTHER RELATED SITE ELEMENTS.

DEVELOPMENT SIZE: Minimum project size is typically 15 to 50 acres.

BUILDING SIZE: Building sizes typically range from 10,000 - 50,000 square feet.

CRITERIA FOR DESIGNATION:

- Identify as buffer use between higher/more intensive uses (i.e., office campus) and office distribution/industrial uses;
- May front either Missouri Route 141 or River Valley Parkway when applicable design standards are met;
- Must have, or be able to provide sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Office uses should be located along the “public” face of the structure facing public ROW or the publicly oriented portion of the development;
- Should be in proximity to service retail;
- Architectural design and associated characteristics should primarily be reflective of office development types (i.e. variety of architectural materials, etc.).

DEVELOPMENT GUIDELINES

- Promote building designs, systems and practices that are sustainable and adaptable to multiple uses in the interest of extending the building life cycle;
- Minimum amount of open space should be 35%;
- Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale;
- Provide gateway features along public ROW;
- Frontage occupied primarily by building;
- Integrate open space into stormwater management system designed as a site amenity.

OFFICE FLEX EXAMPLES





CHARACTERISTICS

Small to medium floor plate buildings, large areas of truck and auto loading, circulation, and parking surrounding each building; low density of employees and visitors

TRAITS AFFECTING DESIGN APPROACH

- High visibility from Maryland Heights Expressway and proposed collector streets
- Provision for employee break areas

PCS CHANNEL RECOMMENDATIONS

High Importance

- Building frontages along Maryland Heights Expressway and buildings
- Project primary entries

Medium Importance

- Areas adjacent to individual unit entries
- Side and rear parcel edges adjacent to local streets and frontages of adjacent projects

Low Importance

- Interior side and rear project limits

SITE PLANNING RECOMMENDATIONS

- 1 Minimum building setbacks, consolidate landscape buffers and islands to all allow multiple use as BMPs and flow attenuation
- 2 Provide adequate buffering and screening of storage, circulation and parking as an integral part of conveyance, storage, and treatment; locate large conveyance, storage and treatment at project side and rear limits
- 3 Locate ponds and refined landscape areas for employee usage at project entries as an integral part of conveyance and storage, and to enhance project identity
- 4 Locate large conveyance, storage, and treatment not designed as a landscape amenity at rear and side property limits or as interior of buffer
- 5 Rout of roof runoff through landscape islands at building perimeters for treatment and flow attenuation

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT



OFFICE DISTRIBUTION



PURPOSE: TO PROVIDE FOR LOCATIONS FOR COMBINED OFFICE AND DISTRIBUTION FACILITIES

CHARACTERISTICS: BUSINESS SERVICES, WAREHOUSING, DISTRIBUTION CENTER; TYPICALLY A PLANNED PARK OR CAMPUS DEVELOPMENT; LIMITED NUMBER OF EMPLOYEES; MAY INCLUDE WHOLESALE USES WITH DISTRIBUTION BUT WITHOUT A LOCAL RETAIL OUTLET; ALL USES CONTAINED WITHIN STRUCTURE; LOADING DOCKS SCREENED FROM PUBLIC VIEW.

DEVELOPMENT SIZE: Minimum project size is typically 25 to 50 acres.

SITE SIZE: Minimum site size is typically 5 to 10 acres.

BUILDING SIZE: Typical building square footage range between 50,000 and 250,000 square feet.

CRITERIA FOR DESIGNATION:

- Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Sufficient land area for internal roadway network that can accommodate large over the road trucks;
- Access to a major roadway through a connector street; Office Distribution may not have direct access to or front on Route 141 or River Valley Parkway.

DEVELOPMENT GUIDELINES

- Architectural design to incorporate design features that create visual relief and shadow into the façade; articulation of building entrances as visual features and focal points; and allows for variety in building surface materials;
- Gateway features utilized along public ROW;
- Integrated open space in coordination with stormwater management system designed as a site amenity;
- Provide connections to the open space system;
- Adequate screening of loading docks from the public ROW.

OFFICE DISTRIBUTION EXAMPLES





LIGHT INDUSTRIAL



PURPOSE: TO PROVIDE OPPORTUNITIES FOR CLEAN, INDOOR RESEARCH, DEVELOPMENT, ASSEMBLY, MANUFACTURING, WAREHOUSING, AND DISTRIBUTION, ALONG WITH SUPPORTIVE GOODS AND SERVICES AT LOCATIONS THAT ALLOW FOR MODERATE TRANSPORTATION IMPACTS

CHARACTERISTICS: ALL USES CONTAINED INDOORS; MAY INCLUDE LIMITED SCREENED OUTDOOR STORAGE; NO EXTERNAL NOISE, EMISSIONS, LIGHT, OR ODORS; LIMITED NUMBER OF EMPLOYEES; LIGHT TO MODERATE TRUCK TRAFFIC AND LOADING.;

DEVELOPMENT SIZE: 25 TO 100 ACRES

BUILDING SIZE: Typical gross floor area of 50,000 to 250,000 square feet.

CRITERIA FOR DESIGNATION:

- Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Access to a major roadway through a connector street; Light Industrial may not have direct access to or front on Route 141;
- Sufficient land area for internal roadway network that can accommodate large over the road trucks;
- Development may be permitted to exceed 250,000 square feet subject to an impact assessment on surrounding land uses, development and viewsheds.

DEVELOPMENT GUIDELINES

- Architectural design to incorporate design features that create visual relief and shadow into the façade; articulation of building entrances as visual features and focal points; and allows for variety in building surface materials;
- Integrated open space in coordination with stormwater management system designed as a site amenity;
- Provide connections to the open space system;
- Adequate screening of loading docks from the public ROW.

LIGHT INDUSTRIAL EXAMPLES





CHARACTERISTICS

Large scale, large floor plate buildings with singular or multiple tenants. Large truck loading, storage, and parking areas surrounding buildings

TRAITS AFFECTING DESIGN APPROACH

- Typically in low visibility areas
- Low density of employees

PCS CHANNEL DESIGN REQUIREMENTS

High Importance

- N/A

Medium Importance

- Buildings fronting on primary access routes, building entry areas.

Low Importance

- Site rear and side lot edges, storage and loading areas

SITE PLANNING RECOMMENDATIONS

- 1 Uses PCS channels with screening plantings to buffer adjacent uses, especially at Development Type edges bordering the mitigation area and other Development Types
- 2 Minimize building setbacks; consolidate landscape areas to incorporate ODS and on-site BMPs to screen blank walls and parking.
- 3 Locate ponds, multi-functional landscape areas adjacent to building entries
- 4 Incorporate consolidated ODS and BMPs into building layout to isolate fragmented storage and treatment.
- 5 Incorporate sand filters and porous pavements in low use/low visibility areas if storage and treatment requirements cannot be met through other means.
- 6 Incorporate porous landscape detention in landscape islands to separate and screen uses and blank facades.

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT



SERVICE RETAIL



PURPOSE: TO PROVIDE FOR LOCAL AND COMMUNITY RETAIL DEMAND GENERATED BY SURROUNDING LAND USES

CHARACTERISTICS: RETAIL, RESTAURANT AND PERSONAL SERVICE BUSINESSES THAT OFFER CONVENIENT ACCESS FOR EMPLOYEES AND VISITORS OF NEARBY DEVELOPMENT; PRIMARY TRADE AREA FOR SERVICE RETAIL IS THREE TO SIX MILES.

DEVELOPMENT SIZE: Minimum project size is typically 5 acres.

BUILDING SIZE: 10,000 to 50,000 square feet, individual building footprints tend not to exceed 50,000 square feet.

CRITERIA FOR DESIGNATION:

- Located along collector street or higher;
- May be located within office or industrial district as part of a larger development;
- Contains a variety of businesses and services at various scales, does not include large scale retail (“big-box”) uses;
- Ability to provide vehicle and pedestrian connections to surrounding uses;
- Compatible with surrounding neighborhood;
- Integrated into adjacent uses.

DEVELOPMENT GUIDELINES

- Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale;
- Gateway features utilized along public ROW;
- Frontage occupied primarily by building;
- Integrated open spaces;
- Stormwater management designed as a site amenity and integrated into the open space system;
- Buildings that derive their image solely from applied treatments that express corporate identity are discouraged.

SERVICE RETAIL EXAMPLES





REGIONAL RETAIL



PURPOSE: TO PROVIDE OPPORTUNITIES FOR REGIONAL AS WELL AS LOCAL RETAIL AND SERVICE DEMAND AT A DESTINATION SITE WITH PROXIMITY TO MANY USERS AND ACCESSIBILITY LOCALLY AND REGIONALLY

CHARACTERISTICS: INTENSITY MAY RANGE FROM SMALLER SCALE TO LARGE-SCALE RETAIL AND MAY INCLUDE A COMBINATION OF USE SIZES; NO RESIDENTIAL USES; MIX OF AUTO-ORIENTED AND PEDESTRIAN ORIENTED USES; OFTEN INCLUDES PAD SITES ALONG MAJOR ROADWAYS FOR CONVENIENCE GOODS, RESTAURANTS AND SERVICES. THE PRIMARY TRADE AREA FOR REGIONAL RETAIL IS FIVE TO FIFTEEN MILES.

DEVELOPMENT SIZE: Minimum project size is typically 35 to 50 acres.

BUILDING SIZE: 10,000 to 100,000 square feet, individual building footprints tend not to exceed 100,000 square feet (buildings may be larger when integrating multiple tenants into a single structure).

CRITERIA FOR DESIGNATION:

- Interchange or intersection of arterial streets or higher;
- High visibility location;
- May include ancillary office uses but no residential uses;
- Must have or provide for sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Sufficient land area for internal roadway network.

DEVELOPMENT GUIDELINES

- Present an integrated connected appearance;
- Designed to front on access roads with parking primarily located behind the buildings, presenting frontage development at 60% occupied by building;
- Facades should be articulated to reduce the massive scale and the uniform appearance of large retail buildings; provide visual interest; introduce human scale elements along the walkways fronting the building;
- Building design and entrances should be designed to reduce walking distances from parking lots and facilitate pedestrian access;
- Signage consolidated and integrated into the architecture;
- Stormwater management and open space will be integrated into the development and utilized as a multi-functional site amenity;
- Parking areas should promote safe, convenient and efficient access for vehicles and pedestrians.

REGIONAL RETAIL EXAMPLES





ENTERTAINMENT



PURPOSE: TO PROVIDE OPPORTUNITIES FOR ENTERTAINMENT AND HOSPITALITY USES IN PROMINENT ACCESSIBLE LOCATIONS THAT COMPLIMENT AND ENHANCE EXISTING ENTERTAINMENT USES.

CHARACTERISTICS: STATE- LICENSED GAMING FACILITIES; HOTELS/MOTELS; RESTAURANTS; SPECIALTY RETAIL; ENTERTAINMENT AND HOSPITALITY USES; RECREATION-ORIENTED USES; ADMINISTRATIVE SERVICES; CONVENTION AND EXHIBITION SPACES.

DEVELOPMENT SIZE: Typically 25 to 50 acres.

BUILDING SIZE: 10,000 to 100,000 square feet, individual building footprints tend not to exceed 100,000 square feet (buildings may be larger when integrating multiple tenants into a single structure).

CRITERIA FOR DESIGNATION:

- Adjacent to existing entertainment uses;
- Access to either Missouri Route 141 or River Valley Parkway;
- Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Sufficient land area for internal roadway network;
- Connections to and integration with adjacent uses.

DEVELOPMENT GUIDELINES

- Present an integrated connected appearance;
- Designed to front on access roads with parking primarily located behind the buildings, presenting frontage development at 60% occupied by building;
- Facades should be articulated to provide human scale and the reduce the uniform appearance of large scale buildings and provide visual interest;
- Building design and entrances should be designed to reduce walking distances from parking lots and facilitate pedestrian access;
- Signage consolidated and integrated into the architecture;
- Stormwater management and open space will be integrated into the development and utilized as a multi-functional site amenity;
- Parking areas should promote safe, convenient and efficient access for vehicles and pedestrians.

ENTERTAINMENT EXAMPLES





MIXED USE



PURPOSE: TO PROVIDE FOR A DENSE, COMPATIBLE MIX OF RETAIL, RESIDENTIAL, COMMERCIAL BUSINESS AND HOSPITALITY LAND USES.

CHARACTERISTICS: BROAD MIX OF USES WITH COMPATIBILITY ENSURED THROUGH SITE DESIGN; INTEGRATED PEDESTRIAN CIRCULATION THROUGHOUT SITE AND TO SURROUNDING USES; BUILDING SIZE AND USE INTENSITY CAN VARY ACROSS DEVELOPMENT; CAN BE TOURIST AND/OR RECREATION ORIENTED; GENERAL AND SPECIALTY RETAIL; MIX OF MULTIFAMILY HOUSING TYPES; OPEN SPACES AND PUBLIC SPACES; SEEN AS A CATALYST FOR HIGH QUALITY DEVELOPMENT; USEFUL IN CREATING COMPACT DEVELOPMENT NODES CENTERED ON PLAZA'S AND OTHER PUBLIC SPACES.

TIMING: While mixed use is the preferred development type in some areas of Howard Bend, it is an emerging development type and may take time to reach build-out and maturity. As development takes place in the Maryland Park Lake District, plans for conditionally encouraged uses, such as regional retail, in mixed use areas will be reviewed to ensure that building layout, infrastructure patterns, and potential connections to public transit can be adapted easily in the future to maximize potential mixed use developments. Early uses on a mixed use site should not preclude future possibilities, and public infrastructure and rights-of-way should be planned accordingly.

DEVELOPMENT SIZE: Typically 40 to 100 acres

CRITERIA FOR DESIGNATION:

- Access to Missouri Route 141;
- Connection between open/space active recreation and other uses;
- Must have or provide sufficient infrastructure (road, water, sewer, stormwater) capacity;
- Sufficient land area for internal roadway network;
- Increased access to the transportation network;
- Access to alternative modes of transportation;
- Promotes a sense of community and place;
- Provide increased access and connection to public places and open space.

DEVELOPMENT GUIDELINES

- Mixed-use developments should create an inviting and attractive destination for local residents and region wide users. Buildings, and spaces between buildings, should be designed and oriented to create safe, pleasant, and active environments;
- The development's circulation system should promote efficient movement of vehicles in a clear and well-defined manner that minimizes conflicts with pedestrians and bicycles. Pedestrian users should find that public spaces and gathering places are clearly identified and easy to access and locate;

MIXED USE EXAMPLES





- Landscaped areas should be used to frame and soften structures, to define site functions, to enhance the quality of the environment, and to screen undesirable views. Landscaping should work with buildings and surroundings to make a positive contribution to the aesthetics and function of both the specific site and the area;
- Visitors and residents should be able to locate and identify major attributes of the development through a unified signage concept;
- Visitors and residents should find that the development provides the best possible design to protect their personal safety and safety of their property.



Retail/Mixed-Use/Entertainment Development Type

CHARACTERISTICS

Retail: Large to small floor plate service and retail buildings surrounded by large parking areas; service and delivery access from secondary access routes, primary visitor access from primary and secondary access.

Multi-Use: medium to small floor plate buildings with a mix of residents and visitors; small to large parking areas with integrated service and delivery access.

Entertainment: Destination, linked, small to large floor plate buildings, surrounded by parking

TRAITS AFFECTING DESIGN APPROACH

- Generally bounded by Page Avenue / Maryland Heights Expressway
- Emphasis on outdoor pedestrian environments
- Importance of image and visibility
- Small to large building foot prints organized around pedestrian spaces and parking

PCS CHANNEL DESIGN REQUIREMENTS

High Importance

- When located adjacent to buildings primary and secondary frontages and primary and secondary access routes

Medium Importance

- When located in parking lots, building service areas, or along service entry routes.

Low Importance

- Not applicable

SITE PLANNING RECOMMENDATIONS

- 1 IP PCS or large ODS channels are required on primary or secondary access perimeters, develop ponds manicured, multi-use landscape areas orient patios, building entries and frontages on PCS to create a unique identity and image
- 2 Develop internal channels as an integral part of retail environment (i.e.- San Antonio River Walk).
- 3 Minimize building setbacks to strengthen retail identity; consolidate landscape islands and integrate PCS, ODS, and BMPs

RECOMMENDATIONS FOR CONVEYANCE / STORAGE / TREATMENT

- 4 Use flow attenuation, surface swales and localized BMP's to pre-treat parking runoff; locate BMPs in
- 5 Locate WQ wetland treatment / PLD to screen blank building facades, service areas, and perimeter parking
- 6 Direct roof runoff to localized PLD's

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT



INSTITUTIONAL

PURPOSE: PROVIDE NECESSARY CIVIC ACTIVITY TO A COMMUNITY, THESE USES TYPICALLY INCLUDE GOVERNMENTAL, EDUCATIONAL AND CULTURAL ACTIVITIES. LOCATED THROUGHOUT THE COMMUNITY, INSTITUTIONAL LAND USES TAKE A VARIETY OF FORMS FROM SINGLE BUILDINGS TO CAMPUSES.

CHARACTERISTICS: ALLOWS FLEXIBILITY IN DEVELOPMENT FOR MAJOR, MULTI-FUNCTIONAL INSTITUTIONAL USES THAT SERVE THE GREATER COMMUNITY. MANAGE THE EXPANSION OF MAJOR INSTITUTIONAL USES TO PREVENT UNNECESSARY IMPACTS ON ESTABLISHED NEIGHBORHOOD AREAS. PRESERVE THE AVAILABILITY OF SITES FOR CIVIC FACILITIES TO ENSURE THAT FACILITIES ARE ADEQUATE FOR POPULATION GROWTH. PROMOTE CIVIC USES THAT ARE ACCESSIBLE AND USEABLE FOR THE NEIGHBORHOOD RESIDENT AND MAINTAIN STABILITY OF TYPES OF PUBLIC USES IN THE NEIGHBORHOOD. MAY INCLUDE HOUSING FACILITIES THAT ARE ACCESSORY TO A CIVIC USE, SUCH AS STUDENT DORMITORIES RECOGNIZE SUITABLE AREAS FOR PUBLIC USES, SUCH AS HOSPITALS AND SCHOOLS, THAT WILL MINIMIZE THE IMPACTS TO RESIDENTIAL AREAS.

TIMING:

DEVELOPMENT SIZE: 5 - 25 ACRES

BUILDING SIZE: 25,000 - 75,000 SQUARE FEET

CRITERIA FOR DESIGNATION:

- An existing civic use that is likely or encouraged to redevelop into a different land use should NOT be designated as civic;
- Civic uses that are permitted throughout the city, such as day care centers and religious assembly, should not be limited to only the civic land use designation.

DEVELOPMENT GUIDELINES:

- Promote building designs, systems and practices that are sustainable and adoptable to multiple uses in the interest of extending the building life cycle;
- Minimum amount of open space should be 35%;
- Architectural elements, such as colonnades, canopies, walkways, lighting standards, street furniture and variety in building materials, together with building massing and form, should create human scale;
- Provide gateway features and design elements along public ROW;
- Majority of the frontage occupied primarily by building;
- Integrated open space in coordination with stormwater management system designed as a site amenity;
- Provide the usability and connectivity of the pedestrian environment by enhancing internal access within the campus, providing access to the public realm of the street and/or open space features.

INSTITUTIONAL EXAMPLES





TRANSPORTATION

The ability of the Maryland Park Lake District to fully develop depends on adequate access and transportation system capacity provided to the area. This Transportation Plan provides the foundation for determining transportation needs and improvements required to provide adequate access and capacity into the planning area.

As development occurs, each development will be required to perform a Transportation Impact Study (TIS), which will be guided by this transportation plan. Transportation Impact Studies will consider the capacity, operations, safety, and sustainability of all applicable modes of transportation (e.g., automobile, trucks, walking, bicycling, and public transportation) with and without the proposed development. These studies will identify the forecasted trips associated with each proposed phase of development and will identify improvements necessary to mitigate transportation impacts resulting from the proposed development.

The number of trips that would be generated by the proposed land uses will be based upon the current version of Trip Generation, published by the Institute of Transportation Engineers (ITE). Where applicable, person trips should be considered and a pass-by/common trip reduction may be applied. Pass-by and common trips are attracted to developments, but are not new to the roadway system. Pass-by trips are specifically those trips that are temporally diverted from their route to a commercial site (such as a bank, service station, etc.) and then continue in the same direction as their original travel. Common trips are those that are part of a “linked” tour. An example would be a shopping trip with an incidental stop at a bank in the same center. The consideration of additional development scenarios to account for future background growth or other proposed developments may also be required in the development of trip forecast scenarios.

The Transportation Impact Study will consider the sufficiency of the transportation system to accommodate anticipated future travel patterns and demands. Items should be considered such as (but not limited to): physical design characteristics such as design speed, sight distance, lane configurations/widths, pavement condition, and presence/condition of shoulders; driveway/access configurations, spacing, and locations; bicycle and pedestrian accommodations such as sidewalks/trails, trail connections, crosswalks, pedestrian signals, mid-block crossings, and bicycle facilities; connections to and accommodations of the regional public transportation system; and traffic control and devices including intersection configuration/control, signing, striping, on-street parking restrictions and speed limits. Study data, assumptions, calculations, methodologies, results, and recommendations will be submitted for review along with any electronic analysis files.

Proposed transportation improvements will be reviewed and evaluated on an incremental basis as development occurs and is reviewed. Transportation improvements should be designed and constructed to provide a high level of connectivity to other developments (both existing and future), local/regional trail systems, and public transportation facilities. Based upon previous studies it is likely that 175,000 to 325,000 new trips would be generated by the full build-out of planning

TRANSPORTATION POLICIES

1. All new development will require a traffic impact study.
2. New development will reflect the guidance provided in this plan for transportation.
3. New developments will be required to provide the maximum level of connectivity possible regarding current and future developments and the trail system.
4. Improvements to the transportation network will be reviewed and evaluated on an incremental basis as development occurs and is reviewed.
5. Access to developments will be required to provide its fair share of infrastructure improvements on an incremental basis.

Crawford Bunte Brammeier, the City's transportation consultant's provided the research, methodology and overall background for the transportation discussion and subsequent recommendations.



area. As such, transportation improvements and enhancements are required to support the development envisioned within the planning area. Each development will be required to provide a fair share of infrastructure improvements on an incremental basis.

REQUIRED IMPROVEMENTS

Transportation improvements will be required to support the future development in the Maryland Park Lake District. A description of transportation issues and improvement guidelines (including implementation and the general timing of the improvements) are presented in this plan. Some of the transportation improvements will not be necessary immediately, as the planning area will likely take 30 to 50 years to fully develop. The improvements have been put into three categories: Short, Mid, and Long-Term Improvements. Additionally a graphic is included illustrating the locations and generalized timeframes for improvements.

SHORT-TERM IMPROVEMENTS

COLLECTOR ROADWAY BETWEEN I-70 AND WATERWORKS ROAD (RIVER VALLEY PARKWAY)

Providing a north-south collector roadway running parallel to Missouri Route 141 (Maryland Heights Expressway) from I-70 to Waterworks Road (through Riverport Business Park) is a key improvement toward achieving the access and mobility goals of this plan. This work was documented in a concept plan which was adopted by the Maryland Heights Planning and Zoning Commission on June 27, 2006 as an amendment to the city's Transportation Element of the Comprehensive Plan.

This roadway ultimately will have four through lanes (two in each direction) and turn lanes at intersections. Although the facility will be designed with some level of access control, it would be primarily designed to provide access to developments within the planning area. Therefore, recommended access control measures should be commensurate with those of a collector roadway. This roadway is planned to be integrated with the regional stormwater conveyance plan (refer to Section 5.2B Stormwater). The roadway will take the form of a parkway, with the regional storm water conveyance system running along the right-of-way, thereby enhancing the aesthetic appearance and feel of the parkway adding value and character to serviced development.

Benefits

River Valley Parkway will support several of the planning area's transportation goals including:

1. Providing multiple interconnections to integrate land uses in the planning area.
2. Avoiding freestanding development areas that are unrelated to each other.
3. Maximizing traffic efficiency.

REQUIRED IMPROVEMENTS

Many of the transportation improvements will not be necessary immediately, as the planning area will likely take 30 to 50 years to fully develop. The improvements have been put into three categories: Short, Mid, and Long-Term Improvements.

SHORT-TERM IMPROVEMENTS: Need to be commenced immediately and continue as development proceeds. These are:

1. Extension of Maryland Heights Expressway to Route 340 (Olive Blvd.)
2. Route 141 Connection
3. River Valley Parkway
4. Maryland Heights Expressway expansion from 4 to 6 lanes
5. Waterworks Road and Maryland Heights Expressway connection
6. Walkways and bikeways

MID-TERM IMPROVEMENTS: Need to be constructed as the development matures (likely within ten to twenty five years). These are:

1. River Valley Parkway/Missouri Route 364 interchange
2. Baxter Road extension
3. Bus circulator

LONG-TERM IMPROVEMENTS: Need to be implemented to facilitate the full build-out of the planning area. They are:

1. Earth City Expressway/River Valley Parkway/I-70 improved interchange
2. Metrolink service



4. Avoiding traffic congestion.
5. Providing for desirable aesthetic design.

This roadway will provide a common corridor through the planning area and tie the various land uses together. Its implementation will eliminate the “cul-de-sac” pattern that is typical of poorly planned developments that quickly become functionally obsolete. It also relieves traffic congestion by providing a way to traverse within the planning area on a “local” roadway; thus preserving the Expressway’s regional character and capacity. The collector roadway and its connections will create multiple travel route options, allowing traffic to spread out across the transportation system. This flexibility not only augments system capacity, but it also translates into increased access for emergency providers thus enhancing safety.

Alignment of River Valley Parkway at River Valley Drive

The River Valley Parkway Alignment Study completed by CBB in 2008 recommended the “selected” alignment in which River Valley Parkway formed a continuous, north-south route parallel to the Expressway and connected via the River Valley Drive Connector. An “optional” alignment was also identified that teed River Valley Parkway into River Valley Drive. The “optional” alignment was ultimately chosen by the city since 1) the “optional alignment provides a reasonable level of connectivity and congestion relief, 2) the “optional” alignment has less encroachment on existing property boundaries, 3) the reduction in development levels supported by the “optional” alignment versus the “selected” alignment, approximately the final 10% of opportunity in the planning area, was not significant enough to justify its negative impacts on adjacent property.

Trigger

The River Valley Parkway extension should be constructed along with adjoining developments, as a primary part of their access plan. Initially the roadway could be built as a two or three-lane facility with right-of-way preserved for the future expansion of the roadway to four-lanes with a median and left-turn lanes. Consideration should be given to widening to a four-lane facility with a median and left-turn lanes when traffic volumes dictate the need, which is generally 10,000 - 12,000 vehicles per day (vpd) or when the peak hour level of service reaches LOS “D”.

WIDEN MISSOURI ROUTE 141 TO SIX-LANES BETWEEN HARRAH’S AND RIVER VALLEY DRIVE

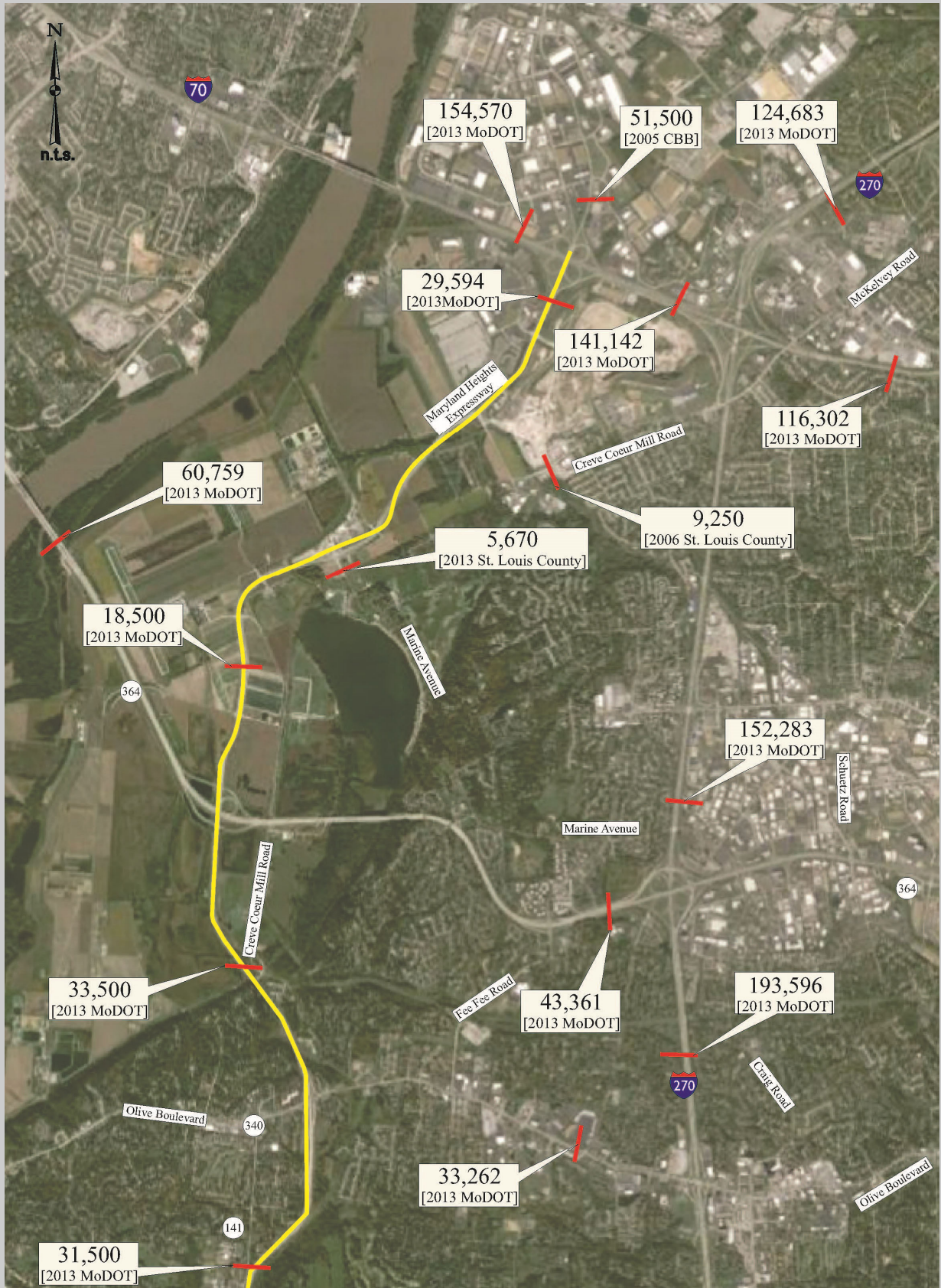
Missouri Route 141 (Maryland Heights Expressway) will eventually need to be widened to six-lanes between Harrah’s Casino and River Valley Drive. Although the Expressway currently has four lanes between Harrah’s and River Valley Drive, it was designed to be widened to six lanes in the future. The additional capacity that the widening of Missouri Route 141 would create would help to preserve the regional function of the expressway while allowing for local uses (i.e. the development of the planning area).

Benefits

The major benefit of the widening of the expressway is the additional capacity that

“The automobile as an object has been our industrial civilizations most significant product Its side effects in terms of mass consumption are enormous. The infrastructures of the land and the urban environment have suffered from a radical upheaval, the historical city centres have been jeopardized by it, the whole system of transporting goods and people has been revolutionized and even our vision of things has been transformed, both subjectively in our mode of perception and objectively in changes to the landscape.

—Vittorio Gregotti, 1978



SOURCE: CRAWFORD, BUNTE, BRAMMEIER

FIGURE 9.4.7: AVERAGE DAILY TRAFFIC VOLUMES



would be created at the signalized intersections along Missouri Route 141. The additional capacity would promote improved Levels of Service and traffic efficiency.

Issues

The primary issue to widen the expressway is cost. However, the right-of-way has already been acquired and much of the grading has already been completed for this widening, which will greatly reduce overall project cost.

Trigger

Consideration should be given to widen the expressway to six-lanes when peak hour operating conditions reach LOS “D” or “E”, generally consistent with traffic volumes of 35,000-45,000 vpd.

IMPROVEMENTS TO MISSOURI ROUTE 141 INTERSECTIONS AND INTERCHANGES

The Missouri Route 141 intersections and interchanges between Creve Coeur Mill Road and Water Works Road will require improvements as a part of ongoing development in the planning area. The interchange at Missouri Route 141/Missouri Route 364 is currently experiencing capacity and operational issues during peak periods. Morning commuter peak queues extend from the eastbound off-ramp onto Missouri Route 364, at times to the Missouri River. Evening commuter peak queues spill back on northbound Missouri Route 141, at times past Water Works Road. Other intersections are at or nearing capacity.

Improvements to existing intersections will be necessary to accommodate additional development. Examples of improvements that have been considered in the past and that may benefit the roadway system include:

- Improvements to the Interchange at Missouri Route 364/Missouri Route 141
- Lengthening and/or Adding Turning Lanes at Intersections
- Widening Side Street Approaches
- Traffic Signal System Improvements
- Respacing of Traffic Signals
- New Interchange at Missouri Route 141/Water Works Road
- New Interchange/Grade Separation of Missouri Route 141 at River Valley Drive

Benefits

As development occurs, improvements at these junctions will be critical to provide an appropriate level of capacity along Missouri Route 141 and provide access into the area. These improvements should be designed and constructed in such a way to promote interconnectivity within the planning area and, to the extent possible, remove traffic from Missouri Route 364 and Missouri Route 141, providing a longer function life from these facilities.

Issues

There are significant constraints for many of these improvements. Much of the right-of-way along this corridor is constrained by the Creve Coeur Memorial Park mitigation area, Creve Coeur Park, the Creve Coeur Airport, proposed development plans, the existing railroad, City of St. Louis waterlines, and the Missouri River bluffs. Design studies are needed to identify the most feasible and cost effective improvement options.



Trigger

Improvements should be constructed as a part of ongoing development, as is required to maintain the functionality of the local and regional transportation system. Intersection and traffic signal improvements could be constructed along with some developments as a part of their primary part of their access plan. Larger improvements (such as new interchanges, interchange improvements, and grade separations) may require the financial support of more than one development. In that case each development should be required to provide a fair share of funding to support the overall project. The specific nature and timing of each improvement should be determined through the Transportation Impact Study Process.

WALKWAYS AND BIKEWAYS

The inclusion of pedestrian and bicycle facilities into the planning area will serve as an important piece in the overall success of the area. The Comprehensive Plan includes several goals related to the development of walkways and bikeways. The Plan seeks to implement a system of walkways and bikeways which 1) serve developments, 2) provide connectivity between developments, and 3) provide connectivity and integration with the regional trail and public transportation systems.

Benefits

Walkways can provide many benefits to an area. First, a well-planned local system of pedestrian and bicycle facilities that connects to a regional system can help enhance the marketability and perception of a community. Moreover, such facilities can help improve a company's image. Companies that build projects with well planned and executed pedestrian amenities, conservation and open space benefits, stand a better chance of being recognized as environmentally-friendly which may help facilitate a better public-image. Walkways and bikeways can also help to enhance floodplains, wetlands, and other types of conservation areas as amenities. Finally, trails help to promote physical activity, fitness, and health. The planning area's system will be unique in that it will connect to several regional trails including the Katy and Centennial Trails. These connections are likely to result in some commuters choosing bicycle as their preferred mode of travel.

Issues

Such facilities are sometimes met with opposition by local neighborhoods. However, the planning area is largely a "greenfield" development of commercial nature, so public opposition should not be an issue. Resultantly, there should be no major issues to implementing walkways and bikeways in the planning area.

Trigger

The inclusion of walkways and bikeways into the area is most easily completed at the inception of development. This would likely include creating the system incrementally as development occurs in conjunction with other infrastructure implementation.

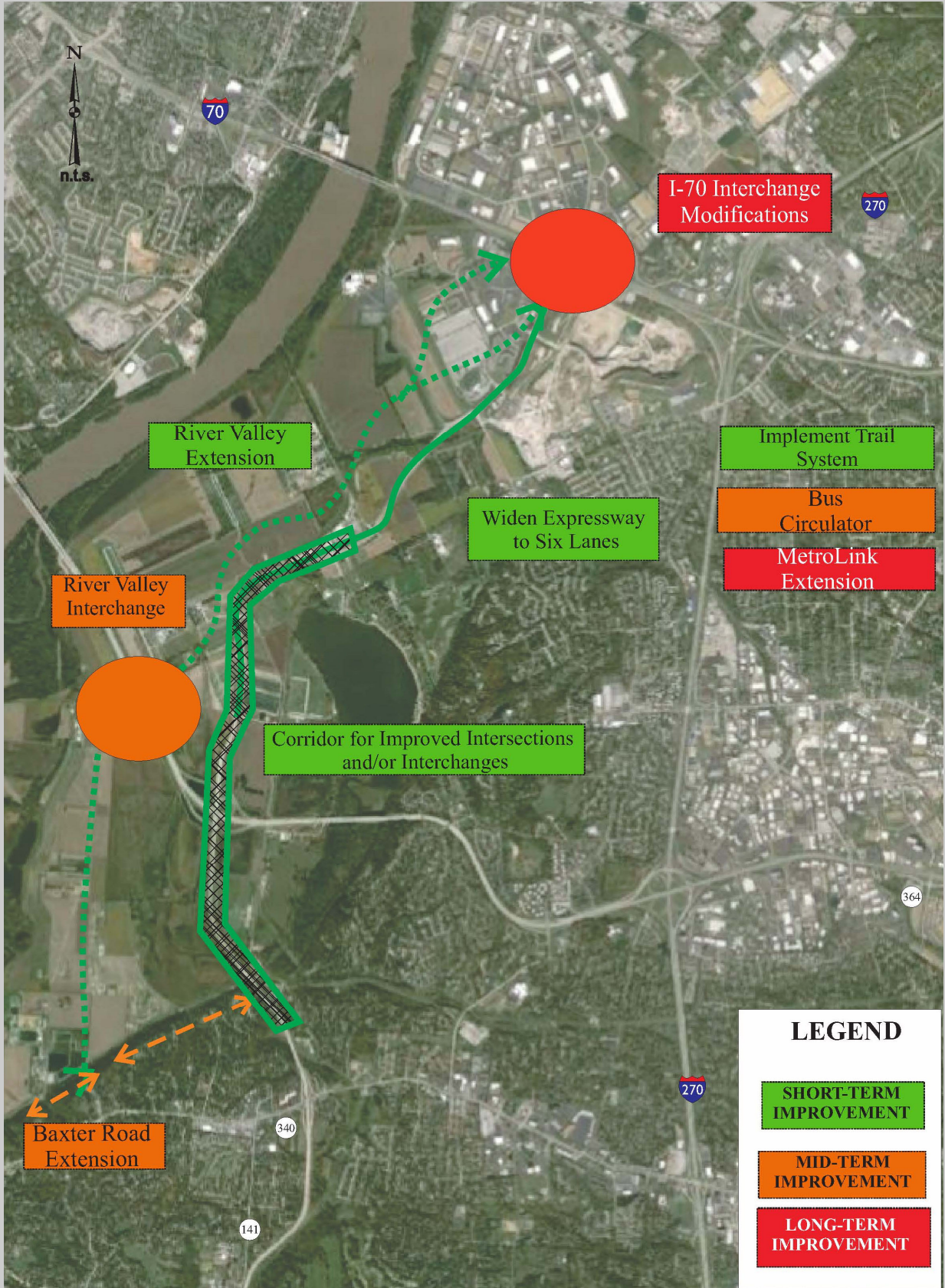
EXTEND EXISTING METROBUS LINES

New developments should consider accessibility to the region's public transportation system. Currently MetroBus serves Riverport and Earth City with Bus Route 34. Additionally, Bus Routes 33 and 98 serve the area near Dorsett Road and I-270. Transportation Impact Studies should coordinate with the Bi-State Development Agency in order to consider extending public transportation routes to serve new developments as they occur.

Benefits

Provision of access to the regional Public Transportation System would result in:

- Congestion reduction
- Environmental pollutant reduction



SOURCE: CRAWFORD, BUNTE, BRAMMEIER

FIGURE 9.4.8: HOWARD BEND TRANSPORTATION IMPROVEMENTS



- Equitable means of travel

Issues

The primary issues with extending existing bus routes or adding new bus routes is cost and ensuring that adequate levels of demand exist. The Bi-State Development Agency should be consulted to determine feasibility enhancements to the public transportation system in the planning area.

Trigger

All new developments should consider accessibility to the region's public transportation system.

MID-TERM IMPROVEMENTS

RIVER VALLEY DRIVE INTERCHANGE

An interchange at River Valley Drive/Missouri Route 364 could become important as the planning area builds-out. This interchange would relieve a great deal of pressure from Missouri Route 364 / Missouri Route 141 interchange and Missouri Route 141 / River Valley Drive intersection. Although this project would provide an immediate benefit to the planning area, it is considered a "mid-term improvement" for two reasons. First, this improvement will not be required until much of the planning area's development is already in place. Second, "short-term improvements" such as the River Valley Drive extension (River Valley Parkway) should be put into place before this interchange is constructed.

Benefits

An interchange at River Valley Drive and Missouri Route 364 would help to increase the accessibility of the planning area. This interchange would also play a large role in relieving traffic on Missouri Route 141. The areas that would benefit the most from this interchange would be 1) developments near the Missouri Route 364/Missouri Route 141 interchange (including a possible regional retail component) and 2) developments in the River Valley District. Without this interchange, a primary route for entering the River Valley District would be to travel north on the Expressway to the River Valley Drive intersection and then cross back over Missouri Route 364 to access this area. An interchange at Missouri Route 364 and River Valley Drive could likely take 15,000-25,000 vpd off this segment of the expressway.

Issues

Some of the potential issues in the construction of an interchange between River Valley Drive and Missouri Route 364 include:

- Environmental (some of the interchange's footprint would fall in wetland mitigation areas created for the Missouri Route 364 project)
- Cost
- MoDOT approval (a typical interchange design would not allow sufficient spacing from Missouri Route 141 interchange; thus a modified interchange form, such as a modified split-diamond interchange, would probably be required).

Due to these issues the ability to gain approvals for such improvements may be challenging and time-consuming.

Trigger

This improvement will likely be necessary when a substantial level of development is realized in the district (e.g., possibly a retail component located near the Missouri Route 364/Missouri Route 141 interchange).



BAXTER ROAD EXTENSION

St. Louis County has previously explored a potential new roadway extending from existing Baxter Road to the southern portion of the planning area, possibly connecting to the Expressway. This extension of Baxter Road was considered as a means of reducing traffic congestion, specifically along Missouri Route 340 (Olive Boulevard). This project is not active at this time, but would allow alternative access to the south portion of the district and should remain as mid-term improvement to improving access to the district.

Benefits

An extension of Baxter Road would provide several benefits; regionally and locally. First, the extension would provide better access to the southern part of the planning area. Additional access points to the planning area would help to alleviate traffic on the existing access roads. The extension of Baxter Road would also help to relieve the traffic conditions at the interchange of Missouri Route 141 and Missouri Route 340.

Issues

Some of the issues that may be involved in the extension of Baxter Road include:

- Purchase of land/cost
- Right-of-way constraints
- The St. Louis County water plant
- Other environmental issues

Trigger

Any extension of Baxter Road would likely be initiated by an initiative by the City of Chesterfield and St. Louis County.

BUS CIRCULATOR

A local transit circulator, similar to the St. Charles SCAT system, Forest Park Trolley, or that used on the Washington University Campus, could be implemented in the planning area to provide alternative means of travel within the planning area. A transit circulator could provide a relatively low cost method of transit in the area. The bus circulator could serve development in the district and could also serve to act as a feeder system if light rail was extended to the planning area. The combination of light rail and bus service may prove necessary in order to provide access to the regional public transportation system and reduce congestion.

Benefits

The inclusion of a bus circulator without light rail service can provide many benefits including:

- Congestion reduction
- Environmental pollutant reduction
- Equitable means of travel

The inclusion of a bus circulator with the expansion of the light rail system to the planning area would include the above benefits as well as a complimentary service that may help to increase ridership and regional mobility.



Issues

The primary issues with the addition of bus service to the planning area are cost and ensuring that adequate levels of demand exist. The costs associated with this alternative would include capital costs (purchase of a vehicle), operation, maintenance, and contracting with an operator. One vehicle would likely cost roughly \$100,000, while operation and maintenance (depending on the hours of operation) could cost roughly \$100,000 annually. MoDOT solicits bids for transit vehicles for public service providers, which is funded through the STP process with the local sponsors providing a 20% match. The sponsor is required to fund the operating costs.

Trigger

The inclusion of bus service to the area would be necessary once it was determined that the demand for the service is sufficient to justify the annual operating expenses. It may also be necessary to include bus service if light rail service is extended to the area. The bus service would then act as a service “feeder” for transit riders to access more specific sites within the planning area.

LONG-TERM IMPROVEMENTS

EARTH CITY EXPRESSWAY/RIVER VALLEY DRIVE EXTENSION/ I-70 INTERCHANGE

The segment of Missouri Route 141 (Earth City Expressway) south of I-70 will experience increased levels of traffic congestion as development in the planning area occurs. This is due to the fact that Earth City Expressway is the only way to access the planning area from I-70. However, it may be possible at some point in the future to provide additional capacity by tying directional movements between the River Valley Drive Extension and I-70/Earth City Expressway interchange as a part of a future project to replace the existing I-70/Earth City Expressway interchange. This would create an alternative route for access into the planning area.

Benefits

An I-70/Earth City Expressway interchange with direct connections to the proposed River Valley Drive Extension would help to reduce future congestion on the Expressway. As previously noted, currently the only way to access the planning area from I-70 is the interchange with Earth City Expressway. A revised interchange configuration that allows for direct connections to the proposed River Valley Drive Extension would likely result in a significant diversion of traffic off of Earth City Expressway north of Harrah's and would also create better access to the northern end of the planning area.

Issues

There are three primary issues that may arise in this improvement.

- The proposed connections would likely have to thread between existing Riverport buildings to reach I-70. It may be possible to thread this connection through Riverport's parking areas and replace the lost parking with structured parking. Safe pedestrian accommodations may also be required to connect the Amphitheater with its parking areas.
- Cost
- FHWA/MoDOT approval; a typical interchange design would not allow sufficient spacing within the Earth City Expressway/I-270/70/St. Charles Rock Road interchange complex; thus a modified interchange form would be required. The standard process may take several years for design and agency approvals.

Trigger

The modification of the I-70/Missouri Route 141 interchange to allow for direct connections to the proposed River Valley



Drive Extension would help to reduce future congestion on the Expressway. It may be most efficient to tie this improvement into future reconstruction efforts by MoDOT. Previous planning studies have noted the need to conduct design studies to determine the most feasible and cost effective improvements at the I-70/Missouri Route 141 interchange to accommodate additional development in the Maryland Park Lake District.

METROLINK EXTENSION

Description

Currently, there is no light rail service in the planning area. However, Metro does have a light-rail connection to West Port and the planning area included as part of its master plan. The proposed Daniel Boone corridor would extend from Clayton and the Cross County MetroLink extension to west St. Louis County with a Westport station location. Light rail service in the area would help to alleviate traffic congestion in the area as well as produce potential economic development gains.

Benefits

The addition of a region transit service into the area can have several benefits. Some of the benefits include:

- Reduction in congestion
- Increase access opportunities
- Equitable means of travel

Issues

The primary issues that arise with the inclusion of light rail service include:

- Cost
- Potential public opposition
- Right-of-way acquisition

Trigger

The inclusion of the light rail system into the planning area will be made more attractive and cost effective if the required right-of-way is already set aside. Even so, the implementation of such a project would be regional in nature, completed by St. Louis County, Bi-State Development Agency or the East-West Gateway Council of Governments.



STORMWATER MANAGEMENT SYSTEM - OVERVIEW

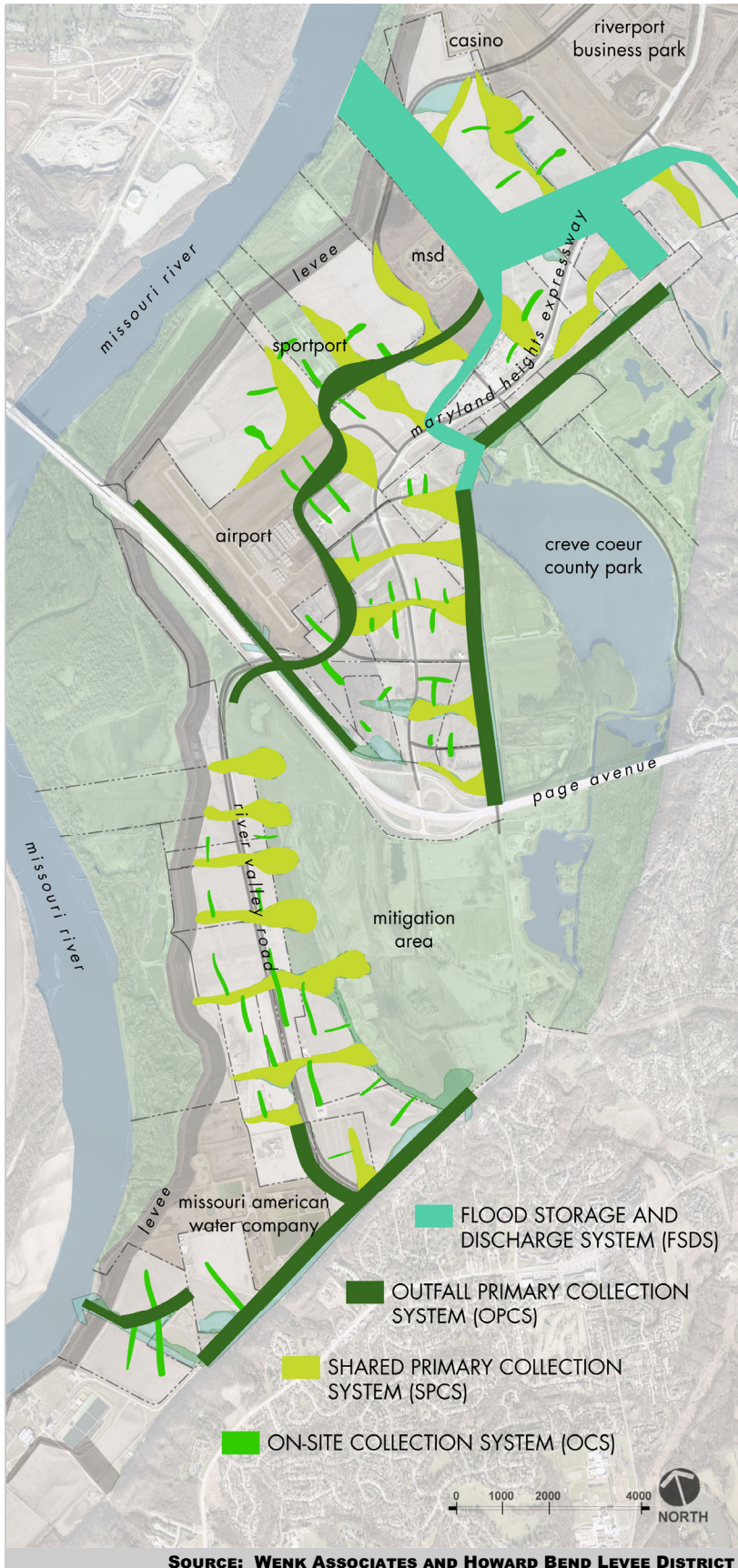
This document presents the framework and implementation guidelines for stormwater management within the Maryland Park Lake District. The design of the system and its approach was based upon the stormwater management vision contained within the 2002 Land Use Plan of multi-functional design and it is also based upon the preliminary engineering studies completed by Horner & Shifrin, the Howard Bend Levee District's engineering consultant. The components of the stormwater system have been developed to be multi-functional and to add value to various development parcels and the District. A key consideration is the manner in which the stormwater conveyance system can help to shape and reinforce desirable development patterns and become a key part of the community's parks and open space network.

This plan was developed through a process that included consultation and collaboration with property owners, Levee District board members, development consultants, and the District's engineer. While this approach was created by the Levee District's consultant, Wenk Associates, collaboration with the City, the City's planning consultants, the planning commission, and the public were critical in establishing an approach to the systems design. Additionally, the St. Louis County parks department staff has been involved in planning work directly related to trails and stormwater management proposals that have a direct effect on Park properties.

The approach taken to stormwater management in the area is one that may be new to the St. Louis region but is being used elsewhere in the country as a means to not only manage stormwater, but also to add character and value to adjoining properties. The system is designed multi-functionally serving the purposes of stormwater management and the creation of an integrated system of open space. Utilization of these design elements will undoubtedly add value and create character within the development of Howard bend and will establish the Maryland Park Lake District as a place of destination and desirability.

"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired in value."

- Theodore Roosevelt



SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT

ELEMENTS OF THE REGIONAL STORMWATER MANAGEMENT SYSTEM

The conceptual stormwater management system is comprised of four types of conveyance and storage. From largest to smallest in scale, this system includes the following components:

The River Flood Protection System: Consists of the 500-year levee, flood walls, seepage protection berm, and outlet gates. This system has been completed by the District and has made development feasible in the project area. Hence, the stormwater management system does not address this system.

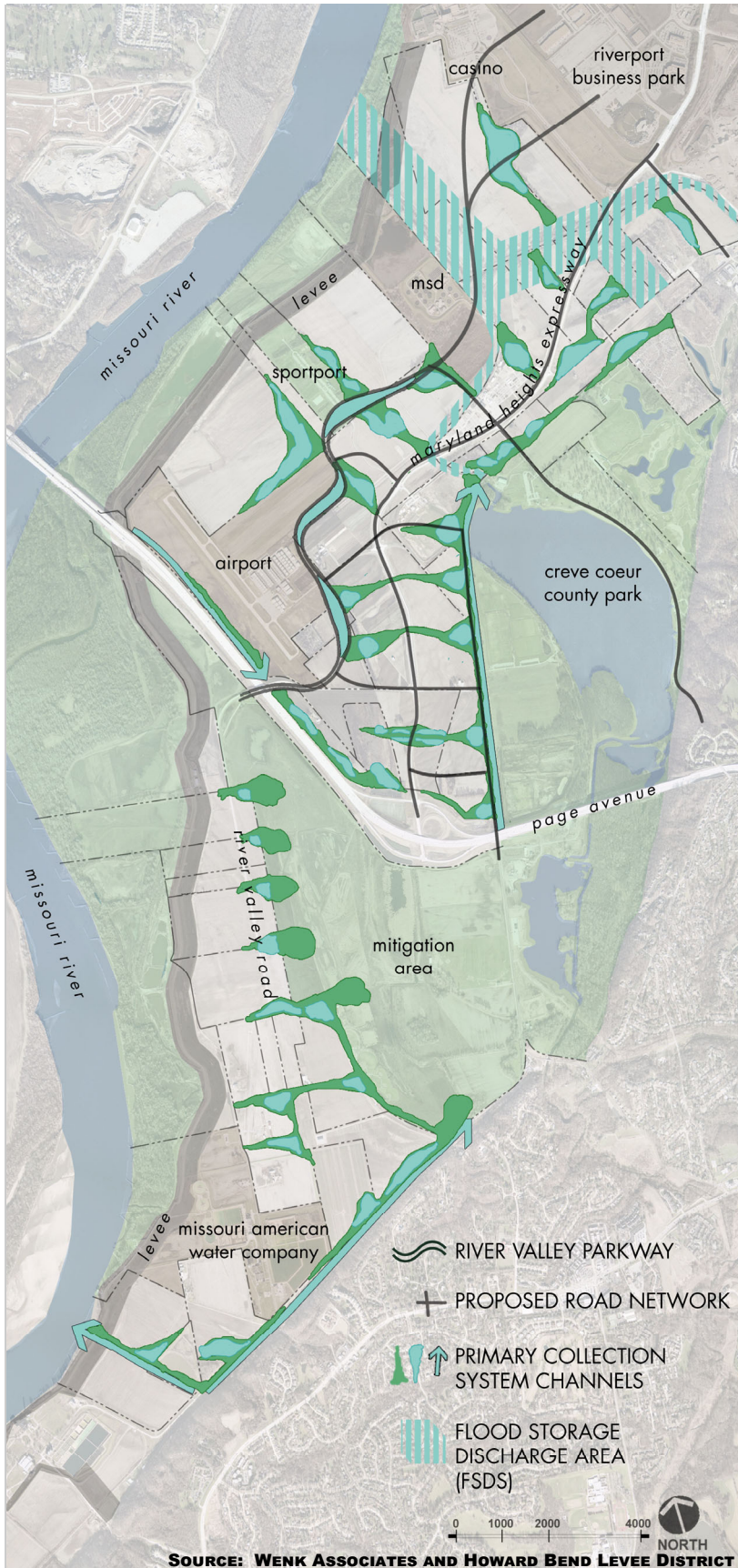
The Flood Storage and Discharge System (FSDS): Consists of Creve Coeur Creek, Fee Fee Creek, and Louiselle Creek; the flank levees along the creeks; Creve Coeur Lake; and the gated outlet culvert through the 500-year levee to the Missouri River. The Flood Storage and Discharge System accommodates upland runoff as well as local runoff and provides the outlet for all discharges to the river.

The Primary Collection System (PCS): collects runoff from developing parcels and conveys their associated stormwater to the flood storage and discharge system. There are two subsets to the system:

1. **Outfall Primary Collection System (OPCS):** This portion of the PCS is directly connected to the FSDS and typically provides contiguous, connected stormwater management for large parcels, or a number of smaller parcels. Because it is contiguous and connected, it can function as an integral part of the regional open space and park uses proposed for the FSDS. In addition to its primary stormwater management functions, the PCS will also provide fill material for development sites.
2. **Shared Primary Collection System (SPCS):** This portion includes localized outfalls that are entirely within larger parcels or that serve as the interface between smaller parcels.

The On-Site Drainage System (OSDS): includes site specific solutions that serve individual development parcels in the District and conveys resulting runoff to the Primary Collection System or directly to the Flood Storage and Discharge System. Specific ODS's rely on the land use and the location of the parcel.

FIGURE 9.4.10: STORMWATER PROTECTION SYSTEM DIAGRAM



APPROACH TO THE STORMWATER MANAGEMENT SYSTEM

An approach relying primarily on consolidated storage, conveyance, and treatment, supplemented by on-site facilities, was selected as the most appropriate approach to stormwater management within the planning area. With this approach, a greater efficiency, roughly a ten percent reduction, in land area required for storage is possible. Additionally, this approach utilizes the State Road 364 mitigation area for stormwater storage. Within consolidated facilities, this approach presents distinctly different opportunities for incorporating the preferred approach for areas north of State Route 364 and south of State Route 364.

Area North of State Route 364: A consolidated system in the area north of State Route 364 will be created through the development of a parkway (referred to as the River Valley Parkway) that integrates a collector road (refer to Section 6.3.1.4: **TRANSPORTATION**) with the regional stormwater conveyance, storage, and treatment in the median. Additionally, the integrated parkway concept supports transportation planning recommendations for the area through the development of a collector roadway extending from the Riverport Business Park to Waterworks Road. The Parkway provides adjacent development with higher visibility, an identifiable address, and creates a landscape that enhances the value and character of adjacent parcels.

The alignment of secondary channels perpendicular to the Parkway and to Missouri Route 141 allows for maximum exposure of future development to both the Parkway and the Expressway. The Secondary Channels also provide for important cross connections for local trails between the Missouri River levee regional trail and trails within Creve Coeur Park. The outfall channel along Creve Coeur Mill Road will allow for the creation of an open space buffer between the Park and anticipated loading and service areas for future development along the Expressway. This buffer allows for an important trail link between the Fee Fee Creek corridor and State Road 364 trails.

Area South of State Route 364: Stormwater requirements for the area south of State Route 364 are considerably different than for the area to the north. Because the area is constrained by the Missouri River levee and the State Route 364 mitigation area, it forms a long narrow series of parcels linked by River Valley Road, generally paralleling the Missouri River levee. Stormwater must be conveyed from the River levee in an easterly direction to the State Route 364 mitigation area, which serves as the area's outfall.

There are two exceptions to this pattern at the south end of the area. East of the Missouri American Water Treatment Plant, portions of the development area drain to a conveyance along the edge of the bluff. The areas west and south of the treatment plant drain directly into the Missouri River. East of the plant, portions of the area drain into a small Shared Primary Collection System that outfalls into the State Route 364 mitigation area. The outfalls into the mitigation area serves two purposes: removing stormwater from development and providing needed water to mitigation lands within Creve Coeur Park.

Because of the areas configuration, the stormwater network is much more localized, lacking the hierarchy that is characteristic of the area North of State Route 364. Because the mitigation area requires additional sources of water to develop wetlands, only water quality capture volumes will be required for developments in the area east and north of the treatment plant. Larger volumes may be conveyed into the mitigation area. As parcels develop, owners will be required to construct stormwater storage facilities in the mitigation area that enhance the habitat of the area as part of the PCS system.

FIGURE 9.4.11: PRIMARY COLLECTION SYSTEM



SYSTEM WIDE POLICIES FOR MULTIPLE USE

The following general policies and guidelines are intended to apply to all components of the stormwater management system.

COMPLIANCE AND COMPATIBILITY WITH REGULATIONS AND CURRENT PLANNING CONTEXT

- Policy #1:** Improvements shall comply with all applicable MSD, State, and Federal standards and guidelines regarding stormwater management and water quality.
- Policy #2:** The Howard Bend District Storm Water Master Plan prepared by Horner and Shifrin constitutes the basis for policies and guidelines that integrate stormwater management systems with proposed development.
- Policy #3:** These policies and guidelines are compatible with, and will become an integral part of, land use and site planning recommendations prepared for the District by the City.

POLICIES FOCUSED ON CREATING “MULTIPLE BENEFIT” STORMWATER SYSTEMS

- Policy #4:** Runoff rates and volumes should be reduced to more closely match natural conditions. Increased runoff associated with development can be environmentally harmful, causing erosion in stream systems and generating greater pollutant loading downstream. A variety of techniques, including fragmenting and reducing impervious areas, and using landscape or other pervious areas to slow runoff and promote infiltration, should be incorporated into the system.
- Policy #5:** Stormwater quality management and flood control should be integrated within the system. Both stormwater quality treatment and flood control detention goals can be accomplished within the same land area through a coordinated design approach.
- Policy #6:** The HBLD and the City will coordinate efforts to develop a “multiple use” stormwater system that simultaneously provides water quality treatment, recreational opportunities, and environmental responsibility. To maximize efficiency of land use and provide the greatest value, the system should exhibit the following characteristics:
- Land areas included in the stormwater system should be made available to the public by the HBLD and private land owners for a range of active and passive recreational uses, open space, and trails.
 - Ecologically and bio-technically based engineering practices should form the basis for storm channel design. The system should be designed to maintain required levels of stormwater storage and treatment in a manner that allows for a reasonable level of biological diversity.
 - The District should support and promote the creation of multi-functional facilities. For example, wildlife habitat should be created as part of stormwater management and water quality treatment facilities. Trails should function in dual roles as facility maintenance access roads where feasible.
- Policy #7:** Stormwater quality facilities that enhance the site, the community, and the environment, should be encouraged. Gardens, plazas, rooftops, and even parking lots function as amenities and provide visual interest while performing stormwater quality functions and reinforcing urban design goals. The integration of water quality features and associated landforms, walls, landscape, and materials can reflect the standards and patterns of a neighborhood and help to create lively, safe, and pedestrian-oriented districts.
- Policy #8:** Stormwater quality needs should be considered early in the design process. When included in the initial planning for a project, opportunities to integrate stormwater quality facilities into a site can be fully realized.
- Policy #9:** The entire site should be considered when planning for stormwater quality treatment. Often, stormwater qual-



ity and flood detention are dealt with only at the low corner of the site and ignored on the remainder of the project. In this “end-of-pipe” approach, all the runoff volume is concentrated at one point and it can be difficult to fit the required detention into the space provided, necessitating the use of more costly mechanical systems.

Policy #10: Sustainable facilities that can be safely maintained should be key considerations in the design process. Stormwater quality facilities must be properly and consistently maintained to function effectively and ensure long-term viability and public acceptance of these facilities.

Policy #11: Facilities should be designed with public safety in mind. One of the highest priorities is to protect public health, safety, and welfare. Stormwater facilities must be designed and maintained in a manner that do not pose health or safety hazards to the public, with respect to public access or to mosquito/West Nile virus concerns. Safety benches will be utilized on permanent ponds that are easily accessed by the public, rather than using fencing. Structures required as part of the stormwater system will be designed to minimize vertical drop offs, avoiding the need for fencing, railings, and other typically employed barriers.

SYSTEMIC POLICIES AND IMPLEMENTATION GUIDELINES

The biological viability and ecological diversity of the primary system is important system-wide, and principles and practices described elsewhere in this report should be uniformly adhered to. The importance of the primary systems visual qualities, and the opportunity for recreational use varies greatly depending on its location, and on the proposed land use. However, the design of these systems should further the concepts of multi-functionality and low impact naturalized designs, staying away from traditional “structured” approaches. The following design guidelines apply for different PCS channel types.

POLICIES AND IMPLEMENTATION GUIDELINES - OUTFALL PRIMARY COLLECTION SYSTEM (OPCS)

This portion of the PCS is directly connected to the Flood Storage and Discharge System. It provides a continuous, connected stormwater management system that can expand and enhance regional open space.

- Publicly accessible multi-use and regional trails should be accommodated as part of the stormwater system maintenance road network.
- Habitat areas, and localized passive parks, should be provided.

POLICIES AND IMPLEMENTATION GUIDELINES - SHARED PRIMARY COLLECTION SYSTEM (SPCS)

This portion of the PCS includes localized outfalls that convey stormwater from large parcels or serve as combined conveyances for smaller parcels to the PCS. This portion of the system will often be entirely within larger parcels, or will serve as the interface between smaller parcels.

- A local and/or regional trail corridor should be provided.
- Private recreation and park facilities should be provided.

Specific portions of the system vary greatly in importance for their potential to support the enhancement of the image and open space qualities of the area. The relative importance of the channels is based on their visibility from major roadways such as the proposed River Valley Parkway, Missouri Route 141, or on their proximity to land use types where image is important, or where there are significant densities of residents, visitors, or workers.

The importance of the visual quality, aesthetics, and the multi-use potential of the conveyances are ranked high, medium, or low depending on the presence of the factors such as those described above. Of universal importance is the need to maintain ecologically diverse and biologically healthy permanent ponds, if required or desired, to minimize the potential



for mosquito habitat. A description of high, medium, and low importance areas follows.

HIGH IMPORTANCE

- Conveyances adjacent to, or visible from the public rights-of-ways, including the proposed River Valley Parkway, Missouri Route 141 and State Route 364.
- Conveyances along or adjacent to proposed internal roadways at the fronts of retail, office, mixed-use/retail/entertainment, and multi-family development types.
- Conveyances within multi-family, office, and retail/mixed-use/entertainment areas where buildings front on the conveyances or where there are high concentrations of visitors or workers.

MEDIUM IMPORTANCE

- Conveyances along secondary circulation routes, in parking areas, and along loading and service areas in multi-family, office campus, and retail/mixed-use/entertainment development types.
- Conveyances along the primary access routes for light industrial/office distribution development types.

LOW IMPORTANCE

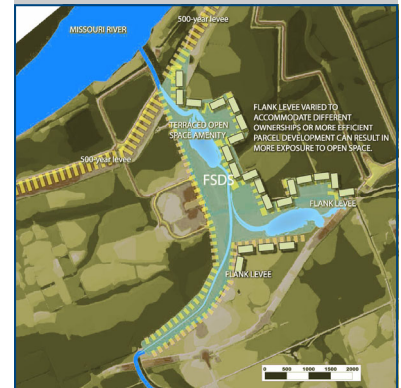
- Conveyances within or backing on to light industrial/office distribution development types.
- Conveyances along retail/mixed-use/entertainment loading and delivery areas

The area's Primary Collection System plays an important role in extending the trail and open space network. Equally important is the role of the Missouri River levee in providing an important link in the regional trail network being developed by Great Rivers Greenway. The Great Rivers Greenway's long-term vision for the area includes a trail network linked to the County and regional systems. This hierarchy of trails will provide an amenity for employees, residents, and visitors of the area. It will allow for, and encourage, bicycle commuting.

The accompanying Trail Concept Plan is intended to illustrate the potential system. Specific trail corridor alignments and locations are shown as minimum implementation requirements, and will be determined as more specific development plans for the area are proposed.

LEEVE ALIGNMENTS

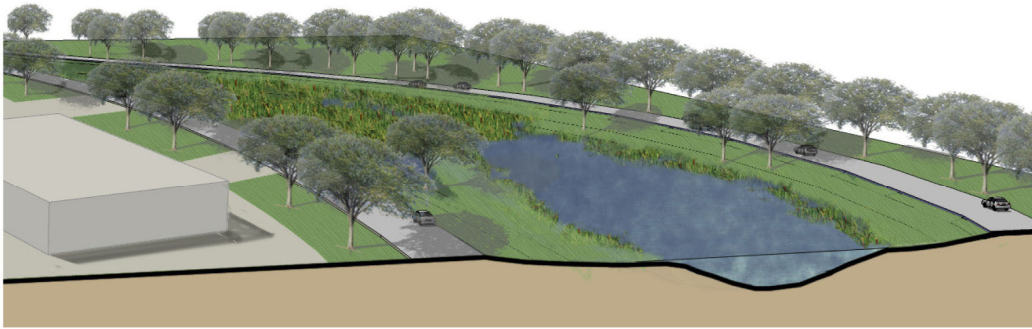
The following figures illustrates alternative levee alignments of the water storage and conveyance area along Creve Coeur Creek that accomplishes flood control, recreation, and habitat restoration objectives.



Levee edges that are planned in conjunction with the development planning for adjacent parcels can provide for the required stormwater storage.

Layout of the flank levees without consideration for the development potential of adjacent parcels, could limit its potential value as a flood storage and open space amenity.





High Importance

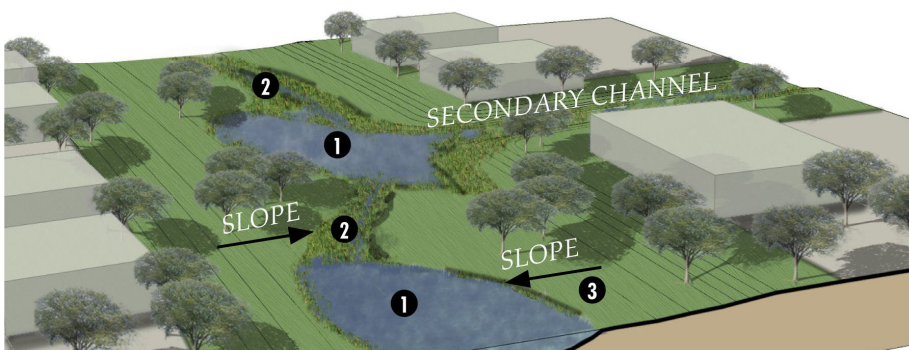
- Design roadway, conveyance and storage, and landscape/aesthetics as an integrated whole.
- Side slopes vary.
- Integrate sediment traps into less visible landscape areas.
- Limit permanent pool areas; provide lining as required to maintain permanent water levels and avoid seasonal drying
- Maintain channel/storage capacity

Medium/Low Importance

- Not applicable

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT

FIGURE 9.4.12: OUTFALL PRIMARY COLLECTION SYSTEM (PCS)



- 1 *Locate permanent pools at areas of flow concentration and limit pool size to minimize seasonal drying*
- 2 *Concentrate frequent storm flows to allow multiple use of channel bottom and to minimize mosquito breeding areas*
- 3 *Maximize storage/conveyance capacity while maintaining positive drainage on side slopes*

High Importance

- Integrate design of conveyance and storage into project and building entries; locate water quality treatment and frequently inundated areas on less visible portions of a site
- Maintain appropriate width/depth channel proportion to the greatest degree possible

Medium/Low Importance

- Maintain appropriate side slopes in more visible areas when possible
- Integrate conveyance and detention into parking and roadway landscape concepts

Low Importance

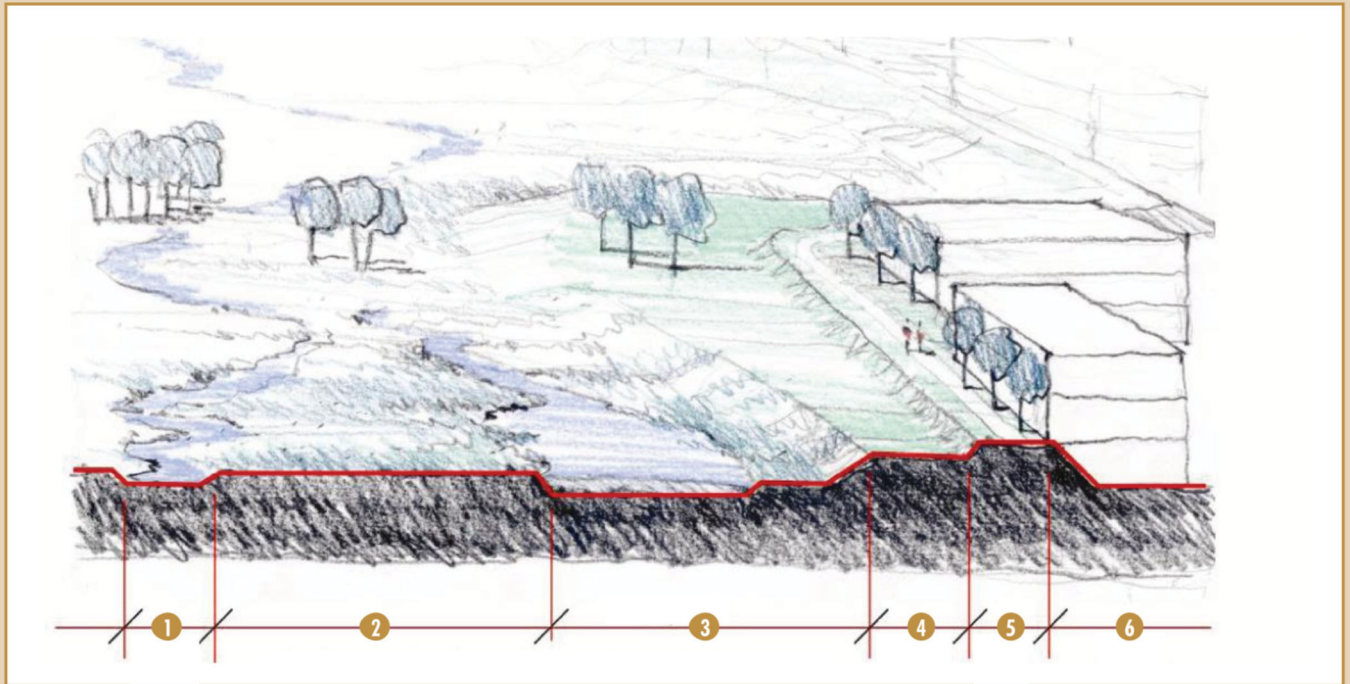
- Not applicable

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT

FIGURE 9.4.13: SHARED PRIMARY COLLECTION SYSTEM (SPCS)



HOWARD BEND LEVEE DISTRICT POLICIES AND IMPLEMENTATION GUIDELINES



- 1 Introduce sinuosity into the creek alignment to stabilize the banks and to promote habitat diversity.
- 2 Terrace the storage area bottom to create meadows, wetlands, and riparian areas. Diverse landscape types function as part of a water quality treatment system and provide diverse wildlife habitats.
- 3 Ponds

- 4 Manicured pocket parks above the five-year flood level.
- 5 Recreational and maintenance trails on top of the flank levee.
- 6 Buildings built into flank levee overlooking the open space.

SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT

FIGURE 9.4.14: POLICIES AND IMPLEMENTATION GUIDELINES

- The District supports significant public access for active and/or passive recreation, and regional and local trails. The trails may be part of the levee District maintenance road access network, or may be independent of maintenance roads. Where appropriate, provision will be made for limited recreational uses on terraces above the five-year flood level.
- Stabilization of creeks will be accomplished primarily through biotechnical means.
- The development of storage capacity will incorporate off-channel wetland, riparian, and upland habitats. Water quality capture volumes from adjacent parcels may be accommodated in this area to enhance wetland habitat potential.
- As appropriate, wetland banking areas will be incorporated for mitigation of off-site wetland impacts as part of the open space area.
- The levee alignments will be determined, to the degree possible, as an integral part of planning for the adjacent parcels to promote stronger connections between adjacent development and proposed open space uses of the area.



1 MINIMIZE BUILDING SETBACKS
-Create consolidated landscape & open spaces that serve a stormwater function



2 ORIENT BUILDINGS TO STORMWATER SYSTEMS
-Develop systems as an amenity



3 AVOID BACKING BUILDINGS ON STORMWATER SYSTEMS
-When unavoidable, screen with infiltration amenities



4 PONDS/ SOIL "BORROW" PITS
-Locate in highly visible areas as open space amenities



5 STORM WATER STORAGE
-Develop less frequently flooded storage as parks that create a campus setting



6 STORMWATER INTEGRATION
-Integrate stormwater treatment, conveyance and storage into landscape areas to minimize runoff and conserve buildable land

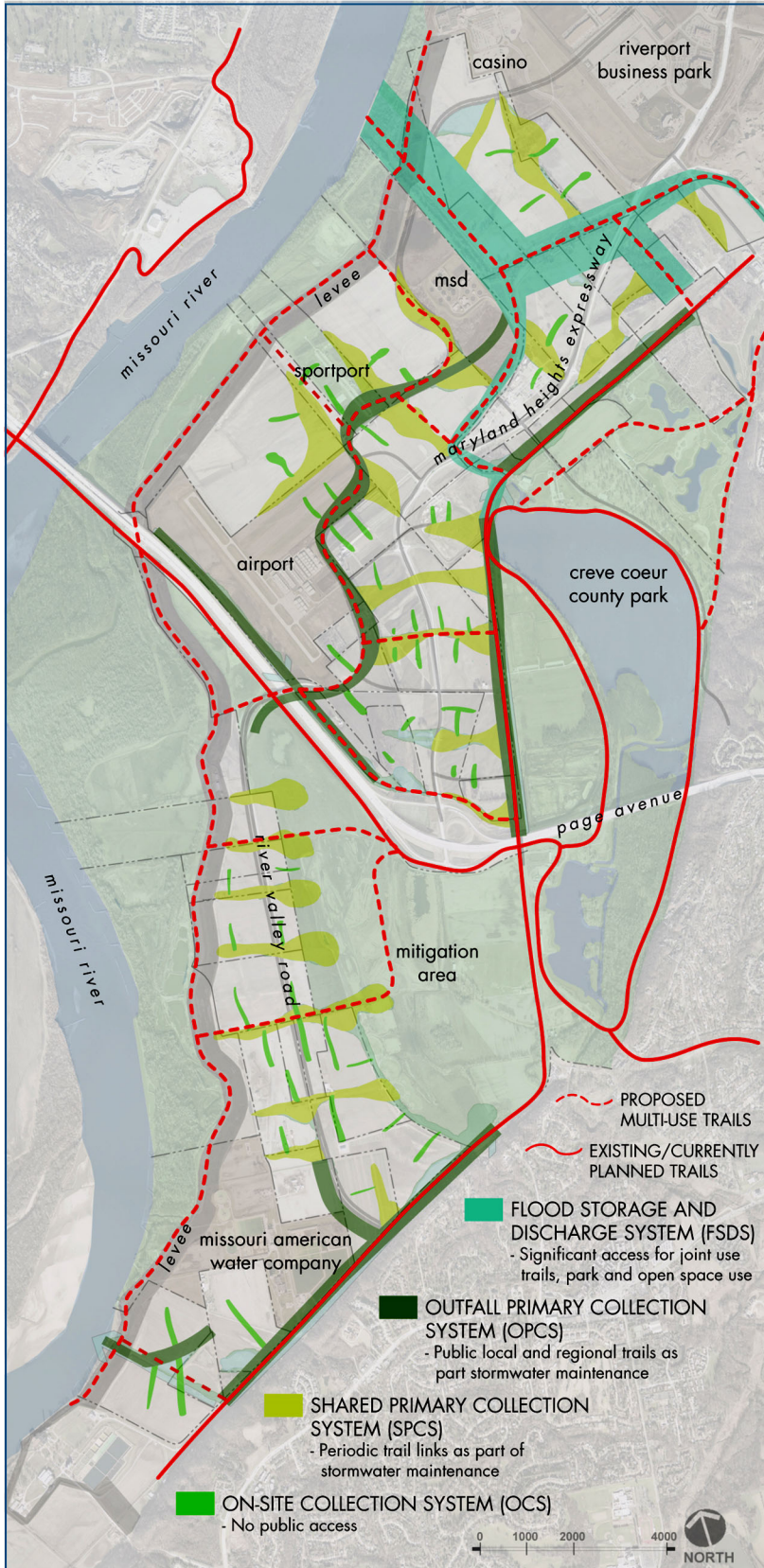


7 GREEN ROOFS
-incorporate green roofs to reduce stormwater storage and conveyance requirements



8 POROUS PAVEMENT
-Incorporate porous pavement to reduce stormwater storage and conveyance requirements

FIGURE 9.4.15: PROTOTYPICAL SITE PLAN



SOURCE: WENK ASSOCIATES AND HOWARD BEND LEVEE DISTRICT

STORMWATER & TRAIL POLICIES AND IMPLEMENTATION GUIDELINES

Multiple use trails will comply with City and County trail design standards.

The maximum distance between trail links connecting Creve Coeur Park and the River levee will be approximately 1 mile.

All designated multiple use trails shown on the Trail Concept Plan will be made accessible to the general public.

comprehensive plan

CITY OF MARYLAND HEIGHTS



SECTION 9.5 - PLANNING SUB-DISTRICT POLICIES

MARYLAND PARK LAKE DISTRICT



OVERVIEW AND APPROACH - PLANNING SUB-DISTRICT POLICIES

The planning approach to the Maryland Park Lake District is comprehensive in both scope and application. The goals and strategies apply on a planning area-wide basis. When fully developed, the planning area should contain a sustainable diverse mix of land uses, necessary infrastructure and an integrated system of open spaces, a formula that will add both value and character to the City.

To further delineate planning policies in the Maryland Park Lake District, six planning sub-districts were identified; each sharing common characteristics, but characteristics (i.e. different topography, land use, infrastructure [future and present] and locational aspects) that distinguish each from the others. For example, land use policy issues for publicly owned park areas such as Creve Coeur Park differ from the issues facing privately owned land. Similarly, land with adjacency to Missouri Route 141 will face different development constraints than land not directly adjacent to Route 141. The same applies to transportation and stormwater constraints which vary over the 8,100 acres within the Planning Area.

The variety of natural features and topography, access, infrastructure, and other physical conditions necessitate the crafting of a planning approach that addresses diversity. Therefore, the breakdown of the planning area into smaller, more distinctive planning sub-districts is a necessity for planning purposes. The identification of smaller areas allows for strategies and recommendations to be tailored to the individual needs of particular geographic areas. The selection of these district boundaries was also influenced by man-made features, such as the levee, highways and existing developments.

The geography, proposed infrastructure, and existing land use patterns within the Maryland Park Lake District set up six distinct planning sub-districts:

RIVERSIDE	RIVER VALLEY
CRYSTAL SPRINGS	CREVE COEUR LAKE
EXPRESSWAY	MISSOURI RIVER

This breakdown allows a focused discussion of land use policies based on unique characteristics, constraints and opportunities for each district. Once the planning sub-district boundaries were determined, a vision statement was prepared to guide the approach to future land use.

Recommendations for each of these planning sub-districts are outlined in the following sections. These recommendations begin with a description of the planning issues facing each sub-district followed by a summary “*vision*” for the sub-district, and an indication of appropriate future land uses. Development policies are then identified for the sub-district, which are intended to guide both the City and property owners in considering future development options and requests. Development policies should be viewed as a complement to the Goals and Strategies providing the next level of guidance for the responsible and orderly development of land.

POLICY DEFINITION

A specific statement of principle or of guiding actions that implies clear commitment but is not regulatory in nature. A policy is also a general direction that a governmental agency sets to follow in order to meet its goals and objectives before undertaking an action program.

VISION DEFINITION

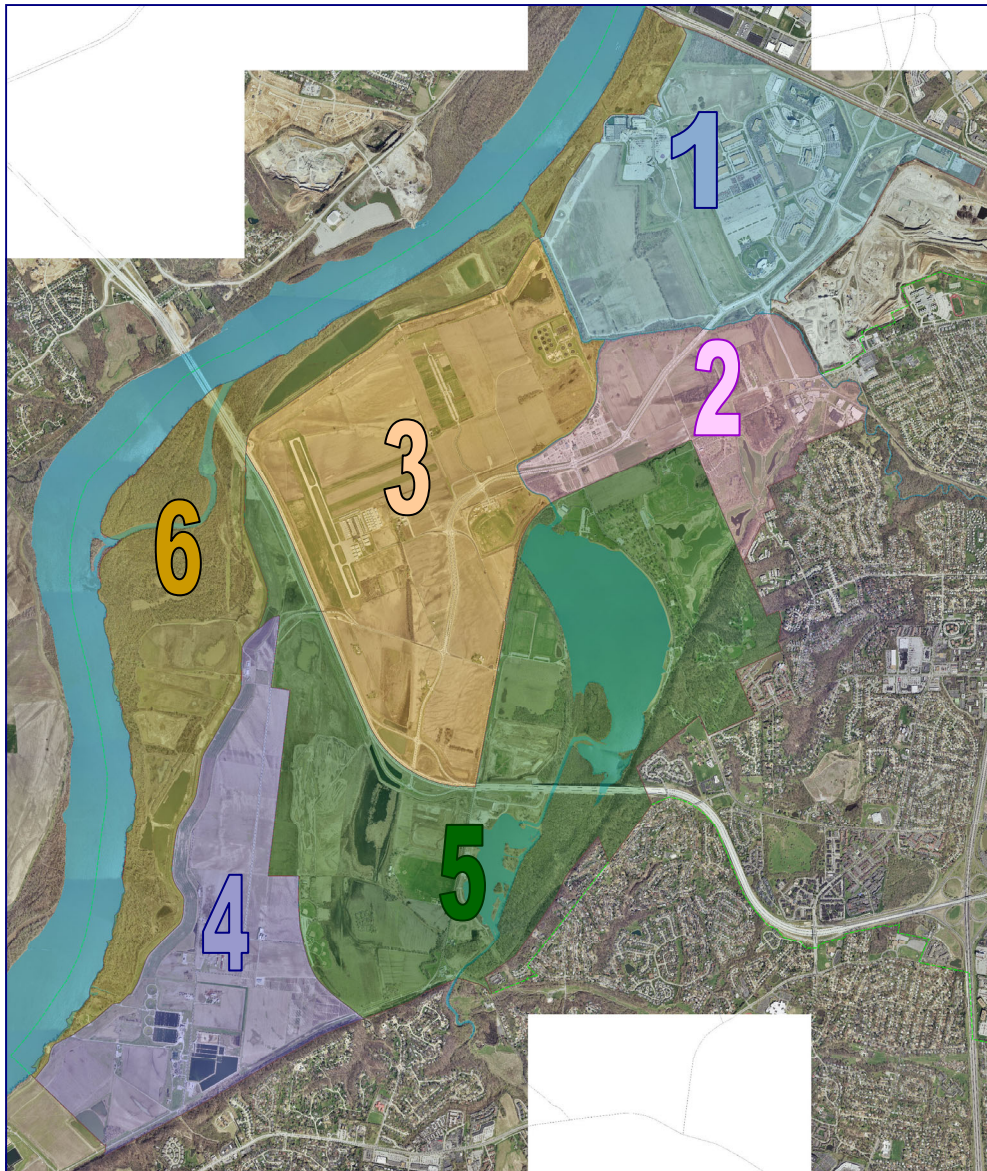
The dictionary defines a vision as “*An Image of the future we seek to create*”. A vision statement describes in graphic terms where the goal-setters want to see themselves in the future. It may describe how they see events unfolding over 10 or 20 years if everything goes exactly as planned.

DEVELOPMENT GUIDELINES

Development guidelines establish the general character that is expected to be present in a proposed development. These guidelines along with land use will establish the baseline for evaluation of development proposals within the planning area.

“Men perish because they cannot join the beginning with the end.”

- ALCAMAEON



PLANNING DISTRICTS

The Maryland Park Lake District has the following Planning Sub-Districts:

1. Riverside
2. Crystal Springs
3. Expressway
4. River Valley
5. Creve Coeur Lake
6. Missouri River

FIGURE 9.5.1: PLANNING SUB-DISTRICTS

TABLE 9.5.A: PLANNING SUB-DISTRICT ACREAGE

PLANNING SUB-DISTRICT	ACRES	PERCENTAGE
Riverside	1,169	14.4%
Crystal Springs	634	7.8%
Expressway	1,619	20.0%
River Valley	996	12.3%
Creve Coeur Lake	2,374	29.3%
Missouri River	1,314	16.2%
Total	8,107	100.0%



DEVELOPMENT QUALITY

While ensuring both an economically productive pattern of development for the City and providing increased value to land owners is important, it is also critical that the City require that the Maryland Park Lake District area develop in such a way that it enhances both the regional image of the City and the needs of the overall community. This plan presents recommendations designed to add both value and character to the planning area. Development proposals in the form of rezoning petitions will be expected to address the following general questions regarding its impacts:

- Does the development improve Maryland Heights' image?
- Does the development provide a needed amenity to the community?
- Does the development adhere to the goals and strategies established in the plan?
- Does the development contribute to the financial well being and stability of the City?
- Does the developments design add character to the area and the City?

The first component that furthers development quality is “quality begets quality”; high quality development sets a tone that attracts additional high quality development. In fact, the historical development approach taken in Riverport Business Park is a positive precedent for the City to follow. While it is desirable for the remaining portion of the Maryland Park Lake District to develop with at least the same base quality as Riverport in office and distribution areas, it is envisioned that improved standards, planning of infrastructure improvements and inclusion of amenities will attract even higher quality development, in which architecture, landscape and urban design are fully integrated across developments and the planning area.

“Quality” is a difficult concept to define, especially when it relates to real estate development. Quality and character are often thought of as subjective ideas that on the surface appear difficult to quantify and seem intangible. However, the fact that subjective concepts cannot always be quantified does not mean that fair, reasonable, effective standards cannot be established. It is well demonstrated that design standards related to land use, public facilities, site planning, building configuration, materials and orientation, landscaping, pedestrian facilities, signage, lighting, and other aspects of public and private development can be established and development character can achieve a certain level of “quality”. At the same time, these standards must be administered efficiently and consistently without creating uncertainty and undue delay in the development review process.

However, the responsibility for quality does not solely rest within the private sector. It is equally important that the City apply the same high standards for the public realm as those to which private development is held. The way in which streets are designed, development is integrated with public pedestrian facilities and open spaces and public properties are maintained and operated are critical to community character.

“Streetscape” standards are particularly important: street landscaping, lighting, traffic control devices, signage, the location of utility lines and other public infrastructure can be designed to achieve an overall aesthetic image, in addition to serving functional

SYSTEMS THINKING

The approach of systems thinking is fundamentally different from that of traditional forms of analysis. Traditional analysis focuses on the separation of the individual pieces of what is being studied; in fact, the word “analysis” actually comes from the root meaning “to break into constituent parts.” Systems’ thinking, in contrast, focuses on how the thing being studied interacts with the other constituents of the system—a set of elements that interact to produce behavior—of which it is a part. This means that instead of isolating smaller and smaller parts of the system being studied, systems thinking works by expanding its view to take into account larger and larger numbers of interactions as an issue is being studied. This results in sometimes strikingly different conclusions than those generated by traditional forms of analysis, especially when what is being studied is dynamically complex or has a great deal of feedback from other sources, internal or external.



purposes.

When considering the future character of this area, it is important to recognize that there is substantial public investment in the area that has begun to establish an image. The City has already made a substantial investment in the area by spending approximately \$46 million on regional transportation improvements and committing an additional \$15+ million to future regional transportation improvements. Specifically, Creve Coeur Park, Hollywood Casino, Riverport Business Park and others have created a regional identity for this area as a venue for entertainment, hospitality and recreation. This image should be preserved, emphasized and capitalized upon even as large-scale development is encouraged. Future development should complement and expand on this theme.

GENERAL DEVELOPMENT POLICIES

There are a number of general policies that are applicable to any developable site within the Maryland Park Lake District regardless of what planning district the site is located within. These policies work with the Maryland Park Lake District Future Land Use Map, and are applicable across the five planning sub-districts that support development.

DETERMINATION OF USES:

- New development should incorporate a mix of uses combined with support and accessory uses as necessary. For example, the Maryland Park Lake District should develop with office, office flex, office distribution, and retail uses, and may also include some specific types of support, retail, personal services and/or multifamily residential.
- Appropriate land uses should be determined based on consideration of the overall Maryland Park Lake District, and cannot be determined based solely upon isolated consideration of a specific site.
- All applicants will need to demonstrate compliance with this Plan and Future Land Use Map and then meet the required developmental design guidelines prior to approval.
- Developments should be larger in scale than single small developments, should include assemblage of multiple parcels, thereby benefiting from economy of scale and opportunities to integrate versus fragment.

CONNECTIONS:

- Integrated connections to the regional stormwater system and either Missouri Route 141 or the River Valley Parkway are a prerequisite in the consideration of development proposals.
- Where possible, all development must connect, or provide future provisions for the connection to the existing or planned open space, park and trail system. Where this is not deemed possible, development proposals must include an internal walkability plan.

RESIDENTIAL USES:

- Single family detached residential development is only acceptable as provided herein.
- Multifamily residential development is a conditionally accepted land use wherever it is identified on the Future Land Use Map except when integrated into mixed use development where it is encouraged.

RETAIL AND MIXED USES:

- Where large scale retail is identified on the Maryland Park Lake District Future Land Use Map, it is considered a conditionally acceptable use.
- Service retail is a conditionally acceptable use wherever it is identified on the Maryland Park Lake District Future Land Use Map.



- Mixed use development is an encouraged use wherever it is identified on the Maryland Park Lake District Future Land Use Map. Retail, commercial and multifamily uses are permitted in a mixed use district, but any single use should only comprise no more than 60-70% of the overall mix.
- Where the Future Land Use Map shows a mix of uses not labeled “mixed use”, such as office distribution/light industrial, either of the uses identified in the mix are appropriate for development, based on its corresponding level of encouragement.

LOCATION AND LOT SIZE:

- Office flex and office distribution uses may be permitted in areas identified for light industrial uses.
- The allowable size of any use will be determined based on:
 - Lot size
 - Infrastructure (available or to be constructed)
 - Size and scale of surrounding uses
 - Character of development area
 - Visual impact of the use on adjoining properties, developments and the public right-of-way.

PUBLIC SERVICES:

- As development takes place within the Maryland Park Lake District, it will be necessary to provide public services such as police, fire, and EMT. Developers will work with the City and public service providers to determine the appropriate service area and locations for these uses based on individual and overall land use patterns.

TRANSPORTATION:

- Development will be required to complete a traffic impact study.
- Development must provide for the accommodation of required transportation improvements.
- Development must provide adequate levels of connectivity within the street network avoiding isolated clusters of development.
- Development must provide a road system that is sustainable and easily maintained.
- Streets, both public and private, will be designed to provide for multi modal transportation options.
- Streets, both public and private, will be designed in a manner that create a sense of place and add character to the public realm.
- New development will be consistent with transportation recommendations set forth in the Comprehensive Plan.

STORMWATER MANAGEMENT:

- Stormwater management systems will be designed in a multi-functional and integrated manner.
- Stormwater management systems will be designed and utilized as a site amenity.
- Stormwater management systems will be designed in a manner that adds character and enhances the public viewshed.



STORMWATER, TRANSPORTATION AND LAND USE

PUBLIC UTILITIES:

- Adequate public utilities must be provided for proposed developments.
- Development proposals must consider the accommodation of public utility infrastructure.

This plan includes transportation and stormwater infrastructure planning recommendations. All three categories – land use, transportation, and stormwater - are interrelated and must work together in a holistic manner.

Within this relationship, there are potential requirements and restrictions included in each component that will impact the others. There are basic requirements, such as the design and construction of the River Valley Parkway and the design and connection of the regional stormwater system, each of which has a relationship and an impact upon land use. An example is the development of a certain square footage of office uses will require the construction of a number of supporting roadways and potentially a segment of the River Valley Parkway with integrated stormwater and open space. In some instances, the development would be contingent on the construction of the identified infrastructure improvements. For example, the build-out of the regional retail and mixed use districts may be contingent on the construction of an interchange at the River Valley Parkway and State Route 364.

Any development proposed in the Maryland Park Lake District must reflect the recommendations contained within this plan for all three policy areas and accurately include site planning related to these triggers and restrictions. As development moves from a “greenfield environment” to a suburban or urban density, the amount of required private investment in providing infrastructure is expected to increase. This development will place higher demand upon the requirements of those systems. The City will work with developers, land owners and community and public agencies to establish timeframes and responsibilities for these improvements.

The remainder of this section will outline the future development recommendations and guidelines for each planning sub-district. These guidelines form the basis for evaluating development proposals and establishing appropriate regulatory standards.

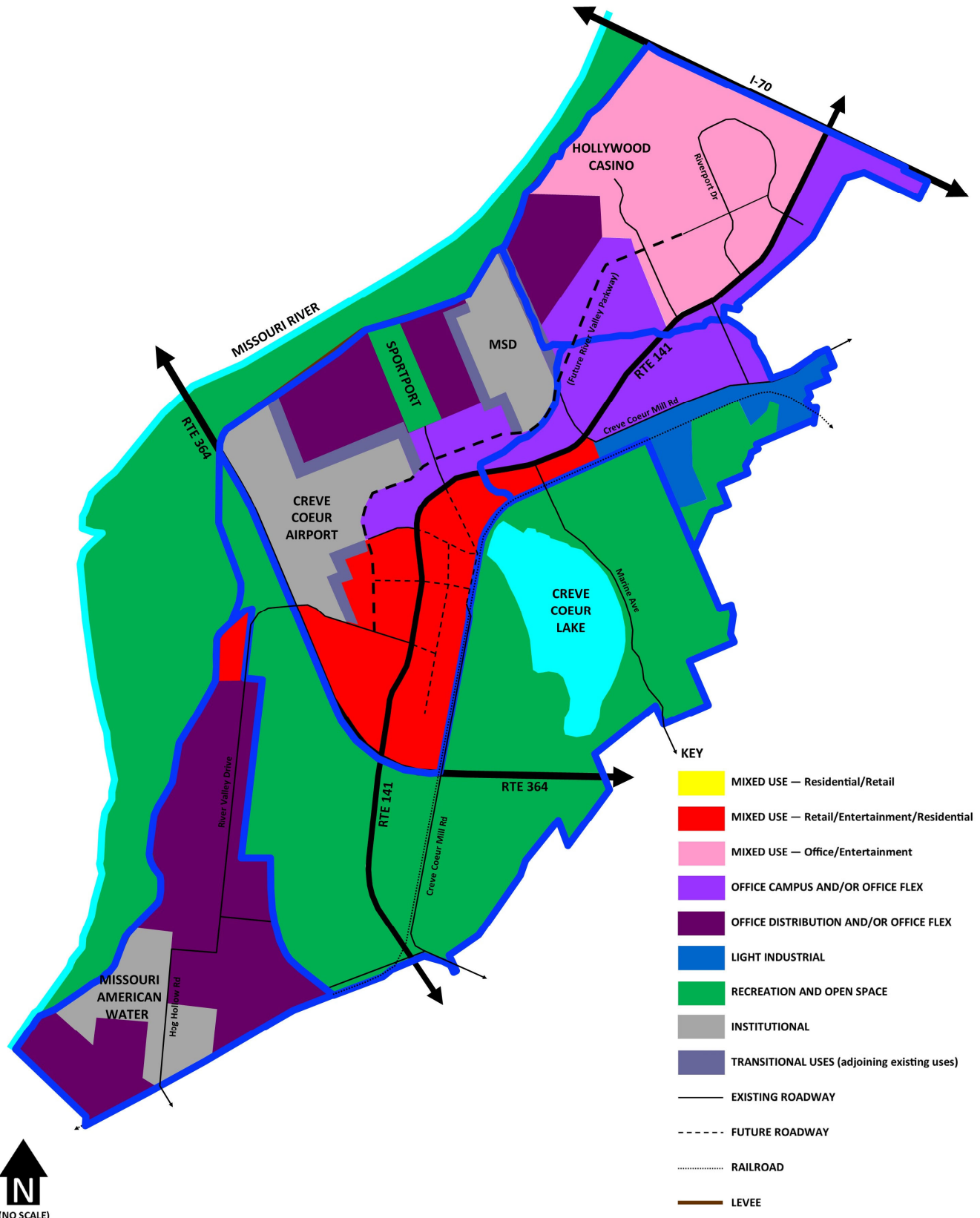


FIGURE 9.5.2: MARYLAND PARK LAKE DISTRICT FUTURE LAND USE MAP



RIVERSIDE PLANNING SUB-DISTRICT

The Riverside Planning Sub-District is defined by the Riverport Business Park and Hollywood Casino Complex, as well as its relationship with I-70 and Missouri Route 141. While still under development, the character and pattern of development within the sub-district is established by these regionally significant planned developments. The remainder of the district is zoned “M-2” Heavy Industrial District (essentially the portion of the quarry and landfill located in the City) and “NU” Non-Urban. The sub-district makes up about 14% of the Maryland Park Lake District.

The quality and type of uses found here are the general benchmarks for development in other sub-districts. Similarly, many of the development tools that will be applied in other sub-districts, such as design review, have emanated from the City’s experience in managing development in this district. Both the Riverport Business Park and Hollywood Casino Planned Districts are still developing. Future build out of these planned developments is approximately 6 million square feet (approximately 3 million square feet is approved and remains to be constructed). The balance of Riverport can be completed without the regional infrastructure being completed throughout the rest of the planning area as sewer and water mains, as well as the stormwater management system, is in place. Hollywood’s levees were constructed on the landward side of the

RIVERSIDE PLANNING SUB-DISTRICT VISION

THE RIVERSIDE DISTRICT WILL SERVE AS A REGIONAL DESTINATION FOR OFFICE CAMPUS, ENTERTAINMENT AND HOSPITALITY TYPE USES. DEVELOPMENT WILL OCCUR AT A HIGH INTENSITY LEVEL AND WILL INCORPORATE QUALITY ARCHITECTURAL ELEMENTS, PEDESTRIAN LINKAGES, CREATION OF PUBLIC SPACES AND AMENITIES.

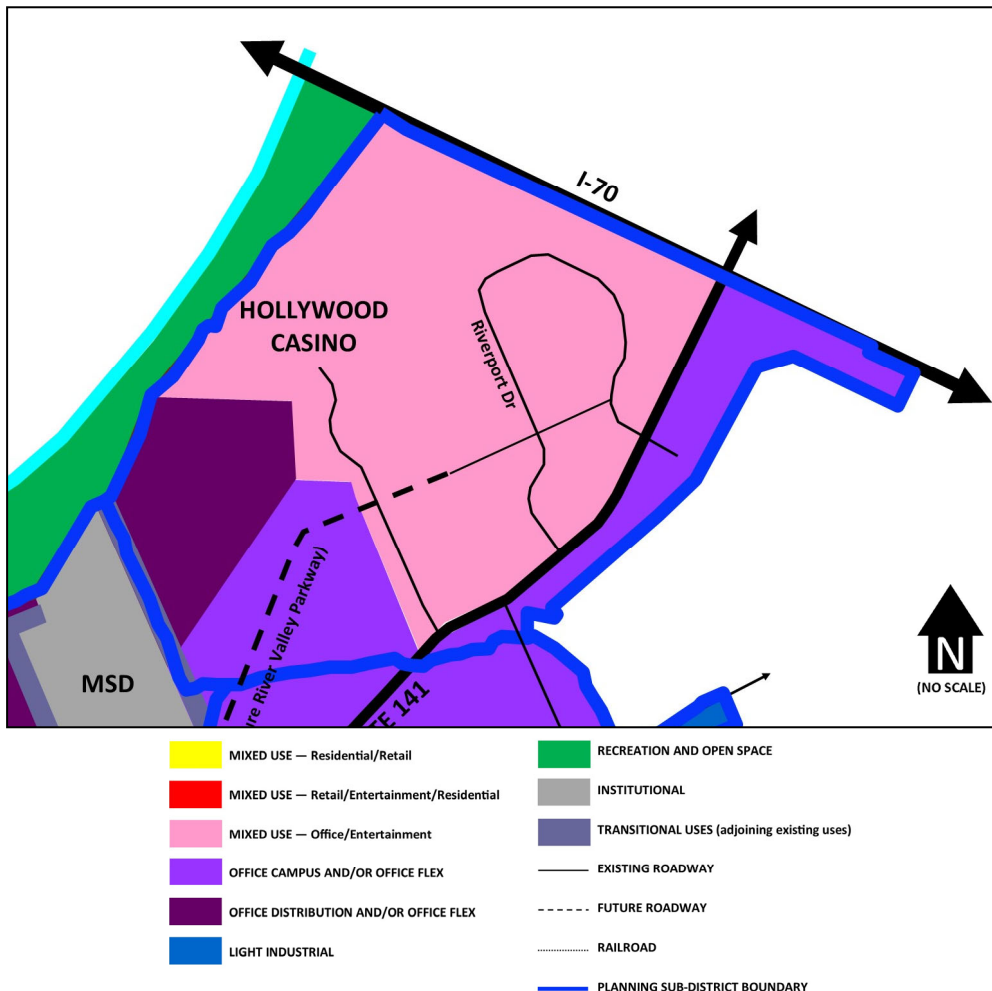


TABLE 9.5.B: RIVERSIDE PLANNING SUB-DISTRICT LAND USE ACCEPTABILITY MATRIX

LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	Red square
MULTI-FAMILY RESIDENTIAL	Red square
MIXED-USE	Green circle
SERVICE RETAIL	Green circle with border
REGIONAL RETAIL	Red square
ENTERTAINMENT	Green circle
OFFICE CAMPUS	Green circle
OFFICE FLEX	Green circle with border
OFFICE DISTRIBUTION	Red square
LIGHT INDUSTRIAL	Red square
RECREATION	Green circle with border
INSTITUTIONAL	Green circle with border
AGRICULTURE	Green circle with border

FIGURE 9.5.3: RIVERSIDE PLANNING SUB-DISTRICT FUTURE LAND USE



existing river levee system, around Hollywood's property, and tie into the Riverport 500-year levee on the south side at Fee Fee Creek. The interior levee was constructed to protect the Hollywood Casino property from both a Missouri River flood, should the Howard Bend levee fail, and the interior flooding potential from Fee Fee and Creve Coeur Creeks. It should be noted, however, that the regional stormwater conveyance system being planned by the Howard Bend Levee District will place a flank levee along the creeks creating a large area of open space to be utilized within future developments. Hollywood manages its internal stormwater from the drainage area defined by the present alignment of the levees.

Ample water supply is available from Missouri American Water Company to serve development. The MSD Missouri River Treatment Plant, which serves a large area in addition to the Maryland Park Lake District, is at capacity. The expansion of this facility is presently being designed. The sanitary sewer collection is in place for Riverport Business Park, no additional constraints on development are assumed within either the Hollywood or Riverport developments.

The Fee Fee Creek corridor has importance as both a regional stormwater conveyance channel and as a linear open space corridor. The improvements to this floodway will incorporate environmental and open space amenities. The planned configuration of the stormwater conveyance system along the frontage of the Hollywood Casino Planned District may preclude the future development of the lands east of the Expressway.

RIVERSIDE DEVELOPMENT VISION

The Riverside Sub-District will serve as a regional destination for office campus, entertainment and hospitality type uses. Development will occur at a high intensity level and will incorporate quality architectural elements, pedestrian linkages, and the creation of public spaces and amenities.

RIVERSIDE DEVELOPMENT CONSIDERATIONS

As new development occurs in the Riverside sub-district, specific consideration will need to be given to the following issues:

- Impacts of the MSD Missouri River Treatment Plant on development with respect to location, compatibility of uses, long term expansion and noxious odors.
- Multi-modal connectivity of projects and uses through automobile, pedestrian, and bicycle routes.
- Potential future pedestrian movement on site and between developments.
- Appropriate design standards for entrance and gateway structures fronting Missouri Route 141.
- The Howard Bend Levee District establishing a funding mechanism for the provision of regional stormwater conveyance along Fee Fee Creek and Creve Coeur Creek.
- Potential amphitheater redevelopment impacts on transportation and surrounding uses.

RIVERSIDE GENERAL POLICIES

The sub-district functions not only as the northern gateway to the Maryland Park Lake District but as a primary gateway to the City, therefore subsequent development within this area should follow the high standards of quality identified in this plan. Because this sub-district is a major destination for both local and regional residents and tourists, uses within the sub-district should provide easy integrated access. Sites should be designed with clear access points. These policies work with and support the Future Land Use Map.

- In areas not zoned or within a planned district, appropriate land uses should be consistent with the Future Land Use Plan and cannot be determined based solely upon consideration of a specific site.



- Any development proposal will need to prove consistency with this plan prior to consideration, and meet the requirements of the Maryland Heights Zoning Code and any applicable design guidelines prior to approval.
- The Future Land Use Map identifies the encouraged development pattern for this area. Other land uses (identified as “Conditionally Acceptable”) may be considered provided that the land uses: demonstrate need and add value to the area; are found to further the Goals and Strategies of this plan; are consistent with the guidance provided in this plan; and any associated development issues can be mitigated.

RIVERSIDE SPECIFIC POLICIES

- New development should incorporate hospitality and entertainment uses and a mix of uses currently established within the Riverport and Hollywood Planned Districts. Some support and/or accessory uses may be necessary to support the integrated development of the area.
- Office campus uses are appropriate and encouraged in this planning sub-district. Office campuses can extend the corporate character established by Riverport and extend that into the Maryland Park Lake District along the Missouri Route 141 and the future River Valley Parkway.
- The expansion of the Hollywood Casino Planned District as a mixed use entertainment and specialty retail district is encouraged.
- Development must connect to, and be integrated within, the regional stormwater management system.
- Development must connect to Missouri Route 141 or future River Valley Parkway.
- All development must connect to existing parks and trail systems where practical. Walkability at the planned development level is a priority.
- Multi-modal connections between planned developments and other districts are required.
- Developments in this area should utilize gateway type architectural elements.



CRYSTAL SPRINGS PLANNING SUB-DISTRICT

The Crystal Springs Planning District is located along Missouri Route 141, Creve Coeur Mill Road and Marine Avenue. This district provides excellent frontage opportunities for new development and contains several opportunities for redevelopment in the planning area. This district contains approximately 6% of the land in the planning area.

The presence of the intersection of the Missouri Route 141 and Marine Avenue presents one of the most attractive intersections in the planning area with Creve Coeur Park to the east. The opportunities in this area are present in the form of mixed use with a focus on retail, office campus and/or office flex, along with the established light industrial and recreational development pattern.

CRYSTAL SPRINGS PLANNING SUB-DISTRICT VISION

THE CRYSTAL SPRINGS PLANNING SUB-DISTRICT WILL SERVE AS A REGIONAL DESTINATION FOR HIGH QUALITY, LOWER INTENSITY USES FOCUSING ON OFFICE CAMPUS, OFFICE FLEX, AND MIXED USE.

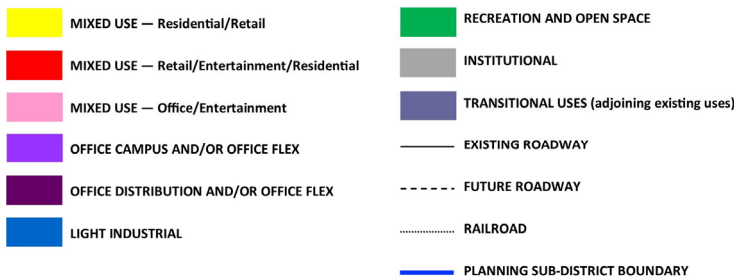
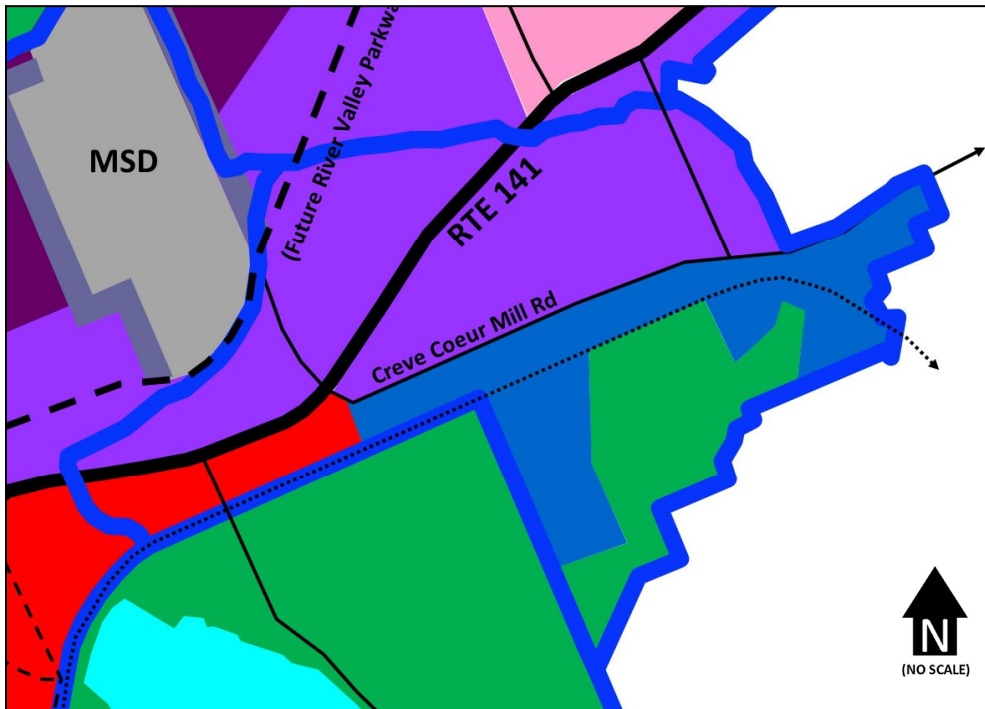


TABLE 9.5.C: CRYSTAL SPRINGS SUB-DISTRICT LAND USE ACCEPTABILITY MATRIX

LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	❑
MULTI-FAMILY RESIDENTIAL	◯
MIXED-USE	●
SERVICE RETAIL	◯
REGIONAL RETAIL	❑
ENTERTAINMENT	◯
OFFICE CAMPUS	●
OFFICE FLEX	●
OFFICE DISTRIBUTION	❑
LIGHT INDUSTRIAL	●
RECREATION	●
INSTITUTIONAL	◯
AGRICULTURE	◯



CRYSTAL SPRINGS DEVELOPMENT VISION

The Crystal Springs Planning District should encourage diversity of design within a unified theme. Proposed development plans should address building massing, orientation and materials; relationship of buildings to the public right-of way; mix of uses; street level activity; integration of trails and open space; creation and protection of view sheds; vehicular parking, access, and circulation; and others.

CRYSTAL SPRINGS FUTURE LAND USE CHANGE

Currently, nine holes of the Crystal Springs Golf Course are in private ownership. In the future, should this land be sold for other use(s), (this land area has limited access to the major transportation network) lower intensity type land uses would be recommended, and multi-family residential uses would be discouraged, but not prohibited in this area. Areas closest to Missouri Route 141 may be appropriate for service retail uses that support the multi-family residential uses or that directly support park uses.

CRYSTAL SPRINGS PREDEVELOPMENT CONSIDERATIONS

This district exhibits some constraints which must be examined prior to considering a development proposal, as critical additions to existing stormwater and flood control infrastructure may change development patterns within the district:

The Howard Bend Levee District is constructing a series of flank levees and other flood control improvements along the Creve Coeur and Fee Fee Creeks, which border the district along the north. This new internal flood control will allow a portion of this district to be removed from its current flood plain designation. In addition, much of the regional stormwater conveyance system runs through the district, impacting and dividing its land area. Although the net acreage available for development is substantial, the district is effectively subdivided into separate developable areas, partially due to the configuration of this conveyance system. This suggests the need to identify development “clusters,” creating a challenge in integrating these development clusters as envisioned in the goals and strategies for this plan. Lastly, certain existing land uses such as Crystal Springs Quarry Golf Course and the former auto salvage yard will influence future land uses, and this existing development presents some constraints to development.

CRYSTAL SPRINGS LINKAGES

Interconnection between districts and development clusters should be created in the process of planning for infrastructure through placement of sidewalks and street trees in greenways along arterial roads, designation of pedestrian and bike trails, use of water conveyance channels and placement on levee rights-of-way. These features will encourage maximum use of alternative forms of movement and will afford access to open space and recreational areas without having to utilize the automobile.

CRYSTAL SPRINGS GENERAL DEVELOPMENT POLICIES

- Appropriate land uses should be determined based on consideration of the overall Maryland Park Lake District, and cannot be determined based solely upon consideration of a specific site.
- Any development proposal will need to prove consistency with this plan prior to consideration, and meet the requirements of the Maryland Heights Zoning Code and any applicable design guidelines prior to approval.
- The Future Land Use Map identifies the encouraged development pattern for this area. Other land uses (identified as “Conditionally Accepted”) may be considered provided that the land uses: demonstrate need and add value to the



area; are found to further the Goals and Strategies of this plan; are consistent with the guidance provided in this Plan; and any associated development issues can be mitigated.

- Prior to development, adequate public facilities must be in place. It is the responsibility of the owner/developer to provide such public facilities and to demonstrate that they will be available at time of occupancy.

CRYSTAL SPRINGS SPECIFIC DEVELOPMENT POLICIES

- Development should include mixed use, office flex, and service retail type land uses.
- Light Industrial is a conditionally accepted use within the sub-district because of its potential adverse impacts on adjoining properties. Each proposed light industrial use or development should be examined on its own merits.
- For Crystal Springs, light industrial buildings should have a typical gross floor area of 10,000-50,000 square feet.
- Outdoor storage may be acceptable as an incidental accessory use to light industrial development. However, outdoor storage as a principal use within this planning sub-district is unacceptable.
- All development must be integrated and connected to the regional stormwater management system.
- All development must connect either to Missouri Route 141 or Creve Coeur Mill Road.
- Public safety must be considered when adding at-grade roadway crossings over the existing rail line.
- Connectivity to the regional transportation network must be provided, particularly for any development proposals related to the existing Crystal Springs Quarry Golf Course.
- All development must connect to existing parks and trail systems where practical. If these connections are not practical, the future accommodations must be made.
- Multi-modal connections between planned developments and other districts are encouraged. A key theme should be the creation of a pedestrian orientation for the area, while accommodating vehicular traffic in a safe and efficient manner.
- Development fronting the public and private ROWs should be oriented to the ROW.
- Parking should be designed and integrated into the site so as not to be the dominant visible development feature from the ROW.
- Provisions must be incorporated for the inclusion of mass transit when it becomes available.
- The City will encourage the private redevelopment of the 47 acre former auto salvage yard with higher valued land uses supporting adjoining development.



EXPRESSWAY PLANNING SUB-DISTRICT

The Expressway Planning Sub-District has the highest long-term potential for development. It is the largest planning sub-district in the Maryland Park Lake District, containing approximately 20% of the land area. Moreover, the district incorporates as its spine the region's outer-belt arterial highway – Missouri Route 141. Route 141 provides regional access to the planning area, and to this sub-district in particular. The sub-district includes three at-grade intersections along Route 141 – at River Valley, Creve Coeur Airport Road, and Sportport Road.

EXPRESSWAY PLANNING SUB-DISTRICT VISION

THIS SUB-DISTRICT WILL BE THE PREMIER BUSINESS CENTER IN THE ST. LOUIS REGION, CONTAINING A DIVERSE MIX OF SUSTAINABLE LAND USES.

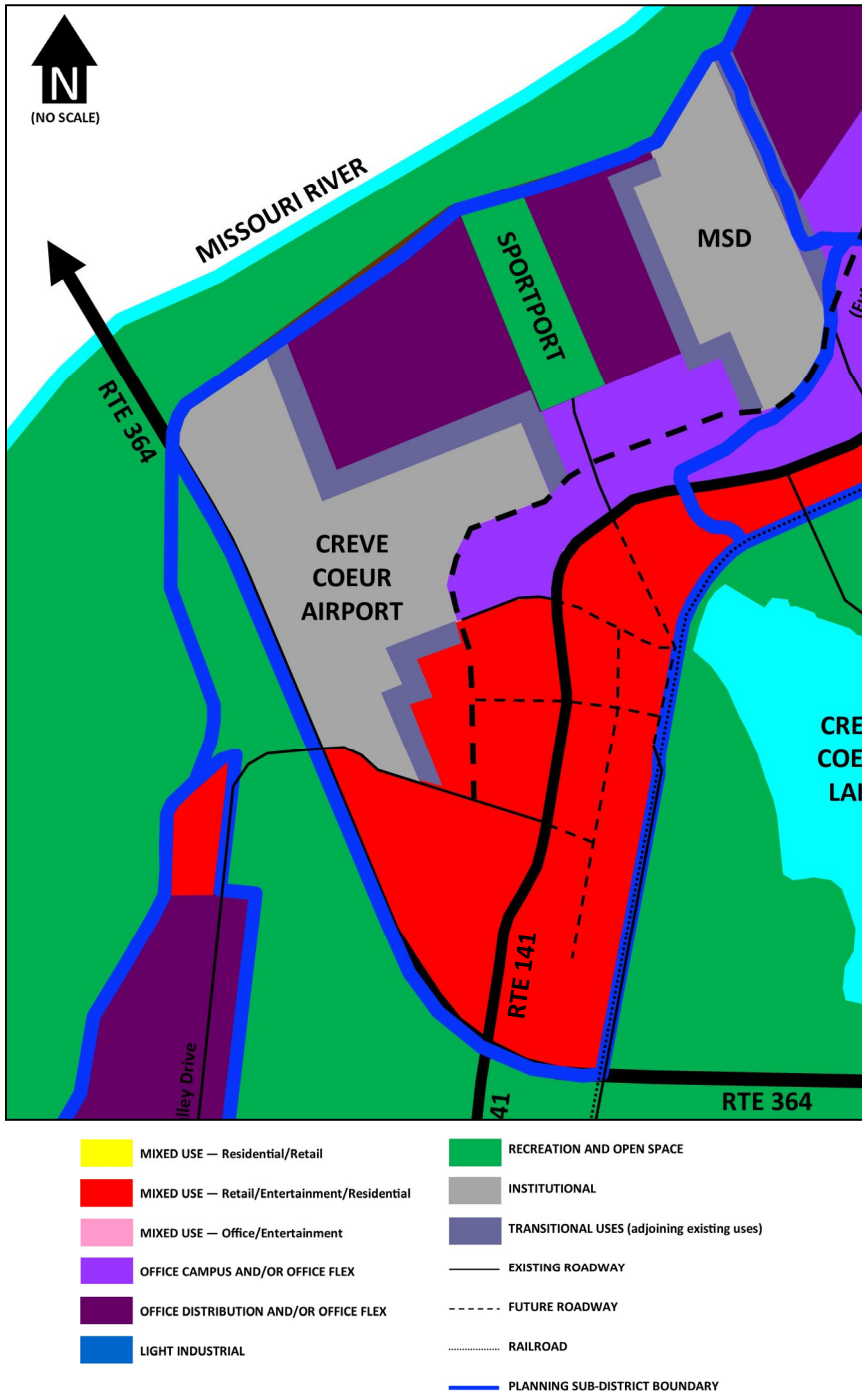


TABLE 9.5.D: EXPRESSWAY PLANNING SUB-DISTRICT LAND USE ACCEPTABILITY MATRIX

LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	☐
MULTI-FAMILY RESIDENTIAL	○
MIXED-USE	●
SERVICE RETAIL	○
REGIONAL RETAIL	○
ENTERTAINMENT	○
OFFICE CAMPUS	●
OFFICE FLEX	●
OFFICE DISTRIBUTION	●
LIGHT INDUSTRIAL	○
RECREATION	○
INSTITUTIONAL	○
AGRICULTURE	○

FIGURE 9.5.5: EXPRESSWAY PLANNING SUB-DISTRICT FUTURE LAND USE



The proposed regional stormwater conveyance system runs through the sub-district, integrated within the River Valley Parkway. This future infrastructure will impact future development more than any other district. Although the net acreage available for development is substantial, it is effectively subdivided into separate developable areas, due to the anticipated configuration of these improvements. However, development will gain from this amenity as it effectively reduces the quantity of needed on-site detention thereby leaving more net acreage available for development. Lastly, certain existing land uses such as MSD's treatment facility will influence future land uses, and such existing development presents some constraints to development.

EXPRESSWAY DEVELOPMENT VISION

The Expressway Planning Sub-District will create an appearance that combines diversity of design within a unified theme. Around the airport environs and northwest area, office and business services and office distribution centers are envisioned to be the dominant land use pattern. Proposed development plans should address building massing, orientation and materials; relationship of buildings to the public right-of way; mix of uses; street level activity; integration of trails and open space; creation and protection of view sheds; vehicular parking, access, and circulation; and others.

EXPRESSWAY LINKAGES

Interconnection between districts and development clusters should be created in the process of planning for infrastructure through placement of sidewalks and street trees in greenways along arterial roads, designation of pedestrian and bike trails, use of water conveyance channels and placement on levee rights-of-way. These features will encourage maximum use of alternative forms of movement and will afford access to open space areas without getting in the car and driving to them.

EXPRESSWAY PREDEVELOPMENT CONSIDERATIONS

As new development occurs in the Expressway Sub-District, specific consideration will need to be given to the following issues:

- Potential for MSD property land swap with adjacent owner(s).
- Determining impact of Sportport on the hospitality industry and its subsequent role within the region and City and potential redevelopment options.
- Potential for additional uses on airport property.
- Integration of impacts from the current airport use into overall planning process.
- Impacts of voluntary sale of airport by owners.
- Partnership with the Howard Bend Levee District and MSD regarding water quality and treatment issues.
- Connectivity of projects and uses through automobile, pedestrian, and bicycle routes.
- Potential future pedestrian movement on site, between developments and to adjacent recreational facilities.
- Appropriate design standards for gateway structures and structures fronting Missouri Route 141 and River Valley Parkway.
- Integration and/or screening of adjacent uses.

**EXPRESSWAY GENERAL DEVELOPMENT POLICIES**

- Appropriate land uses should be determined based on consideration of the overall Maryland Park Lake District, and cannot be determined based solely upon consideration of a specific site.
- Any development proposal will need to prove consistency with this plan prior to consideration and meet the requirements of the Maryland Heights Zoning Code and any applicable design guidelines prior to approval.
- The Future Land Use Map identifies the encouraged development pattern for this area. Other land uses (identified as “Conditionally Encouraged”) may be considered provided that the land uses: demonstrate need and add value to the area; are found to further the Goals and Strategies of this plan; are consistent with the guidance provided in this plan; and any associated development issues can be mitigated.
- Prior to development, adequate public facilities must be in place. It is the responsibility of the owner/developer to provide such public facilities and to demonstrate that they will be available at time of occupancy.

EXPRESSWAY SPECIFIC DEVELOPMENT POLICIES

- The Missouri Route 141 corridor and the edges near Creve Coeur Park should include mixed use with an emphasis on retail and entertainment with or without integrated residential uses.
- Office campus uses are highly encouraged in this sub-district.
- Development fronting on either or both of Missouri Route 141 and/or the future River Valley Parkway should be oriented to the ROW; integrating “front door” finish as an important element of overall character of the district and the Maryland Park Lake District.
- Parking should be designed and integrated into the site so as not to be the dominant visible development feature from the ROW.
- Redevelopment of the Creve Coeur Airport should be examined in context of adjacent development.
- All development must be integrated and connected to the regional stormwater management system.
- All new development must connect to either Missouri Route 141 or the future River Valley Parkway.
- All development must provide connections to the parks and open space system.
- All development must provide multi-modal connections between planned developments and other adjacent districts.
- All development must create and include provisions for pedestrian orientation, while accommodating vehicular traffic in an efficient manner.



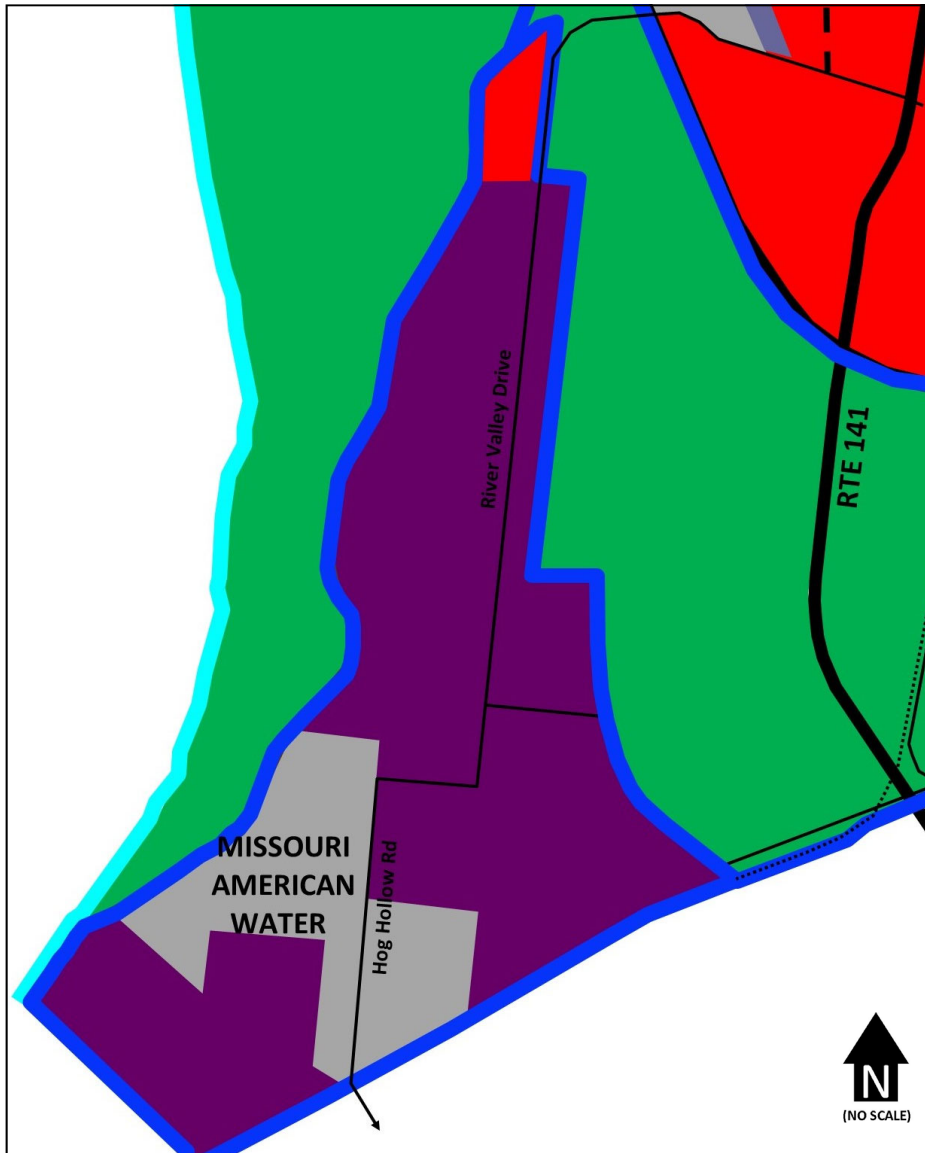
RIVER VALLEY SUB-DISTRICT

The River Valley Sub-District is located at the southern end of the Planning Area, furthest from the highway system. The district makes up approximately 12% of the Maryland Park Lake District.

The primary constraint to development in this planning district as been access to the regional road network. Historically, River Valley Drive was the single collector road in this district. Because of the lower traffic requirements for office-warehouse and service

RIVER VALLEY SUB-DISTRICT VISION

THIS DISTRICT WILL CONSIST OF HIGH QUALITY, BUT LOWER INTENSITY OFFICE DISTRIBUTION AND BUSINESS SERVICE CENTERS WITH INTEGRATED ARCHITECTURAL AND SITE DESIGN.



- MIXED USE — Residential/Retail
- RECREATION AND OPEN SPACE
- MIXED USE — Retail/Entertainment/Residential
- INSTITUTIONAL
- MIXED USE — Office/Entertainment
- TRANSITIONAL USES (adjoining existing uses)
- OFFICE CAMPUS AND/OR OFFICE FLEX
- EXISTING ROADWAY
- OFFICE DISTRIBUTION AND/OR OFFICE FLEX
- FUTURE ROADWAY
- RAILROAD
- PLANNING SUB-DISTRICT BOUNDARY

TABLE 9.5.F: RIVER VALLEY PLANNING DISTRICT LAND USE ACCEPTABILITY MATRIX

LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	◻
MULTI-FAMILY RESIDENTIAL	◻
MIXED-USE	◻
SERVICE RETAIL	◯
REGIONAL RETAIL	◻
ENTERTAINMENT	◻
OFFICE CAMPUS	◯
OFFICE FLEX	◯
OFFICE DISTRIBUTION	●
LIGHT INDUSTRIAL	●
RECREATION	◯
AGRICULTURE	◯

FIGURE 9.5.12: RIVER VALLEY PLANNING DISTRICT FUTURE LAND USE



districts, the local two-lane roads can be made serviceable through these improvements until such time as market pressure or the planned extension of the Maryland Heights Expressway opens up more local streets in the area. With the completion of the Expressway, the district has improved accessibility for high-traffic generating development.

The River Valley sub-district is the single district where a large amount of unconstrained contiguous land (800 acres) is available that is generally free of stormwater constraints. It is expected that interim lower-density uses, such as agriculture and recreation, will continue to be feasible in this area in the short-term, but as development and market demand continues to grow, it is expected that the market pressures will open up this area to high quality business uses. Of course, in the event that there is developer interest in the near future, the area could be developed according to the policies described herein. It should be noted that, if the private market wants to proceed with the type of development envisioned in the Plan at any time, in the near or long-term, it would seek and probably obtain the private funds and public support for the necessary infrastructure upgrades.

RIVER VALLEY DEVELOPMENT VISION

This district will consist of high quality, but lower intensity office distribution and business service centers with integrated architectural and site design. Development will contain significant amounts of open space, that where locationally possible, will be integrated with stormwater management and thus connecting to Creve Coeur Park.

RIVER VALLEY PREDEVELOPMENT CONSIDERATIONS

As new development occurs in the River Valley sub-district, specific consideration will need to be given to the following issues:

- Providing a buffer to the Missouri American Water treatment plant.
- Incorporating service retail as an accessory use development.
- Connectivity of projects and uses through automobile, pedestrian, and bicycle routes.
- Connectivity to Creve Coeur Park and other recreational facilities.
- Appropriate design standards for entrance features and structures fronting River Valley Parkway and the Maryland Heights Expressway.
- Integration and/or screening of adjacent uses.
- Appropriate land uses should be determined based on consideration of the overall Howard Bend Planning Area, and cannot be determined based solely upon consideration of a specific site.
- Any development proposal will need to prove consistency with this plan prior to consideration, and meet the requirements of the Maryland Heights Zoning Code and any applicable design guidelines prior to approval.

RIVER VALLEY GENERAL DEVELOPMENT POLICIES

- The Future Land Use Map identifies the encouraged development pattern for this area. Other land uses (identified as “Conditionally Encouraged”) may be considered provided that the land uses: demonstrate need and add value to the area; are found to further the Goals and Strategies of this plan; are consistent with the guidance provided in this plan; and any associated development issues can be mitigated.
- Prior to development, adequate public facilities must be in place. It is the responsibility of the owner/developer to provide such public facilities and to demonstrate that they will be available at time of occupancy.



- The River Valley sub–district should create an appearance that combines diversity of design within a unified theme.
- Proposed development plans should address building massing, orientation and materials; relationship of buildings to the public right-of way; mix of uses; street level activity; integration of trails and open space; creation and protection of view sheds; vehicular parking, access, and circulation; and others.
- All new development must be integrated and connected to the regional stormwater system.
- All development must provide for connections to the open space and parks system.
- All development must provide multi-modal connections between planned developments and other adjacent districts.
- All development must provide multi-modal considerations, while accommodating vehicular traffic in an efficient manner.

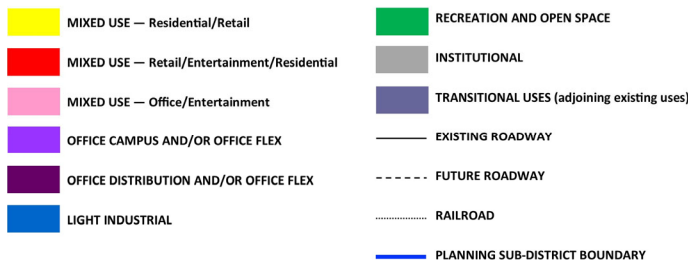
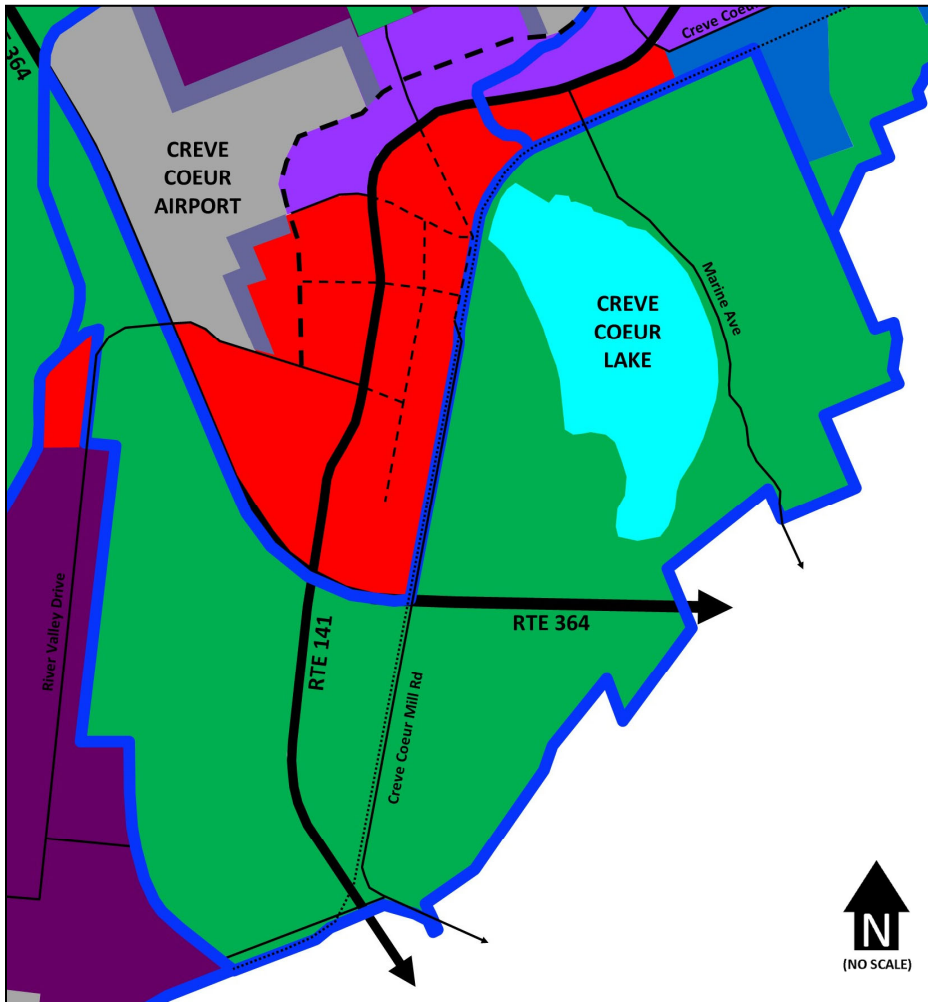


CREVE COEUR LAKE PLANNING SUB-DISTRICT

The Creve Coeur Lake Sub-District is unique in the Maryland Park Lake District in that it is owned and managed almost in its entirety by the St. Louis County Department of Parks and Recreation. This planning sub-district encompasses nearly twenty percent of the Maryland Park Lake District. Creve Coeur Park supports both active and passive recreation uses, including a walking and biking loop around Creve Coeur Lake, picnic areas, and a disc golf course. Athletic fields are leased to clubs, organizations and the City of Maryland Heights for soccer, flag football, softball/baseball and polo. In 2001, the Crystal Springs Quarry Golf Course was expanded by nine holes through the long-term lease of parklands. The park is home to the St. Louis Rowing Club, Lou Fusz Soccer Club, Scott Gallagher Soccer Club, and Go Ape treetop adventure course.

CREVE COEUR LAKE PLANNING SUB-DISTRICT VISION

THE CREVE COEUR LAKE SUB-DISTRICT WILL CONTINUE AS A MAJOR REGIONAL DESTINATION FOR A VARIETY OF ACTIVE, AND PASSIVE RECREATION USES, SOME OF WHICH ARE UNIQUE TO THE REGION, AND ALL OF WHICH ARE SUPPORTIVE OF THE CITY'S HOSPITALITY INDUSTRY.



LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	□
MULTI-FAMILY RESIDENTIAL	□
MIXED-USE	□
SERVICE RETAIL	○
REGIONAL RETAIL	□
ENTERTAINMENT	□
OFFICE CAMPUS	□
OFFICE FLEX	□
OFFICE DISTRIBUTION	□
LIGHT INDUSTRIAL	□
RECREATION	●
INSTITUTIONAL	□
AGRICULTURE	□

FIGURE 9.5.7: CREVE COEUR LAKE PLANNING SUB-DISTRICT FUTURE LAND USE



St. Louis County Parks received approximately 1,100 acres of land as part of the mitigation from the construction of Route 364 (Page Avenue Extension) through the park. To manage this additional open space, the county prepared a master plan and coordinated the rezoning of the park with the City to an “MXD” Mixed-Use District. The plan includes the continuation of existing recreational uses and the expansion of athletic fields. The county plan also calls for more aggressive recreational programming, including a skateboard park, which will provide a recreational resource unique to the region. As presently understood, the county plan is consistent with the City’s recreation plans for the area.

The Creve Coeur Lake Sub-District incorporates a major portion of the regional stormwater management system, including the lake itself, Little Creve Coeur Lake, Creve Coeur Creek, and extensive water storage lands. The eastern edge of the district incorporates the bluffs and is one of the few points where the Maryland Park Lake District lies adjacent to a residential area.

CREVE COEUR LAKE DEVELOPMENT VISION

The Creve Coeur Lake Planning Sub-District will continue to function as a major regional destination for a variety of active, and passive recreational uses, some of which are unique to the region, and all of which are supportive of the City’s hospitality and entertainment industry.

CREVE COEUR LAKE LINKAGES

The trail system will attract usage by office and commercial tenants from adjoining districts. Pedestrian and bicycle linkages from adjoining districts should be encouraged as an enhancement to the overall quality of development and marketability in the entire planning area. The development of these linkages should preclude the need to drive to the Creve Coeur Lake Sub-District in order to use its trail system. Pedestrian and bicycle linkages should be achieved through combinations of walking paths, separate bike trails, and on-street bicycle facilities. Designated on-street bicycle facilities include bicycle lanes and bicycle routes.

CREVE COEUR LAKE GENERAL DEVELOPMENT POLICIES

The potential for support of the hospitality industry will be further strengthened with the establishment of linkages to the Expressway Planning Sub-District and its regionally significant Sportport Soccer Complex.

- Appropriate land uses should be determined based on consideration of the overall Maryland Park Lake District, and cannot be determined based solely upon consideration of a specific site.
- Any development proposal will need to prove consistency with this plan prior to consideration, and meet the requirements of the Maryland Heights Zoning Code and any applicable design guidelines prior to approval.
- The Future Land Use Map identifies the encouraged development pattern for this area. Other land uses (identified as “Conditionally Encouraged”) may be considered provided that the land uses: demonstrate need and add value to the area; are found to further the Goals and Strategies of this plan; are consistent with the guidance provided in this plan; and any associated development issues can be mitigated.

**CREVE COEUR LAKE SPECIFIC DEVELOPMENT POLICIES**

- Prior to development, adequate public facilities must be in place. It is the responsibility of the owner/developer to provide such public facilities and to demonstrate that they will be available at time of occupancy.
- Provide both physical and signage-based connections to adjacent districts. Uses and developments within and adjacent to the district should be welcoming to visitors and designed to be compatible with the surrounding environment.
- Encourage selective accessory commercial uses such as snack bars and restaurants, provided they are subordinate to recreation and open space features.
- Encourage active and unique recreation facilities.
- Encourage and require adequate parking to support planned uses. Parking facilities should have a low environmental and storm water impact, with alternatives to traditional paving, such as pervious surfaces encouraged. Peak traffic demands related to special events should be managed, addressing the location of parking as well as ingress and egress.

RIVER VALLEY SPECIFIC DEVELOPMENT POLICIES

- All new development must be integrated and connected to the regional stormwater system.
- Multi-modal connections between other sub-districts are encouraged.



MISSOURI RIVER PLANNING SUB-DISTRICT

The Missouri River Planning Sub-District is the only planning district that will be outside the 500-year levee. The land area between the levee and the Missouri River is either in its natural state or is used for agriculture. It comprises 16% of the Maryland Park Lake District. The sub-district is located entirely within either the regulated floodway or the flood plain; as a result, the lands that are actively farmed are often flooded. It is rich in wildlife habitat, and is often used for local hunting activities. It was also the location of borrow pits for the construction of the 500-year levee.

MISSOURI RIVER PLANNING SUB-DISTRICT VISION

THIS PLANNING SUB-DISTRICT WILL REMAIN AS OPEN SPACE, AND WILL BE INCORPORATED INTO THE EVOLVING REGIONAL NETWORK OF OPEN SPACES TO BECOME AN INTEGRAL COMPONENT OF THE CONFLUENCE GREENWAY. CHANGES WILL BE ENCOURAGED THAT EXPAND THE NATURAL CHARACTER OF THE AREA; NOT EXPANDED ACTIVE AGRICULTURAL USES. IMPORTANT VIEWSHEDS WILL BE PRESERVED. LOW IMPACT ACCESS TO THE PUBLIC IN SUCH A WAY THAT THE ENVIRONMENTAL INTEGRITY OF THE AREA IS MAINTAINED AND PRIVATE PROPERTY RIGHTS ARE RESPECTED.

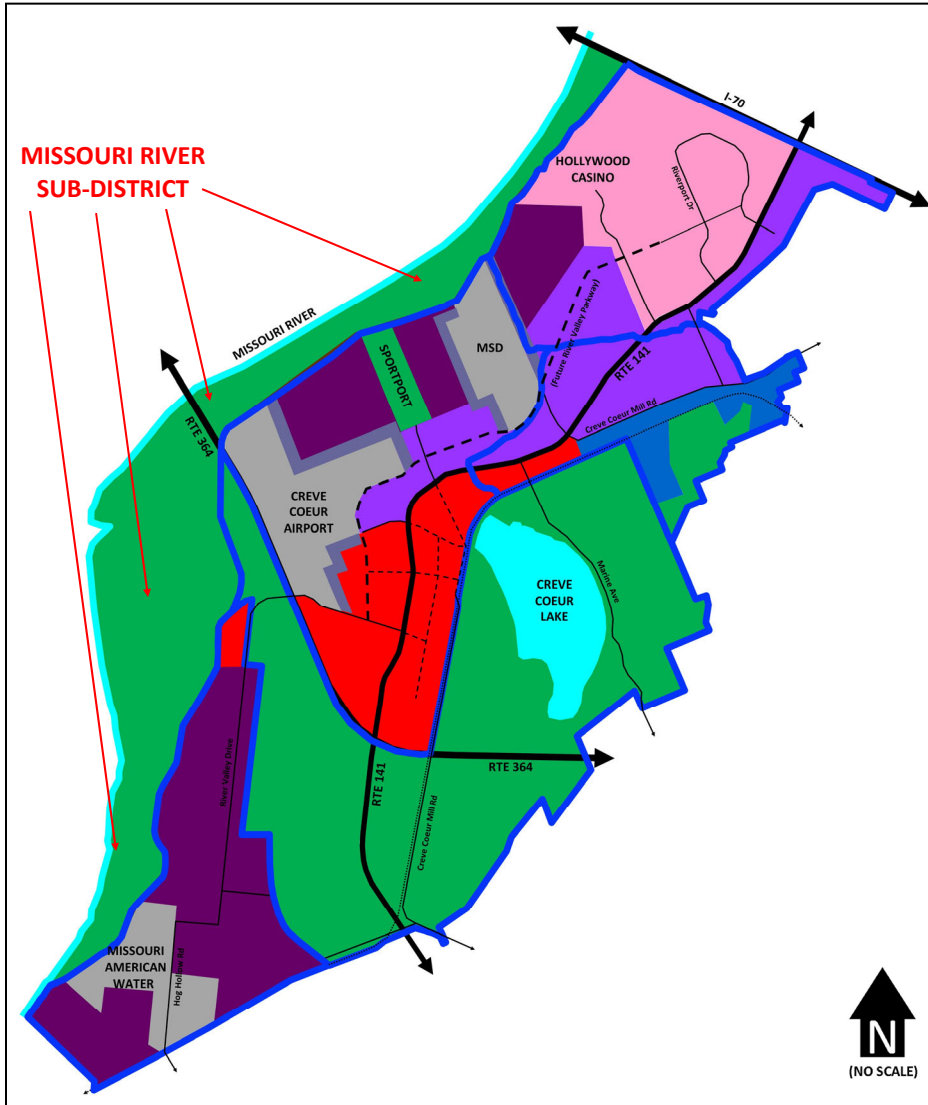


TABLE 9.5.HG MISSOURI RIVER PLANNING SUB-DISTRICT LAND USE ACCEPTABILITY MATRIX	
LAND USE CATEGORY	ACCEPTABILITY LEVEL
SINGLE FAMILY RESIDENTIAL	❑
MULTI-FAMILY RESIDENTIAL	❑
MIXED-USE	❑
SERVICE RETAIL	❑
REGIONAL RETAIL	❑
ENTERTAINMENT	❑
OFFICE CAMPUS	❑
OFFICE FLEX	❑
OFFICE DISTRIBUTION	❑
LIGHT INDUSTRIAL	❑
RECREATION	◯
INSTITUTIONAL	❑
AGRICULTURE	❑

FIGURE 9.5.8: MISSOURI RIVER PLANNING SUB-DISTRICT FUTURE LAND USE

**MISSOURI RIVER DEVELOPMENT GUIDELINES**

Although new development will not occur in the Missouri River Sub-District, specific consideration will still need to be given to the following issues:

- Providing access to natural spaces.
- Potential locations for wetlands mitigation for other districts.
- Continuation of maintenance for agricultural users.
- Development of passive recreational uses.

comprehensive plan

CITY OF MARYLAND HEIGHTS



SECTION 9.6 - IMPLEMENTATION

MARYLAND PARK LAKE DISTRICT



COMPREHENSIVE PLAN IMPLEMENTATION

The Comprehensive Plan is a set of policies intended to guide land use decisions and development while coordinating other City plans, decisions, and regulations. The Comprehensive Plan has no legal basis or legislative authority in regulating development but rather provides the guidance in the form of policies and regulations that provide the nexus to the Zoning Code and other regulations.

The following section discusses some of the tools and techniques for implementing the policies and objectives of the Future Land Use Plan. The City presently utilizes some of the implementation tools, which therefore may only require review for consistency with the plan. Other implementing actions may be pursued by the City to further the implementation of the Plan. These may include actions that expand on and develop adopted policies, and that may be formally adopted later as part of the plan.

REGULATORY STANDARDS AND DESIGN GUIDELINES

Regulatory measures to implement the Plan must be adopted as legal instruments in the form of ordinances. Administrative actions and decisions of the City also should be based on implementing the goals and policies of the Plan. Appropriately used and enforced, regulations prove one of the most valuable implementation tools available. Regulations focused on development standards are of vital importance in guiding the physical development aspects of the Land Use Plan. The zoning code, development regulations, and building codes are but a few examples of the regulatory tools that are available.

The City should create, amend, and adopt the appropriate revisions to the City's Zoning Code to create the mechanism for the use of a "Planned District" as specifically outlined within this plan. A series of related and connected planned developments should be created on a case by case basis, arising from specific development requests and proposals in accordance with the planning policies and guidelines contained within this Plan.

Development plans should include development standards, urban design guidelines, and open space requirements specifically designed to meet the recommendations of this Plan. Planned Districts should function as the vehicles for development used when property owners or developers are interested in proposing specific development plans. These developments should only be proposed when and if the appropriate infrastructure improvements are completed and the plans should be interconnected with other development as well as within itself. The Planned District should also provide for the evaluation of stormwater management review, traffic management, traffic impact, access management, design criteria, functional open space integration, and level of service standards.

PARTNERSHIP OPPORTUNITIES

Opportunities to provide partnerships should be advanced to the maximum extent practical. These partnerships represent not only efficient public policy but responsible public policy. These partnering opportunities follow:

1. ST. LOUIS COUNTY PARKS

The City should continue to work in collaboration with the St. Louis County Department of Parks to review and evaluate future development opportunities within the park. Continued partnering opportunities should be maintained and cultivated focusing on the development of the open space and trail system and recreational program sharing opportunities with the City and the Maryland Park Lake District.

2. PROPERTY OWNERS/HOWARD BEND LEVEE DISTRICT/MISSOURI DEPARTMENT OF NATURAL RESOURCES

The City should encourage the development of a "wetland mitigation bank" that would provide for the replacement of wetlands that have been impacted by development. Additionally, the City should continue to cultivate its leadership



role in guiding the design and development of the regional stormwater management system.

3. METROPOLITAN SEWER DISTRICT/PROPERTY OWNERS/DEVELOPERS

The City should collaborate with MSD regarding potential land swap opportunities that would provide benefit to the planning area by adding additional developable property with higher visibility in the planning area while ensuring the expansion needs of the Missouri River treatment plant are met.

4. GREAT RIVERS GREENWAY/ST. LOUIS COUNTY PARKS/HOWARD BEND LEVEE DISTRICT

The City should participate in the planning and development of a regional trail system that will expand on existing walkways and bikeways within Creve Coeur Park, extend the Missouri River Greenway system along the levee and provide connection opportunities for the Centennial Greenway. This trail system should include internal and local development linkages with the Park, as well as connections to the Katy Trail and proposed developments.

5. MISSOURI-AMERICAN WATER COMPANY/ST. LOUIS COUNTY HIGHWAY DEPARTMENT

The City should mutually investigate local roadway alternatives to provide improved access to the River Valley Planning District including the elimination of through traffic at the Missouri American Water Company.

CONTINUED PLANNING EFFORTS

The planning effort does not conclude with the adoption of the Comprehensive Plan but rather creates the need for further plans to address the general guidance contained within. An overview of these future planning efforts follow:

1. TRAFFIC AND CORRIDOR MANAGEMENT PLAN

The City should develop and adopt a Corridor Management Plan for Route 141 and the River Valley Parkway and the associated street network. The Management Plan will assure that the street network is developed and managed in a way that corresponds with the aesthetic and functional goals and policies outlined within this plan. While a portion of this has been completed and incorporated within this plan, additional recommendations will be needed regarding the following:

- Interconnection standards of the street network, both regionally and locally.
- Level of Service (LOS) standards for future commercial.
- Access management standards for the roadway system.
- Internal circulation guidelines, development access and interconnection between planned development districts.
- Development of mass transit systems to serve the projected employment base with the Maryland Park Lake District.
- Alternate transportation management programs to mitigate peak hour congestion.

2. OPEN SPACE AND PARKS PLAN

The City should create and adopt an Open Space and Parks Plan specifically designed for the Maryland Park Lake District. This Plan should provide recommendations for the provision, allocation and management of open space and its associated amenities. The Plan should also contain specific recommendations for the provision and connection of pedestrian and bicycle facilities and their inclusion into new roadway construction and the stormwater management system.



TRANSPORTATION

The implementation of the Transportation Plan requires:

1. The continuation of the intergovernmental cooperation between the regional agencies (St. Louis County, MoDOT, East/West Gateway, etc.) and the City.
2. The establishment of regulatory tools that ensure the transportation goals are met.
3. The creation of Improvement Districts to provide the funding for the required infrastructure.
4. The continuous monitoring of the roadway network to maintain safe and efficient movement of traffic within the Maryland Park Lake District.

APPROPRIATE REGULATORY MEASURES

The developer should be responsible for the construction of the infrastructure improvements needed to support the development. Accordingly, the City needs to specify the appropriate roadway improvement requirements based upon the scale and nature of the project in each Planned District ordinance.

FUNDING MECHANISMS

The planning area has many funding mechanisms available to fund the required improvements contained within this plan. Options include allocating some portion of the tax revenue received through taxes to fund these projects.

One funding mechanism that may be employed is the use of local finance initiatives. One example of a local finance initiative would be the use of a Transportation Development District (TDD). TDD's may be created to act as the entity responsible for developing, improving, maintaining, or operating one or more projects relative to the transportation needs of the area in which the District is located. Funds generated through the use of TDD's may be used for roadways, interchanges, intersections, bridges, traffic signals, mass transit, or other improvements. A similar initiative, a Community Improvement District (CID), could be used to fund a wider range of public improvements and their maintenance. Both TDD's and CID's impose additional property or sales taxes within the District itself, not citywide.

Another local finance initiative that could be used is the development of Local Option Economic Development Sales Tax. The use of a Local Option Economic Development Sale Tax was approved by the Missouri General Assembly in 2005. These taxes allow citizens to approve an additional sales tax dedicated exclusively for certain economic development initiatives in their municipality. Funds generated from a Local Option Economic Development Sales Tax can be used for projects directly related to long-term economic preparation, such as land acquisition, installation of infrastructure for industrial or business parks, water and wastewater treatment capacity, street extensions and for matching state or federal grants related to such long-term projects.

This list of funding mechanisms does not represent the only options that may be utilized in funding future improvements for the planning area. New and innovative funding mechanisms may become available in the future. The funding mechanisms provided within this plan are meant to be a starting point for the funding of the improvements that will be necessary due to the full build-out of the planning area.

SHARING THE RESPONSIBILITY

In order for the successful development of the planning area, a great deal of coordination will be required. The City will continue to facilitate relationships with many agencies. Some agencies that will play a key role in this process include the Missouri Department of Transportation (MoDOT), St. Louis County, and local municipalities. These relationships can help foster the notion that the development of the transportation system in Howard Bend not only provides a benefit to the city, but also the St. Louis region.



TRANSPORTATION

RESERVE IMPROVEMENTS

If the planning area develops at intensity higher than expected, additional improvements may help to alleviate congestion on the roadway network. It is important to note that given the current land use planning efforts, these improvements do not appear to be necessary.

- Retrofit of the Missouri Route 141 to a Freeway

The character of the Maryland Heights expressway could be changed such that it becomes a freeway with grade separated interchanges instead of intersections. This would increase the capacity of Route 141 but would also limit access from the Expressway. In addition, as a retrofit project the costs would probably be very high due to right-of-way impacts.

- Enhance McKelvey Road Connection with Possible Interchanges on I-270 and/or I-70

McKelvey Road could potentially be enhanced in order to provide an additional way to access the planning area. A potential interchange with I-270 and/or I-70 would also provide an additional method of accessing the planning area.

Some of the potential benefits of this improvement would be that McKelvey Road would act as a reliever route for Missouri Route 141 and the improvement would create another way to access planning area. The issues involved with this improvement would likely include cost, obtaining FHWA and MoDOT approval, and minimizing impacts to neighborhoods.

- Enhanced Connection via Dorsett Road and Marine Avenue

Dorsett Road and Marine Avenue could be enhanced to provide an addition access route for the area. This would involve measures to increase the capacity of the roadways to handle to increase in volume. This improvement would serve to relieve other routes that access the planning area. However, this strategy would have profound impacts to Creve Coeur Park, and would probably not be politically feasible.



APPENDIX



TABLE: GOALS & OBJECTIVES



Goal	Objectives
Essential Land Use and Development Strategies	
<p>Encourage projects and features that enhance the identity and image of the City.</p>	<p>Ensure the character and image of the City of Maryland Heights is perpetuated in new development and redevelopment proposals.</p> <p>Encourage the expansion and strengthening of existing commercial areas.</p> <p>Encourage a better/improved range of retail and services, including hospitality and entertainment.</p> <p>Support the development of neighborhood retail and service opportunities.</p> <p>Encourage mixed-use developments that enhance the quality of life and community character by building efficient, compact, connected development.</p>
<p>Encourage a sustainable development pattern that accommodates and balances both economic growth and community character.</p>	<p>Reduce energy consumption through the application of energy efficient design techniques and technologies.</p> <p>Encourage environmentally friendly building practices such as green roofs and permeable pavers in new development and redevelopment.</p> <p>Encourage redevelopment of buildings and properties that are experiencing functional or economic obsolescence.</p> <p>Create development patterns that result in efficient connection to the regional stormwater and transportation system.</p> <p>Encourage public infrastructure and facilities including roads, pedestrian connections, and streetscapes that are designed to promote both aesthetic and functional quality.</p> <p>Encourage green infrastructure in all redevelopment and new development.</p> <p>Establish and strengthen focal points, such as schools, parks, commercial districts, and other community gathering spaces.</p>



Goal	Objectives
Creating and Maintaining Healthy and Vibrant Neighborhoods	
Encourage quality housing and neighborhoods that include a high quality public realm.	<p>Support residential uses within mixed-use developments.</p> <p>Provide a range of housing options for all stages of life.</p> <p>Develop a diverse housing stock, both in form and price range.</p> <p>Interconnect residential subdivisions where possible and feasible.</p> <p>Encourage the development of functional common ground areas.</p> <p>Consider residential land use categories and regulations that reflect distinct neighborhood patterns rather than a “one size fits all” approach.</p>
Promote, preserve, and enhance the character of the single-family residential areas of the City.	<p>Ensure that infill development is compatible with the established neighborhood.</p> <p>Encourage additions and renovations to existing homes.</p> <p>Ensure that properties are maintained through proactive code enforcement.</p>



Goal	Objectives
Open Space, Parks, Recreation, and Wellness	
<p>Encourage and require open space that is both accessible and sustainable, and that results in a quality place.</p>	<p>Create adaptable, multiuse spaces for community gathering, play, and social activity for all ages and abilities.</p> <p>Ensure compatibility between potential development and the existing natural environment.</p> <p>Support the integration of open space to create transitions in mixed-use developments and residential neighborhoods.</p> <p>Ensure the accessibility of recreational facilities.</p> <p>Ensure the character and image of the City of Maryland Heights is perpetuated in open space and recreational areas.</p>
<p>Encourage wellness and active living through green infrastructure, physical activity, and recreation.</p>	<p>Support the creation of pedestrian linkages for existing development, redevelopment, and infill.</p> <p>Enhance, reinforce, and connect to local and regional open space and recreation facilities.</p> <p>Encourage walkable developments and neighborhoods.</p>



Goal	Objectives
Delivering Quality Community Services	
<p>Create value and character for the city, property owners, and the development community through innovative design of the stormwater management system.</p>	<p>Encourage stormwater management practices that reduce peak flows while improving water quality.</p> <p>Encourage stormwater management systems that mimic natural processes.</p> <p>Utilize the stormwater management system as a visual, environmental, and functional amenity.</p>
<p>Support Complete Streets that are convenient and accessible for all users of the transportation system including motorists, transit users, pedestrians, and cyclists of all ages and abilities.</p>	<p>Assure that new development is responsive to pedestrian needs.</p> <p>Consider the mobility-impaired population of Maryland Heights in all planning and construction phases.</p> <p>Establish and expand the planning, implementation, and operation of a multi-modal transportation system, including transit, roadways, bikeways, and pedestrian facilities.</p> <p>Ensure the visual quality of transportation networks and their support facilities.</p> <p>Ensure the functional compatibility of the transportation system and adjacent land uses.</p> <p>Reduce the impact of parking facilities on public rights-of-way.</p>
<p>Manage access and traffic to promote safety, maximize efficiency, and avoid congestion.</p>	<p>Encourage the efficient use of roadways and other existing transportation elements.</p> <p>Create internal street systems that are coordinated and integrated, including multiple interconnections between individual developed area, avoiding freestanding development areas unrelated to each other.</p> <p>Encourage future road improvements that provide both a local and regional benefit.</p>



Goal	Objectives
Delivering Quality Community Services	
Encourage transportation improvements to include aesthetic enhancements that add character and further City image.	<p>Require high level and quality design standards that create character along roadways.</p> <p>Ensure the character and image of the City of Maryland Heights is perpetuated in transportation improvements.</p> <p>Design roads, bridges, and overpasses to enhance the surrounding area and larger community.</p>
Encourage the provision of adequate public utilities while balancing the needs of the environment, public health, safety, and general welfare.	<p>Support a strong infrastructure system that supports new, sustainable technologies.</p> <p>Support renewable energies that are easily scalable, environmentally sound, efficient, and adaptable to environmental change and community demand.</p> <p>Promote the conservation and re-use of water to the maximum extent practical.</p> <p>Ensure that provisions for the layout and delivery of utilities consider the potential impacts on the layout, value, and character of adjacent future development opportunities.</p>



Goal	Objectives
Hazard Mitigation and Resiliency	
Encourage resiliency and sustainable development by protecting development from natural hazards.	<p>Raise public awareness concerning hazards, including measures that can be taken to promote mitigation and increase disaster preparedness, response, and recovery capabilities.</p> <p>Evaluate options to mitigate the impacts of gradual and catastrophic natural hazards.</p> <p>Support efforts that will assist with the continuity of critical business operations.</p> <p>Form working relationships to leverage and share resources.</p> <p>Minimize the loss of life and injuries that could be caused by natural hazards to the greatest extent practical.</p>



Goal	Objectives
Enhancing Economic Vitality	
Increase economic resiliency and innovation as part of a globally competitive, business-friendly region, comprised of healthy communities that sustain a high quality of life.	<p>Encourage a diversified mix of businesses to support a vibrant local economy.</p> <p>Provide efficient government services to all citizens of the community.</p> <p>Encourage and support redevelopment and adaptive reuse of the Westport industrial area, as well as at Westport Plaza.</p> <p>Encourage new hospitality oriented businesses to complement existing venues.</p> <p>Provide opportunities for existing businesses to expand and grow.</p> <p>Promote appropriate new commercial development or redevelopment of existing properties where market-supported opportunities occur.</p> <p>Consider incentives for renovation projects.</p> <p>Encourage projects that produce quality jobs.</p>



Goal	Objectives
Active Community Engagement	
Encourage an environment that promotes community awareness and involvement in neighborhood enhancement.	<p>Enhance resident and civic organization capacity to shape their communities.</p> <p>Explore ways to offer improved access to City services through enhanced technologies.</p> <p>Encourage involvement by residents and business owners in the planning process.</p> <p>Involve residents in the creation of their neighborhood plans.</p> <p>Investigate and implement appropriate activities to assist in creating a sense of community identity.</p> <p>Support the efforts of the “creative class” as they work to enhance the vibrancy of the City’s neighborhoods.</p> <p>Continue to recognize the importance of the arts.</p>



CITY OF MARYLAND HEIGHTS

DATA BOOK

LAST UPDATED 2021

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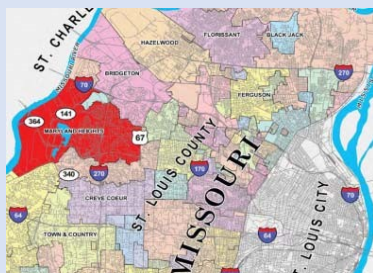
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Introduction



Regional Context

In the St. Louis metropolitan area, the City of Maryland Heights is strategically located between the northern and central travel corridors of the entire region. U.S. Route 40 is just to the south of the City limits and Interstate 70, in part, forms the northern border of the community. Interstate 270 bisects the City area. With Interstate 255, the City is within a 30-minute driving time from nearly all parts of the Missouri-Illinois Metro Region. The City has quick access to all the major commercial and employment nodes of the region and has its own

regional commercial and employment centers in the form of the Westport Plaza and Progress West commercial/industrial developments, which are in the heart of the community. The Riverport commercial and industrial area in the northwest sector of the community adds another major source of employment and commercial center encompassing 600 acres. These major developments rank the community among the highest in the metro area in terms of assessed valuation and property tax generation.

WHAT MAKES MARYLAND HEIGHTS A PLACE FOR BUSINESS?

The City of Maryland Heights is about moving people and goods within the region. It is a residential community of 27,000 persons. On an average day approximately 50,000 people come to Maryland Heights to work in over 30 million square feet of commercial and business development. During a given year, the Hollywood Casino typically attracts three million people, Creve Coeur Lake Memorial Park attracts one million travelers, and the Hollywood Casino Amphitheater attracts 20 to 25,000 people for each concert held May through October (approximately 15 to 20 concerts or events).

To serve the need of business associates and tourists visiting the area, the City has roughly 4,000 hotel rooms available. Several thousand students per day attend DeVry University, Chamberlain School of Nursing, and Lindenwood University's satellite campus, contributing to the City's economy and attracting new service-oriented businesses.

To move all these people, the City relies on the Dorsett Road corridor which connects Lindbergh Boulevard to I-270. The average daily traffic (ADT) of Dorsett Road at I-270 is 33,810 vehicles. Page Avenue (Route 364) is an east-west highway connecting St. Louis to Maryland Heights and St. Charles County. It has as an ADT over 33,000 at I-270. State Highway 141 (Maryland Heights Expressway) has an ADT of just under 16,000. It is a north-south connector from West County (Olive Road) to I-70. This highway is anticipated to serve future retail, entertainment, and hospitality development in the Maryland Park Lake District, as envisioned by the City's Comprehensive Plan.

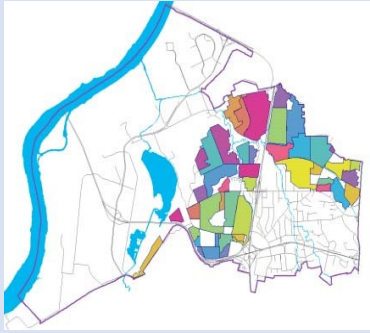
The City's well-established position as a major regional commercial and employment center will continue to ensure a prosperous future for Maryland Heights for years to come. The desirability of its location may exert pressure toward redevelopment of older properties, especially along major transportation corridors and within established light industrial areas. The City's proximity to the region's international airport, approximately five miles to the northeast, contributes towards the continued stability of its office, service, and industrial economy.

Maryland Heights can be accurately described as an Edge City.¹ It began as a mostly rural community that has shifted into a larger city over the past 30 years. The post-World War II building boom in St. Louis County changed the identity of Maryland Heights from semi-rural to suburbia. The "Old Heights" community became surrounded by new subdivisions and suburban development. During the 1950s and 1960s the urbanization of Maryland Heights was further influenced by the post-war road construction projects (See Appendix I, History of Maryland Heights for more information).

According to 2010 Census data, the City currently ranks eight in population among St. Louis County municipalities. At 23.42 square miles, the City's total area ranks it as the third largest municipality in St. Louis County. Maryland Heights would have reached a limit of developable land, had the Howard Bend Levee not been in 2005². Prior to the Howard Bend Levee, commercial, industrial, and residential areas were generally considered built out. Levee construction resulted in the land transitioning from agricultural floodplain to the development of commercial land. Funding for the levee was made possible by the creation of the Howard Bend Levee District. Land owners and residents of the district voted to fund the construction and maintenance of the levee through an assessment of property owners in the area. The levee, which extends from the Missouri American Water Treatment Plant in the south to the Riverport levee in the north, is certified annually by the Core of Engineers. The land in the Lake District was certified by the Federal Emergency Management Agency (FEMA) with a letter of Map Revision in April 2006, declassifying the land as floodplain.

¹ Edge City: concept to explain a concentration of businesses, entertainment, and homes clustered away from a metropolitan area's traditional urban core; usually located in areas previously exclusively suburban or semi-rural in character.

² A 500-year levee has the capability of repelling a flood of such a magnitude that it has a 0.2% chance of occurring each year.



Residential Neighborhoods

Existing housing stock was built between 1940 and 1978 and is typically a ranch style with three bedrooms and two baths. Many of the homes in Maryland Heights are 1,200 square feet or smaller with carports. The limited square footage of the existing housing stock contributes to growing families moving out of Maryland Heights in hopes of finding a home with greater living space. While many of the existing homes are well maintained, they no longer satisfy the preferences of the many homebuyers in the current housing market. In 2020, the National Association of Realtors issued a survey showing the preferences of a

typical homebuyer based on home purchases. The surveys have shown that the majority of the current housing stock in Maryland Heights does not match the preferences of current homebuyers (Table 1).

Table 1: Housing Purchases

	Typical Home Purchased	Maryland Heights
Average Age	28 years	40 years
Bedrooms	Three	Three
Bathrooms	Two	Two
Square Feet	1,900	1,357

Source: National Association of Realtors

The high percentage of homes lacking in size, bedrooms, and bathrooms most home buyers are seeking puts Maryland Heights in an uncertain position for the future. The relative desirability of the City's housing stock compared to neighboring communities may lead to people looking elsewhere in the region to live and raise families. The functional obsolescence of the existing single-family homes potentially results in a changed demographic profile for homebuyers. Those that do choose to buy these houses will likely fall into one of the three categories: "residential investors/absentee landlords," "new families/first time home buyers," and "empty-nesters." Unfortunately, without housing stock that satisfies the needs of growing families, the community may find itself unable to offer the variety of housing choices needed for a healthy and vibrant city.

One of the City's strategic goals is preserving neighborhoods and ensuring that they are safe and well-maintained. Residents should feel secure in their homes and proud of their neighborhoods. For this reason, the City established proactive programs to ensure safe homes and neighborhoods. While these policies are designed to protect all residents, some policies, including our residential occupancy permit requirement, are for the benefit of our newest residents – those who are just moving into the community.

This program is beneficial to the community for multiple reasons. As mentioned previously, the average home in Maryland Heights is 40 years old. With an aging housing stock, it is important to identify safety concerns within the home. These items may be the result of deferred maintenance or unsafe home repair efforts. A proactive program helps to identify and address potential blighting of neighborhoods. This helps maintain property values for all residents.

Geographically, housing in Maryland Heights generally differs from northeast to southwest. Homes in the northeast tend to be older, smaller and less expensive, while homes toward the southwest tend to be newer, larger and more expensive. The same geographical trend can be witnessed in neighboring communities (Table 2).

Table 2: Median Value of Owner Occupied Housing (2019)

Maryland Heights	North and East				South and West			St. Louis County
	Bridgeton	Hazelwood	Overland	St. Ann	Chesterfield	Creve Coeur	Olivette	
\$158,800	\$168,700	\$118,900	\$89,000	\$89,900	\$379,800	\$402,300	\$338,100	\$198,800

Source: US Census Bureau (American Community Survey)

The City’s general image in a regional context is not well defined. Unlike the older communities of the region, Maryland Heights has no defined downtown, unique residential neighborhoods, or other publicly known “historical” setting into which it can be readily categorized. The community has an opportunity to cultivate an image through various civic activities and programs (including public art), location and design of community center buildings, and the appearance and maintenance of buildings along its major streets. City officials and staff should make every effort to disseminate positive activities, occurrences, and features of the community. However, Maryland Heights’ residents are the best ambassadors for the community through their employment and social activities throughout the region.

Maryland Heights holds a notable role as an employment and entertainment center. Its location in the regional circulation and growth network, coupled with the magnitude of its corporate and industrial citizens, will undoubtedly assure it a place of prominence for the future. The City’s residential context in the region is somewhat nondescript and historically has limited capacity for growth. The scope and magnitude of further development of the Riverport area and redevelopment in and around Westport Plaza will further promote the City’s regional role as a commercial/industrial center, as well as major development of the remaining Maryland Park Lake District.² Because of the community’s existing economic base and potential for commercial and industrial expansion, it is likely that the residents of Maryland Heights will be afforded a good level of services and community amenities (once those not already in place are developed).

Population

The decennial census conducted by the United States Census Bureau is the most detailed source of population information available. The most recent census completed was in 2010. The following analysis compares census data from the 1990, 2000, and 2010 reports. Some of the data compared are from the census and other data was gathered from the American Community Survey (ACS) from 1990, 2000, and 2010 using three-year estimate levels. The census and the ACS ask different questions and report on different levels of detail and topics. For this reason, both surveys were consulted to create a clearer picture of Maryland Heights.

² Formerly known as Howard Bend.

Data from the 1980 census has been included within sections of the Data Book in order to draw comparisons and evaluate change. It should be noted however that the 1980 census data is based on estimated City boundaries due to the 1985 incorporation. Therefore conclusions drawn from this data may not entirely align with the 1990 data.

GENERAL POPULATION CHARACTERISTICS

Ultimately, a city is its people. The number of people and the rate at which the population changes are basic to formulating population projections, determining future needs, and shaping public policy. Table 3 illustrates the population growth of Maryland Heights for the period of 1990 through 2020.

Table 3: Population Trends (1990 - 2020)

Year	Population	Percent Change
1980	24,958	---
1990	25,407	1.6%
2000	25,756	1.4%
2010	27,472	6.7%
2020	28,284	3.0%

Source: U.S. Census Bureau

During the decade of 1980 to 1990, the population of Maryland Heights increased from 24,998 persons to 25,407 persons, an increase of 409 persons, or just under 2%. This population increase can be attributed to a combination of several factors including: (1) people living in smaller household units comprised of younger households with fewer children, more divorced and single parent families and empty nesters in the older age groups and (2) a pattern of migration to the urban fringe in west St. Louis County and St. Charles County where extensive home building has occurred.

St. Louis County during this timeframe also experienced an increase of only 2%, a moderate overall growth rate due to the previously mentioned population shifts. In comparison, both St. Charles and Jefferson Counties experienced population increases of 48% and 17% respectively.

Maryland Heights experienced a much larger population growth during the decade of 2000 to 2010 than during previous decades measured. The population increased from 25,756 persons to 27,472 persons, an increase of 1,716 persons or nearly 7%. While not substantial, Maryland Heights continued to experience growth from 2010 to 2020.

In addition to the total population count, the distributions of the population by age groups are important for planning analysis. Comparing age group distribution over time can show the extent population change is correlated to births, deaths, and migration.

Table 4: Population Trends by Age Group (1980 - 2010)

Age Group	1980		1990		2000		2010	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
0-9	3,504	14.0%	3,067	12.1%	3,039	11.8%	3,079	11.2%
10-14	2,262	9.1%	1,236	4.9%	1,559	6.1%	1,499	5.5%
15-19	2,427	9.7%	1,429	5.6%	1,450	5.6%	1,609	5.9%
20-24	2,196	8.8%	2,401	9.5%	2,004	7.8%	2,338	8.5%
25-29	2,945	11.8%	3,814	15.0%	2,892	11.2%	2,988	10.9%
30-34	2,694	10.8%	2,783	11.0%	2,299	8.9%	2,237	8.1%
35-44	3,866	15.5%	3,860	15.2%	4,401	17.1%	3,553	12.9%
45-54	2,455	9.8%	3,026	11.9%	3,320	12.9%	3,957	14.4%
55-64	1,449	5.8%	1,940	7.6%	2,337	9.1%	2,855	10.4%
65-74	683	2.7%	1,027	4.0%	1,455	5.6%	1,825	6.6%
75-84	339	1.4%	502	2.0%	774	3.0%	1,110	4.0%
85+	138	0.6%	238	0.9%	226	0.9%	422	1.5%
Total	24,958	100%	25,407	100%	25,756	100%	27,472	100%

Source: U.S. Census Bureau

Changes in age group and gender distribution between 1980 and 2010 for the total population are shown in Table 4. While half of Maryland Heights' current population is under the age of 35, there are indications that the population is aging. In the 1990 Census, the most significant percentage increases were in the age groups of persons 65 or older, with the largest percentage increase in persons over 75. This is consistent with regional and national trends.

AGE AND GENDER COMPOSITION

Most age groups are evenly split between males and females, with the exception of the 75 and older age group, where the trend of female longevity becomes apparent. See Table 5 on page 7 for further detail.





Table 5: Population Trends by Age Group & Gender (1980 - 2010)

Age Group	Year	Female			Male		
		Number	Percent of Total	Percent Change	Number	Percent of Total	Percent Change
0-9	1980	1,625	13.0%	--	1,879	15.1%	--
	1990	1,543	12.0%	-5.0%	1,524	12.1%	-18.9%
	2000	1,512	11.6%	-2.0%	1,527	12.0%	0.2%
	2010	1,507	10.7%	-0.3%	1,572	11.7%	2.9%
10-19	1980	2,300	18.4%	--	2,389	19.1%	--
	1990	1,321	10.3%	-42.6%	1,344	10.7%	-43.7%
	2000	1,466	11.3%	11.0%	1,543	12.1%	14.8%
	2010	1,514	10.7%	3.3%	1,594	11.9%	3.3%
20-29	1980	2,606	20.9%	--	2,535	20.3%	--
	1990	3,019	23.5%	15.8%	3,196	25.4%	26.1%
	2000	2,337	17.9%	-22.6%	2,559	20.1%	-19.9%
	2010	2,669	18.9%	14.2%	2,657	19.8%	3.8%
30-34	1980	1,304	10.5%	--	1,390	11.1%	--
	1990	1,336	10.4%	2.5%	1,447	11.5%	4.1%
	2000	1,093	8.4%	-18.2%	1,206	9.5%	-16.7%
	2010	1,081	7.7%	-1.1%	1,156	8.6%	-4.1%
35-44	1980	1,977	15.8%	--	1,889	15.1%	--
	1990	1,971	15.4%	-0.3%	1,973	15.7%	4.4%
	2000	2,152	16.5%	9.2%	2,249	17.7%	14.0%
	2010	1,722	12.2%	-20.0%	1,831	13.7%	-18.6%
45-54	1980	1,163	9.3%	--	1,292	10.4%	--
	1990	1,584	12.3%	36.2%	1,442	11.5%	11.6%
	2000	1,735	13.3%	9.5%	1,585	12.5%	9.9%
	2010	2,049	14.5%	18.1%	1,908	14.3%	20.4%
55-64	1980	714	5.7%	--	735	5.9%	--
	1990	959	7.5%	34.3%	981	7.8%	33.5%
	2000	1,268	9.7%	32.2%	1,069	8.4%	9.0%
	2010	1,525	10.8%	20.3%	1,330	9.9%	24.4%
65-74	1980	411	3.3%	--	272	2.2%	--
	1990	552	4.3%	34.3%	475	3.8%	74.6%
	2000	814	6.2%	47.5%	641	5.0%	34.9%
	2010	1,028	7.3%	26.3%	797	6.0%	24.3%
75 or older	1980	376	3.0%	--	101	0.8%	--

	1990	552	4.3%	46.8%	188	1.5%	86.1%
	2000	650	5.0%	17.8%	350	2.7%	86.2%
	2010	990	7.0%	52.3%	542	4.0%	54.9%
Total	1980	12,476	100%	--	12,482	100%	--
	1990	12,837	100%	2.9%	12,570	100%	0.7%
	2000	13,027	100%	1.5%	12,729	100%	1.3%
	2010	14,085	100%	8.1%	13,387	100%	5.2%

Source: U.S. Census Bureau

Table 6: Population Trends by Gender (1990 - 2010)

Year	Female		Male	
	Percent Number of Total		Percent Number of Total	
1990	12,837	50.5%	12,570	49.5%
2000	13,027	50.6%	12,729	49.4%
2010	14,085	51.3%	13,387	48.7%

Source: U.S. Census Bureau



Table 7: Household Composition (2000 - 2010)

Household Type	Year	Maryland Heights			St. Louis County		
		Number	Percent of Total Households	Percent Change	Number	Percent of Total Households	Percent Change
Family Households	2000	6,420	56.8%	--	270,810	67.0%	--
	2010	6,766	55.6%	5.4%	263,423	65.1%	-2.7%
Married Couple	2000	5,001	44.2%	--	206,240	51.0%	--
	2010	4,859	39.9%	-2.8%	189,432	46.8%	-8.1%
Male Householder (no wife present)	2000	343	3.0%	--	13,077	3.2%	--
	2010	513	4.2%	49.6%	16,338	4.0%	24.9%
Female Householder (no husband present)	2000	1,076	9.5%	--	51,493	12.7%	--
	2010	1,394	11.4%	29.6%	57,653	14.2%	12.0%
Non-Family Household	2000	4,882	43.2%	--	133,502	33.0%	--
	2010	5,414	44.4%	10.9%	141,342	34.9%	5.9%
Householders Living Alone	2000	3,820	33.8%	--	113,172	28.0%	--
	2010	4,291	35.2%	12.3%	119,346	29.5%	5.5%
Total Households	2000	11,302	100%	--	404,312	100%	--
	2010	12,108	100%	7.1%	404,765	100%	0.1%
Households with Individuals Under 18 years	2000	3,122	27.6%	--	138,497	34.3%	--
	2010	3,350	27.5%	7.3%	126,823	31.3%	-8.4%
Households with Individuals 65 years or Older	2000	1,661	14.7%	--	98,852	24.4%	--
	2010	2,181	17.9%	31.3%	106,110	26.2%	7.3%

Source: U.S. Census Bureau

Table 7 illustrates the predominance of the single person household in Maryland Heights. This type of household occupies 30% of all housing units within the City. Compared to St. Louis County, the City has a higher percentage of single person households and non-family households, and a lower percentage of households with individuals under 18 years.

Table 8: Racial Composition (1990 - 2020)

Group	Year	Number	Percent of Total Population	Percent Change
White	1990	23,752	94.0%	--
	2000	21,983	85.4%	-7.4%
	2010	20,122	73.2%	-8.5%
	2020	16,555	58.5%	-17.8%
African-American	1990	913	3.6%	--
	2000	1,436	5.6%	57.3%
	2010	3,262	11.9%	127.2%
	2020	4,353	15.4%	33.4%
Other	1990	742	2.9%	--
	2000	2,337	9.0%	215.0%
	2010	4,024	14.8%	72.2%
	2020	7,376	26.1%	83.3%
Total	1990	25,407	100%	--
	2000	25,756	100%	1.4%
	2010	27,472	100%	6.7%
	2020	28,284	100%	3.0%

Source: U.S. Census Bureau

Racial diversity within Maryland Heights has increased slightly from 1980 through 1990. Table 8 reflects the trend in ethnic composition for the City from 1990 to 2020. The combination of all other racial groups increased dramatically during the decade from 1990 to 2000 and continued to increase between 2000 and 2010. From 1990 to 2000, the combination of all other racial groups more than doubled, increasing by 1,595 persons or 215%. In 2020, racial groups other than African-American or White represented roughly 26% of the total population, a substantial increase from the nearly 2% in 1980. Together all racial minorities make up about 42% of Maryland Heights' population according to the 2020 census. Although still making up the majority of the population, the percent of the population categorized as white continues to decrease, while the minority races continue to increase.

See Appendix II for detailed racial composition data and population data comparison between the United States, Missouri, St. Louis County, and Maryland Heights.

Housing

The percent of single unit housing structures out of the total housing structures in Maryland Heights did not change significantly from 1990 (59%) to 2010 (54%). However, the number of multi-unit housing structures grew significantly during this time (Table 9). The number of two-unit housing structures increased by 147% between 1990 and 2010. The number of three- or four-unit structures increased by 88% during the same time period and the number of five- to nine-unit structures increased by 57%. From 1990 to 2010 the total number of housing units in Maryland Heights increased by nearly 15% (or 1,701 units). This means that the majority of the housing being added in the City from 1990 to 2010 was in the form of multi-unit structures.

Table 9: Units in Housing Structure (1990 - 2010)

Structure Type	Year	Maryland Heights			St. Louis County		
		Number of Units	Percent of Total Units	Percent Change	Number of Units	Percent of Total Units	Percent Change
Single Unit, Detached	1990	6,215	54.2%	--	286,709	71.3%	--
	2000	6,762	57.2%	8.8%	308,745	72.9%	7.7%
	2010	6,490	49.3%	-4.0%	313,450	71.6%	1.5%
Single Unit, Attached	1990	623	5.4%	--	13,806	3.4%	--
	2000	714	6.0%	14.6%	15,802	3.7%	14.5%
	2010	744	5.6%	4.2%	20,375	4.7%	28.9%
2 Units	1990	48	0.4%	--	6,936	1.7%	--
	2000	83	0.7%	72.9%	6,760	1.6%	-2.5%
	2010	119	0.9%	43.4%	7,185	1.6%	6.3%
3 or 4 Units	1990	633	5.5%	--	20,631	5.1%	--
	2000	632	5.3%	-0.2%	20,976	5.0%	1.7%
	2010	1191	9.0%	88.4%	22,379	5.1%	6.7%
5 to 9 Units	1990	1,120	9.8%	--	23,496	5.8%	--
	2000	1,101	9.3%	-1.7%	24,384	5.8%	3.8%
	2010	1,763	13.4%	60.1%	25,443	5.8%	4.3%
10 to 19 Units	1990	1,759	15.3%	--	28,705	7.1%	--
	2000	1,761	14.9%	0.1%	23,565	5.6%	-17.9%
	2010	2,291	17.4%	30.1%	24,799	5.7%	5.2%
20 or more Units	1990	998	8.7%	--	17,618	4.4%	--



	2000	773	6.5%	-22.5%	22,339	5.3%	26.8%
	2010	573	4.4%	-25.9%	22,537	5.1%	0.9%
Mobile Home or Trailer	1990	11	0.1%	--	1,472	0.4%	--
	2000	0	0.0%	-100.0%	1,145	0.3%	-22.2%
	2010	0	0.0%	0.0%	1,590	0.4%	38.9%
Other	1990	63	0.5%	--	2,466	0.6%	--
	2000	0	0.0%	-100.0%	33	0.0%	-98.7%
	2010	0	0.0%	0.0%	155	0.0%	369.7%
Total	1990	11,470	100%	--	401,839	100%	--
	2000	11,826	100%	3.1%	423,749	100%	5.5%
	2010	13,171	100%	11.4%	437,913	100%	3.3%

Source: U.S. Census Bureau

When compared to surrounding areas, Maryland Heights has a higher proportion of multi-family housing as well as renter occupied housing. In 2010, approximately 45% of the housing in Maryland Heights was multi-family units (2 units or more) compared to only 23% of the overall housing units in St. Louis County (Table 9). Of the housing within the City, 58% is owner occupied compared with 72% in the County (Table 10).



Table 10: Total Population in Occupied Housing Units by Tenure (2000 - 2019)

Status	Year	Maryland Heights			St. Louis County			Missouri		
		Number	Percent of Total	Percent Change	Number	Percent of Total	Percent Change	Number	Percent of Total	Percent Change
Owner Occupied	2000	17,422	68.6%	--	784,132	78.6%	--	4,001,014	73.6%	--
	2010	16,911	62.8%	-2.9%	735,572	75.1%	-6.2%	4,145,569	71.3%	3.6%
	2013	15,993	59.5%	-5.4%	717,946	73.2%	-2.4%	4,097,217	70.0%	-1.2%
	2019	15,298	57.8%	-4.3%	695,797	71.1%	-3.1%	4,121,022	69.5%	.6%
Renter Occupied	2000	7,990	31.4%	--	212,897	21.4%	--	1,432,139	26.4%	--
	2010	10,002	37.2%	25.2%	243,928	24.9%	14.6%	1,669,216	28.7%	16.6%
	2013	10,866	40.5%	8.6%	263,463	26.8%	8.0%	1,754,790	30.0%	5.1%
	2019	11,191	42.2%	3.0%	282,414	28.9%	7.2%	1,808,976	30.5%	3.1%
Total in Occupied Housing Units	2000	25,412	100%	--	997,029	100%	--	5,433,153	100%	--
	2010	26,913	100%	5.9%	979,500	100%	-1.8%	5,814,785	100%	7.0%
	2013	26,859	100%	-0.2%	981,409	100%	0.2%	5,852,007	100%	0.6%
	2019	26,489	100%	-1.4%	978,211	100%	-0.3%	5,929,998	100%	1.3%

Source: U.S. Census Bureau (2000 and 2010 Census, 2013 American Community Survey 3-year estimates, 2019 ACS 1-year estimates)

Of all the single-family homes, there are about 200 homes that have no basement and are built on slabs. While this is not a statistically significant number, it is worth noting as they tend to be clustered together. About 53% of single-family homes in Maryland Heights have fewer than two enclosed parking spaces. That figure consists of homes with one-car garages, carports, detached garages, and those with no vehicular shelter.

For empty nesters, the relative size of a home becomes less of an issue as their children grow up and move out. However, with time these homeowners age and the physical demands of home maintenance can become an issue. Some eventually move into senior housing facilities or into the homes of their adult children. In some cases, they will live their entire life in the home. With appropriate services and benefits, a senior citizen may choose to stay in a smaller home, if modifications could be made to accommodate increasingly limited mobility. Improving the home environment will improve the quality of seniors' lives and allow them to remain at home safely and independently. With 78 million baby boomers nationwide approaching retirement, communities will increasingly need to address the needs of a growing senior citizen population. Development of more housing options in Maryland Heights, especially senior living options, will be important in the next few years to support the aging population.

While keeping houses occupied has not yet become a serious problem, the smaller, older houses are slowly being converted to rental stock, a trend that may be accelerated by the current economic climate. The millennial generation, people born between 1980 and 2000, is the biggest generation in US history with 92 million people compared to the Baby Boomer generation of 77 million people. The millennial generation has different priorities and habits than previous generations. Goldman Sachs published a document about spending habits and trends of the millennial generation.³ In 1968, 56% of adults age 18 to 31 were married and living in their own household nationally. That percentage has decreased over time and in 2012, only 23% of adults age 18 to 31 were married and living in their own household.

The millennial generation has shown a preference for renting not buying. In 2005, 52% of adults age 25 to 34 were renters. In 2013, 60% of adults age 25 to 34 were renters. According to a survey done by Fannie Mae in 2014, 90% of millennials would like to own a home, but with high student loan debt and a tough employment market, many struggle to get loans or come up with down payments.⁴

In September of 2011, Cassidy Turley, a commercial real estate services firm, published a white paper titled "Insights: The Rise of the Apartment Market." The paper explained impacts of the crash of the housing bubble and the increase in the unemployment rate on the housing market. As home ownership rates fell, there was a corresponding rise in renter occupied space. The paper predicts that the rental market will stay strong until there is a significant increase in the employment rate. Since 2010, individuals age 20 to 34 have seen the largest employment increase, but that is also the age group least likely to buy homes. The paper cites a study done by Harvard University's Joint Center for

³ Goldman Sachs. "Millennials: Coming of Age." 2015. <http://www.goldmansachs.com/our-thinking/pages/millennials/>

⁴ Christie, Les. "Millennials squeezed out of buying a home." CNN Money. June 2014. http://money.cnn.com/2014/06/01/real_estate/millennials-squeezed-out/index.html

Housing Studies, which predicts that the number of renter households will continue to increase by 360,000 to 470,000 annually through 2020.⁵

As previously shown, the majority of new housing constructed in Maryland Heights is multi-family. This lends itself well to a growing market for rentals and apartments. Table 10 shows the total population in occupied housing units by tenure. While the percentage of the population in occupied housing units that are rental units has grown since 2000, the majority of the population is still in owner occupied units. Table 11 supports the same trends, but shows the data based on housing units rather than population.

Table 11: Housing Occupancy & Tenure (2000 - 2010)

Status	Year	Maryland Heights			St. Louis County		
		Number of Units	Percent of Total Units	Percent Change	Number of Units	Percent of Total Units	Percent Change
Occupied Housing Units	2000	11,302	95.4%	--	404,312	95.4%	--
	2010	12,180	93.0%	7.8%	404,765	92.4%	0.1%
Owner Occupied Units	2000	7,080	62.6%	--	299,670	74.1%	--
	2010	7,136	58.6%	0.8%	291,937	72.1%	-2.6%
Renter Occupied Units	2000	4,222	37.4%	--	104,642	25.9%	--
	2010	5,044	41.4%	19.5%	112,828	27.9%	7.8%
Vacant Housing Units	2000	544	4.6%	--	19,437	4.6%	--
	2010	912	7.0%	67.6%	33,267	7.6%	71.2%
Total Housing Units	2000	11,846	100%	--	423,749	100%	--
	2010	13,092	100%	10.5%	438,032	100%	3.4%

Source: U.S. Census Bureau

Table 12 supports the findings from surveys mentioned earlier that the millennial generation is renting over buying. The millennial generation is represented by the age group of 15 to 34. Of the owner occupied units in Maryland Heights, only 14% are occupied by people in the age group of 15 to 34. Of the renter occupied units in Maryland Heights, 57% are occupied by members of the millennial generation.

⁵ Reardon, Rob. "Insights: The Rise of the Apartment Market." Cassidy Turley. September 2011. [http://dtz.cassidyurley.com/DesktopModules/CassidyTurley/Download/Download.ashx?contentId=1120&fileName=Mul ti-Family+White+Paper.pdf](http://dtz.cassidyurley.com/DesktopModules/CassidyTurley/Download/Download.ashx?contentId=1120&fileName=Mul%20ti-Family+White+Paper.pdf)

Table 12: Tenure by Age of Householder (2010)

Status	Age	Maryland Heights		St. Louis County	
		Number of Units	Percent of Total	Number of Units	Percent of Total
Owner Occupied	15 to 34	1,000	14.0%	29,997	10.3%
	35 to 54	2,944	41.3%	116,803	40.0%
	55 to 74	2,436	34.1%	106,196	36.4%
	75 and over	756	10.6%	38,941	13.3%
	Total OO Units	7,136	58.6%	291,937	72.1%
Renter Occupied	15 to 34	2,880	57.1%	43,525	38.6%
	35 to 54	1,554	30.8%	38,675	34.3%
	55 to 74	512	10.2%	19,141	17.0%
	75 and over	98	1.9%	11,487	10.2%
	Total RO Units	5,044	41.4%	112,828	27.9%
Total Occupied Housing Units		12,180	100%	404,765	100%

Source: U.S. Census Bureau

Housing age in Maryland Heights as compared to St. Louis County is shown in Table 13. In 1990, over 90% of the housing in the City was constructed after 1960 versus 57% in the County. An interesting comparison is the conflicting trend that 1,580 housing units were added between 1980 and 1990, yet the population only increased by 500 persons in that same timeframe. According to 2010 data, 89% of the housing structures in Maryland Heights were built after 1960 while 62% of the structures in St. Louis County were constructed after 1960. However, this time the population increased by more than the increase in housing units. From 2000 to 2010, the population increased by 1,716 persons, while only 1,345 housing units were added in Maryland Heights.





Table 13: Housing Year Built (1990 - 2010)

Year Structure Built	Year of Survey	Maryland Heights			St. Louis County		
		Number of Units	Percent of Total	Percent Change	Number of Units	Percent of Total	Percent Change
2005 or later	2010	13	0.1%	--	8,310	1.9%	--
2000 to 2004	2010	463	3.5%	--	16,023	3.7%	--
1990 to March 2000	2000	730	5.9%	--	41,390	9.8%	--
	2010	1,013	7.7%	38.8%	39,635	9.1%	-4.2%
1980 to 1989	1990	1,580	13.8%	--	57,495	14.3%	--
	2000	2,427	19.5%	53.6%	54,514	12.9%	-5.2%
	2010	2,427	18.4%	0.0%	51,674	11.8%	-5.2%
1970 to 1979	1990	4,525	39.5%	--	76,004	18.9%	--
	2000	4,463	35.8%	-1.4%	77,525	18.3%	2.0%
	2010	4,625	35.1%	3.6%	77,062	17.6%	-0.6%
1960 to 1969	1990	4,293	37.4%	--	96,973	24.1%	--
	2000	3,636	29.2%	-15.3%	90,823	21.4%	-6.3%
	2010	3,269	24.8%	-10.1%	81,674	18.7%	-10.1%
1940 to 1959	1990	829	7.2%	--	127,139	31.6%	--
	2000	1,031	8.3%	24.4%	117,407	27.7%	-7.7%
	2010	1,166	8.9%	13.1%	118,272	27.0%	0.7%
1939 or Earlier	1990	243	2.1%	--	44,228	11.0%	--
	2000	184	1.5%	-24.3%	42,090	9.9%	-4.8%
	2010	195	1.5%	6.0%	45,263	10.3%	7.5%
Total	1990	11,470	100%	--	401,839	100%	--
	2000	12,471	100%	8.7%	423,749	100%	5.5%
	2010	13,171	100%	5.6%	437,913	100%	3.3%

Source: U.S. Census Bureau

Approximately 90% of the homes built in Maryland Heights since 1978 are greater than 1,200 square feet in gross floor area (total living space on all floors). Of that 90% of homes built since 1978, 52% are greater than 1,800 square feet and less than 1% have fewer than two full bathrooms. Comparatively, 52% of the homes built before 1978 are less than 1,200 square feet in gross floor area. Homes with less than 1,500 square feet account for 76% of the homes built before 1978. Approximately 51% of these older homes have fewer than two full bathrooms.

First time home buyers and new families are often constrained by income more so than veteran homeowners and established families. The relative size of the home is less important when smaller families live in it. However, as a family grows they often desire housing that satisfies their need for increased square footage. Such families may choose to build an addition on their current home or seek to move to an area where preferred housing stock is available. However, older homes are not good candidates for vertical expansion and small lot sizes often restrict horizontal additions. In eight years, 2619 building alterations were completed by permit (Table 14). Of these alterations 59% were window and/or door replacements, 10% were decks, 8% were basement finishes, 7% were kitchen remodels, and 6% were bathrooms. Less than 1% of all building alterations were attributed to additions. The inability to expand their home may lead to transience amongst growing families.

Table 14: Building Alterations (May 2013 - May 2021)

Type	Number	Percent
Decks	260	10%
Basement	211	8%
Room Addition	20	<1%
Patio Covers	16	<1%
Garages	61	2%
New Homes	51	2%
Bathrooms	151	6%
Flag Pole	7	<1%
Kitchen	184	7%
Porch	48	2%
Roof	69	3%
Other *	1541	59%
Total	2619	100%

* Includes window and/or door replacements

Source: Maryland Heights Community Development Department





Table 15: Value of Owner Occupied Housing (1990-2010)

Value	Year	Maryland Heights			St. Louis County		
		Number of Units	Percent of Total Units	Percent Change	Number of Units	Percent of Total Units	Percent Change
Less Than \$50,000	1990	278	4.6%	--	39,792	15.3%	--
	2000	84	1.3%	-69.8%	20,167	7.3%	-49.3%
	2010	114	1.7%	35.7%	9,674	3.3%	-52.0%
\$50,000 to \$99,999	1990	4,678	78.1%	--	128,600	49.5%	--
	2000	2,598	39.4%	-44.5%	92,837	33.8%	-27.8%
	2010	291	4.4%	-88.8%	39,674	13.7%	-57.3%
\$100,000 to \$149,999	1990	902	15.1%	--	49,086	18.9%	--
	2000	2,907	44.1%	222.3%	64,418	23.4%	31.2%
	2010	1,844	27.9%	-36.6%	56,112	19.4%	-12.9%
\$150,000 to \$199,999	1990	79	1.3%	--	19,028	7.3%	--
	2000	634	9.6%	702.5%	38,491	14.0%	102.3%
	2010	2,959	44.8%	366.7%	57,190	19.8%	48.6%
\$200,000 to \$299,999	1990	53	0.9%	--	13,933	5.4%	--
	2000	291	4.4%	449.1%	32,423	11.8%	132.7%
	2010	1,015	15.4%	248.8%	60,409	20.9%	86.3%
\$300,000 to \$499,999	1990	0	0.0%	--	6,608	2.5%	--
	2000	52	0.8%	5200.0%	17,690	6.4%	167.7%
	2010	324	4.9%	523.1%	40,476	14.0%	128.8%
\$500,000 or More	1990	0	0.0%	--	2,582	1.0%	--
	2000	25	0.4%	2500.0%	8,815	3.2%	241.4%
	2010	52	0.8%	108.0%	25,311	8.8%	187.1%
Total	1990	5,990	100%	--	259,629	100%	--
	2000	6,591	100%	10.0%	274,841	100%	5.9%
	2010	6,599	100%	0.1%	288,846	100%	5.1%

Source: U.S. Census Bureau

Table 15 highlights the affordability of housing within Maryland Heights as compared to St. Louis County. In 1990 the majority (78%) of housing within the City was valued within the range of \$50,000 to \$99,999, while the County had a smaller percentage, yet nearly half, of their housing stock located in this value range (49%). In 2010, the majority (72%) of housing within Maryland Heights was within the range of \$100,000 to \$199,999, while St. Louis County had a smaller percentage of their housing stock located in this price range (39%). Based on these statistics, the conclusion may be drawn that the City has a greater proportion of affordable middle-range housing than does the County.

From 2000 to 2010, there was a shift in the majority value range of housing units in Maryland Heights. In 2000, the value range of \$100,000 to \$149,999 held the largest percentage of housing units (44%). In 2010, the value range of \$150,000 to \$199,999 held the largest percentage of housing units (44%). From 2000 to 2010, the percentage of housing units valued in the \$150,000 to \$199,999 range increased by 2,325 units or 336%.

An examination of Table 15, Value of Owner Occupied Housing, verifies that for decades St. Louis County has home a housing stock with a higher median value than Maryland Heights. On the contrary, Table 16 provides data supporting Maryland Heights' historically higher median gross rent. The different pricing characteristics partly reflect the fact that, on the average, single-family dwellings are older than multi-family dwellings in Maryland Heights. However, the relationship shifted in 2010 with the median contract rent in Maryland Heights of \$764 being lower than the median rent of \$792 in St. Louis County.





Table 16: Monthly Rent Paid (1990 - 2010)

Rent	Year	Maryland Heights			St. Louis County		
		Number of Units	Percent of Units	Percent Change	Number of Units	Percent of Units	Percent Change
Less than \$100	1990	37	0.9%	--	616	0.6%	--
	2000	0	0.0%	-100.0%	409	0.4%	-33.6%
	2010	0	0.0%	0.0%	47	0.0%	-88.5%
\$100 to \$199	1990	52	1.3%	--	3,564	3.6%	--
	2000	140	3.4%	169.2%	2,554	2.4%	-28.3%
	2010	0	0.0%	-100.0%	1,015	0.9%	-60.3%
\$200 to \$299	1990	48	1.2%	--	4,691	4.8%	--
	2000	9	0.2%	-81.3%	4,177	3.9%	-11.0%
	2010	101	1.8%	1022.2%	2,463	2.1%	-41.0%
\$300 to \$399	1990	146	3.6%	--	15,269	15.5%	--
	2000	27	0.6%	-81.5%	11,706	10.8%	-23.3%
	2010	0	0.0%	-100.0%	2,021	1.8%	-82.7%
\$400 to \$499	1990	1,349	33.2%	--	29,456	29.9%	--
	2000	116	2.8%	-91.4%	19,067	17.6%	-35.3%
	2010	49	0.9%	-57.8%	4,674	4.1%	-75.5%
\$500 to \$599	1990	1,423	35.0%	--	20,763	21.1%	--
	2000	1,103	26.5%	-22.5%	20,450	18.9%	-1.5%
	2010	312	5.5%	-71.7%	10,743	9.3%	-47.5%
\$600 to \$699	1990	409	10.1%	--	10,478	10.6%	--
	2000	1,051	25.2%	157.0%	15,918	14.7%	51.9%
	2010	1,149	20.1%	9.3%	17,070	14.8%	7.2%
\$700 to \$749	1990	167	4.1%	--	3,289	3.3%	--
	2000	408	9.8%	144.3%	5,309	4.9%	61.4%
	2010	977	17.1%	139.5%	10,043	8.7%	89.2%
\$750 to \$999	1990	357	8.8%	--	5,903	6.0%	--
	2000	951	22.8%	166.4%	16,746	15.5%	183.7%
	2010	1,781	31.2%	87.3%	35,445	30.8%	111.7%
\$1,000 or More	1990	32	0.8%	--	2,332	2.4%	--
	2000	258	6.2%	706.3%	8,119	7.5%	248.2%
	2010	1,081	18.9%	319.0%	26,788	23.3%	229.9%
No Cash Rent	1990	44	1.1%	--	2,222	2.3%	--

	2000	103	2.5%	134.1%	3,630	3.4%	63.4%
	2010	257	4.5%	149.5%	4,894	4.2%	34.8%
Total	1990	4,064	100%	--	98,583	100%	--
	2000	4,166	100%	2.5%	108,085	100%	9.6%
	2010	5,707	100%	37.0%	115,203	100%	6.6%
Median gross rent	1990	525	--	--	482	--	--
	2000	659	--	25.5%	601	--	24.7%
	2010	764	--	15.9%	792	--	31.8%

Source: U.S. Census Bureau



Labor Force

The number of residents who were employed in Maryland Heights grew 19%, from 13,592 in 1980 to 16,130 in 1990. This sharp rise reflects the demographic trend of the two-career household. Between 1990 and 2000, Maryland Heights saw a 6% decrease in the number of persons employed compared to a 4% increase in the County. Then from 2000 to 2010, the relationship reversed with Maryland Heights experiencing a 2% increase in the total employed and St. Louis County experiencing a 3% decrease. All three geographic areas experienced a significant decrease in unemployment from 2010 to 2019, with percentages decreasing from 8% to 4%.

Table 17: Unemployment Rate (2019)

	Population 16 years & over	Unemployment Rate
Maryland Heights	22,781	4.1%
St. Louis County	802,898	4.7%
Missouri	4,88,733	4.6%

Source: US Census Bureau (American Community Survey, 1-year estimates)

Table 18: Unemployment Rate by Age Group (2019)

Age Group	Maryland Heights		St. Louis County		Missouri	
	Number	Unemployment Rate	Number	Unemployment Rate	Number	Unemployment Rate
16 t o 19	1,056	12.3%	50,417	15.4%	317,290	13.6%
20 t o 24	2,191	13.7%	62,170	9.2%	414,394	7.7%
25 t o 44	8,841	8.4%	245,345	13.5%	1,551,590	13.5%
45 t o 54	3,251	2.0%	127,824	3.3%	769,927	3.4%
55 t o 64	3,517	4.6%	140,992	5.7%	821,807	5.6%
65 t o 74	2,057	0.0%	98,048	2.8%	577,726	2.6%
75 & over	1,868	18.9%	78,102	4.3%	428,999	3.2%

Source: US Census Bureau (American Community Survey, 1-year estimates)

In terms of occupational categories, residents of Maryland Heights were more likely to hold "white collar" than "blue collar" positions in 1990 than they were in 1980. The number of residents employed in executive/managerial positions grew 27% over the decade. The number of people employed in professional specialty positions also grew 27%. Overall, 5,748 residents held jobs in one



of these two categories in 1990. On the other hand, the number of residents employed as machine operators, handlers and laborers fell 66% over the decade, to 887.⁶

⁶ The U.S. Census no longer uses “white collar” and “blue collar” classifications, so these tables show the classification of workers using the current categories.



Table 19: Classification of Workers (1990 - 2010)

Class	Year	Maryland Heights			St. Louis County		
		Number of Persons	Percent Total Employed	Percent Change	Number of Persons	Percent Total Employed	Percent Change
Private For-Profit Wage and Salary Workers	1990	12,899	80.0%	--	377,979	74.5%	--
	2000	12,097	80.1%	-6.2%	374,000	74.0%	-1.1%
	2010	12,246	79.8%	1.2%	360,576	73.7%	-3.6%
Private Not-For Profit Wage and Salary Workers	1990	1,429	8.9%	--	50,590	10.0%	--
	2000	1,278	8.5%	-10.6%	56,635	11.2%	11.9%
	2010	1,277	8.3%	-0.1%	55,385	11.3%	-2.2%
Local Government Workers	1990	640	4.0%	--	2,428	4.8%	--
	2000	570	3.8%	-10.9%	23,482	4.6%	867.1%
	2010	809	5.3%	41.9%	25,697	5.2%	9.4%
State Government Workers	1990	275	1.7%	--	10,295	2.0%	--
	2000	287	1.9%	4.4%	11,913	2.4%	15.7%
	2010	172	1.1%	-40.1%	11,696	2.4%	-1.8%
Federal Government Workers	1990	342	2.1%	--	18,201	3.6%	--
	2000	206	1.4%	-39.8%	13,696	2.7%	-24.8%
	2010	340	2.2%	65.0%	12,365	2.5%	-9.7%
Self-Employed Workers	1990	530	3.3%	--	24,866	4.9%	--
	2000	634	4.2%	19.6%	24,654	4.9%	-0.9%
	2010	484	3.2%	-23.7%	23,042	4.7%	-6.5%
Unpaid Family Workers	1990	15	0.1%	--	1,310	0.3%	--
	2000	31	0.1%	106.7%	870	0.2%	-33.6%
	2010	13	0.1%	-58.1%	740	0.2%	-14.9%
Total Employed	1990	16,130	100%	--	485,669	100%	--
	2000	15,103	100%	-6%	505,250	100%	4.0%
	2010	15,341	100%	2%	489,501	100%	-3.1%

Source: U.S. Census Bureau

Since 1990 the largest percent of workers continues to fall under the “Private For-Profit Wage and Salary Workers” classification. From 2000 to 2010, the number of federal government workers increased by 65% to 340 persons. However, this classification still only represents 2% of the total employed in Maryland Heights.

See Appendix II for a table of major employers in Maryland Heights. Note the City’s population increases by approximately 50,000 workers each business day. See Table 20 for a comparison of the employment of the City’s residents by industry to those of St. Louis County. The general trend finds Maryland Heights outpacing the County in the areas that comprise “white collar” employment. This is likely due to the relatively high proportion of office uses within the City.

Table 20: Employment by Industry (1990 - 2010)

Industry	Year	Maryland Heights		St. Louis County	
		Number of Persons	Percent Total Employed	Number of Persons	Percent Total Employed
Agriculture, forestry, fishing and hunting, and mining	1990	154	1%	4,229	0.8%
	2000	50	0%	1,146	0.2%
	2010	77	1%	1,886	0.4%
Construction	1990	736	5%	23,096	4.6%
	2000	806	5%	24,817	4.9%
	2010	476	3%	21,637	4.4%
Manufacturing	1990	3,540	22%	95,164	18.8%
	2000	2,041	14%	64,212	12.7%
	2010	2,071	14%	51,186	10.5%
Transportation	1990	916	6%	23,872	4.7%
	2000	775	5%	27,141	5.4%
	2010	711	5%	21,686	4.4%
Information and communications	1990	421	3%	16,842	3.3%
	2000	582	4%	19,021	3.8%
	2010	704	5%	13,045	2.7%
Wholesale Trade	1990	990	6%	28,621	5.6%
	2000	711	5%	21,290	4.2%
	2010	545	4%	16,549	3.4%
Retail Trade	1990	2,367	15%	84,193	16.6%
	2000	1,797	12%	57,061	11.3%
	2010	1,156	8%	54,258	11.1%
Finance, insurance, and real estate	1990	1,543	10%	43,044	8.5%
	2000	1,656	11%	45,603	9.0%

	2010	1,575	11%	45,820	9.4%
Other services, except public administration	1990	1,325	8%	37,661	7.4%
	2000	511	3%	24,398	4.8%
	2010	625	4%	22,639	4.6%
Art, entertainment, recreation, and accommodation and food services	1990	224	1%	6,132	1.2%
	2000	1,107	7%	38,345	7.6%
	2010	1,666	11%	42,145	8.6%
Educational Services, health services, and social assistance	1990	2,324	15%	89,173	17.6%
	2000	2,590	17%	109,440	21.7%
	2010	2,664	18%	121,297	24.8%
Professional and related services	1990	1,113	7%	37,058	7.3%
	2000	2,110	14%	56,101	11.1%
	2010	1,900	13%	61,175	12.5%
Public Administration	1990	447	3%	18,436	3.6%
	2000	367	2%	16,675	3.3%
	2010	435	3%	14,991	3.1%
Total Employed	1990	16,100	100%	507,521	100%
	2000	15,103	100%	505,250	100%
	2010	14,605	100%	488,314	100%

Source: U.S. Census Bureau

Income

In 2010, the median household income in Maryland Heights was almost 9% lower than the County median income, as shown in Table 21. The per capita income in Maryland Heights was 17% lower than the County per capita income. This represents a shift in the relationship from 1990 when household income was higher in Maryland Heights than the County, but per capita income was higher in the County than Maryland Heights. The correlation between household income and per capita income in 1990 could have been due to the higher percentage of non-related roommates in the City than in the County. However, the percentage of non-related roommates in 2010 was still higher in Maryland Heights than in St. Louis County, so this is not the reason for the change in the relationship between median household income and per capita income.

Table 21: Income (2010)

	Maryland Heights	St. Louis County	Difference	Percent Difference
Median Household Income	\$52,221	\$56,847	4,626	8.9%
Per Capita Income	\$28,106	\$33,093	4,987	17.7%
	Maryland Heights		St. Louis County	
	Number	Percent of Total	Number	Percent of Total
Non-Related Roommates	5,508	44.8%	140,216	34.7%

Source: U.S. Census Bureau

Maryland Heights exists as a middle-income city, with few residents falling below the poverty line or receiving public assistance. Poverty in Maryland Heights is less prevalent than it is in St. Louis County, which itself is more affluent than the rest of the metropolitan area or the State of Missouri. In 2010, only 8% of the City's residents fell below the poverty line (\$22,050 for a family of 4), compared to nearly 11% in the County.

Table 22: Household Income (1990 - 2010)

Income	Year	Number	Percent of Total	Percent Change
Less than \$10,000	1990	495	4.6%	--
	2000	472	4.1%	-4.6%
	2010	704	5.6%	49.2%
\$10,000 to \$14,999	1990	530	5.0%	--
	2000	486	4.3%	-8.3%
	2010	510	4.1%	4.9%
\$15,000 to \$24,999	1990	1,500	14.1%	--
	2000	967	8.5%	-35.5%
	2010	981	7.8%	1.4%
\$25,000 to \$34,999	1990	1,909	17.9%	--
	2000	1,542	13.5%	-19.2%
	2010	1,242	9.9%	-19.5%

\$35,000 to \$49,999	1990	2,851	26.7%	--
	2000	2,377	20.8%	-16.6%
	2010	2,111	16.8%	-11.2%
\$50,000 to \$74,999	1990	2,512	23.5%	--
	2000	2,926	25.6%	16.5%
	2010	3,040	24.2%	3.9%
\$75,000 to \$99,999	1990	637	6.0%	--
	2000	1,487	13.0%	133.4%
	2010	1,982	15.8%	33.3%
\$100,000 or more	1990	230	2.2%	--
	2000	1,153	10.1%	401.3%
	2010	1,976	15.7%	71.4%
Total	1990	10,664	100%	--
	2000	11,410	100%	7.0%
	2010	12,546	100%	10.0%

Source: U.S. Census Bureau

Table 22 shows the changes in household income distribution from 1990 to 2010. The largest percent changes were seen between 1990 and 2000 with the percent of households with income in the \$100,000 or more bracket increasing by 401%. This change was very large, but in 2000, the \$100,000 or more bracket still only contained 10% of the households in Maryland Heights. According to 2010 census data, over half (55%) of the households in Maryland Heights have a household income of \$50,000 or more. This percentage has increased from the previous two decades when this bracket represented 31% of households in 1990 and 48% of households in 2000.

Utilities

WATER DISTRIBUTION

Water is provided to Maryland Heights' residents via the Missouri American Water Company system. Missouri American Water Company has a major intake and treatment plant located within the City limits at the far southwest corner of the City. Discussions with a Missouri American Water Co. representative provided an indication that all parts of Maryland Heights have the ability to be served for residential, commercial, or industrial purposes. The older part of their system within the City is in the "Old Heights" area. There are no major pressure or deterioration problems which have been identified in Maryland Heights at this time.

STORM AND SANITARY SEWERS

The sanitary sewer system in Maryland Heights is under the jurisdiction of the Metropolitan St. Louis Sewer District (MSD).

The private sanitary sewer companies throughout St. Louis County generally had less stringent standards for construction, and when MSD acquired the companies, it acquired numerous problems in some areas. In Maryland Heights, these problems are not widespread. The part of the community comprising the “Old Heights” area of the community extending to the northeast toward Saturn and Wildwood Drives represents the area with the most frequent sanitary sewer problems.

ELECTRICITY

Ameren Missouri provides electricity to Maryland Heights. Service is presently available at any level required for all types of uses.

NATURAL GAS

Spire Missouri, Inc. (formerly Laclede Gas Company) provides natural gas service to the City and much of the metro area. This service is available to all types of uses and capacity in most of the City; it is expected to exceed demand for the foreseeable future. A significant portion of the Maryland Park Lake District is not currently served by natural gas. The cost of extending this infrastructure is one issue facing future development in this area.

SOLID WASTE SERVICES

The City has a contract with a provider for collection of residential trash, yard waste, and recyclable materials within the City boundary.

Education

SCHOOL DISTRICTS



Parkway School District: The Parkway District has only one school within the City’s boundaries, McKelvey Elementary School, with approximately 538 students attending during the 2015-2016 academic year. Generally, Parkway draws children

from the southwest residential section of Maryland Heights. Parkway serves approximately 40% of the City’s students.



Pattonville School District: The Pattonville School District serves children in the northwestern and eastern sections of Maryland Heights. Pattonville School District has three elementary schools within

the City’s boundaries, Rose Acres Elementary, Parkwood Elementary, and Remington Traditional Elementary (Kindergarten-8th Grade). Each school draws approximately 500 students, though students from the Traditional School (an alternative school formerly referred to as Remington School) are not all Maryland Heights residents. The school district also maintains Pattonville Heights Middle

school (6th-8th Grades) on Fee Fee Road. The high school for the Pattonville District is within the City limits on Creve Coeur Mill Road. Pattonville serves approximately 60% of the City's students.

EDUCATIONAL ATTAINMENT

There was an increase in the level of education attained by the adult residents of Maryland Heights in the 1980s, continuing earlier trends. Significantly, the number of adults aged 25 or older with less than a high school diploma decreased from 20% in 1980 to 14% in 1990 and by 2010 the number was down to 11%. According to the 2010 census, 44% of City adults aged 25 or older had an associate, bachelor, or graduate degree, which is comparable to 46% in the rest of the County. From 2000 to 2010, Maryland Heights saw a large increase in adults aged 25 years or older with an associate degree from 842 persons to 1,657 persons or a 96% increase.

Table 23: Educational Attainment (1990 - 2010)

Level	Year	Maryland Heights			St. Louis County		
		Number of Persons	Percent of Total*	Percent Change	Number of Persons	Percent of Total*	Percent Change
Less than 9th Grade	1990	967	5.6%	--	46,611	7.1%	--
	2000	790	4.4%	-18.3%	26,962	4.0%	-42.2%
	2010	773	3.9%	-2.2%	19,980	3.0%	-25.9%
9th to 12th Grade, no diploma	1990	1,338	8.0%	--	70,083	10.6%	--
	2000	1,318	7.4%	-1.5%	54,573	8.1%	-22.1%
	2010	1,510	7.7%	14.6%	39,708	5.9%	-27.2%
High School Graduate, or alternative credit	1990	4,352	25.2%	--	147,886	26.5%	--
	2000	4,105	23.0%	-5.7%	162,405	24.0%	9.8%
	2010	4,465	22.7%	8.8%	152,937	22.6%	-5.8%
Some College, no diploma	1990	3,725	21.6%	--	140,323	21.2%	--
	2000	3,904	21.9%	4.8%	153,941	22.7%	9.7%
	2010	4,151	21.1%	6.3%	149,420	22.1%	-2.9%
Associate Degree	1990	1,042	6.0%	--	35,698	5.4%	--
	2000	842	4.6%	-19.2%	39,417	5.8%	10.4%
	2010	1,657	8.4%	96.8%	47,724	7.1%	21.1%
Bachelor's Degree	1990	4,085	23.7%	--	125,773	19.0%	--
	2000	4,746	26.6%	16.2%	149,139	22.0%	18.6%
	2010	4,363	22.2%	-8.1%	157,751	23.3%	5.8%
	1990	1,707	9.9%	--	67,535	10.2%	--

Graduate, Professional or Doctorate Degree	2000	2,155	12.1%	26.2%	90,590	13.4%	34.1%
	2010	2,713	13.8%	25.9%	108,540	16.1%	19.8%
Total	1990	17,216	100%	--	633,909	100%	--
	2000	17,860	100%	3.7%	677,027	100%	6.8%
	2010	19,632	100%	9.9%	676,060	100%	-0.1%

Source: U.S. Census Bureau

Public Safety and City Services

FIRE PROTECTION

Four fire protection districts are responsible for covering the City: Maryland Heights, Pattonville, Monarch, and Creve Coeur. The Maryland Heights Fire Protection District is responsible for approximately 85% of the developed land in the City. It extends from the southern boundary of the City up to the eastern edge of Creve Coeur Lake. The boundary line then extends northward along the lake up to the railroad tracks, then following the tracks to McKelvey Road. The boundary then runs along McKelvey Road to the City's northern border. The district's boundary in the east is the City limit, except for a very small section east of Taylor and Edward Avenues which is handled by the Pattonville district.

Pattonville Fire Protection District is responsible for all land in the northwest quadrant of Maryland Heights between the river and the eastern border of Creve Coeur Lake, from River Valley Road before it turns southward. It is therefore responsible for the Riverport complex and the subdivisions between the Village of Champ and the railroad tracks west of McKelvey Road.

The Monarch Fire Protection District handles the southwest quadrant of the City which currently contains little development since prior to construction of the Howard Bend Levee, it was practically all part of the Missouri River floodplain. Now however, further development is scheduled for the area south of Creve Coeur Lake. Monarch Fire Protection District is also responsible for the southern half of the park west of the eastern boundary of the lake.

Creve Coeur Fire Protection District covers only a small section of the City on the southern edge of Maryland Heights around Basston Drive, Bennington Place, and Page Avenues cutting through apartment complexes that were not present at the time the district lines were drawn.

CITY SERVICES

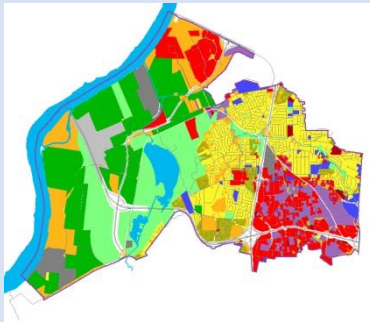
Maryland Heights City Hall is located at 11911 Dorsett Road. Presently, it houses both the administrative service departments of the City, as well as the Police Department. The Maryland Heights Community Center is located at 2300 McKelvey Road. The previous Community Center was demolished and construction for a new community center began in 2015. The new Community Center was completed in 2017. Other services provided by the City include:

- Police patrol and investigations

- Street maintenance and other public works functions, such as snow removal and capital improvements
- Recreation and park services
- Planning and zoning
- Municipal court
- Licensing, permitting, and inspections

Land Use

EXISTING LAND USE



Future planning within Maryland Heights starts with determining the amount and location of the different land uses within the City. The provision of services: sewer and water, fire and police protection, transportation, and parks and recreation operate as a direct function of the location and density of the various land uses. In addition, the potential for redevelopment within the community is also based upon a direct relationship to the type and intensity of the land uses as they presently exist.

Table 24: Existing Land Use

Land Use Categories	2021			1985		
	Area in Acres	% of Developed Land	% of Total Land	Area in Acres	% of Developed Land	% of Total Land
Single Family Residential	1,988	19.5%	13.3%	1,681	22.2%	11.8%
Multi-Family Residential	402	3.9%	2.7%	560	7.4%	3.9%
Residential Sub-Total	2,390	23.4%	16.0%	2,241	29.5%	15.8%
Commercial	1,653	16.2%	11.0%	252	3.3%	1.8%
Industrial	708	7.0%	4.7%	664	8.8%	4.7%
Commercial/Industrial Sub-Total	2,361	23.2%	15.7%	916	12.1%	6.4%
Public/Semi-Public				2,958	39.0%	20.8%
Parks & Recreation	2,555	25.1%	17.1%	1,473	19.4%	10.4%
Transport	2,032	19.9%	13.6%			
Institutional	307	3.0%	2.0%			
Utility	542	5.3%	3.6%			



<i>Public Sub-Total</i>	5,436	53.4%	36.3%	4,431	58.4%	31.2%
<i>Total Developed Land</i>	10,187	100%	68.0%	7,588	100%	53.4%
Vacant Land	1,674		11.2%	6,010		42.3%
Agricultural	2,550		17.0%			
Missouri River	574		3.8%	604		4.3%
<i>Total Undeveloped and Agricultural Land</i>	4,798		32.0%	6,614		46.6%
<i>Total Area of City</i>	14,985		100%	14,202		100%

In 1985, vacant land represented 39% of the total land within the City. However, the amount of vacant land has significantly decreased and now represents only 11% of the total land within Maryland Heights. Residential uses made up only 14% of total land in 1985 compared to an average of 29%. In 1985, residential land uses also made up a smaller percentage of developed land (29%) compared to the study average of 39%. From 1985 to 2015, the area of total developed land has increased. While the percentage of total City land that is residential developed has also increased during this time, the percentage of developed land that is residential decreased from 29% in 1985 to 21% in 2015. This could be attributed to the fact the many of the annexed areas within Maryland Heights are commercial or industrial in nature.

Commercial uses made up just under 2% of total land as compared to an average of 3%, slightly less than half. However in 2015, commercial land use is above the average making up 10% of total land. From 1985 to 2015, the percentage of developed land that is commercial land increased significantly from 3% in 1985 to 15% in 2015.

Industrial uses have not significantly increased since 1985, making up 4% of total land as compared to an average of 8%, slightly more than half. In a similar pattern to residential land use, the percentage of total land that is industrial grew insignificantly slightly from 1985 to 2015, and further experienced a decline from 8% of developed land in 1985 to 6% in 2015.

In 1985, transportation uses ran closely to its average, making up 18% of total land use with an average of 19% of total land use. However that gap has grown significantly with transportation only accounting for less than 2% of total land use in 2015.

Clearly, the emphasis in development within the City has been primarily within the commercial land uses, as opposed to residential. Commercial land use is the only category that increased in percentage of developed land. In 1985, commercial land use represented 251.8 acres in Maryland Heights. Commercial land use has grown to make up 1,634.4 acres in 2015.

There are three major landfills within the community and one in the Village of Champ, which is on the City's northern border. Two of these facilities within City boundaries have been closed for a number of

years, the F&J Landfill and the S&S Landfill. Both of the facilities were operated and closed prior to the implementation of the more stringent State and Federal legislation which controls such facilities today and have been found to have leachate problems in the past. The third landfill within the community is operated by Browning Ferris Industries. This site was found to have significant leachate problems as well as methane gas, however solutions were implemented to control the problems. The property also houses the St. Louis Composting Company.

The last major landfill site is part of a large tract of land owned by IESI MO Champ Landfill LLC, located just outside of the City boundary. This landfill is part of the large area at the southwest corner of the intersection of Interstate 70 and 270, which is a limestone quarry still in active operation. The quarry is run by Fred Weber, Inc., which leases the land from Champ Landfill LLC. The fill areas involve parts of the site which are no longer suitable for quarrying. This facility has been operating without major problems and in compliance with State and Federal permits.

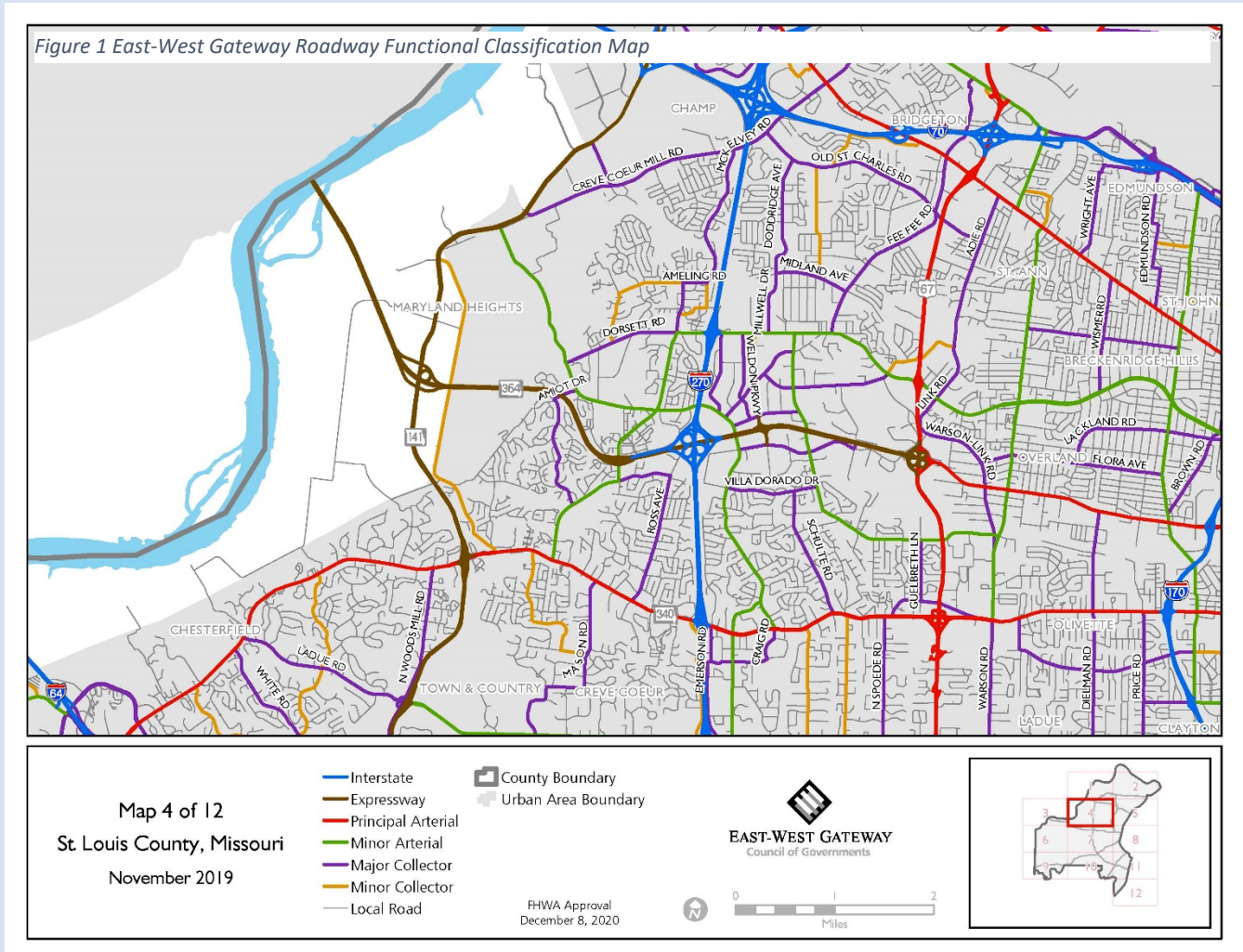
Transportation

Functional classification is the process by which streets are defined as either expressways/freeways, major or minor arterials, major or minor collectors, or local streets. These classifications are established by the Federal Highway Administration (FHWA) and are tied to federal funding for highways. The basic foundation to this process is the recognition that individual streets do not serve travel independently but rather, most travel involves movement through an interconnected network of streets. It is also important to note that although the higher traffic volumes usually occur on the higher classified streets, the streets are classified by the function they serve and not by the amount of traffic volume it carries.

Purpose:

- Guide public policy decisions regarding all modes of transportation (auto, etc.).
- Identify deficiencies in the City's road and transit systems.
- Provides basis of setting priorities for roadway improvements.
- Directs the approach to the movement of people and goods.
- Provides linkage of circulation and access to existing and future land use.

The discussion of functional classifications is presented in this plan in a hierarchical format. The streets are laid out and discussed based on the following criteria of nodes and corridors.



Functional Classification Definitions:

- **Freeways and Expressways:** These are principal arterials that are fully or partially controlled access facilities. These routes are typically the highest traveled corridors, serve the major centers of activity, and carry the major portion of trips entering or leaving the study area. Interstates and toll ways facilities are included in this classification.
- **Major Arterials:** The principal arterial street system serves the remaining major activity centers of the study area and carries a high proportion of total travel on a limited number of roadway miles. This system is comprised of both major rural and urban connections.
- **Minor Arterials:** The urban minor arterial street system interconnects with the principal arterials to provide service of moderate length at a somewhat lower level of travel mobility than principal (major) arterials. The minor arterial classification places more emphasis on land access than the higher level road routes. Such facilities could carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable neighborhoods.

- *Collectors (Major and Minor):* The urban collector street system provides land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. Urban collector systems may penetrate neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Collector streets also collect traffic from local streets in residential neighborhoods and channels it into the arterial street system.
- *Local Streets:* The local street system comprises all facilities not on one of the higher street systems. Its primary purpose is to provide direct access to abutting land and connect to the collector system. Local streets are either publicly or privately owned and provide access to individual properties. It offers the lowest level of mobility and usually contains no bus routes. Service to through traffic movement is deliberately discouraged.

Table 25, Functional Road Classification, is based on a Thoroughfare Study prepared by Crawford, Bunte, and Brammeier (CBB), traffic and transportation engineers, in October 1999. The final determination of functional classification included the input of the City Engineer.

Table 25: Functional Classification

Dorsett Road/I-270 Node			
Street	From	To	Classification
Dorsett Road	Marine Avenue	Lindbergh Boulevard	Minor Arterial
I-270	City Limits	City Limits	Freeway/Expressway
Progress Parkway	Dorsett Road	Westport Plaza Drive	Collector
McKelvey Hill Drive	Dorsett Road	McKelvey Road	Collector
Page Avenue/I-270			
Street	From	To	Classification
Page Avenue	City Limits	City Limits	Freeway/Expressway
I-270	City Limits	City Limits	Freeway/Expressway
Westport Plaza Dr/Marine Ave/Craig Rd	City Limits	City Limits	Minor Arterial
Bennington Place	City Limits	Marine Avenue	Minor Arterial
Fee Fee Road	Westport Plaza Drive	Schuetz Road	Minor Arterial
Lindbergh Boulevard/Page Avenue			
Street	From	To	Classification
Lindbergh Boulevard	City Limits	City Limits	Major Arterial
Page Avenue	Bennington Place	City Limits	Freeway/Expressway
Dorsett Road	Page Avenue	Adie Road	Minor Arterial



Lackland Road	Congressional Drive	Lindbergh Boulevard	Collector
Missouri Route 364/Maryland Heights Expressway			
Street	From	To	Classification
River Valley Drive	Expressway	St. Louis Waterworks Rd	Collector
Creve Coeur Mill Road	City Limits	City Limits	Minor Arterial
Page Avenue Corridor			
Street	From	To	Classification
Lackland Drive	Craig Road	Concourse Drive	Minor Arterial
Westport Plaza Drive/Craig Road	City Limits	Marine Avenue	Minor Arterial
Schuetz Road	City Limits	Dorsett Road	Minor Arterial
Grissom Drive	Westline Industrial	Page Avenue	Collector
Concourse Drive	Page Avenue	Lackland Road	Collector
Missouri Route 364 Corridor			
Street	From	To	Classification
Bennington Place	City Limits	Marine Ave.	Minor Arterial
Marine Avenue	Creve Coeur Mill Rd	Westport Plaza Drive	Minor Arterial
Creve Coeur Mill Road	City Limits	City Limits	Minor Arterial
Expressway	City Limits	Missouri Route 364	Freeway/Expressway
River Valley Drive	Creve Coeur Mill Rd	St. Louis Waterworks Rd	Collector
Missouri Route 364 West Corridor			
Street	From	To	Classification
Missouri Route 364	Bennington Place	City Limits	Freeway/Expressway
Creve Coeur Mill Road	City Limits	City Limits	Minor Arterial
Expressway	City Limits	Missouri Route 364	Freeway/Expressway
River Valley Drive	Creve Coeur Mill Rd	St. Louis Waterworks Rd	Collector
Dorsett Road West Corridor			
Street	From	To	Classification
Rule Avenue	Dorsett Road	Ameling Road	Collector



Marine Avenue	Creve Coeur Mill Rd	Westport Plaza Drive	Minor Arterial
McKelvey Road	Bennington Place	Ameling Road	Collector
McKelvey Hill Road	Dorsett Road	McKelvey Road	Collector
Dorsett Road East Corridor			
Street	From	To	Classification
Progress Parkway	Dorsett Road	Westport Plaza Drive	Collector
Weldon Parkway	Westline Industrial	Dorsett Road	Collector
Millwell Drive	Midland Avenue	Dorsett Road	Collector
Schuetz Road	City Limits	Dorsett Road	Minor Arterial
Fee Fee Road	Dorsett Road	City Limits	Minor Arterial
Adie Road	Fee Fee Road	Lindbergh Boulevard	Collector
Lindbergh Boulevard	City Limits	City Limits	Major Arterial
Earth City Expressway Corridor			
Street	From	To	Classification
Interstate 70	City Limits	City Limits	Freeway/Expressway
Creve Coeur Mill Road	City Limits	City Limits	Minor Arterial
Prichard Farm Road	Expressway	Creve Coeur Mill Road	Minor Arterial
Maryland Heights Expressway Corridor			
Street	From	To	Classification
Missouri Route 364	Bennington Place	City Limits	Freeway/Expressway
Expressway	Missouri Route 364	I-70	Freeway/Expressway
Marine Avenue	Creve Coeur Mill Rd	Westport Plaza Drive	Minor Arterial
River Valley Drive	Creve Coeur Mill Rd	St. Louis Waterworks Rd	Collector

Appendix I: Brief History of Maryland Heights

The earliest development of the Maryland Heights area can be traced back to the late 1700s to the Native American inhabitants of the area. Much of the development was adjacent to what is currently the City of Bridgeton.

It wasn't until the latter half of the 19th century that Maryland Heights was considered a community with established land uses and services. As a result of a commuter rail line connecting the cities of Clayton and Maryland Heights, the area became less rural as suburban-oriented development began occurring more frequently.

The first residential area to be developed is now known as "Old Heights" and encompasses the neighborhoods surrounding the intersection of Dorsett and Fee Fee Roads. Some of the housing stock in this area was plotted and/or constructed as early as 1903.

Given the emphasis on infrastructure post-World War II, accessibility to Maryland Heights increased and consequently the area grew increasingly residential, leaving its rural roots in the past. By the 1970s, Maryland Heights was becoming more than just a residential community but a community thriving with office, commercial, and hospitality industries.

For a more detailed history on the City and its transformative journey, please read *The History of Maryland Heights*, written by Paul H. Thompson. Copies are available at the Government Center for a \$15 fee.

Appendix II: Supplemental Data Tables

Detailed Population Data Subject	United States					Missouri					St. Louis County					Maryland Heights				
	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change
	Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent	
SEX AND AGE																				
Total population	281,421,906	100	308,745,538	100	9.7%	5,595,211	100	5,988,927	100	7.0%	1,016,315	100	998,954	100	-1.7%	25,756	100	27,472	100	6.7%
Male population	138,053,563	49.1	151,781,326	49.2	9.9%	2,720,177	48.6	2,933,477	49	7.8%	481,371	47.4	472,903	47.3	-1.8%	12,729	49.4	13,387	48.7	5.2%
Female population	143,368,343	50.9	156,964,212	50.8	9.5%	2,875,034	51.4	3,055,450	51	6.3%	534,944	52.6	526,051	52.7	-1.7%	13,027	50.6	14,085	51.3	8.1%
Median age (years)	35	(X)	37	(X)		36	(X)	38	(X)		38	(X)	40	(X)		34	(X)	35	(X)	
18 years and over	209,128,094	74.3	234,564,071	76	12.2%	4,167,519	74.5	4,563,491	76.2	9.5%	760,324	74.8	764,780	76.6	0.6%	20,216	78.5	21,902	79.7	8.3%
RACE																				
One Race	274,595,678	97.6	299,736,465	97.1	9.2%	5,513,150	98.5	5,864,338	97.9	6.4%	1,003,485	98.7	980,358	98.1	-2.3%	25,494	99	26,794	97.5	5.1%
White	211,460,626	75.1	223,553,265	72.4	5.7%	4,748,083	84.9	4,958,770	82.8	4.4%	780,830	76.8	701,948	70.3	-10.1%	21,983	85.4	20,122	73.2	-8.5%
Black or African American	34,658,190	12.3	38,929,319	12.6	12.3%	629,391	11.2	693,391	11.6	10.2%	193,306	19	233,029	23.3	20.5%	1,436	5.6	3,262	11.9	127.2%
American Indian and Alaska Native	2,475,956	0.9	2,932,248	0.9	18.4%	25,076	0.4	27,376	0.5	9.2%	1,717	0.2	1,962	0.2	14.3%	52	0.2	64	0.2	23.1%
Asian	10,242,998	3.6	14,674,252	4.8	43.3%	61,595	1.1	98,083	1.6	59.2%	22,606	2.2	34,597	3.5	53.0%	1,832	7.1	2,696	9.8	47.2%
Asian Indian	1,678,765	0.6	2,843,391	0.9	69.4%	12,169	0.2	23,223	0.4	90.8%	6,197	0.6	10,761	1.1	73.6%	873	3.4	1,540	5.6	76.4%
Chinese	2,432,585	0.9	3,347,229	1.1	37.6%	13,667	0.2	22,104	0.4	61.7%	6,875	0.7	9,739	1	41.7%	425	1.7	438	1.6	3.1%
Filipino	1,850,314	0.7	2,555,923	0.8	38.1%	7,735	0.1	10,914	0.2	41.1%	2,276	0.2	2,688	0.3	18.1%	141	0.5	163	0.6	15.6%
Japanese	796,700	0.3	763,325	0.2	-4.2%	3,337	0.1	3,186	0.1	-4.5%	1,137	0.1	869	0.1	-23.6%	37	0.1	33	0.1	-10.8%
Korean	1,076,872	0.4	1,423,784	0.5	32.2%	6,767	0.1	9,249	0.2	36.7%	2,348	0.2	3,058	0.3	30.2%	183	0.7	208	0.8	13.7%
Vietnamese	1,122,528	0.4	1,548,449	0.5	37.9%	10,626	0.2	14,523	0.2	36.7%	1,557	0.2	3,324	0.3	113.5%	59	0.2	99	0.4	67.8%
Other Asian [1]	1,285,234	0.5	2,192,151	0.7	70.6%	7,294	0.1	14,884	0.2	104.1%	2,216	0.2	4,158	0.4	87.6%	114	0.4	215	0.8	88.6%
Native Hawaiian and Other Pacific Islander	398,835	0.1	540,013	0.2	35.4%	3,178	0.1	6,261	0.1	97.0%	251	0	307	0	22.3%	9	0	13	0	44.4%
Native Hawaiian	140,652	0	156,146	0.1	11.0%	594	0	958	0	61.3%	56	0	86	0	53.6%	2	0	1	0	-50.0%
Guamanian or Chamorro	58,240	0	88,310	0	51.6%	435	0	969	0	122.8%	36	0	70	0	94.4%	1	0	0	0	-100.0%
Samoan	91,029	0	109,637	0	20.4%	1,116	0	1,557	0	39.5%	74	0	53	0	-28.4%	2	0	8	0	300.0%
Other Pacific Islander [2]	108,914	0	185,920	0.1	70.7%	1,033	0	2,777	0	168.8%	85	0	98	0	15.3%	4	0	4	0	0.0%
Some Other Race	15,359,073	5.5	19,107,368	6.2	24.4%	45,827	0.8	80,457	1.3	75.6%	4,775	0.5	8,515	0.9	78.3%	182	0.7	637	2.3	250.0%
Two or More Races	6,826,228	2.4	9,009,073	2.9	32.0%	82,061	1.5	124,589	2.1	51.8%	12,830	1.3	18,596	1.9	44.9%	262	1	678	2.5	158.8%
Race alone or in combination with one or more other races: [4]																				
White	216,930,975	77.1	231,040,398	74.8	6.5%	4,819,487	86.1	5,070,826	84.7	5.2%	791,139	77.8	717,744	71.8	-9.3%	22,196	86.2	20,671	75.2	-6.9%

Black or African American	36,419,434	12.9	42,020,743	13.6	15.4%	655,377	11.7	747,474	12.5	14.1%	198,695	19.6	242,703	24.3	22.1%	1,527	5.9	3,567	13	133.6%
American Indian and Alaska Native	4,119,301	1.5	5,220,579	1.7	26.7%	60,099	1.1	72,376	1.2	20.4%	5,259	0.5	6,592	0.7	25.3%	123	0.5	192	0.7	56.1%
Asian	11,898,828	4.2	17,320,856	5.6	45.6%	76,210	1.4	123,571	2.1	62.1%	26,261	2.6	40,622	4.1	54.7%	1,934	7.5	2,957	10.8	52.9%
Native Hawaiian and Other Pacific Islander	874,414	0.3	1,225,195	0.4	40.1%	6,635	0.1	11,296	0.2	70.2%	1,009	0.1	941	0.1	-6.7%	23	0.1	43	0.2	87.0%
Some Other Race	18,521,486	6.6	21,748,084	7	17.4%	64,880	1.2	96,920	1.6	49.4%	7,777	0.8	10,648	1.1	36.9%	240	0.9	777	2.8	223.8%

(X) Not applicable.

Detailed Population Data	United States					Missouri					St. Louis County					Maryland Heights				
	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change
	Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent	
HISPANIC OR LATINO																				
Total population	281,421,906	100	308,745,538	100	9.7%	5,595,211	100	5,988,927	100	7.0%	1,016,315	100	998,954	100	-1.7%	25,756	100	27,472	100	6.7%
Hispanic or Latino (of any race)	35,305,818	12.5	50,477,594	16.3	43.0%	118,592	2.1	212,470	3.5	79.2%	14,577	1.4	25,024	2.5	71.7%	599	2.3	1,233	4.5	105.8%
Mexican	20,640,711	7.3	31,798,258	10.3	54.1%	77,887	1.4	147,254	2.5	89.1%	7,309	0.7	14,542	1.5	99.0%	331	1.3	775	2.8	134.1%
Puerto Rican	3,406,178	1.2	4,623,716	1.5	35.7%	6,677	0.1	12,236	0.2	83.3%	1,300	0.1	1,957	0.2	50.5%	64	0.2	104	0.4	62.5%
Cuban	1,241,685	0.4	1,785,547	0.6	43.8%	3,022	0.1	4,979	0.1	64.8%	606	0.1	792	0.1	30.7%	22	0.1	18	0.1	-18.2%
Other Hispanic or Latino [5]	10,017,244	3.6	12,270,073	4	22.5%	31,006	0.6	48,001	0.8	54.8%	5,362	0.5	7,733	0.8	44.2%	182	0.7	336	1.2	84.6%
Not Hispanic or Latino	246,116,088	87.5	258,267,944	83.7	4.9%	5,476,619	97.9	5,776,457	96.5	5.5%	1,001,738	98.6	973,930	97.5	-2.8%	25,157	97.7	26,239	95.5	4.3%
RELATIONSHIP																				
Total population	281,421,906	100	308,745,538	100	9.7%	5,595,211	100	5,988,927	100	7.0%	1,016,315	100	998,954	100	-1.7%	25,756	100	27,472	100	6.7%
In households	273,643,273	97.2	300,758,215	97.4	9.9%	5,433,153	97.1	5,814,785	97.1	7.0%	997,029	98.1	979,500	98.1	-1.8%	25,412	98.7	26,913	98	5.9%
Householder	105,480,101	37.5	116,716,292	37.8	10.7%	2,194,594	39.2	2,375,611	39.7	8.2%	404,312	39.8	404,765	40.5	0.1%	11,302	43.9	12,180	44.3	7.8%
Spouse [6]	54,493,232	19.4	56,510,377	18.3	3.7%	1,140,866	20.4	1,150,929	19.2	0.9%	206,240	20.3	189,432	19	-8.1%	5,001	19.4	4,859	17.7	-2.8%
Child	83,393,392	29.6	88,820,256	28.8	6.5%	1,632,535	29.2	1,672,430	27.9	2.4%	308,009	30.3	292,989	29.3	-4.9%	6,573	25.5	6,893	25.1	4.9%
Own child under 18 years	64,494,637	22.9	64,778,147	21	0.4%	1,293,406	23.1	1,263,106	21.1	-2.3%	234,281	23.1	210,665	21.1	-10.1%	5,091	19.8	5,097	18.6	0.1%
Other relatives	15,684,318	5.6	20,411,239	6.6	30.1%	215,253	3.8	287,911	4.8	33.8%	40,127	3.9	48,930	4.9	21.9%	903	3.5	1,120	4.1	24.0%
Under 18 years	6,042,435	2.1	7,779,796	2.5	28.8%	96,412	1.7	125,635	2.1	30.3%	17,290	1.7	19,694	2	13.9%	300	1.2	350	1.3	16.7%
Nonrelatives	14,592,230	5.2	18,300,051	5.9	25.4%	249,905	4.5	327,904	5.5	31.2%	38,341	3.8	43,384	4.3	13.2%	1,633	6.3	1,861	6.8	14.0%
Unmarried partner	5,475,768	1.9	7,744,711	2.5	41.4%	111,010	2	159,237	2.7	43.4%	16,973	1.7	21,812	2.2	28.5%	575	2.2	832	3	44.7%
In group quarters	7,778,633	2.8	7,987,323	2.6	2.7%	162,058	2.9	174,142	2.9	7.5%	19,286	1.9	19,454	1.9	0.9%	344	1.3	559	2	62.5%
Institutionalized population	4,059,039	1.4	3,993,659	1.3	-1.6%	90,430	1.6	93,274	1.6	3.1%	12,080	1.2	12,035	1.2	-0.4%	324	1.3	522	1.9	61.1%
Noninstitutionalized population	3,719,594	1.3	3,993,664	1.3	7.4%	71,628	1.3	80,868	1.4	12.9%	7,206	0.7	7,419	0.7	3.0%	20	0.1	37	0.1	85.0%

HOUSEHOLDS BY TYPE																				
Total households	105,480,101	100	116,716,292	100	10.7%	2,194,594	100	2,375,611	100	8.2%	404,312	100	404,765	100	0.1%	11,302	100	12,180	100	7.8%
Family households (families) [7]	71,787,347	68.1	77,538,296	66.4	8.0%	1,476,516	67.3	1,552,133	65.3	5.1%	270,810	67	263,423	65.1	-2.7%	6,420	56.8	6,766	55.6	5.4%
With own children under 18 years	34,588,368	32.8	34,743,604	29.8	0.4%	699,779	31.9	676,727	28.5	-3.3%	127,869	31.6	114,948	28.4	-10.1%	2,917	25.8	3,114	25.6	6.8%
Husband-wife family	54,493,232	51.7	56,510,377	48.4	3.7%	1,140,866	52	1,150,929	48.4	0.9%	206,240	51	189,432	46.8	-8.1%	5,001	44.2	4,859	39.9	-2.8%
With own children under 18 years	24,835,505	23.5	23,588,268	20.2	-5.0%	497,201	22.7	449,855	18.9	-9.5%	91,733	22.7	76,147	18.8	-17.0%	2,148	19	2,031	16.7	-5.4%
Female householder, no husband present	12,900,103	12.2	15,250,349	13.1	18.2%	253,760	11.6	292,204	12.3	15.1%	51,493	12.7	57,653	14.2	12.0%	1,076	9.5	1,394	11.4	29.6%
With own children under 18 years	7,561,874	7.2	8,365,912	7.2	10.6%	156,571	7.1	168,143	7.1	7.4%	29,742	7.4	31,157	7.7	4.8%	611	5.4	806	6.6	31.9%
Nonfamily households [7]	33,692,754	31.9	39,177,996	33.6	16.3%	718,078	32.7	823,478	34.7	14.7%	133,502	33	141,342	34.9	5.9%	4,882	43.2	5,414	44.4	10.9%
Householder living alone	27,230,075	25.8	31,204,909	26.7	14.6%	599,808	27.3	672,276	28.3	12.1%	113,172	28	119,346	29.5	5.5%	3,820	33.8	4,291	35.2	12.3%
65 years and over	9,722,857	9.2	10,995,689	9.4	13.1%	225,631	10.3	239,991	10.1	6.4%	40,797	10.1	43,926	10.8	7.7%	622	5.5	873	7.2	40.4%
Households with individuals under 18 years	38,022,115	36	38,996,219	33.4	2.6%	762,492	34.7	754,287	31.8	-1.1%	138,497	34.3	126,823	31.3	-8.4%	3,122	27.6	3,350	27.5	7.3%
Households with individuals 65 years and over	24,672,708	23.4	29,091,122	24.9	17.9%	525,811	24	595,032	25	13.2%	98,852	24.4	106,110	26.2	7.3%	1,661	14.7	2,181	17.9	31.3%
Average household size	3	(X)	3	(X)		2	(X)	2	(X)		2	(X)	2	(X)		2	(X)	2	(X)	
Average family size [7]	3	(X)	3	(X)		3	(X)	3	(X)		3	(X)	3	(X)		3	(X)	3	(X)	

(X) Not applicable.

Detailed Population Data	United States					Missouri					St. Louis County					Maryland Heights				
	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change	2000		2010		Percent Change
	Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent		Number	Percent	Number	Percent	
HOUSING OCCUPANCY																				
Total housing units	115,904,641	100	131,704,730	100	13.6%	2,442,017	100	2,712,729	100	11.1%	423,749	100	438,032	100	3.4%	11,846	100	13,092	100	10.5%
Occupied housing units	105,480,101	91	116,716,292	88.6	10.7%	2,194,594	89.9	2,375,611	87.6	8.2%	404,312	95.4	404,765	92.4	0.1%	11,302	95.4	12,180	93	7.8%
Vacant housing units	10,424,540	9	14,988,438	11.4	43.8%	247,423	10.1	337,118	12.4	36.3%	19,437	4.6	33,267	7.6	71.2%	544	4.6	912	7	67.6%
For seasonal, recreational, or occasional use	3,578,718	3.1	4,649,298	3.5	29.9%	66,053	2.7	80,374	3	21.7%	1,504	0.4	2,072	0.5	37.8%	58	0.5	93	0.7	60.3%
Homeowner vacancy rate (percent) [8]	2	(X)	2	(X)		2	(X)	3	(X)		1	(X)	2	(X)		1	(X)	2	(X)	
Rental vacancy rate (percent) [9]	7	(X)	9	(X)		9	(X)	11	(X)		7	(X)	10	(X)		7	(X)	9	(X)	
HOUSING TENURE																				
Occupied housing units	105,480,101	100	116,716,292	100	10.7%	2,194,594	100	2,375,611	100	8.2%	404,312	100	404,765	100	0.1%	11,302	100	12,180	100	7.8%
Owner-occupied housing units	69,815,753	66.2	75,986,074	65.1	8.8%	1,542,149	70.3	1,633,610	68.8	5.9%	299,670	74.1	291,937	72.1	-2.6%	7,080	62.6	7,136	58.6	0.8%
Renter-occupied housing units	35,664,348	33.8	40,730,218	34.9	14.2%	652,445	29.7	742,001	31.2	13.7%	104,642	25.9	112,828	27.9	7.8%	4,222	37.4	5,044	41.4	19.5%

Population in renter-occupied housing units	(X)	(X)	99,479,722	(X)		(X)	(X)	1,669,216	(X)		(X)	(X)	243,928	(X)		(X)	(X)	10,002	(X)
Average household size of renter-occupied units	(X)	(X)	2	(X)		(X)	(X)	2	(X)		(X)	(X)	2	(X)		(X)	(X)	2	(X)

(X) Not applicable.

[1] Other Asian alone, or two or more Asian categories

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories

[3] One of the four most commonly reported multiple-race combination nationwide in the Census 2000

[4] In combination with one or more of the other races listed. The six numbers add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race

[5] This category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic"

[6] "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were edited during processing to "unmarried partner"

[7] "Family households" consists of a householder and one or more people related to the householder by birth, marriage, or adoption. They do not include same-sex married couple even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple households are included in the family household category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" consist of people living alone and households which do not have any members related to the householder

[8] The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100

[9] The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100

Source: U.S. Census Bureau, 2000-2010 Census

Principal Employers in Maryland Heights

Employer	Employees	Rank	Percentage of Total Employment
Edward Jones	1,874	1	4.33%
Spectrum Mid West	1,805	2	4.17%
World Wide Technology	1,432	3	3.31%
Magellan Health Services	1,350	4	3.12%
Hollywood Casino*	1,256	5	2.90%
Siemens Industry Software	1,127	6	2.61%
Essence Healthcare	1,081	7	2.50%
United Healthcare of the Midwest	900	8	2.08%
Schnuck Markets	635	9	1.47%
Elsevier	510	10	1.18%
Ranken Jordan	500	11	1.16%
Graybar Electric Company	494	12	1.14%
Safety National Casualty Corporation	485	13	1.12%
Meridian Medical Technology	456	14	1.05%
Enterprise Holdings	450	15	1.04%
The Boeing Company	421	16	0.97%
Home State Health Plan	400	17	0.92%
The Reliable Insurance Company	400	18	0.92%
Watlow	400	19	0.92%
Equifax Workforce Solutions	361	20	0.83%
Total	16,337		37.77%

Source: City's Clerk office based on business license renewals for 2020