# JVIC Activity Center Plan

***Prepared for:***

The City of Springfield, Missouri
& Missouri State University

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CITY of SPRINGFIELD

Missouri State UNIVERSITY

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# INTRODUCTION

In response to increased growth in the Springfield Metropolitan Statistical Area and corresponding impacts on trends in real estate development throughout the Springfield region, the City commissioned the Urban Consulting Group of Peckham, Guyton, Albers & Viets (PGAV) to evaluate and update planning for nine (9) Activity Centers identified in the *2001 Growth Plan*. The *2001 Growth Plan* introduced the Activity Centers concept as a method to encourage concentrated development in targeted locations so as to optimize transportation investments, citizen convenience, investor confidence, a compact growth pattern, and a sense of urban excitement. The result of PGAV's analysis for eight (8) of the Activity Centers is the *2006 Activity Center Plan*. Due to the unique nature of the Jordan Valley Activity Center (JVIC), this Activity Center is addressed in a separate report entitled the JVIC Activity Center Plan.

Within the *2001 Growth Plan* the Activity Centers were classified according to their different stage of desired evolution in response to existing and estimated future development activity. The Activity Centers were classified as **Major**, **Community**, **Emerging,** and **Potential**.

**Major Activity Centers** are those that already have a "critical mass" of employment, business, and housing that serve the entire region, namely Center City and the Battlefield-Glenstone-James River Freeway (B-G-JRF) area.

**Community Activity Centers** are those that have established business or residential bases but are of lesser size or importance than the two Major Activity Centers.

**Emerging Activity Centers** are, as the name implies, just beginning to show promise as commercial-residential-civic hubs.

**Potential Activity Centers** are those that have not yet developed but, because of their location, have potential as a future activity center.

The *2006 Activity Center Plan* and the JVIC Activity Center Plan accomplish the following objectives for each of the nine Activity Centers:

- ✓ Establish the direction for future planning or development.
- ✓ Provide general concepts for land use, building and site design, in response to current and projected future growth and development trends.
- ✓ Analyze market capacity to support existing and future development.
- ✓ Recommend potential incentives or regulations to facilitate public and private investment at the Activity Centers.

The following is the Plan for the JVIC Activity Center as part of Springfield's overall Activity Center planning process.

## JVIC Activity Center Background

The Jordan Valley Innovation Center (JVIC) is a government-sponsored initiative to encourage industrial development through the creation of a research center in Springfield, Missouri. The US Department of Defense, in association with Missouri State University (MSU), is redeveloping the former Missouri Farm Association (MFA) feed mill into a center for nanotechnology. JVIC is a collaborative effort between the private, public and institutional sectors to invest in Downtown Springfield. The City of Springfield (City) used $1.2 million in HUD funding to complete the purchase and begin renovation of the MFA structure in 2003. The City sold the property, minus eight silos across Phelps Street, to MSU for one dollar ($1). The DOD is providing funding to complete redevelopment of the main MFA structure, and MSU is negotiating with private firms to lease most of the space – reserving part of the space for MSU functions.

Renovation of the MFA facility will occur in three phases of redevelopment. Phase One consists of the renovation of the two "main" buildings (a total of 44,000 square feet) to provide facilities for selected corporate R&D organizations, a clean room and laboratories, demonstration area, and offices and administrative support. Phase Two consists of demolishing part of the existing facility and renovating it to accommodate advanced manufacturing for use by private firms. Phase Three involves the partial demolition of one of the auxiliary structures and the construction of additional applied manufacturing space.

The JVIC project is part of a larger, long-term plan to revitalize the City's Downtown and Central Business District. As such, JVIC is a "sub-area" within the Center City Activity Center identified in the *2001 Growth Plan*. The *2001 Growth Plan* identified the Center City Activity Center as a *Major Activity Center*, and states:

> "*Currently the focus of varied and multiple activities, additional emphasis is needed to stabilize and revitalize downtown. This is an important center for the community with respect to maintaining a "sense of place" and as a catalyst for conservation or older, stable neighborhoods…The City should work cooperatively with Urban Districts Alliance and other private interests to bolster market interest here. Center City and especially the Civic Park area should be the location of major civic and institutional functions. Smaller concentrations of commercial, civic or institutional activity should be located so as to serve each neighborhood, not isolated in remote, single-use complexes."*

Due to the unique development opportunities presented by the JVIC project, this "sub-area" of the Center City Activity Center has been deemed as its own Activity Center for future planning purposes. The JVIC Activity Center is generally bounded by Chestnut, Memorial, Phelps and Boonville and contains some of Springfield's oldest industrial uses. This Activity Center provides the City with an opportunity to incorporate a "catalyst" redevelopment project into the comprehensive revitalization program for the Center City. JVIC has the potential to encourage new, high-paying employment positions through the facilitation of technology-based advanced manufacturing while simultaneously diversifying and contributing to the economic diversity necessary for successful revitalization of Downtown Springfield.

## The Role of Local Government in Research Park Development

JVIC, in and of itself, is the primary catalyst for additional redevelopment activity within the JVIC Activity Center. One of the objectives of the JVIC Activity Center is to create a comprehensive plan for future development such as advanced manufacturing and support services resulting

from nanotechnology research and knowledge-sharing occurring at JVIC. The "urban" environment surrounding the JVIC location presents planning and development challenges, but also provides significant advantages to auxiliary development. Not a research park in the traditional sense, there is a need to create a "sense of place" or "urban space" that defines a JVIC-centered "campus" within Downtown Springfield's urban fabric while simultaneously integrating the JVIC Activity Center with Downtown through physical and psychological connections. Before discussing the planning issues associated with achieving this objective, it is helpful to evaluate the role of local government in other successful "technology-centered" developments.

Many geographic centers of high-technology in the United States started as small, federally-funded operations. Silicon Valley and the North Carolina Research Triangle (Triangle) were largely undeveloped swaths of land before 1950. It was not until federally-funded scientists began locating research activities at these locations that private, high-tech industries started to emerge and develop. Most of the early Silicon Valley companies began as defense contractors in the wake of World War II. In 1951, Frederick Terman, an MIT-trained engineer and president of Stanford University, decided to build the Stanford Industrial Park, and eventually some of the most innovative companies of the twentieth century (Intel, AMD, HP) either started or immediately located there. The Triangle began as a research park - a collaborative effort between Duke University, North Carolina Chapel Hill, and North Carolina State University. The first tenants of the Triangle were federally-funded agencies such as The National Environmental Health Sciences Center, NASA, the National Air Pollution Center, National Center for Health Statistics, and the U.S. Forest Service. Each of these tenants built facilities within the first ten-years of the Triangle's inception. Today, the Triangle employs over 38,000 people - approximately 25,000 of them are privately employed in high-tech companies.

The rationale behind the construction of research parks (such as Silicon Valley and the Triangle) is that private firms, government entities, or universities that are engaged in technology research share information and resources. The "technology transfer", in turn, increases the innovative potential of the companies, making them more profitable and thus leading to regional economic development. For a research park to be successful, and for further industrial and economic development to occur, a certain synergy must be in place between the university or universities involved in research, private firms as tenants, and local government. The components of this synergy are as follows:

- ✓ Universities must be performing research that has the potential to translate into industry-applicable inventions.
- ✓ Private companies have to secure sufficient funding for research whether through federal government grants, venture capital, or corporations.
- ✓ A network of relationships should exist among industry and university scientists which facilitates collaboration and the transfer of knowledge.
- ✓ State government should provide an economic climate supporting research and development, university-research, and investments in workforce and infrastructure resources.
- ✓ Local government must enable the expansion of research/industrial and office facilities through appropriate zoning, land acquisition, and available financial incentives.

- ✓ Local government ought to make available amenities (a quality of life factor) that contribute to an attractive environment where scientists and engineers want to live, perform research, and seek collaborative relationships.

The means by which local governments have actively promoted innovative industrial development has differed according to regional circumstances. During the initial growth of Silicon Valley, local government involvement was largely absent, a fact that has been lamented by some local government officials who were later faced with difficult transportation and land use concerns that could have been avoided with proper planning.[1] While not a barrier to economic growth, the absence of local planning resulted in development impediments to the Valley's long-term transportation and land use capabilities that have become apparent today. Conversely, the Triangle involved local government from its inception. Before the first research park was constructed within the Triangle, an independent planning commission was formed constituting municipal, county, and state planning officials. The stated goal of the independent planning commission was to change land use policies and build the transportation infrastructure necessary to accommodate a research park and future industrial development. The Triangle has benefited from decades of long-term planning so that the transportation network, environment, and municipal services have not been compromised.

Both Silicon Valley and the Triangle involved research-centered locations where industrial/office development occurred as "Greenfield development". A current, urban research-centered redevelopment example is the Center of Research and Technological Expertise (CORTEX). CORTEX is a research and development district currently being planned and developed in an older industrial section of St. Louis, Missouri, between Washington University Medical School, Saint Louis University Medical Center, and the Missouri Botanical Gardens.[2] Unlike Greenfield development, Urban redevelopment is challenged by the increased costs of land, the difficulty in acquiring land, and the cost of demolishing or renovating existing structures. Thus far, CORTEX has relied on public financing to overcome some of the costs of redevelopment within an urban setting. CORTEX has established a revolving loan fund to acquire land using state tax credits and university donations. The City of St. Louis is contributing to the CORTEX district by supporting the formation of tax increment financing (TIF) districts to fund road and streetscape improvements. The formation of TIF districts also allows the City of St. Louis to influence future land use by providing local incentives in return for a specified land use and design.

The JVIC site is similar to CORTEX – it is situated in an urban environment with existing buildings and infrastructure. In both cases, the central role of local government in promoting innovative industrial development should be offering incentives to overcome the "extraordinary costs" of urban redevelopment, assist in the acquisition of land, and when necessary implement design standards via development regulations or code emphasizing a "campus" atmosphere. Each of the examples provided herein, demonstrates that a proactive City of Springfield will be necessary to ensure high-quality, comprehensively-planned development in response to economic growth occurring from JVIC.

[1] Some of these reported problems include the existence of incompatible land uses, traffic congestion, pollution, and "urban sprawl" leading to the inefficient provision of municipal services.

[2] CORTEX and JVIC share a similar "industrial" development environment that had earlier benefited from rail accessibility.

**Impacts of Nanotechnology Research on Economic Development Planning**

Nanotechnology involves the creation of very small structures and machines, on the level of 1 to 100 nanometers. Nanotechnology-related devices are expected to revolutionize a variety of industries ranging from medicine to energy production. According to the *Wall Street Journal*, industry forecasters estimate spending on nanotech-related products could reach $1 trillion annual by 2015.[3]

A nanotechnology research center is only one component in the decision to locate nanotechnology production or research facilities. Lloyd L. Tran, program director for the International Association of Nanotechnology, identifies several crucial factors that should exist in order to support a new nanotech operation.[4] These factors include:

- ✓ A new plant should be near a nanotechnology research center so management can tap the expertise of knowledgeable researchers.
- ✓ The availability of support services as a part of the "infrastructure" (i.e. tool shops, small businesses or shops available to offer prototype engineering services, etc.). Nanotechnology shops in the middle of "nowhere" are at a significant disadvantage in this regard.
- ✓ Availability of a skilled work force (in this case, skilled engineers, scientists or technicians for the nanotechnology sector).
- ✓ The presence of a strong education establishment.

The confluence of nanotechnology research, technology transfer and advanced manufacturing generates a need for additional nanotech facilities allowing research to move from untested concept to proven reality. Such collaboration across research and industry, particularly within the highly complex nanotechnology industry, requires increasing demands on the number and design of structures. Clean rooms and other spaces must accommodate both proprietary and more interdisciplinary research.[5] Generally speaking, these advanced nanotech manufacturing facilities require open floor plans to easily adapt to changes in the manufacturing process, including the expansion of manufacturing capability.

In addition to the presence of specific nanotechnology facilities in locating or relocating a nanotech manufacturing facility, the competitiveness for "high-tech" researchers and employees places an emphasis on locations with art, culture, and other entertainment venues. Researchers are often people who are seeking locations near a university, with little to no commute, and a diverse assortment of social and recreational opportunities to explore.

[3] Keating, Michael. "Infrastructure Crucial When Establishing Nanotech Operations." *Expansion Management*, February 2005.

[4] Keating, Michael. "Infrastructure Crucial When Establishing Nanotech Operations." *Expansion Management*, February 2005.

[5] Rubin, Debra K., Gonchar, Joann. "R&D Market is Industry's New Testing Lab." *ENR: Engineering News-Record, Vol. 253, Issue 3.* July 19, 2004.

In *The Rise of the Creative Class*[6], Richard Florida develops a basic argument that regional economic growth is powered by creative people (referred to as the Creative Class[7]), who prefer places that are diverse, tolerant and open to new ideas. The 3T's of economic development (Technology, Talent and Tolerance) are each necessary, but by themselves insufficient conditions to attract creative people, generate innovation and stimulate economic growth.[8] According to Florida, regional economic growth comes from the 3T's of economic development, and to spur innovation and economic growth a region must offer all three of them. For Florida, the bottom line is people need a people climate even more than they need a business climate. Cities are finding that urban centers, places that had once lost their historic economic function, are coming back as crucibles for innovation and creativity. Florida notes that urban centers have become the prime location for the creative lifestyle and the new amenities that go with it.

In Florida's assessment, a major research university is a basic infrastructure component of the Creative Economy and a huge potential source of competitive advantage. According to Florida, to be an effective contributor to regional growth, the university must play three interrelated roles that reflect the 3T's of creative places:

> *Technology:* Universities are centers for cutting-edge research and important sources of new technologies and spin-off companies.
>
> *Talent:* Universities are amazingly effective talent attractors, and their effect is truly magnetic. By attracting eminent researchers and scientists, universities in turn attract graduate students, generate spin-off companies and encourage other companies to locate nearby in a cycle of self-reinforcing growth.
>
> *Tolerance:* Universities also help to create a progressive, open and tolerant people climate that helps attract and retain members of the Creative Class.

Florida notes that while universities help establish the broader quality of place of the communities in which they are located, they cannot do it alone. The surrounding community must have the capacity to absorb and exploit the innovation and technologies that the university generates, and also help put in place the broader lifestyle amenities and quality of place sought by Creative Class people.[9] Therefore, the "development", or urban context, in which nanotechnology facilities locate, may be just as important as the research facility itself.

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[6] Florida, Richard. The Rise of the Creative Class and how it's transforming work, leisure, community and everyday life. Basic Books, 2002.

[7] The Creative Class includes engineers and researchers. Florida estimates that 30%, or 38 million, of the workforce is involved in Creativity.

[8] Florida's theories within *The Rise of the Creative Class* are not without criticism. However, the book offers a compelling viewpoint for greater emphasis on a holistic approach to economic development as development of "community", rather than the historic emphasis on isolated centers of commerce (i.e. business parks). It is in this spirit that Florida's analysis offers some perspective for the role of Springfield and MSU to function as "forces" in initiating community change in the "new" information economy. An in-depth reading of the book provides an overview of the research findings supporting his theories.

[9] Florida, Richard. The Rise of the Creative Class and how it's transforming work, leisure, community and everyday life. Basic Books, 2002.

The City of Springfield is faced with encouraging two principal development outcomes. First, the City needs to be a partner and leader in creating an environment for "spin-off" companies and advanced manufacturing to locate in close proximity to JVIC. As previously discussed and further encouraged by leaders in "locating" nanotech facilities, a progressive environment offering access to university research, land and infrastructure to support advanced manufacturing, and development regulations to ensure long-term development sustainability will be necessary for successful redevelopment within the JVIC Activity Center. The JVIC Activity Center physical layout should be principally oriented towards achieving this outcome. Many of the major components for successful "nanotechnology development" are in place – the presence of MSU, a nanotechnology research center (JVIC), an area of the City well-situated to support nanotechnology development, and a proactive City government.

A second, albeit less direct outcome, is the continued enhancement of the City's Downtown area (the Center City Activity Center). The City's Downtown has started to benefit from a recent increase in redevelopment activity, with several larger redevelopment projects in planning stages.[10] Couple this recent redevelopment activity with the construction of Hammons Field, Expo Center, and Hammons Hotel, and the Center City Activity Center are putting into place the necessary synergy to encourage self-sustaining revitalization in Downtown. Historically, Downtown has been the cultural and artistic hub and should remain as such into the future. With the recent integration of housing units into the Downtown area, the urban environment continues to be renewed in Springfield's Center City.

The challenge for the City lies in preparing the JVIC Activity Center to support technology-related development while weaving development within the JVIC Activity Center into the fabric of the Center City Activity Center. Such a holistic approach to supporting the revitalization and redevelopment of both the JVIC and Center City Activity Centers has the potential to provide an environment to absorb and exploit nanotechnology innovation within the broader community life offered by Springfield. The potential diversity of social, business, cultural and recreational experiences offered by Center City and JVIC is the basis for the added value of the JVIC Activity Center's location.

## JVIC Activity Center Concept Plans

The concept plan included the **Appendix** visually depicts the design guidelines that are intended to foster a sense of place and a campus atmosphere for JVIC while at the same time integrating the JVIC Activity Center with the surrounding community.

**Plate 1** depicts the boundaries of the JVIC Activity Center and the areas which should be considered for redevelopment. Plate 1 displays buildings with potential for adaptive reuse and suggests two phases for the development of the JVIC campus. Phase 1, the area bounded by Chestnut, Phelps, Boonville, and Jefferson, should be the primary focus of initial development activity to ensure concentrated growth around JVIC. As demand for space increases, available resources should be utilized to encourage development in Phase 2, the area bounded by Jefferson, Chestnut, Phelps, and Memorial. The areas to the west of Boonville are designated as possible locations for ancillary development to the research park, such as parking, retail, and mixed uses which complement the campus environment. Plate 1 also suggests design features

[10] Much of the redevelopment activity has involved residential/loft conversions. The Downtown retail climate has improved in response to the addition of residential units in Downtown. Entertainment venues are also in the development stages.

which integrate the campus into the urban environment. Entry signage at significant access points to the campus promote a sense of place, as does enhanced landscaping on the south side of the heavily trafficked Chestnut Expressway. The recommended streetscape improvements extend from Downtown to help visually integrate the JVIC campus with Downtown. The streetscape improvements and signage should be uniform in character throughout the Activity Center and reinforce a sense of identity unique to a high-technology research park.

**Plate 2** is a Concept Plan depicting a possible configuration of a JVIC "campus". **Plate 2** depicts an "open" campus where pass through traffic is encouraged. This rendering encourages increased residential uses within the Phase 1 development area and proposes a pedestrian thoroughfare which links the residential and office uses in Phase 1 to the ancillary developments west of Boonville.

The PGAV Concept Plan alternative is intended to represent a potential development scenario and does not necessarily represent the way in which development will actually occur. Development in Phase 1 and Phase 2 will evolve based on the actual end users of a facility. Plans for all development will be submitted in compliance with the City's development codes and will be reviewed by the Planning Commission and City Council as required.

## Development Challenges and Project Financing

In order to prepare the JVIC Activity Center to attract nanotech research and advanced manufacturing, the City will need to address significant infrastructure deficiencies and "physical environment" factors. As previously noted, the JVIC Activity Center is encumbered by "extraordinary costs" of redevelopment due to the land use and development patterns that occurred over time and exist today. Urban redevelopment, such as the redevelopment of the JVIC Activity Center, is burdened by:

- ✓ Inadequate and aged infrastructure facilities.
- ✓ Outmoded parking and transportation design.
- ✓ Potential environmental contamination.
- ✓ The need to acquire and demolish obsolete, improved property.
- ✓ The relocation of existing businesses.
- ✓ A general lack of physical maintenance to both private and public properties.

These "extraordinary costs" of redevelopment, not to mention the need to encourage high-quality design and physical enhancements in new development, contribute additional costs to developing the JVIC Activity Center in response to a growing demand for nanotech facilities. The private sector is unlikely to pay for these extraordinary costs of development without entering into a public-private partnership offering, at a minimum, financial support to offset these "extraordinary costs". The advantage for the City and other government agencies in entering into such public-private partnerships is the enhanced ability to direct or require high-quality, comprehensively planned development that would not otherwise be required by the City's existing development regulations.

There is also the additional challenge of creating a "market" for nanotech development within Springfield. The development of the JVIC facility is the cornerstone of this effort.[11] However, the first wave of advanced manufacturing facilities will be pioneers in the nanotechnology business sector in Springfield. The barriers to entry of such companies within an unproven business market creates a higher degree of risk than a company locating in an area with a proven nanotechnology business climate. It is incumbent upon the City, as well as its partners in the future development of the JVIC Activity Center (i.e. MSU, the State of Missouri), to lower the costs of entering an unproven market in order to enhance the potential benefits associated with the increased risk. Again, JVIC's facilities and access to knowledge will assist in the technology transfer component of nanotech development, but the shift to advanced manufacturing will rely less on the JVIC facility and more closely on traditional operational business costs (i.e. employee productivity, cost of space, utility costs, etc.).

**How does the City assist in lowering the barriers to entry of the first wave of nanotechnology development resulting from the presence of JVIC?** By providing a vision for the future redevelopment of the JVIC Activity Center as a center for nanotechnology research, development and manufacturing. The implementation of this vision includes:

- ✓ Identifying the appropriate location and mix of future land uses.
- ✓ Establishing high-quality development standards.
- ✓ Acquiring available land or property for future development.
- ✓ Participating in site preparation, when necessary.[12]
- ✓ Upgrading and rehabilitating existing infrastructure.
- ✓ Providing parking for higher-density users in an urban context.
- ✓ Partnering with JVIC and MSU to recruit future tenants and businesses to locate in the JVIC Activity Center.

The City should play a leading role in identifying the appropriate sources of public financial resources available to support the future vision for the JVIC Activity Center. Without question, continued efforts should be made to receive Federal financial assistance in order to enhance the JVIC facilities capabilities and rehabilitation program. If Federal financial assistance is available to support basic infrastructure needs, the City should pursue such funding.[13]

[11] Note that JVIC, in and of itself, has been heavily subsidized by the Federal government in order to "create" a market for nanotech research and development in Springfield.

[12] Site preparation may include the removal of environmental contaminants, the demolition of existing structures, or rough grading of property.

[13] The Community Development Block Grant program is a potential source of additional funds for infrastructure.

In reality, most of the financial burden for the physical development issues to be supported by public funding will be placed on the State and the City.[14] Federal grants for economic development are not as commonplace as they used to be. The State's Brownfield Redevelopment Program, administered by the Missouri Department of Economic Development (MODED), offers tax credits to assist with up to 100% of the cost of the remediation of hazardous substances and/or demolition, and also offers grants for public infrastructure improvements for up to $1 million. In addition, part of the JVIC Activity Center lies within the Warehouse and Industrial National Historic District. State Historic Preservation tax credits, which are administered by MODED, may be used to finance up to 25% of the cost of renovating eligible structures. National Historic Preservation Tax Credits, which are administered by the Missouri State Historic Preservation Office (SHPO), may be available to finance up to 20% of the cost of renovating eligible structures and may be used in conjunction with State Historic Preservation tax credits.

It also might be possible to apply for financial assistance through Missouri Development Finance Board (MDFB). The MDFB provides loans to public entities to assist with the construction of public infrastructure and the acquisition of land and demolition of buildings within redevelopment areas. The MDFB also issues tax credits which may be used to aid development within the JVIC Activity Center.

The most applicable State program to encourage redevelopment of the JVIC Activity Center is the Missouri Downtown Economic Stimulus Act (MODESA). The JVIC Activity Center has the potential to generate additional new employment. MODESA allows a percentage of additional state income taxes generated from new employment within a MODESA District to be applied to finance the "extraordinary costs" associated with redeveloping the area.

The City has a number of Missouri redevelopment and financing mechanisms to choose from depending on the desired approach of the City. The City may choose Tax Increment Financing (TIF), tax abatement under Chapter 353, the use of a Transportation Development District (TDD) or Community Improvement District (CID). These economic development tools, in combination with each other, should be considered as a part of any comprehensive approach to planning for the redevelopment of the JVIC Activity Center.

## Recommendations

### *City of Springfield's Implementation Actions*

The City's role in the redevelopment of the JVIC Activity Center will be an ongoing process, much like the examples of other technology campuses discussed within this Plan. The following are short to intermediate actions for the City to consider initiating in the next one to five years in response to opportunities created with the opening of the JVIC facility:

[14] The State of Missouri offers several different economic development "incentive" programs to attract new business and support the expansion of existing businesses. This discussion does not address these "incentives" because the benefactor is the business – in exchange for job creation, capital investment, etc. The intent of these economic development "incentives" are not to pay for basic infrastructure, in most cases, but to influence business investment in the State. While the importance of such "incentives" should not be overlooked (they also lower the barriers of entry for companies), these "incentives" are not a part of the City's "tool kit" for preparing the JVIC Activity Center for redevelopment.

- ✓ Prepare and adopt design and development guidelines specifically for the JVIC Activity Center.

- ✓ The Activity Center is currently zoned a mixture of GM (General Manufacturing), HM (Heavy Manufacturing), and CC (Center City). It is recommended that a Planned Development District, such as PD – Nanotechnology or PD – Urban Business, be created and established for the JVIC Activity Center. A PD District allows the City to have control over the design of each developable site and would ensure uniform development in accordance with the design guidelines to be established by the City for the JVIC Activity Center and the Concept Plans provided in this Activity Center Plan.

- ✓ Initiate and establish a MODESA district to assist in overcoming the extraordinary costs of redeveloping the JVIC Activity Center.

- ✓ Acquire vacant land and/or buildings when they become available and determine the "highest and best" use of the building in the context of a JVIC campus. Can the building be adaptively re-used to support the objectives of the JVIC Activity Center Plan? Should a building be removed to make way for newer, more technologically advanced facilities to support nanotechnology? The City may need to "land bank" properties until such time that the demand exists for these facilities.

- ✓ Actively solicit a master developer or co-developer partnership with builders capable of constructing new facilities to meet future demand. A possible avenue to identify such an entity is the issuance of a request for qualifications and/or request for proposal of the development community. The developer/builder should bring significant experience and expertise in the creation and development of a research and technology centered development program.

In addition to taking the lead on the aforementioned actions, it is recommended that the City initiate the establishment, and play a leading role in, a proposed JVIC Redevelopment Corporation.

*Proposed JVIC Redevelopment Corporation*

In order to facilitate the planning and development process within the JVIC Activity Center it is recommended that a separate organization be created to oversee the JVIC Activity Center's progress as a locus for research and innovation.[15] It is recommended that the organization be a non-profit corporation governed by a board of directors consisting of leaders from:

- ✓ Federal Agencies involved in JVIC.

- ✓ The City of Springfield.

- ✓ Missouri State University.

[15] The organizational structure of the corporation may be public or quasi-public in nature. Organization under the State's Chapter 353 Urban Redevelopment Corporations Law is one potential organizational structure, but others should be considered based on the organization's objectives and membership.

- ✓ Significant Corporate Interests.

The main goals of this entity will be as follows:

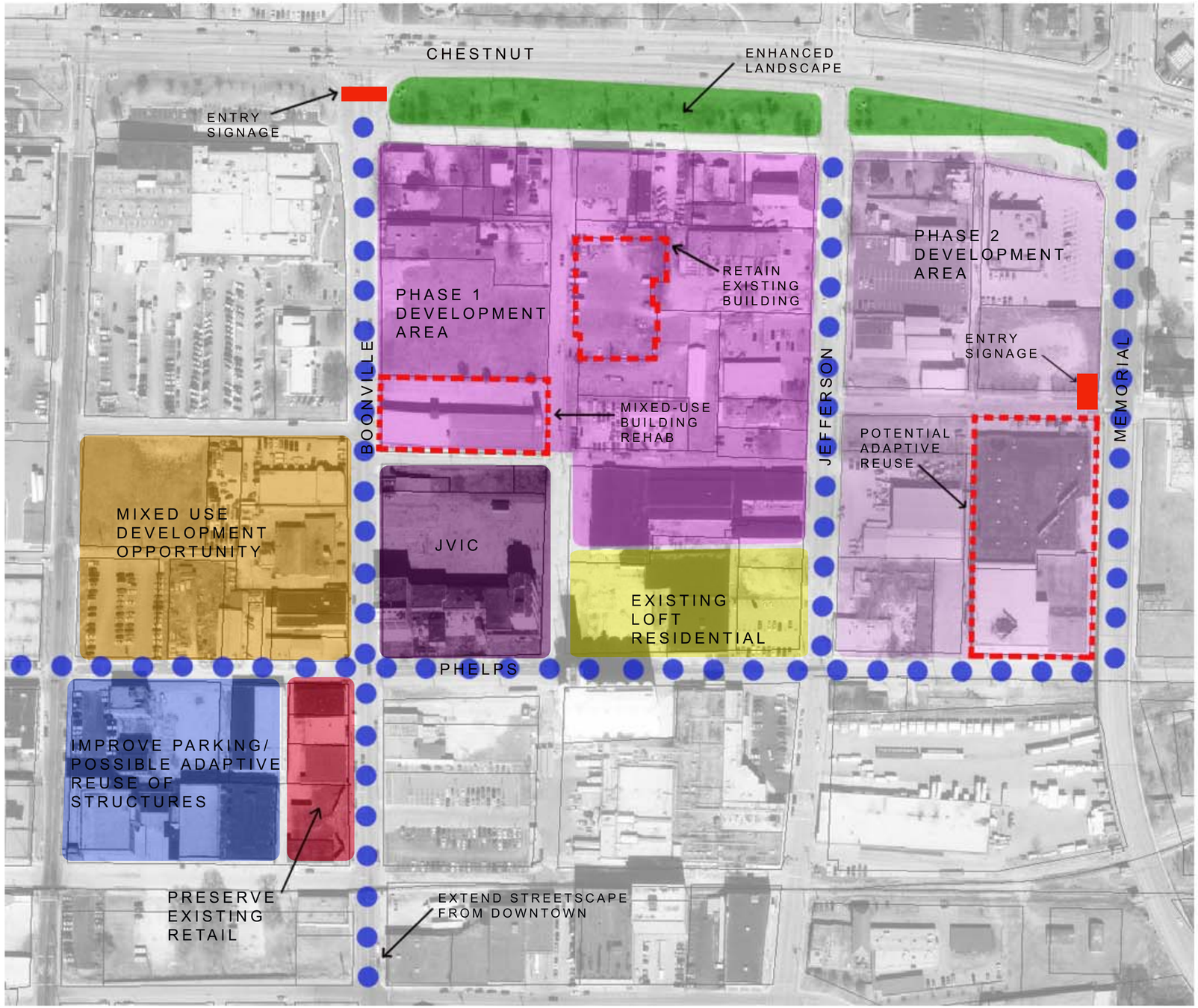
- ✓ Secure funding from available sources and determine appropriate uses.
- ✓ Facilitate the continued development of JVIC as an urban research campus in accordance with the design principles and objectives outlined in the JVIC Concept Plans.
- ✓ Encourage technology transfer between university and governmental interests in order to promote business growth and entrepreneurship.
- ✓ Advocate and market JVIC as an attractive research campus to existing nanotechnology companies.
- ✓ Promote and host regional nanotechnology conferences such as those of the Missouri Nanotechnology Research Alliance of Missouri (NRAM) in Springfield.

This entity would serve as the driving force behind the JVIC Activity Center plan to help JVIC realize its innovative potential. Such an organization would be able to more effectively obtain and marshal the variety of state, local, and federal funding sources than a local government would be able to by itself. The organization will also be able to facilitate consensus building between MSU, the City, federal agencies, and corporate interests. In addition, this organization would fill the role of "development coordinator" by bringing together the local nanotechnology community and proactively marketing JVIC's potential to those outside of Springfield.

A stated before, the types of facilities demanded by nanotechnology-related industries are highly specialized. To construct such specialized facilities requires a developer or developers with experience in similar projects. Both the Missouri Research Park in O'Fallon, Missouri and CORTEX in St. Louis were constructed in partnership with developers Trammell Crow and Clayco, respectively. Developers experienced with these types of facilities should be identified early on by the City and the non-profit corporation to serve a primary role as advisors, or partners, to the coordinating organization. A development partner brings specialized expertise to the construction, operation, and marketing of space, allowing the non-profit corporation, MSU, and the City to focus on encouraging technology transfer, business recruitment, business development, and project financing.

**PGAV recommends classifying the JVIC Activity Center as an *Emerging Activity Center*.**

# APPENDIX




## PLANNING GOALS

- ENHANCE STREETSCAPE AND LANDSCAPING TO CREATE A SENSE OF PLACE.
- CONNECT DOWNTOWN AND JVIC WITH STREETSCAPE ALONG BOONVILLE, JEFFERSON, & MEMORIAL.
- PROVIDE FUTURE "DEVELOPMENT AREAS" FOR NANOTECH OFFICE AND ADVANCED MANUFACTURING.
- ENCOURAGE A "RESEARCH PARK" ORIENTATION WHILE RETAINING THE URBAN ENVIRONMENT.
- CONCENTRATE PUBLIC AND PRIVATE INVESTMENT IN DEVELOPMENT AREAS.
- ENCOURAGE ADVANTAGEOUS ADAPTIVE REUSES OF BUILDINGS FOR OFFICE AND RESIDENTIAL USE.

Plate 1
Jordan Valley Innovation Center Activity Center
Springfield, Missouri

**CONCEPTUAL LAND USE PLAN**

50 200
0 100

SCALE 1:200

PGAV URBAN CONSULTING


Plate 2
Jordan Valley Innovation Center Activity Center
Springfield, Missouri

## CONCEPT PLAN

50 200
0 100 300

SCALE 1:200

PGAVURBANCONSULTING