





# City-Wide Brownfield Redevelopment Plan

City of Roanoke, Virginia

Adopted by City Council January 22, 2008



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### **EXECUTIVE SUMMARY**

This City-Wide Brownfield Redevelopment Plan has been created in direct response to input from public meetings to develop a formal brownfield plan for the City. Redevelopment of brownfield properties is critical for our City as it is built out with almost 95% of property in the City developed. Recycling of underused land offers us a chance for sustainable growth.

#### Vision

The sustainable reuse of brownfield sites involves three basic elements or approaches to make the City a vibrant community of choice and to improve quality of life for our residents:

- 1. Convert underused industrial property along the Roanoke River to a green corridor with a supporting mix of commercial and residential uses.
- 2. Revitalize brownfield sites in or immediately adjacent to residential neighborhoods as neighborhood scale commercial operations that reinforce Village Centers or provide opportunities for technology and entrepreneurial business and to create opportunities for housing clusters and other mixed development.
- 3. Reinforce industrial corridors by reusing property for new operations for more efficient land use and to strengthen the industrial base of the City.

This approach allows the City to maintain our existing industrial base while providing opportunities to attract new business and residents.

#### **Corridors**

The plan identifies five primary corridors that likely contain brownfield sites and identifies redevelopment opportunities based on the applicable neighborhood plans:

Roanoke River

Central Rail

Hollins - Plantation
 Road

- Statesman RCIT
  - Williamson Road

### Policy

The plan closes by presenting policy to be investigated and developed and the role the city will play in developing a sustainable brownfield redevelopment program that encourages and facilitates reinvestment.

Brownfield (noun) - real property, the expansion, redevelopment or reuse of which may be complicated by the presence of or potential presence of a hazardous substance, pollutant, or contaminant (U.S. Environmental Protection Agency)

#### City of Roanoke Population Change

1900 - 21,495 1950 - 91,921 1980 - 100,220 2006 - 91,552

# 2006 U.S. Council of Mayors <u>Brownfield Survey</u>

- 172 cities with 23,810 brownfield sites
- Average site is 5 15 acres
- Redeveloped sites could produce over \$2 billion/year in taxes revenue
- Incentives provided by over half of cities
- 62 cities reported \$233 million in actual tax revenue from redeveloped sites
- 83,171 jobs created

### **BROWNFIELDS - LAND OF OPPORTUNITY**

Reuse of brownfield sites represents a strategic opportunity for growth, community development, economic investment and environmental restoration for the City of Roanoke. Recycling these properties offers a number of opportunities:

- Creation of green space, and mixed residential and commercial development along the Roanoke River corridor.
- Better utilization of other industrial and commercial zoned property.
- Opportunities for new jobs and housing stock.
- Increased tax base
- Correction of environmental issues that may otherwise remain uncontrolled.

The City experienced explosive growth in the first half of the 20th century as a hub for railroad and other industrial activities. During this period, the Magic City's population grew from 21,495 in 1900 to 91,921 in 1950. Unfortunately, as market dynamics, economic conditions and technologies changed, many traditional manufacturing operations have scaled back or ceased production in the City. This has left our industrial corridors with underused and/or abandoned properties that do not contribute to the community and in some cases act as blight, posing a threat to the surrounding neighborhoods and to the environment.

With creativity and planning, brownfield redevelopment can create open space and buffers while allowing for new development to respond to market demands. The purpose of this plan is to develop a framework to encourage reinvestment in underutilized commercial and industrial corridors in the City. Reuse of these under-used properties is critical for sustained growth as the City is built out. Nearly 95 percent of land in the City is developed with the remaining land comprised largely of small individual lots or parcels located on steep slopes, in a flood plain and/or with poor access.

### **BASIS FOR THE PLAN**

This city-wide plan establishes a broad vision for redevelopment in the City building upon initiatives identified in the City's Comprehensive Plan, *Vision 2001-2020*, and public input

specific to brownfield redevelopment. The plan also establishes a policy framework to support development that will be refined and developed over time.

### Initiatives from the Comprehensive Plan

The community and economic benefits of brownfield redevelopment are recognized in the City's Comprehensive Plan, *Vision 2001 - 2020*. Specific Strategic Initiatives and Actions identified in *Vision* are listed below.

Initiative	Brownfield Program Relevance	
Redeveloping Underutilized Commercial and Industrial Sites	Most underutilized industrial properties by definition are brownfields and under used commercial strips often contain former automotive, dry cleaning or other operations that may have environmental issues that need to be addressed.	
Investing in Critical Amenities	Redevelopment in brownfield corridors along the Roanoke River allows for leveraging of public investment in parks and greenways while redevelopment in proximity to downtown leverages current private investment that can support increased entertainment and cultural events.	
Shifting Gears - New Economic Initiatives	New spaces created by redevelopment can be used for technology and other new businesses in the valley, partially attracted by the valley's natural resources and amenities	
Getting Wired	Technology companies seek flexible work spaces, often preferring buildings and warehouses with historic character. Reuse of old industrial buildings, particularly along the river or in proximity to downtown or village centers can help satisfy this need.	
Village Centers and Housing Clusters	Brownfield corridors are located in close proximity to several identified village centers. Revitalization of these properties can support a mixture of commercial and mixed density residential uses to support village centers and the surrounding neighborhoods.	

### **Community Input - Basis for Plan Development**

City staff held a series of public meetings, forums and input sessions to solicit comments and ideas for the development of the City's brownfield program and use of U.S. Environmental Protection Agency (EPA) Brownfield Grant funds. A primary issue that rose from these meetings and review of successful programs in other cities is the development of a plan or vision to guide prospective investors and developers on the types of projects that will be supported.

Other comments received as part of the public input process include the following:

- Provide open space and greenways along the Roanoke River corridor and identify opportunities for commercial/mixed use development to complement the greenways.
- Evaluate how redevelopment will occur in proximity to rivers and along floodplains.
- Look for opportunities across the City including scattered gas stations.
- Redevelopment should include a mixture of residential, recreation, commercial and industrial uses based on site location and environmental conditions.
- Develop an inventory of brownfield sites/redevelopment opportunities.
- Use available funds based on long-term sustainable planning principles.

### Public/Private Partnership

The City does not have the means to redevelop brownfield sites on its own nor is it the City's intent to unilaterally perform such work. Likewise, in many cases brownfield projects are not economically feasible for the private sector due to costs required to address environmental concerns. The goal of this program is to establish a community-based process where public funds can be used to support private sector development that is consistent with the Comprehensive Plan, applicable Neighborhood Plans and other related input or directives.

### TYPICAL BROWNFIELD REDEVELOPMENT PROCESS AND ISSUES

This section presents an overview of the historical barriers to brownfield redevelopment and existing tools to help overcome these barriers. A discussion of the typical steps in the brownfield redevelopment process, key issues to consider, current city policy, and future policy needs follows.

### **Typical Barriers to Redevelopment**

There are four broad barriers to redevelopment at brownfield sites.

- 1. Liability for existing environmental conditions.
- 2. Cost to identify and address those conditions.
- 3. Time required to satisfy regulatory agencies that environmental issues have been addressed and development can occur.
- 4. Lack of knowledge on site conditions and assistance that may be available to a prospective developer

### **Existing Tools to Overcome Barriers**

### **Assistance from Federal and State Brownfield Laws**

Federal and state brownfield laws adopted in 2002 address the issues of environmental liability, cost and time to address regulatory concerns. These laws offer liability protections to three types of purchasers of brownfield property:

- 1. Innocent Land Owner an entity that purchases a property that is not believed to contain environmental issues based upon performance of AAI.
- 2. Bona fide prospective purchaser a purchaser of a brownfield site, aware of environmental conditions based on performance of AAI that intends to take reasonable steps to address the environmental conditions on the site.
- 3. Contiguous property owner an entity that owns property that is contaminated due to environmental conditions on an adjacent or otherwise nearby situated site.

### All Appropriate Inquiry

All Appropriate Inquiry (AAI) is the legally defined process for performing environmental due diligence (Phase I ESA). The EPA standards for AAI became effective in November 2005.

The preparation of a Phase I ESA in accordance with the AAI standard is required for a purchaser to be eligible for brownfield liability protections and for funding from EPA grants.

Liability is limited for these purchasers provided that:

- 1. All Appropriate Inquiry was performed prior to purchase of the property.
- 2. The purchaser has no affiliation with a party responsible for contamination at the site.

To maintain the liability protections over time, a purchaser is expected to take *reasonable steps/appropriate care* to make sure the site is safe. This could include addressing issues identified during AAI that represent an immediate threat to human health or the environment or performing limited cleanup, as needed to support future land use. However, the purchaser is not expected to perform a full blown cleanup to remove all contamination from the property, thus the limitation of liability.

The state brownfield law also provides an amnesty provision to owners of brownfield sites. This provision provides amnesty from civil penalties provided that the owner takes appropriate care to address known environmental issues and markets the property for redevelopment.

The federal Brownfield Law offers a series of grants available to state and local government and in some cases to non-profit groups to help fund redevelopment of brownfield sites. These grants are awarded on an annual cycle and include the following:

- Assessment grants funding to perform environmental site assessments, redevelopment planning and community outreach and monitoring.
- Cleanup grants funding to perform cleanup activities.
- Revolving Loan Fund grants funding to establish a pool to loan or subgrant for cleanup actions.

State funding is available from the Department of Environmental Quality (DEQ) and Virginia Resources Authority (VRA) through various revolving loan fund programs. DEQ can provide publicly sponsored brownfields projects with site assessments and in some cases, limited cleanup actions, where appropriate. The Virginia Brownfields Program provides the assessment as a free service to owners of qualifying sites, subject to the availability of funding from the federal government.

#### **Comfort Letters**

The Virginia Department of Environmental Quality (DEQ) will prepare comfort letters for a purchaser confirming status as an innocent land owner, bona fide prospective purchaser or contiguous property owner upon completion of All Appropriate Inquiry (AAI). (www.deq.state.va.us/brownfi eldweb/)

### Virginia Brownfields Restoration and Economic Redevelopment Assistance <u>Fund</u>

The state brownfield law includes a provision to establish this fund for grants to local government or loans to private developers. The general assembly has not appropriated funding at the time this plan was developed.

A key provision to assist with the timely evaluation of environmental issues at brownfield sites is the recognition of State Response Programs in the federal brownfield law. Based on this provision, an established state program, rather than an EPA program is the preferred means to address environmental issues at a brownfield. The federal brownfield law also includes an enforcement bar so that a site that has been addressed to the satisfaction of the state is not subject to additional cleanup action from EPA. Working with state officials is also quicker than working with a remote EPA regional office. The state brownfield law recognizes DEQ's Voluntary Remediation Program (VRP) as Virginia's state response program.

### Managing the Level of Assessment and Cleanup Required

Both federal and state laws limit the liability of a purchaser for the assessment and subsequent cleanup or remediation of environmental issues at a brownfield. However, the purchaser is expected to take reasonable steps/appropriate care to make sure a site is safe for its intended reuse. Typically assessment and remediation (cleanup or corrective action) of a site involves six broad steps as follows:

- 1. Environmental Site Assessment (ESA) the process used to determine if contamination is present on the site and if so, what types of contaminants are there and how extensive the contamination may be (e.g., soil, groundwater, amount of migration). A Phase I ESA consists of records research and cursory site review to identify the potential presence of environmental conditions. Actual field investigations and sampling are then performed (Phase II) to confirm and delineate the actual extent of environmental conditions. The Phase II assessment can be an iterative process that is completed over several stages to create a complete set of information.
- 2. Risk assessment the evaluation of the actual risk to human health and the environment due to contamination at a site. The risk is based on the quantity of contaminants present at the site and the potential for exposure to these contaminants. The risk assessment typically involves evaluating how significant the risk at the site is and then determining what level of cleanup is needed to make the site safe.
- 3. Remediation assessment (feasibility study) once the extent of contamination is known and the risk that it presents is determined, various methods can then be evaluated to determine the best means to remediate the problem. This can include removing the contamination, treating the contaminated area to destroy the contaminants, immobilizing or containing the contaminants, or a combination of measures.

#### Remediation/cleanup

Action or combination of actions taken to mitigate, remove, correct, abate, minimize, eliminate, control, contain, or prevent a release of contaminants into the environment in order to protect human health and the environment.

#### Triad Approach

The Triad Approach to site assessment is endorsed by EPA as a time and cost-effective means to delineate environmental impacts on a site and is based on the following components:

- 1. Systematic project planning
- 2. Dynamic work plans
- 3. Real-time measurement technologies

This approach has been shown to reduce assessment cost by up to 50%. See the following for additional information:

- www.triadcentral.org/ref/r ef/documents/2004triadf actsheeta.pdf
- www.epa.gov/tio/downloa d/misc/triadprimer.pdf
- www.triadcentral.org

- 4. Source removal a common step in a cleanup process is to address the area(s) of high contamination as they present the highest risk to human health and once these areas are controlled potential for migration of contaminants is greatly reduced.
- 5. Residual cleanup once the source area is addressed, the remaining or residual contamination can be managed, as necessary.
- 6. Closure the end point of regulatory action regarding a release of contaminants at a site.

By taking advantage of streamlined site assessment processes and risk-based corrective action, responsible development can occur without performing a full-blown cleanup of a site to return it to its original condition. The goal for brownfield redevelopment is to get from the initial environmental assessment through to closure as quickly as possible. A key to cost effectively assessing a brownfield site is to perform the work in a manner that reduces the need for multiple phases of investigation and focusing assessment efforts in areas where such work is required. Two key elements to implementing such activities are as follows:

- Know the intended end use(s) for the property.
- Utilize field testing methods that can be adapted and focused on-site in real time based on results.

In this manner sampling plans can be adapted in the field to focus on delineating "hot spots" and identifying potential issues in areas sensitive to the development (i.e., proposed residential vs. industrial uses).

The use of risk-based cleanup through the VRP allows for flexibility and reduced cost to address environmental issues identified in the assessment. In simple terms, the site must be cleaned up enough to reduce potential risk to a safe level. The main issue then is the potential exposure to contamination by a future occupant or user of the redeveloped site. Potential exposure is dependant on site-specific conditions and future land use factors including the following:

- Level of contamination at the site.
- Location of contamination (on the ground surface or deep in soil).
- Potential for vapors to migrate to ground surface or into buildings.
- Potential for inhalation or ingestion of dust or soil.
- Potential for direct contact with contaminated material.

#### Voluntary Remediation Program

The VRP allows for flexibility in determining cleanup levels based on site-specific conditions and intended land use. Environmental issues can be addressed by conventional remediation methods and/or by the use of engineering and institutional controls.

Engineering control - physical means of limiting exposure to contaminants. These can take a number of forms including landscaped fill or parking lots constructed as caps or buildings with impervious/vented foundation structures. (Furthermore, these engineering controls can be rapidly depreciated for tax purposes.)

Institutional control – restrictions on the types of activities that can occur on the property ranging from the type of uses allowed (e.g., commercial only) to how the site is developed (e.g., no excavation in certain areas).

Exposure can be controlled by either removing the contaminants from the property and/or by implementing controls on-site to limit exposure. On-site controls could include ventilation and impermeable barriers to control vapors or capping of soil to prevent direct contact and windblown dust.

The VRP also has two critical determinations that can provide significant liability relief to participants: the eligibility determination and the Certificate of Satisfactory Completion of Remediation.

- Once a property is entered in the program the applicant will receive a determination that remediation is not clearly mandated at the site. Recognizing that a developer must take appropriate steps to make the site safe for reuse, this determination provides comfort that remediation is not required for the site in its current state. What this means for a brownfield developer is that if a development plan falls through, the owner is not obligated to complete the cleanup (until a new development is proposed).
- Upon completing the VRP program, a Certification of Satisfactory Completion of Remediation is issued providing immunity from future DEQ enforcement. Furthermore, DEQ and EPA have entered into a Memorandum of Agreement so that parties enrolled in the VRP will not be subjected to an EPA action under the Superfund Law (Comprehensive Environmental Response, Compensation, and Liability Act or CERCLA).

### **Typical Redevelopment Steps and Issues**

There are four basic steps involved in a typical brownfield redevelopment project (see *Anatomy of Brownfields Redevelopment* guide prepared by EPA <a href="http://www.epa.gov/brownfields/anat\_bf\_redev\_101106.pdf">http://www.epa.gov/brownfields/anat\_bf\_redev\_101106.pdf</a>). The actual steps may vary based on the complexity of a project and may be iterative in some cases. The following table provides a summary of the steps in the redevelopment process and potential challenges that may exist. The table also identifies current City mechanisms that can assist with redevelopment issues and issues where additional policy measures should be considered.

### Redevelopment Steps and Potential Issues Requiring Assistance

Step	Typical Activities	Potential Issues	Available City Assistance	Policy Needs
Concept/ redevelopment	<ul> <li>Identify redevelopment scenario(s)</li> <li>Due diligence including AAI/Phase I ESA</li> <li>Identify sources of funding</li> <li>Request comfort letter from DEQ and discuss preliminary means to address environmental issues</li> <li>Discuss zoning and development issues with City</li> </ul>	<ul> <li>Cost for up front environmental studies may be prohibitive for smaller sites/marginal locations</li> <li>Contacting property owners/and property assembly</li> <li>Regulatory agency agreement with potential remediation/redevelopment scenario</li> </ul>	<ul> <li>EPA grant funds to assist with environmental assessments</li> <li>Provide support to prospective developer in meetings with regulatory agencies</li> </ul>	<ul> <li>Identify other sources of funds to support project needs</li> <li>Develop database of owner information and abandoned properties in target areas</li> <li>Consider purchase of "key" parcels</li> </ul>
Securing the project	<ul> <li>Contract negotiations</li> <li>Determine         remediation         needs/cost</li> <li>Secure financing</li> <li>Secure property         (purchase or other         arrangements)</li> <li>Utilize Triad         Approach to tailor         environmental         efforts to end use         for property.</li> </ul>	<ul> <li>Property assembly</li> <li>High cleanup cost relative to property value</li> <li>Difficulty securing financing for cleanup activities</li> <li>Cost for infrastructure improvements</li> <li>Cost to demolish obsolete/unnecessary facilities</li> </ul>	<ul> <li>Revolving loan fund to assist with cleanup cost that can't be conventionally financed</li> <li>Existing economic development incentive program</li> </ul>	<ul> <li>Consider purchase of "key" parcels if available</li> <li>Funding sources for demolition and basic infrastructure improvements (e.g., streetscape, drainage) in blighted areas</li> </ul>

Step	Typical Activities	Potential Issues	Available City Assistance	Policy Needs
Cleanup and Development	<ul> <li>Remediation plan approval from regulatory agency</li> <li>Zoning and plan review approvals from City</li> <li>Integrate cleanup and site development to extent possible</li> <li>Regulatory closure for environmental conditions</li> <li>Completion of construction - facility start-up, lease, sale</li> </ul>	<ul> <li>Remediation plan does not meet zoning/ site plan review requirements</li> <li>Cost of City review and related fees (rezoning) when added to cost of state environmental programs, cleanup, etc.</li> <li>Zoning issues in transitional areas reuse does not meet community objectives or is desirable but not supported by current zoning</li> <li>Developer does not perform cleanup in conjunction with state or federal regulatory program - doesn't meet appropriate care criteria.</li> </ul>	<ul> <li>Encourage meetings with City early in process for consistency</li> <li>Encourage meetings between developer, City and DEQ as necessary to advocate for project needs and other funding assistance (state revolving loan funds).</li> <li>Local revolving loan fund (EPA grant) to assist with cleanup cost that can't be conventionally financed</li> </ul>	<ul> <li>Consider         waiver/reduction of         City application and         review fees</li> <li>Prepare corridor plans         and zoning overlays         to assist         redevelopment efforts</li> <li>Require that sites be         enrolled in Voluntary         Remediation Program         or other regulatory         program to be         eligible for funding         beyond due diligence         efforts.</li> </ul>
Property Management	<ul> <li>Maintenance of engineering controls</li> <li>Review of expansions, changes in use or future redevelopment for consistency with institutional and engineering controls</li> </ul>	Redevelopment or future redevelopment does not maintain controls - potential for unintended exposure to contaminants	No specific programs at this time	Maintain database of environmental conditions, engineering controls and institutional controls for redevelopment sites

# Flood Plain - Challenges and <u>Opportunities</u>

Many brownfield sites are located within the 100-year flood plain of the Roanoke River or its tributaries. This offers development challenges that can also serve as opportunities.

New construction will need to be raised above the flood elevation. Raising the elevation with fill can also serve as an engineering control over areas of contamination reducing the need for contamination. The cost to construct this engineering control may be eligible for the Federal Brownfield Tax Credit.

Well thought out development plans for property near the river and its tributaries can have the benefit of creating an attractive environment that will have high demand for use and that benefit the surrounding neighborhoods.

Some redevelopment issues specific to Roanoke are as follows:

- 1. Brownfield corridors in the City tend to be fragmented into small parcels with multiple owners. Property assembly issues must be considered to create developable tracts of land. This is an issue for two reasons:
  - A larger parcel of land offers more development potential and opportunities to accommodate a mixture of uses.
  - If environmental issues are present on a single parcel, combining that lot with other parcels can reduce the overall project cost for cleanup making the project more viable.
- 2. Original industrial development in the City was along the river, therefore flood plain issues need to be considered with redevelopment as follows:
  - Potential need to raise finished floor elevations (e.g., filling site to raise overall elevation, provide parking or other uninhabited space on first floor).
  - Existing buildings may require flood proofing or may need to be razed and replaced.

Key considerations for prospective purchaser or developer interested in brownfield redevelopment are outlined in the following Table.

### **Key Consideration For Redevelopment Projects**

Action	Importance		
Project Concept - the better defined a project is at the front end, the less likelihood for problems later in the process.			
Perform due diligence	Completion of All Appropriate Inquiry (AAI) is a critical to provide an understanding of environmental conditions and to provide a basis for making informed decisions. AAI is also required to be eligible for liability limitations and funding from EPA brownfield grants.		
Initiate discussions with City	The City wants to see successful redevelopment and can offer the following support: <ul> <li>Assist in discussions with DEQ to lend support to a project</li> <li>Work with zoning and other development issues</li> <li>Identify incentives that may be available</li> </ul>		
Involve DEQ	<ul> <li>The agency wants to see redevelopment projects succeed – use them as a resource as follows:</li> <li>Request comfort letters to provide written documentation of liability limitations under state law (and will also confirm completion of AAI requirements to satisfy any EPA inquiry).</li> <li>Discuss potential issues regarding environmental conditions early in the redevelopment process to identify areas of potential concern and to identify potential solutions.</li> </ul>		
<b>Project Development</b> - Begin specific development objective	with the end use in mind. Knowing the end use allows environmental work to be focused on meeting es.		
Use the Triad Approach for site assessment	The Triad Approach (or similar method) encourages tailoring site assessment activities to the specific end use and targeted, real-time field testing methods to minimize the need for multiple phases of work. This approach can save both time and money.		
Integrate cleanup and site development	Cost-effective redevelopment projects use cleanup actions or other controls that are accommodated as part of the development activity. Full cleanup of a site to remove contamination can be a costly and time-consuming process that may not be economically feasible or necessary based on the long-term land use. However, when existing site conditions, the role of limited cleanup and the final end use(s) are consider together, creative solutions can be identified to allow development to occur in a safe and cost effective manner.		

### **Key Consideration For Redevelopment Projects**

Action	Importance
Coordinate development and cleanup plans with the City	Development plans must be reviewed and approved by the City and an important consideration that may be overlooked is that proposed engineering controls must conform to the City's zoning ordinance. Potential conflicts between the zoning ordinance and a development plan incorporating engineering controls include:
	<ul> <li>Quantity (percentage) of impervious surface.</li> <li>Location of buildings (improper setbacks/yard widths).</li> <li>Parking that exceeds the allowable maximum.</li> </ul>
	In addition, land use restrictions on a property should be consistent with the zoning district to prevent conflicts and encourage flexibility.

### **PRIORITIES**

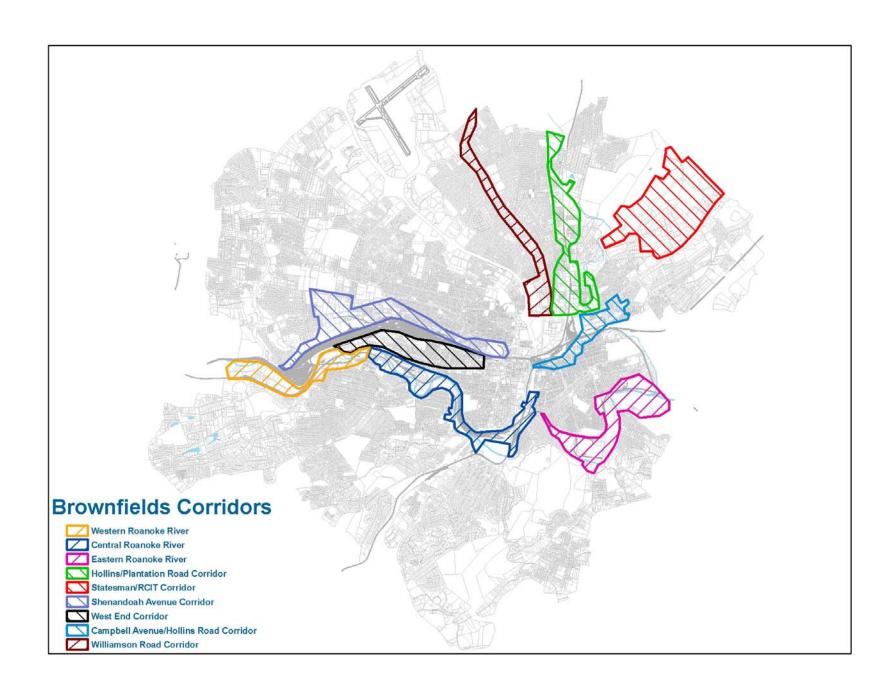
This section identifies target corridors in the City where brownfield properties are likely to be present and include the following areas:

- Roanoke River Corridor
- Central Rail Corridor
- Hollins/Plantation Road Corridor
- Statesman Industrial Park/Roanoke Centre for Industry and Technology
- Williamson Road Corridor
- Scattered Sites

These corridors were identified based on large areas of industrial zoning or historical commercial and industrial uses that could present a challenge to redevelopment. The following map and table identify the City's brownfield corridors and present a summary of pertinent information including current land uses, future land uses based on the applicable neighborhood plans, and priority actions based on the neighborhood plans and other public input. Each corridor is then discussed in more detail including an overall description, types of land uses present, percent of vacant property, pertinent policies from neighborhood plans covering the corridors and general goals for redevelopment in the areas. Detailed maps showing the target areas and current zoning in and around the corridors are enclosed as Appendix A.

The potential land uses in the corridors represent a balanced approach to support:

- Shifts in land use along the Roanoke River to support open space and new opportunities for residential and commercial uses.
- Support land use transitions to support village centers and housing opportunities.
- Strengthen and better utilize key industrial corridors.



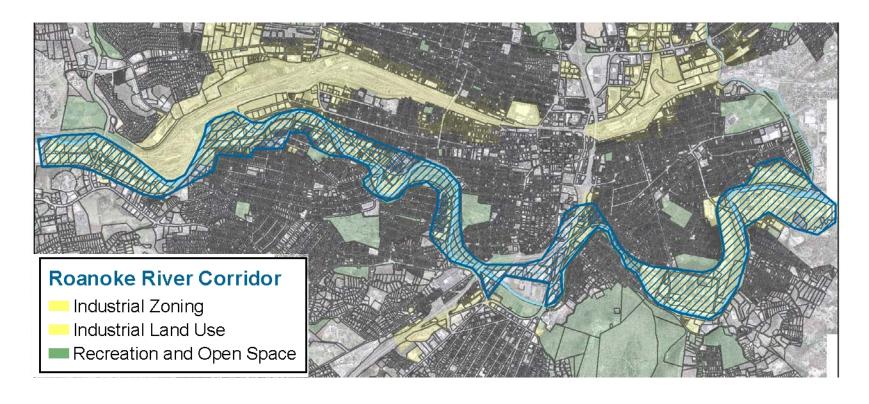
### **CORRIDOR DESCRIPTIONS AND SUMMARY**

<b>Corridor Description</b>	Current Land Uses	Potential Land Uses	Priority Actions
Roanoke River Corridor			
East - Piedmont Park east to the City limit	Industrial and Commercial	Industrial and commercial with opportunity for future mixed uses	Support redevelopment opportunities as they arise, could include long-term land use shift
<b>Central</b> - Bridge Street east to Piedmont Park	Industrial, Commercial, and Open Space	Transition to open space and mixture of less intensive uses along the river	Convert underutilized property along the river to residential, commercial and recreation uses
West - City limit to Bridge Street	Industrial	Commercial, Industrial, and open Space	Support opportunities at west end of Hurt Park neighborhood
Rail Corridor			
Shenandoah - 2nd Street to Peters Creek Road	Industrial and Commercial	Commercial, Mixed Use, Industrial	Better utilize industrial property and improve transitions into neighborhood
<b>West End</b> - 5th Street west through Hurt Park	Industrial and Commercial	Commercial, Residential, Industrial, Mixed Use	Support redevelopment for appropriate transition from Downtown into West End, addresses properties abutting residential areas and appropriate industrial infill
Campbell Avenue - Hollins Road - I-581 bridge to eastern City limit along Lick Run	Industrial and Commercial	Commercial, Industrial	Support industrial reuse
Hollins/Plantation Corridor - Corridor parallel to Plantation and Hollins Roads	Industrial and Commercial	Commercial, Mixed Use, Industrial	Support reuse of existing industrial property and transition to village centers
Statesman/RCIT Corridor - Industrial parks on Orange Avenue	Industrial and Commercial	Commercial, Industrial	Support reuse projects as they arise
Williamson Road Corridor - Williamson Road north from Orange Avenue	Commercial, Mixed Use	Commercial, Mixed Use, Residential	Support appropriate reuse of commercial operations
Miscellaneous Properties - Industrial and commercial	Varies	Varies	Create inventory of opportunities to support village center and commercial

Corridor Description	Current Land Uses	Potential Land Uses	Priority Actions
properties scattered across City			corridor use

### **Roanoke River Corridor**

The Roanoke River Corridor runs across the length of the City from east to west and is divided into an eastern, central and western portion for discussion in this plan. The river corridor is an important part of the City, both in the historical industrial development, and in its future for the development of greenways and other uses along the river. Eighty percent of the corridor has been developed with many old manufacturing plants along the river now vacant or underutilized. Reuse opportunities can be further leveraged with the current flood reduction project and associated construction of the Roanoke River greenway.

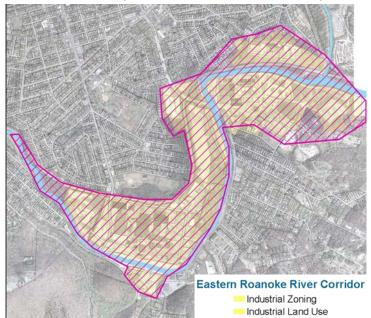


### Eastern Roanoke River

### **Corridor Description**

The Eastern Roanoke River Corridor primarily consists of terraced land along the river from Piedmont Park to the eastern City limit. Much of the land on the north side of the river is situated in the 100-year flood plain between the river and the nearby railroad tracks. This area includes two large former industrial operations, American Viscose and Hooker Furniture. The area also includes smaller industrial property, strip commercial development, the Western Virginia Water Authority's regional wastewater treatment plant and some open space along the river.

The American Viscose plant was at one time, the largest rayon textile mill in the world. The facility was closed in the late 1950s when its operations were combined with the company's plant in Front Royal, Virginia. The Viscose property was bought by a group that operates the facility as an industrial park, the Roanoke Industrial Center. The center occupies a large portion of the former facility and has over 40 tenants leasing 1.1 million square feet of space.



The Hooker Furniture plant was a 265,000 square foot plant specializing in wood furniture manufacturing. Hooker closed this plant in August 2006, consistent with the trend for many domestic furniture producers. The facility is currently being used by another furniture manufacturing company.

### **Neighborhood Plan Policies**

Portions of this corridor are covered by the Morningside-Kenwood-Riverdale and Riverland-Walnut Hills neighborhood plans

The following policies are presented in the Morningside-Kenwood-Riverdale neighborhood plan:

- Ensure compliance with pollution and other environmental regulations for industrial uses in the area. Residential and industrial uses have coexisted in this area since its settlement. Clean water and clean air are critical components to maintaining a high quality of life.
- Encourage businesses in the Roanoke Industrial Center to use the Enterprise
   Zone incentives and other economic incentives available through public sources.
- Several out-parcels are prime for development in the Bennington Street/Route 116/ Riverland Road village center.
- Encourage development of commercial services, i.e., restaurants, drug stores, etc., in designated village centers. Two large village centers, Parkside Plaza on Dale Avenue and the Bennington Street and Riverland Road village center, have retail space and vacant land available.

The Riverland-Walnut Hills neighborhood plan includes the following policies and actions:

- Support efforts to reduce flooding and potential damage to personal property support the Roanoke River flood reduction project to minimize the risk of flooding privately-owned properties.
- Encourage a vibrant village center in terms of appropriate form, scale, and activity.

The current zoning in the corridor is Recreation and Open Space along the river banks with the surrounding land zoned largely industrial with some commercial and residential uses along the eastern bank. The future land use maps in the neighborhood plans show future land use that is consistent with current zoning.

### **Development Opportunities**

This portion of the river is of relatively low priority in the short term for brownfield redevelopment as its properties are generally occupied and the Roanoke River greenway is already largely constructed through the corridor. Neighborhood policy is focused on:

- Maintaining industrial use at the former Viscose property.
- Provide infill/better use of commercial areas in the Riverdale area (serve as future village center)

 Improve the village center in the Riverland-Walnut Hills neighborhood at the Walnut Street Bridge. (The area in the vicinity of the Walnut Street bridge will benefit from redevelopment of the South Jefferson Redevelopment Area.)

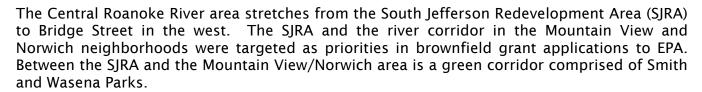
However, the eastern river corridor represents a future opportunity for development if and when a shift in land use demand occurs. If the demand for industrial space continues to decrease over time, the former Viscose property and other large tracts could potentially be reused for mixed residential or commercial uses with additional open space along the river. In fact, the Viscose plant was identified in *Vision 2001-2020* as an underutilized industrial area that could be a future redevelopment opportunity.

The eastern edge of the corridor will likely remain industrial because of its location along a major rail line, active furniture plant, and proximity to the regional wastewater treatment plant.

Any development along the river will need to consider development requirements associated with the Flood Plain and River and Creek Corridor zoning overlays.

### **Central Roanoke River**

### **Corridor Description**



The SJRA is a major economic development focus for the City covering 110 acres extending south along Jefferson Street from downtown. Based on the size of the developable property in the area, \$175 million in capital expenditures is anticipated over the term of the project with approximately 2,500 employees working in the area. To date, redevelopment has focused on the Riverside Centre for Research and Technology (RCRT), a 25-acre technology park located along Jefferson Street and Reserve Avenue. The Roanoke Redevelopment and Housing Authority purchased property in the area and performed the necessary environmental investigations. The area houses the Carilion Biomedical Institute (CBI) and will also contain the Carilion Clinic, medical school, hotel, and other space.



The area was originally developed as a railroad locomotive facility with rail supported industries located between the river and Jefferson Street. These industries included metal recycling, steel and iron fabrication, warehousing, and street car maintenance and associated power plant. The railroad is still a significant feature of the area with mainline tracks that remain in use.

The Mountain View/Norwich corridor stretches from Wasena Park to the west along Cleveland Avenue and then into the Norwich neighborhood, extending to Bridge Street. The area has deteriorated with many abandoned and underused industrial properties. However, some viable businesses are scattered through the corridor. Much of the corridor is located in the 100 year flood plain due to its close proximity to the river. The area



will undergo significant change with the construction of the Roanoke River Flood Reduction Project and associated greenway. Forty-three percent (43%) of the land in this corridor is vacant or underutilized.

The industrial uses along the southern edge of the Mountain View neighborhood are naturally buffered from adjoining residences by terrain and vegetation. This area is well contained and features zoning for both light and heavy manufacturing uses. However, most of these manufacturing properties are no longer in use. The exceptions are a steel fabrication facility and a small-scale furniture manufacturer.

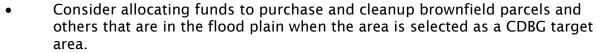
The south bank of the river in the Norwich neighborhood features largely vacant industrial property between the river and a branch rail line. A foundry and a utility contractor are among the operating industries in the neighborhood that remain in close proximity to the river.



### **Neighborhood Plan Policies**

A specific Redevelopment Plan for the SJRA was completed by the Roanoke Redevelopment and Housing Authority in 2001. The plan contains a boundary description and Boundary and Acquisition Map for the project area, conditions requiring redevelopment, statement of goals and objectives, general land use plan, and other important information on the project.

The Hurt Park - Mountain View - West End and Norwich neighborhood plans contain several policy and action items relevant to the brownfield corridor as follows:



- The Roanoke River Flood Reduction Project will provide more access to, and perhaps promote more study for, the use of the vacant industrial land along the Roanoke River as a park.
- Encourage infill development of vacant industrial parcels and screen industrial activity as much as possible from adjoining residential areas.
- Industrial uses should have as minimal impact as possible on adjoining residential areas in terms of visibility, noise and air quality.







### **Trail Oriented Development**

General information on use of trails as a development catalyst (www.railtrails.org/resources/documents/whatwedo/TrailLink%2007%20progra

m\_Economic%20Develop.p df) and a specific example of its application (http://www.ci.minneapolis. mn.us/planning/docs/Midto wn\_Greenway\_executive\_sum mary.pdf).

- Village center development along 13th Street and Bridge Street should be encouraged and commercial establishments should be compatible with the neighborhood.
- Improve the appearance and functionality of gateways to the neighborhoods.

### **Opportunities for Reuse**

In the SJRA, redevelopment efforts are well underway in the Riverside Center for Research and Technology. This area accounts for approximately one third of the entire SJRA leaving opportunities to the east along the Roanoke River and to the north along Jefferson Street and Williamson Road towards downtown. Based on the key location between the river, RCRT, downtown and several residential neighborhoods (Old Southwest, Belmont-Fallon and Riverland-Walnut Hills), continued redevelopment in this area is a priority for the City. The Roanoke River flood reduction project and greenway project should be complete in this area by 2008, providing additional support for redevelopment activities.

To date environmental issues in the SJRA have been addressed by a combination of land use and engineering controls with little actual cleanup required. Developed parcels have typically been raised with several feet of fill and/or use first floor parking to raise the structures out of the 100-year flood plain. These site improvements can also serve as a cap over potentially contaminated soil, an example of integrating environmental controls as part of site development.

The Mountain View/Norwich portion of the corridor also offers significant opportunity in the long-term. The Roanoke River flood reduction and greenway project should be completed in the area by 2012. These projects will provide a catalyst to help transform this area from an underutilized industrial area to a combination of mixed use and open space in accordance with the corridor brownfield plan. Such "trail oriented development" has been a successful development tool in other cities.

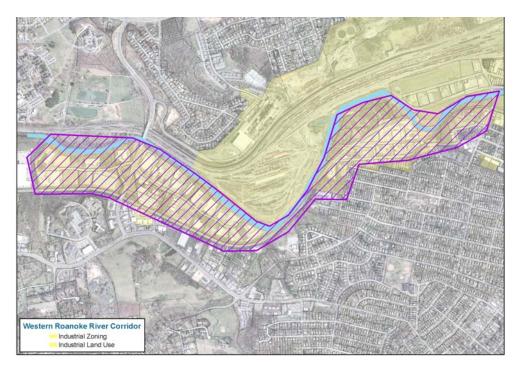
Both the SJRA and Mountain View-Norwich corridors are high priority brownfield areas for redevelopment as reuse advances several goals of the City's comprehensive plan as well as the respective neighborhood plans.

### **Western Roanoke River**



The Western Roanoke River corridor is the most recently developed area along the river. The northern side of the river throughout this section is predominantly occupied by railroad operations with a small buffer between railroad uses and the river. The south side of the river through this section consists of an industrial park with light intensity uses transitioning to heavy industry moving towards the east. Various companies are located in the industrial park along Aerial Way Drive such as wood fabricating facilities and contractor supply yards. Further to the east are a coatings manufacturer, asphalt storage facility, precast concrete plant and foundry. Most industries in this corridor are viable and provide a substantial tax base for the City.

Thirty-six (36) percent of the corridor is vacant or underutilized based on review of data in the City's GIS. Most of this underused property is located in close proximity to the river and is within the 100-year flood plain and has limited access due to the railway.



### **Neighborhood Plan Policies**

The western portion of the Roanoke River corridor includes parts of the Hurt Park-Mountain View-West End, Norwich, Greater Raleigh Court and Greater Deyerle neighborhoods. Neither the Raleigh Court, Deyerle nor Hurt Park-Mountain View-West End plans contains any policies or actions regarding this portion of the industrial corridor along the river.

The future land use map in the Norwich plan shows properties along the Roanoke River west of Bridge Street as conservation (open or recreation) space. The plan contains a policy recommending that access to the river be provided to support recreational opportunities. This policy could also be applied to currently vacant industrial property across the Roanoke River, much of which is located in the flood plain. This property currently cannot be accessed as there is no grade crossing over the railroad main line.

### **Development Opportunities**

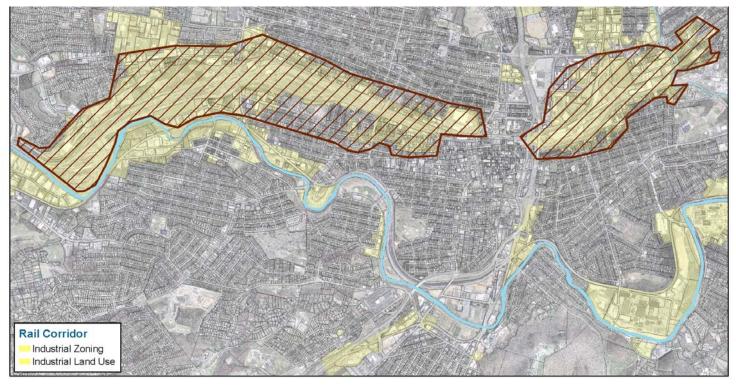
There is potential for redevelopment of currently vacant industrial property in the western portion of the Hurt Park neighborhood and along Aerial Way Drive. Based on future land use mapping and surrounding land use, these areas should be reused for other industrial purposes.

There is an opportunity to create an additional buffer of green space along the Roanoke River in the western portions of the Norwich and Hurt Park neighborhoods by converting currently vacant industrial space along the flood plain into a vegetated buffer and greenway. This area is lower priority than the portion of the neighborhood located in the central river corridor in that it does not provide direct access to residential area. However, the additional open space could still be important in the future to advance the Roanoke River greenway project and to develop buffers along the river to protect water quality.

### **Rail Corridor**

The Rail Corridor encompasses several areas along the east/west mainlines, classification yard and mechanical facilities of the Norfolk Southern Railway Company within the City. These areas adjacent to the Norfolk Southern operations have historically supported small industry with rail access, a few large industries and other scattered commercial and industrial operations transitioning into the surrounding residential neighborhoods. The rail corridor is broken into three subcorridors as follows:

- Shenandoah Avenue Corridor extending from the 2<sup>nd</sup> Street (Coca-Cola® bottling plant) west to Peters Creek Road.
- West End Corridor extending from downtown through the Hurt Park neighborhood to the western terminus of Patterson Avenue.
- Campbell Avenue Hollins Road Corridor starting at the I-581 overpass over Campbell and heading east to the City limit along Lick Run and Tinker Creek.



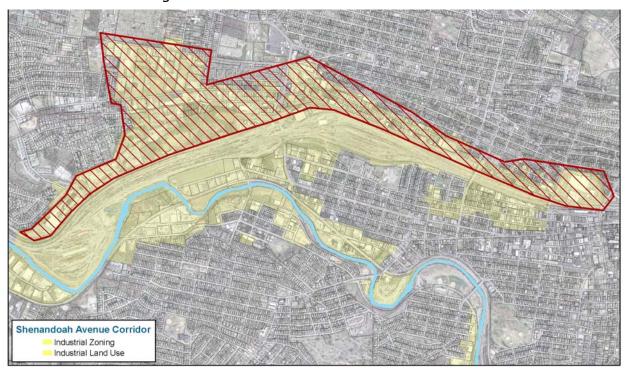
### **Shenandoah Avenue Corridor**

### **Corridor Description**



The Shenandoah Avenue corridor encompasses most of the area along the north and south sides of Shenandoah Avenue, Centre Avenue, etc., from 2nd Street to Peters Creek Road. The corridor includes a mixture of active businesses on Shenandoah Avenue along the Norfolk Southern rail yard and vacant/abandoned property transitioning into residential neighborhoods. The corridor is anchored by the Coca Cola bottling facility at the eastern end and Steel Dynamics to the west. Active businesses between these anchors include contractor shops, building supply distributors, scrap yards, and other small industries.

This industrial corridor is a viable part of the City's tax base with a number of successful establishments in operation. However, there are a number of underused and vacant properties in the corridor (443 of 946 parcels or 46%). Several of these underused industrial sites abut residential neighborhoods.





### **Neighborhood Plan Policies**

The corridor stretches from the Gilmer neighborhood in the east through Loudon-Melrose and into the Peters Creek South area to the west.

The corridor in the Gilmer neighborhood is characterized by small properties that are generally well utilized along Shenandoah Avenue but with many vacant/abandoned properties to the north transitioning into the residential portion of the neighborhood. The Neighborhood Plan encourages the redevelopment of these properties to complement the future goals of the neighborhood.

The Loudon/Melrose/Shenandoah West Neighborhood Plan includes similar policies as follows:

- Encourage infill development of vacant industrial parcels in the LM and HM districts.
- Minimize the impact of industrial uses on adjoining residential areas.
- Encourage the development of commercial establishments that are compatible with the neighborhood.
- Encourage out-parcel development of the IPUD site at 24th Street and Melrose Avenue.



### Development Opportunities

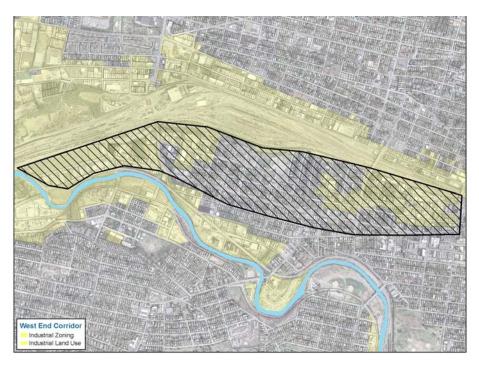
The proximity of this corridor to the railroad and its industrial activity makes long-term industrial use of this area appropriate. There are opportunities for infill and better utilization of property in the corridor.

Special consideration is necessary where industrial uses directly abut residential property. In many areas there is little or no buffering with vacant industrial property adjacent to residential homes. Further evaluation of these transition areas is appropriate and is consistent with the neighborhood plans.

### **West End Corridor**

The corridor contains two generally discrete areas of industrial development. The eastern most zone extends west from downtown through the West End and into the Hurt Park neighborhoods, generally along Salem and Norfolk Avenues. Establishments between 5<sup>th</sup> Street and 13<sup>th</sup> Street vary in size; some of them are small and fit into an urban development pattern, while others are situated across entire blocks. Many properties are used for outdoor storage and industrial property directly abuts residential development.

The industrial development at the western end of the area begins in the Hurt Park neighborhood at 19<sup>th</sup> Street and runs west along Patterson Avenue to its western terminus. Industry fits into the character of Norfolk Southern's large Shaffer's Crossing rail yard and mechanical facility. The western end of Patterson Avenue is characterized by small parcels to Bridge Street with larger lots extending west along Patterson Avenue and includes two closed landfills. However, there is limited transition from industrial to residential uses in Hurt Park in the vicinity of 19<sup>th</sup> Street and Patterson Avenue.



Sixty-five percent (65%) of the properties in this corridor are vacant or underutilized.

### **Neighborhood Plan Policies**

This corridor includes property in the West End and Hurt Park neighborhoods covered by the Hurt Park - Mountain View - West End Neighborhood Plan.

 Consider allocating funds to purchase and cleanup brownfield parcels when the area is selected as a CDBG target area.

- Encourage infill development of vacant parcels in the industrial zoning districts.
- Industrial uses should have as minimal impact as possible on adjoining residential areas in terms of visibility, noise and air quality. Consider planting trees and/or establishing green space to buffer industrial uses from residential areas.
- Commercial establishments should be compatible with the neighborhood.

### **Opportunities for Reuse**

Opportunities for industrial or residential infill exist in the corridor based on location. Industrial zoning continues to be appropriate along Norfolk Avenue adjacent to the Norfolk Southern rail yard and at the far west end of Salem Avenue near Boulevard and adjacent to the rail yard.

Opportunities for the westward expansion of the downtown district exist with development in the vicinity of the Jefferson Center and with the new Salem Avenue Automotive Historic District. Historic tax credits are available in this area and the first application for rezoning from an industrial to a residential use in this corridor has already been approved. Scattered industrial properties in the West End and Hurt Park neighborhoods offer opportunities for reuse for residential and commercial development to create transitions from downtown to the 13th Street village center and from the industrial corridor along the railroad into residential areas to the south.

Industrial property to the west of Boulevard is isolated from residential uses and underused properties should be infilled with new industrial operations.



### **Campbell Avenue - Hollins Road Corridor**

### **Corridor Description**

The Campbell Avenue - Hollins Road corridor is centered on the Norfolk Southern East End Shops, a railroad and locomotive shop facility that has been in operation since the 1880s. Many of the businesses along the south side of Campbell are characteristic of the 1930s and 1940s style architecture while newer construction serves as infill. This was perhaps the most industrial area in the City. Adjacent to the locomotive shops to the east was the Virginia Bridge and Iron Company (the waste transfer station currently occupies this site) with the Roanoke Gas and Water Company gas works to the west. Railroad tracks can be found across the area and under close observation, it can be noticed that several companies requiring rail access once thrived south of Campbell Avenue.

Current uses in the area include petroleum storage, warehousing, automobile repair shops, contractor yards, truck and large equipment storage, and outside storage. The largest and

only redevelopment project to take place in the area was the construction of the Roanoke Valley Waste Transfer Station in the late 1980s and early 1990s.



Sixty percent (60%) of the corridor is vacant or underutilized. The corridor contains 733 individual lots with 433 that are indicated as vacant. Many of the lots identified as vacant serve as parking for other properties but there are parcels that could support moderate development and several old structures that could be adaptively reused for commercial and/or light industrial uses.

### **Neighborhood Plan Policies**

The Campbell Avenue - Hollins Road Corridor is located primarily in the Belmont - Fallon neighborhood and extends into the southeastern corner of the Hollins - Wildwood Neighborhood



Policies from the Belmont-Fallon Neighborhood Plan include the following:

- Redevelop industrial area by initiating programs to encourage assembly and combination of small parcels in the industrial district to provide suitable industrial properties and assist businesses with expansion/ relocation/improvements through incentives.
- Provide economic incentives such as enterprise zones and technology zones only in recognized commercial/industrial districts.
- Industrial development and redevelopment will be promoted in the industrial district along Campbell Avenue.

The Hollins-Wildwood plan includes a policy stating that additional property should not be rezoned for commercial or industrial uses until existing property is well used.

### **Opportunities for Development**



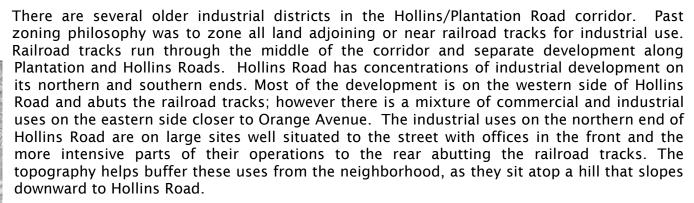
Opportunities for a variety of uses exist in the corridor. Property near Williamson Road offers opportunity for mixed uses consistent with the downtown district. Small industrial properties along Campbell Avenue offer opportunity for continued small-scale industrial and commercial use. Underused property is located to the east of Tinker Creek where development is likely limited by topography. This area may be suited to future infill and accommodation of the Tinker Creek greenway corridor. There are a number of industrial operations along Hollins Road that area currently well used. This area should remain industrial in the future based on its proximity to the railroad facilities.

Other City projects that may assist with redevelopment of under used property in the area are as follows:

- Construction of an improved connector street between 13th Street to the south of the railroad and Hollins Road to the north will provide better transportation access.
- The possible extension of the Rail Walk into this corridor could create a defined pedestrian connection to downtown and allow for future recreational uses.

# **Hollins/Plantation Road Corridor**

## **Corridor Description**



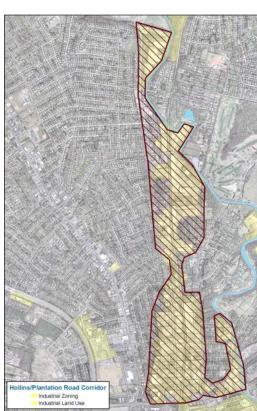
Most of the uses on the southern end are on smaller lots and are situated closer to the street. The topography is flatter on this end of Hollins Road and industrial properties are closer to residences. Eleventh Street features a number of industrial uses from Orange Avenue to its dead-end near Missouri Avenue. Most of these operations are warehouse and trucking establishments. Part of the Hollins neighborhood is sandwiched between the industrial uses on 11th Street and Hollins Road. There are 859 individual parcels located within this corridor with 370 that are indicated as vacant (43% of the parcels).

Tinker Creek, prone to flooding during heavy rains, flows along the eastern boundary of the corridor.

## **Neighborhood Plan Policies**

The Hollins-Wildwood and Williamson Road Neighborhood Plans encourage the following actions that can be applied to the corridor:

1. Avoid further expansion of commercial districts to encourage quality development and more efficient use of developing districts.



- 2. Evaluate underused industrially zoned land and demarcate or rezone to maximize its potential.
- 3. Industrial development and redevelopment will be actively promoted in the industrial district along Plantation Road with consideration to declaring the area between Plantation and Hollins Roads a redevelopment area.

## **Opportunities for Redevelopment**

With a high proportion of vacant or underutilized property, opportunities for redevelopment are present within this corridor. Businesses needing rail access could benefit from locating in this corridor. Based on policy from the neighborhood plan, redevelopment in the corridor will focus on maximizing industrial potential in areas currently zoned for such use.

However, there are residential properties immediately adjacent to and scattered among industrial properties as well as the village center at Hollins Road and Liberty Road and commercial areas along Plantation Road. These residential and commercial areas will need to be considered as part of any redevelopment effort. Effective utilization (along with proper buffering) of industrial property can provide higher demand for services in nearby commercial areas which will strengthen the village centers, benefiting the surrounding neighborhoods.

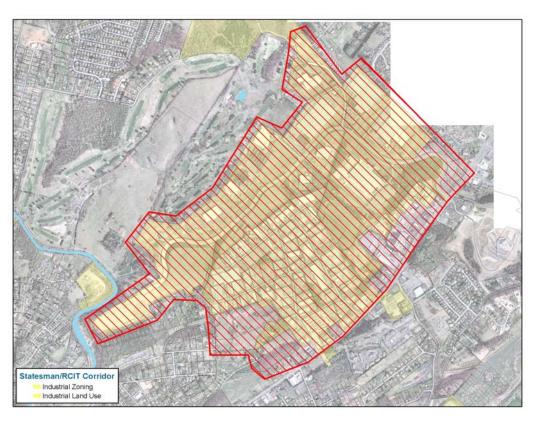
No specific changes to land use policy are planned at this time making the corridor a moderate priority where redevelopment projects will be supported based on demand/need.



## Statesman / RCIT

## **Corridor Description**

The Statesman Industrial Park and Roanoke Centre for Industry and Technology are located adjacent to one another, off Orange Avenue near the eastern edge of the City. Statesman Industrial Park is home to over 50 business establishments, most of which are warehouse and heavy manufacturing uses. It is accessed via Granby Street and Siebel Drive off of Orange Avenue and is almost self-contained. The parcels in Statesman are relatively small and don't have much open green space. In addition, the park's two main entrance roads and lack of signage make it indistinguishable from other uses on Orange Avenue.



Overall, Statesman Industrial Park is a well utilized industrial complex that contributes to the City's tax base while having only a minimal impact on its surroundings. Statesman Industrial Park is about eighty five percent filled with viable businesses. There are some existing parcels of vacant land that could be developed and used for industrial purposes. Potential exists to connect Statesman to the Roanoke Centre for Industry and Technology located along its eastern and northern borders.

Created in 1983, the Roanoke Centre for Industry and Technology (RCIT) is a 440 acre, City-developed industrial complex. A number of restrictive covenants are in effect in the park, which govern how property is developed. The park is characterized by large lots, and large industrial buildings with significant open space between operations. Recognizing further economic potential of the site, City Council authorized the purchase of an additional 140 acres in 1990. At present, nine sites in the park are occupied by 12 companies, leaving approximately 130 acres available for future use. Four new sites have been graded and are ready for development.

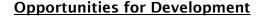


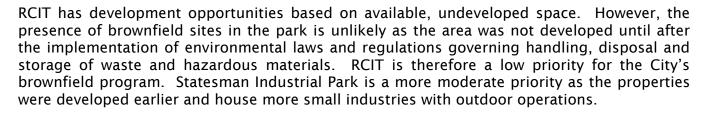
Since its inception, there have been eight expansions within RCIT. Over \$122 million has been invested by private companies who currently employ over 4,350 people.

## Neighborhood Plan Policies

The Hollins-Wildwood Neighborhood Plan encourages the following actions in the neighborhood:

- 1. Avoid further expansion of commercial districts to encourage quality development and more efficient use of developing districts.
- 2. Evaluate underused industrially zoned land and demarcate or rezone to maximize its potential.





Based on neighborhood plan policy, development in these areas will continue to focus on industrial or commercial uses. Enterprise Zones are present in the area and offer various incentives for development in the corridor

Specific priorities in the corridor could include reuse options that improve the street presence of the Statesman Industrial Park along Orange Avenue and development of parcels between the Statesman and RCIT areas that likely contain construction debris from the original development of the Statesman area.



## Williamson Road Corridor

## **Corridor Description**

The Williamson Road corridor, extending from Orange Avenue north to the City limit, presents a mixture of primarily commercial uses on predominantly small lots. While the corridor does not have a history as an industrial corridor it does contain a number of under used properties that could be considered brownfields based on potential for environmental issues. These properties include former gas stations, automotive shops and dry cleaners as well as some industrial property near Orange Avenue.

Williamson Road serves as the main street for the northeastern portion of the City and is characterized by variable right-of-way width and streetscape patterns. There are a number of underutilized commercial areas along the corridor.



## **Neighborhood Plan Policies**

The neighborhood plan contains a number of broad policies to improve the function and character of the corridor. The Williamson Road corridor is identified primarily for small and medium scale commercial uses that complement village centers for lengths of the corridor. Here commercial uses serve surrounding neighborhoods, but also have some uses that draw from regional markets. This pattern will encourage vertical and lateral mixing of business types in small scale buildings 2-4 stories in height. Typical uses are retail, services, offices, and restaurants. Smaller scales and the nature of uses make these areas ideal for mixing in residential uses, especially on upper floors. Such areas should be designated with neighborhood commercial, office-residential, and general commercial zoning districts as appropriate for the context, scale, and existing land use pattern.

General commercial zoning will be limited within the area to locations where existing land uses and scale of development reflect the purpose of the zoning districts. In areas between identified nodes/clusters, zoning should be changed to less intense uses such as light commercial or residential. Future expansions of general commercial zoning will be discouraged except where they reinforce identified nodes or strategic initiatives.

Streets and public spaces must be well-designed both functionally and aesthetically. Parks and public squares will be established and preserved as part of the urban fabric. A public square should be included as an amenity of each village center.

Parking is recognized as a necessity, but must not be allowed to dominate any development. Parking lots should be located to the rear and/or side of buildings. The number of spaces provided should be limited to that which is needed for typical demands (rather than peaks) and consider the availability of on-street parking spaces. Street-side and shared parking arrangements are strongly encouraged.

Economic development policies to support these goals includes the following:

- Establish a network of commercial nodes along the Williamson Road corridor (Breckenridge, Oakland School, Liberty Road). Areas between these centers will be encouraged to transition to lower intensity commercial uses, high density residential uses, or a mixture thereof.
- Encourage clustering of related uses to create special destinations (i.e., auto sales and service, restaurants, ethnic shops)
- The supply of commercial zoning along Williamson Road will be limited to encourage more efficient use of Roanoke's scarce land resources. In conjunction, Roanoke will encourage increased lot coverage ratios, multi-story buildings, and reduced setback requirements. Future expansion of commercial districts will be discouraged.

## **Development Opportunities**

The number of industrial brownfield sites in the corridor is limited, but there may be opportunities for the brownfield program to assist with redevelopment of commercial properties that may have some environmental issues.

Where applicable, the brownfield program will be used to support redevelopment that supports the goals and objectives of improving the character and function of the corridor.

## **Scattered Properties**

Scattered properties exist throughout the City that could be classified as brownfields. These properties could be in the form of isolated industrial or commercial operations or commercial strips with old gas stations, dry cleaners or automotive repair shops.

Under used properties outside the identified corridors still represent opportunities for the City. Many of these sites are located in residential neighborhoods where reuse could remove a potential source of blight and improve the quality of the neighborhood by offering new opportunities for residential or neighborhood appropriate commercial activity. Likewise, reuse of vacant or underutilized space in commercial strips can make these areas more vibrant and viable for other business or for alternative land uses.

As such, scattered properties are a priority for the city but would need to be evaluated on a case-by-case basis based on the proposed use and neighborhood needs.

## **POLICY ISSUES**

The City recognizes the need for the public sector to guide, support and facilitate responsible reuse of brownfield sites while encouraging private sector investment to perform much of the actual development work. This section of the brownfields plan identifies policy issues, specific policies and actions, which will further the initiatives set forth in the comprehensive plan. The goal of these policies is to encourage the reuse of contaminated sites, which will in turn increase economic development potential, ease environmental concerns, protect natural resources and boost property values.

## Policy areas reviewed include:

- 1. Development Process The City of Roanoke should review development processes to encourage investment in brownfield areas that is consistent with smart growth principles. The City should review processes to assist with land assembly and encouraging quality redevelopment consistent with the comprehensive plan.
- 2. Opportunity Identification Opportunities present themselves in varying forms, from the site itself to potential partners. To successfully create and implement a brownfields project the City needs to conduct a citywide inventory for brownfields opportunities and develop partnerships.
- 3. Incentives and Funding for Brownfield Reuse Desired redevelopment of traditionally risky sites will often require City assistance in the form of financial and procedural incentives. The City of Roanoke currently offers incentives to help spur development but should consider expanding the incentives available. The City should consider identifying and securing funding for infrastructure, acquisition, demolition, and redevelopment.
- 4. Long Term Stewardship tracking environmental conditions of redeveloped property ensures that public health and environmental quality will be protected. The City needs to incorporate policy actions that will ensure long-term stewardship.

The City should develop policies and actions that will encourage quality redevelopment in brownfield areas. Below are possibilities for policy changes that would guide development in a direction consistent with the comprehensive plan.

## **Development Process**

## **Policy Issues**

## Zoning

## Zoning Solutions: Richmond, VA & Austin, TX

Richmond's brownfields project "Rockett's Landing" required amendments and the creation of new zoning categories to accommodate the density and variety of uses indicated in the plan. Austin created "Desired Development Zones" to encourage development within specific areas, in turn developers received fee waivers and other incentives.

In areas with potential brownfields sites, current zoning may not allow for changes in the existing land use or offer enough flexibility for effective redevelopment. Often times brownfields are found in areas currently zoned industrial; however, the highest and best use when redeveloped may be something other than industrial (e.g., recreation/open space, mixed-use, commercial, residential). An appropriate redevelopment plan should not be rejected due to current zoning.

Zoning changes may include City-initiated rezonings based on area or corridor plans (see below) or development of a base or special use brownfield district where redevelopment is encouraged. The City would need to make these zones attractive through links to incentives and/or mixtures of uses to encourage development in difficult to develop areas.

#### Corridor Plans

Corridor plans should be created for areas where substantial land use changes may be necessary for redevelopment or desired based on community input. These documents would further develop ideas for desired redevelopment while incorporating stakeholder input and guide developers by identifying specific development issues and proposed policies, priorities and actions to address those issues.

## Land Assembly

Vacant properties often remain vacant due to problems with liens and titles. Small and marginal parcels may also remain vacant due to their size and/or cost as related to market value. The City or partner organizations such as the Roanoke Redevelopment and Housing Authority or Economic Development Authority could create a land bank to acquire, hold,

manage, and disperse property with clear title. Two methods of land banking include: (a) purchasing vacant or underutilized land piecemeal until a large enough site exists to sell, grant or develop; and (b) purchasing properties currently stalling development and sell, grant, or develop. A parallel to land banking includes evaluating City policy with regard to disposition of property with significant tax liability. Rather than requesting that such properties be sold through a tax sale to recover costs, the City could consider requesting that the court transfer title to the City.

### Formal Redevelopment Areas

Based on the presence of significant blighted condition in a corridor or portion of a corridor, state law allows the establishment of a formal redevelopment area through a Housing Authority. While it is the City's intention to work in partnership as a facilitator of redevelopment projects, in some instances it may be appropriate to work with the Roanoke Redevelopment and Housing Authority to establish a formal redevelopment area where wide-scale blight is a concern that must be addressed.

## **Permitting Process**

Brownfields redevelopment is often viewed as overly complicated. Expedited permitting, reduced fees or special assistance with site development, building and environmental issues may ease this concern. By providing a single point of contact for developers interested in the brownfields program, potential developers will find the process less daunting and easier to navigate.

Other localities such as Phoenix, Arizona, have created a single source for information regarding permitting, incentives, financing, and negotiation.

#### **Policies**

- Ensure zoning designations are compatible with brownfield redevelopment plans.
- Provide specific plans where land use shifts area desired.

# Single Point of Contact: Phoenix, AZ

The city of Phoenix has established a central point of contact who assumes the role of "shepherding the project through local, county and state approval processes." Developers agree this is one of the most important things a community can do to encourage brownfields redevelopment.

- Establish means to assemble strategic properties to sell, grant or develop.
- Consider an expedited permitting and review process to facilitate development of brownfield sites.
- City to serve as a clearinghouse, matching prospective developers with property owners, coordinating incentives, and helping potential buyers navigate the regulatory requirements.

#### Actions

## Zoning/Permitting/Project Clearinghouse

- Review current zoning districts and research zoning options to facilitate reuse of brownfield sites.
- Consider overlay district to address actions and activities specific to brownfield redevelopment.
- Develop a base or special purpose zoning district for brownfield corridors that allow for an appropriate mixture of uses and use patterns.
- Evaluate expedited permitting process with the Development Assistance Center and other code administration staff.
- Create single point of contact for all brownfields projects.
- Coordinate with Department of Environmental Quality on environmental and site development issues.
- Work with developer to ensure engineering controls, zoning and land use restrictions are compatible.

## Detailed corridor plans

- Identify areas where specific corridor plans are needed.
- Work with community stakeholders to create corridor redevelopment strategies.
- Work with relevant City departments to draft appropriate development and design concepts and discuss roles in implementing plans
- Research other plans/policies related to areas
- Develop recommendations and strategies for the area

## Land Assembly

- Set aside funding for acquisition of strategic properties
- Evaluate process for handling tax delinquent properties in brownfield areas.
- Consider acquisition of key properties with intention to
  - o Sell to developers with appropriate and desired redevelopment plans
  - o Act as developer
  - o Retain as public open space.

## **Opportunity Identification**

#### Issues

## Inventory

The first step to brownfields redevelopment is identification. Developers and the City need to know where potential brownfields properties are located and conduct preliminary research to determine environmental issues. Owners also need to be informed about program benefits and opportunities to sell or redevelop their properties. An inventory can help focus redevelopment efforts and provide direction for developers.

#### Public Outreach

For a successful program, the public must be informed, involved and educated about brownfields challenges and opportunities. There is a need to get the message out to all stakeholders; citizens, neighborhood leaders, business leaders, property owners and developers. Equally, the City must be educated about community issues. In order to develop the most appropriate solution, the City must know and understand concerns facing the community. The City is dependent on public input and participation to make the Brownfields Program a success.

## Public/Private Partnerships

Partnerships are key for the implementation of any plan; and the brownfields plan is no exception. The City will foster relationships with all stakeholders from residents and business owners to private and non-profit developers. One benefit of partnerships is

# Successful Partnerships: Bridgeport, CT

The Park City Brownfields Redevelopment Partnership is a consortium of nonprofit agencies, community groups, and government agencies, originally established for a single brownfields project. The umbrella group continues to work on brownfields projects throughout the City. This partnership has leveraged funds from HUD, the National Park Service, state agencies and the city.

increased funding. Grants from the EPA alone are not enough for brownfields redevelopment. Communities must leverage resources and support through partnering. The City can act as a catalyst; however, the private sector is one of the most important long-term participants. The City does not have sufficient resources to redevelop brownfields without significant participation and investment by the private sector, both from individual property owners, developers and entrepreneurs.

#### **Policies:**

- Use a brownfields inventory to determine areas of opportunity. Create a citywide inventory of potential brownfield corridors. For each target area create a detailed inventory of specific sites, past uses, and possible contaminants.
- Develop and implement public outreach activities.
- Develop and maintain Public/Private partnerships.
- Work closely with the Economic Development Authority and Roanoke Redevelopment and Housing Authority

#### Actions:

- Compile a brownfields inventory
  - o Analyze and compile available environmental data for target areas
  - Study historic uses, past environmental issues, zoning, ownership, topography and other site data to create a useful inventory for City staff and developers. Make the data available digitally for potential developers to use in evaluating opportunities.
  - Market brownfield opportunities online, through newsletters, through direct contact with potential developers and with the Virginia Economic Development Partnership.
- Outreach and Project Facilitation
  - o Develop a marketing approach/plan for the City's brownfield program.

- Meet periodically with stakeholders to discuss the brownfield plan, specific projects, and gain support/input.
- o Hold public meetings, redevelopment forums, charrettes, and focus groups.
- Create and maintain a website for public use that includes general information on brownfields, funding received, the proposed projects, and an online form for those interested in having their property evaluated for the program.
- O Develop and distribute semi-annual newsletter to stakeholders and also make available on the website.
- O Define the role of the brownfields citizen advisory committee as it works with staff to implement the brownfield plan.
- Work with local media to inform the public of the brownfields program (print, web, TV, radio).

## • Develop and maintain partnerships

- Continue seeking partnerships through individual meetings, direct mailings, redevelopment forums, professional organizations, conferences, and other avenues
- Create a database of individuals and groups to match with potential development opportunities
- Meet with developers, property owners, non-profit agencies, neighborhood representatives and other community development agencies.
- Role of Economic Development Authority (EDA) and Roanoke Redevelopment and Housing Authority (RRHA)
  - o EDA will administer the EPA Revolving Loan Fund grant.
  - Develop partnerships with the RRHA and EDA to assist with acquisition of properties for redevelopment and facilitating redevelopment, where appropriate.

## **Incentives and Funding for Brownfields Reuse**

#### Issues:

## Assessments and Clean-up can be Cost-Prohibitive

The cost for upfront assessments and cleanup can be cost prohibitive for smaller sites or marginal locations. Funding sources for these activities need to be secured to facilitate project development. Currently the City has EPA grant funding for both assessment and clean-up (revolving loan fund). Other funding sources for assessment and clean up need to be identified beyond the current grants for a long-term sustainable brownfield program.

## Difficulty Securing Financing

In addition to the cost of site preparation, securing financing for redevelopment can also be difficult. The City should identify all internal resources available, however, City and EPA funding is not sufficient and other sources must be identified and secured. Sources to seek funding include state and federal agencies, private foundations, local and national lenders, and private investors.

#### Infrastructure

While brownfields are often located in areas where infrastructure is in place, some facilities may need updating. Also, if the end use differs from the current or former use, additional infrastructure such as sidewalks, street lights and/or increased water/sewer may be necessary. Funding for infrastructure must be identified before development can proceed.

#### **Need for Incentives**

Due to the cost and risk involved in development, and the perception of increased cost and risk associated with brownfields, it will be necessary to market City incentives and research other incentive options. Incentives can offset the costs associated with "upside down" properties and provide gap financing for activities such as demolition, infrastructure and site preparation. In addition, procedural incentives can expedite projects.

There are several options for incentives that can be researched further but may require changes in City Code and or/state enabling legislation to implement. These incentives to be further investigated include:

#### Taxes as a Tool

The structure of tax programs can be an important redevelopment tool. For example:

Two tier tax - emphasis on land value will discourage property owners from mothballing property and encourage new development.

<u>Tax abatement</u> - Reducing for a predetermined period can offset initial investment costs by a developer

<u>Tax increment financing</u> – uses future tax revenue for an area to finance infrastructure improvements

<u>Federal Brownfield Tax</u> <u>Incentive</u> – allows eligible assessment and cleanup costs to be fully deducted in the year they occur.

- Potential waiver or reduction of fees Many localities waive development fees (such as zoning, permitting, site plan review, etc.) for development of a certain type and/or within a specific target area. In addition to saving the developer money, waiving or reducing fees indicates City support of brownfields redevelopment, which may encourage increased redevelopment at brownfield sites.
- Tax Abatement The City of Roanoke currently has a Rehab Tax Abatement Program; however, some localities grant an additional tax credit or extend the time period for brownfield properties.
- Two-Tier Tax A tax system that places more emphasis on the value of property than the value of improvements will encourage owners to develop underused properties or sell to a party interested in development.
- Infrastructure improvements in several localities the local government has shown support of brownfields redevelopment through capital improvements such as sidewalks, streets, streetscaping, lighting, etc.
- Individualized Permitting Assistance City staff is currently organized to help with comprehensive plan approvals, inspections, etc., in a timely manner as a "one stop shop." Developers appreciate this approach as it saves time, which saves money. Investigate any modifications or additions to current process as brownfield program evolves.
- Incentive zoning the Commonwealth of Virginia allows for the use of bonuses in the form of increased project density or other benefits to a developer in return for the developer providing certain features or amenities desired by the locality within the development.
- Tax Increment Financing provides for private sector funding of public infrastructure investments with reimbursement through future incremental tax revenues. The project must be successful to generate tax revenue needed to repay the developer.
- Transfer of Development Rights localities may provide for the transfer of development rights which essentially reduces development in one area and intensifies development in another area. These transfers allow for the

preservation of open spaces, while giving urban areas a chance to expand and experience continued growth.

These incentives could be linked to a designated "Brownfield Zone" or a specific zoning district.

## **Limited Funding for Projects**

With limited funding it may become necessary to develop a method of ranking potential projects. All projects funded by the City must support the goals of the Comprehensive Plan as well as meet specific eligibility guidelines; however additional ranking criteria should be developed to help the City identify those projects that are (a) most feasible, and (b) will most benefit the community.

#### **Policies:**

- Continue to apply for assessment and clean-up grants
- Research other funding availability and apply for funding when appropriate
- Leverage resources from relevant projects in the current CIP (e.g. Parks & Recreation, Curb, Gutter & Sidewalk, and Storm Drainage)
- Market City incentives to encourage redevelopment, research other incentive options
- Develop criteria for ranking projects

#### **Actions:**

- Assessment and Cleanup Funding
  - Continue to submit application for EPA Brownfield Assessment, Cleanup and/or Revolving Loan Fund grants.
  - o Lobby for funding of Virginia's Brownfield Remediation Loan Program

- Research funding opportunities
  - o Contact DEQ, HUD, and EDA regarding available funding
  - Prepare budget supplemental requests for City general funds to be used for brownfields
  - Work with partners both internal and external to leverage resources
  - Create a database of possible funding sources available to the City, private sector and non-profits
  - Offer technical support to non-profits applying for grants
  - Research and determine feasibility of Tax District similar to those in Downtown and the Williamson Road Business Area
- Leverage resources identified within current CIP
  - o Identify projects currently funded that may impact brownfields program
  - Coordinate with recipients of CIP funds to identify overlapping goals (i.e. flood reduction project, greenways and trails, and the Parks and Recreation master plan)
- Local Incentives -
  - Further research feasibility and appropriateness of incentives identified under policy issues and implement those most effective.
  - o Review current incentives offered by the City and increase marketing efforts in conjunction with brownfields initiatives. These include
    - Partial Real Estate Tax Exemption on Rehabilitated Buildings
    - Partial Real Estate Tax Exemption in Conservation/Rehab Districts
    - Enterprise Zone Incentives
    - Technology Zone Incentives
    - Capital Investment Grant
    - Future entrepreneurial zone
  - Develop a "Brownfields Zone" where the City encourages development and offers incentives that could include special assistance, expedited reviews, reduced or waived fees for zoning, subdivision, site plans, etc.
  - Amend Enterprise Zone boundaries to incorporated appropriate brownfield areas.
  - Publicize other federal and state incentives such as the federal Brownfields Tax Incentive program.

- Ranking Projects
  - Research criteria used by other localities
  - Develop a list of both threshold and ranking criteria to be used as part of the application

## Long-term Stewardship

#### Issues:

## Ensuring Public and Environmental Health

Long-term stewardship is the process used to make sure that environmental cleanups, engineering controls and/or institutional controls that are proposed as part of a redevelopment project are actually implemented and the site conditions remain protective of human health and the environment over time (are properly maintained).

Once a site reaches a regulatory closure status there may not be any permanent record assigned with the property that indicates what level of cleanup occurred. A system of recording and maintaining this information should be developed and implemented to insure that long term site use is consistent with the level of cleanup that occurred on the property. The ultimate property owner must be responsible for how the site is used and for any related monitoring activities (collecting, analyzing, and reporting data on the continuing performance and integrity of the engineered structures and remedial processes) to minimize the risk to the public and the environment. However, a mechanism to track basic information as part of the development review process would serve as a check.

## Follow-up on Deed Restrictions

Engineering and institutional controls are recorded as part of the deed to the property when a project is completed through the VRP. This information is not provided to the City when a site plan is submitted for review - there is no check to make sure restrictions on a deed are followed during development. This could be a particular issue when a redevelopment site is redeveloped again at some point in the future.

# **Policy:**

- Track and make available environmental conditions for redeveloped properties
- Ensure environmental deed restrictions are known and followed during redevelopment

## **Actions:**

- Ensuring Public and Environmental Health
  - Work with authorities (DEQ and EPA) to share site information and ensure institutional controls, site monitoring and inspection are being performed
  - Use GIS and/or Permits Plus to track environmental conditions/restrictions
  - o Consider requiring submittal of Phase I ESA (AAI) and Phase II ESA, when applicable, for any redevelopment project
- Deed Restrictions
  - Research methods of attaining information on environmental conditions/restrictions for brownfields property
  - Maintain records of land use restrictions and required engineering controls
  - Consider having all deed restrictions related to environmental issues disclosed on site plans

## CITY ROLE - CLEARINGHOUSE AND FACILITATOR

The primary role for the City in the redevelopment process is to facilitate redevelopment that meets the goal of the Comprehensive Plan and supporting documents. This role includes developing partnerships with property owners, prospective developers, and community stakeholders as well as working with other City departments and government agencies to leverage projects that support redevelopment efforts.

## **Identify and Support Opportunities**

The City will continue outreach efforts and compile background information on potential brownfield areas to identify prospective development opportunities and to match and market those opportunities to prospective developers.

The City will also evaluate land use and administrative policies that encourage reuse of brownfield sites and makes such reuse competitive with development of greenfield sites.

## Work with Owner and Developer

The City will work with a property owner and /or developer to identify specific programs to facilitate projects that conform to long-term development goals. This assistance may include:

- Concept development to meet goals of the Comprehensive Plan.
- Due diligence/environmental investigations.
- Coordination with DEQ for comfort letters, regulatory support.
- Coordination of cleanup plans (engineering controls) for consistency with site development (zoning) requirements.
- Developing land use restrictions that are consistent with current zoning and future land uses to offer maximum flexibility in site use.

## **Retain Records of Environmental Conditions**

Summary information of environmental conditions on the property, particularly the general nature of environmental impacts and any engineering and land use controls will be retained should the use of the property change or should the site be redeveloped in the future.

# **IMPLEMENTATION ACTIONS**

Activity	Responsible Organization	Timeline
Development Process		
Develop corridor plans for specific areas	Planning Division	Mountain View-Norwich - early 2008. As needed when land use change is recommended from public input, updated neighborhood plan, etc.
Review zoning districts and implement feasible options to support redevelopment	Planning Division	1 year for evaluation with ongoing implementation, as appropriate
City initiated rezonings to support corridor plans	Planning Division	To be considered as corridor plans are developed
Establish a "brownfield zone" with reduced fees or other incentives	Planning Division Economic Development	1 year to evaluate feasibility with implementation, as appropriate
Land Assembly	Economic Development, Economic Development Authority, Roanoke Redevelopment and Housing Authority Billings and Collections	As appropriate based on timing, location and strategic value
Establish formal redevelopment Areas	Roanoke Redevelopment and Housing Authority	Only as needed, based on public demand
Review permitting process to facilitate brownfield redevelopment	Planning Division	1 year for evaluation with ongoing implementation
Opportunity Identification		
Create an inventory of brownfield sites to market for redevelopment	Planning Division, Environmental Management Economic Development	6 months for initial target areas

Activity	Responsible Organization	Timeline
Develop of brownfield marketing strategy	Economic Development Planning Division	6 months
Continue public outreach to neighborhoods, property owners and development community	Planning Division, Environmental Management Economic Development	Ongoing
Create public-private partnerships to facilitate projects	Planning Division, Environmental Management Economic Development	Ongoing
Incentive and Funding		
Apply for EPA brownfield grants to support projects	Planning Division, Environmental Management Economic Development	Annual, as applicable
Research other state, federal or private foundation funding and apply	Planning Division, Environmental Management Economic Development	Ongoing, with applications submitted based on need and submittal time lines
Research and evaluate other funding/incentive strategies	Planning Division, Environmental Management Economic Development	1 year for initial review and ongoing monitoring for options.
Leverage resources from other city projects	Planning Division	Ongoing
Market available incentives to prospective developers	Economic Development	Ongoing
Amend enterprise zone, etc. to incorporate brownfield areas	Economic Development Planning Division	Annual review
Long-term Stewardship		
Track environmental conditions on redeveloped property	Planning Division Environmental Management	1 year to develop processes

Activity	Responsible Organization	Timeline
Evaluate mechanisms to confirm the land use restrictions are followed	Planning Division Environmental Management	1 year to evaluate code mechanisms, resource requirements and development implications

APPENDIX A

**Detailed Corridor Maps** 

