

# City of Roanoke, Virginia

## Brownfield Rail Corridor Revitalization Plan



## REVITALIZATION PLAN

**October 22, 2012**





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## Executive Summary

The Roanoke Rail Corridor is the historic economic engine of the region. The history and legacy of the railroad and the industry it brought helped to create the surrounding neighborhoods, but also left a legacy of decline and environmental contamination.

Investigations into available records have, however, shown that environmental impacts are limited to mainly petroleum, asbestos, and paint. The City can leverage existing programs and tools to address these challenges, but must do so within the context of providing economic stimulus in order to create a new legacy of prosperity.

## Description of Project

### Current State

The Roanoke Rail Corridor straddles the Norfolk Southern rail sorting yard and is bordered by 5<sup>th</sup> Street on the east, 24<sup>th</sup> Street on the west and extends from Loudon Avenue in the north to Patterson Avenue in the south. The Corridor is a mix of development types, with industrial clustered near the rail yard itself and closer to downtown. However, residential, commercial and industrial uses have been permitted to intermingle throughout. The area is distressed economically with a considerable number of properties in poor condition.

### Future Vision

The City and local residents have expressed a desire for a neighborhood corridor which:

- Addresses the environmental legacies of the past;
- Is economically vibrant, and home to a variety of business types;
- Provides economic opportunities for local residents;
- Provides more appropriate transitions in land use between industrial and residential uses;
- Incorporates opportunities for permitting neighborhood uses, including neighborhood commercial and recreational uses;
- Provides transportation and utility infrastructure that supports these goals.

## Key Recommendations

### Critical Actions

The City's first steps in revitalizing the Rail Corridor must include:

- Develop a full brownfield inventory;
- Engage directly with the property owners representing vacant properties within the Rail Corridor ;
- Complete and disseminate marketing materials for vacant or underutilized properties within the Rail Corridor;
- Develop a neighborhood clean-up program;
- Develop a more comprehensive database of Rail Corridor properties ;
- Engage local businesses on skills required and outreach efforts.

It is recommended that these actions should take place within one year of this report. Further actions should include:

- Rezone key areas of the Rail Corridor – this will create specific transition areas between residential and industrial use.
- Develop a “skills catalog” – prepare a directory of skills held by the labor force in proximity to the Rail Corridor that will help to both identify future industrial targets and also enhance local and regional marketing efforts.

### **Ongoing Management**

The recommendations above require a means for coordinating, evaluating, and adapting efforts to meet changing requirements and altering circumstances. The plan will also benefit by incorporating lessons learned from experience along the way. The activities laid out in this plan should not be interpreted as rigid, but as flexible enough to meet the changing needs of the area. Thoughtful, considered change is to be encouraged as long as it is aligned to the plan’s overall goals.

Continual monitoring through reporting, site visits, interviews and testimony will help to ensure that the plan is implemented as effectively as possible. Success will take sustained commitment over time from the City and from community organizations and businesses willing to play their part.

## Introduction

The City of Roanoke's brownfield program is one component of the City's economic and rejuvenation vision for its core neighborhoods. The City intends the Rail Corridor Plan to identify brownfield sites and work with existing and proposed neighborhood planning efforts to suggest specific revitalization strategies and target industries that will benefit area residents and business owners. The Rail Corridor Plan area has been defined as extending from 5<sup>th</sup> Street to 24<sup>th</sup> Street to the east and west and from Loudon Avenue to Patterson Avenue to the north and south. Current research did not reveal an existing readily-available public database of brownfield sites in Roanoke from which to build upon.

The overall goal of the project is to provide a framework for revitalizing the corridor itself and to spur reuse where possible. Such initiatives have performed with great success in other communities, including Milwaukee, Chicago, and Philadelphia. Lessons learned from these projects have informed the current process. Further details on previous projects may be found in Appendix D

The goals of this project are to:

- Identify basic land use;
- Compile plans and build a GIS database of existing brownfield sites on appropriate background data;
- Reach out to residents and businesses through public meetings and/or charrettes to develop a baseline of goals, objectives and visions;
- Provide a detailed analysis of economic conditions and market demand for the corridor;
- Determine best uses based on current and expected market conditions;
- Examine feasibility of and recommend improvements that may be necessary to reuse the brownfield site, including policy changes and actions for the City of Roanoke;
- Develop strategies for transitioning uses to other specialties that are not proposed by City staff;
- Develop a specific set of implementation steps and resources for the City of Roanoke;
- Publish a final plan and fact sheets/other tools to use for plan implementation.

Over the period spanning from August 2011 to October 2012, a multi-disciplinary team worked with the City and local stakeholders to identify the current physical, socioeconomic, business, and environmental conditions within the Corridor and in the context of the City of Roanoke. Through data analysis, conversations and work sessions, the team has been able to develop the following plan to revitalize the Corridor and its neighborhoods in accordance with the goals above.

The consultant team included the following firms:



**CWS Consulting Group, LLC**

Project lead

Economic and community development

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**Sustainable Strategies 2050**  
Brownfield and environmental consulting



**Mattern & Craig**  
Engineering and infrastructure



**Resource Systems Group**  
Community planning and transportation



**Nexus Infrastructure**  
Financial tools

## Project Goals

Based on conversations, interviews and work sessions with the City, residential groups and businesses, the following key goals for revitalization of the Rail Corridor have been identified in addition to those stated at the inception of the project:

- Address environmental contamination and develop tools to facilitate remediation of sites.
- Create economic opportunity for Corridor residents – in particular, there is a desire to see more work opportunities for younger Corridor residents. This would be coupled with the training and support required for these residents to take advantage of such opportunities.
- Improve the built environment within the Corridor – this takes different meaning for different groups within the Corridor, but there is broad agreement on the need for improved aesthetics, more recreation, better building maintenance, unified design, and defined transitions between residential and industrial areas.
- Improve the community services and shopping available within the Corridor – grocery, banking, health care, and other basic services are currently lacking or substandard within the Corridor and need to be augmented and upgraded.
- Improve the quality of life for area residents – food options, recreational amenities, health care availability and cultural resources all need to be enhanced in the Rail Corridor.
- Transportation and access – both businesses and residents noted transportation challenges in the Corridor. Residents experience difficulty with pedestrian access to much of the neighborhood and also have concerns about lighting and safety. Businesses experience problems in moving goods by truck into and through the Corridor.
- Address other basic infrastructure issues – stormwater management, utility relocation, low water pressure are matters of concern that continue to be raised by businesses and residents.

While some of these goals lie outside the scope of the current project, several have been accommodated within

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## Project Area Description

**Figure 1: Rail Corridor**



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businesses in the Rail Corridor. The report has been organized as follows:

- A summary of [high priority initiatives](#) that the City can implement using their current organizational infrastructure with limited additional investment of resources.
- A review of the process undertaken to examine the Rail Corridor, identify its [strengths and weaknesses](#), and establish the resources available to aid in revitalization.
- A discussion of the [existing conditions](#) in the Rail Corridor and the Roanoke metropolitan area including [employment trends](#), [regional competitiveness](#), [infrastructure](#), and identification of six [target areas](#) within the Rail Corridor.
- [Summary of findings](#) including [key strengths/opportunities](#) and [weaknesses/threats](#), as well as [reuse opportunities](#) by target area within the Rail Corridor.
- A [Policies and Action Plan](#) that discusses proposed policies and actions to be undertaken across areas including the [environment](#), [economic and business](#), [infrastructure](#) and [community](#). In order to ensure the long-term success of the plan, a section on [coordination, management, and evaluation](#) of the plan has also been presented.
- A catalog of [Policies and Guidelines](#) that may be utilized either as direct tools in revitalization or which may be leveraged at a later time as the situation warrants.

The above information was developed based on extensive research across many areas including:

- Detailed property characterization (vacant parcels, size, use, ownership, land use and zoning etc.)
- Brownfield property inventory,
- Reverse site selection modeling,
- Interviews performed with government/non-profit organizations and private businesses across the Rail Corridor.

All of the supporting information for this report has been compiled and presented in [Appendices A through F](#) in this report. Specifically, the databases are included in [Appendix A](#), reverse site selection sources in [Appendix B](#), the Environmental Action Plan in [Appendix C](#), lessons from other communities in [Appendix D](#), acknowledgements in [Appendix E](#), and previous reports summarized in [Appendix F](#) with the reports included on the CD attached to the back cover of this report.

## High Priority Initiatives

The City's first steps in revitalizing the Rail Corridor must include:

- Developing a full brownfield inventory – the analysis contained in this report begins this process. However, the City needs to compile the information that is easily usable and can be utilized for economic development initiatives.
- Directly engage property owners representing vacant properties within the Rail Corridor – the landowners are key partners in the revitalization process and should be included in order to ensure that future actions are practical and beneficial for all stakeholders.
- Completion and dissemination of marketing materials for vacant or underutilized properties within the Rail Corridor – this report identifies target area use and – where appropriate - industry types within each area. These recommendations should be assembled into marketing materials and distributed through Virginia's regional and Commonwealth economic development organizations.
- Develop a neighborhood clean-up program – utilize existing programs to assist local residents and landlords in remediation of small scale environmental issues, as well as addressing basic upkeep and aesthetic issues.
- Develop a more comprehensive database of properties within the Rail Corridor regarding ownership, vacancy, environmental contamination, land use, and potential for future revitalization. (Please note that a program of this type may be produced in the future as a component of an enhanced property profiling tool.)
- Engage local businesses – this group of stakeholders will provide insights into the skills required by business to perform current activities and to grow. They should be involved both in skills development and eventually in outreach and marketing efforts on behalf of the Rail Corridor.

## Process

The process used to develop this report and plan reflects a systematic review of properties and an assessment of the market forces that could be used to revitalize the Corridor. The project progressed in a task-by-task manner, building a base of analysis from which to draw conclusions. It also allowed the City to review and provide feedback and suggestions at multiple points during the preparation of the plan.

The specific tasks included in the process were as follows:

### Task 1 – Compile and Refine Current Plans

We worked with the City to collect existing plans, existing brownfield site inventories and other data, GIS information and 2010 census data. The team also performed initial outreach to residents and businesses in the Corridor to develop a revised baseline of goals and objectives and an enhanced vision.

The team performed a baseline assessment of the characteristics of the Rail Corridor area as a whole and identified the existing brownfield properties. This data was entered into a GIS database and analyzed with the latest census, business, and other applicable location data.

At the end of this task, the team provided the City with the catalog of data collected, and a summary of the background information crucial to the project. The team also provides key findings that provide the foundation and guidance for future phases. The Task 1 report may be found on the CD attached to the back cover of this report.

### Task 2 – Define Future Uses for Brownfields

Brownfields often lie at key points in the community with robust access to workforce, infrastructure, and other key community advantages. The team examined these attributes as compared to the location needs of various industry, function, and property use types. We have provided an honest, objective and complete assessment of strengths, weaknesses and goals for the City of Roanoke and for the selected target areas within the Rail Corridor. We also identified areas where competitive improvement is needed.

As a component of this, our team evaluated the community and sites using a weighting and ranking model commonly used by corporations as they make location decisions. This allowed for a review of which industries and uses might be interested in a Roanoke location. A target-area review then provided insight into which specific target area might be considered appropriate for various use types.

## Public Involvement

The team conducted a series of meetings with key neighborhood and community groups, as well as a series of public charrettes. The team used these conversations to examine re-use alternatives, revitalization strategies and next steps.

The Task 2 deliverable is also contained in the CD on the back cover of this report.

#### **Task 3 – Plan for Reuse of Infrastructure**

The service life, capacity, and location of utility lines were evaluated against proposed development scenarios. The team identified deficiencies in the infrastructure within the Rail Corridor. The Task 3 deliverable can be found in the CD on the back cover of this report.

#### **Task 4 – Policy and Strategy for Reuse**

The plan for brownfield reuse included both a physical plan and a policy framework that will enable and support the realization of this plan. The team reviewed and adjusted existing policies and developed new policy tools to foster revitalization. The Task 4 deliverable can be found in the CD on the back cover of this report.

#### **Task 5 – Implementation Steps and Resources**

The first step in implementing the strategy was to re-confirm that the plan was in line with the Community's goals and capabilities. The Team developed a specific set of implementation steps/resources for many critical activities that will drive the revitalization of the brownfield properties and surrounding area.

#### **Task 6 – Compile Area-Wide Plan**

The current document is the final area-wide plan for revitalization of the Rail Corridor. This includes “tools” for effectively providing information about the plan to facilitate implementation. This report is an action plan and is the result of working closely with the City of Roanoke.



## Existing Conditions

Historically a transportation hub for centuries, the City of Roanoke has thrived with the industry. Initially the cross roads of trails and roads, the area provided access to the frontier of the Carolinas and Tennessee in Colonial days.

With the arrival to the valley of the Virginia and Tennessee Railroad (V&T) in 1852, the town of Big Lick moved to embrace the commercial activity and was chartered in 1874. When the Shenandoah Valley Railroad came seven years later, the town became Roanoke, derived from an Indian word, “Rawrenock.”

Over the next decade, additional railroad lines were built including the Atlantic, Mississippi & Ohio Railroad, later renamed the Norfolk and Western Railway (N&W), along with the Shenandoah Valley Railroad as well. Roanoke became the junction of the two lines, which brought access throughout Virginia, West Virginia, North Carolina and Ohio.

This marked the start of the town’s rapid growth, leading to its charter as the City of Roanoke in 1884. Growth continued to ride on the railways with the creation of the Virginian Railway, which followed the Roanoke River, transporting coal to power manufacturing and power plants. The Virginia Railway merged with N&W in 1959. The merger of the N&W with the Southern Railway gave birth to Norfolk Southern, which continues to operate in Roanoke.

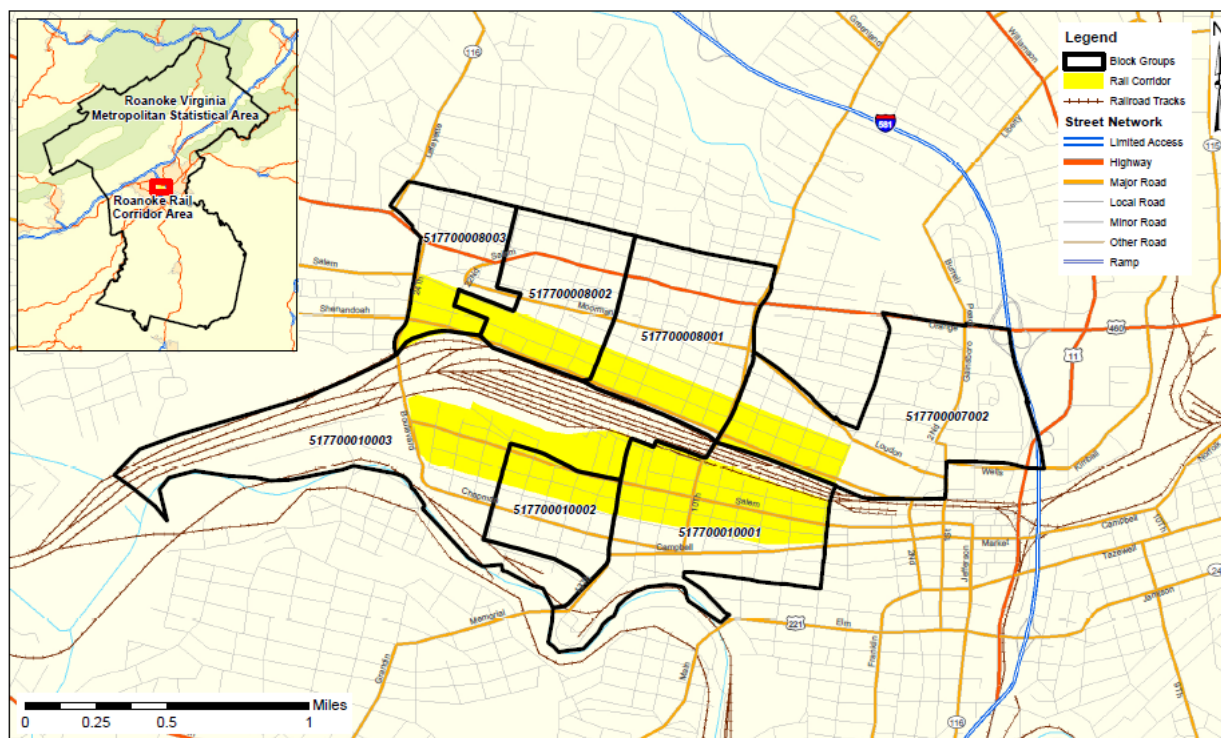
It is this history of transportation and manufacturing that gives Roanoke its distinctive character and skill set, and supports the economic climate of the City today. The stately homes along Patterson Avenue built during the railroads’ heyday are an example of the positive legacy. However, the industrial and rail activities have also left behind areas of environmental contamination and vacant or underutilized properties. This provides the opportunity for revitalization in order to capture the value of these legacy assets for the City.

## Demographics Within the Rail Corridor

The City of Roanoke and its immediate metropolitan area are attractive locations when examined through attributes including quality of life, housing, employment and other aspects. Unfortunately, the industrial legacy of the Rail Corridor itself has a different tale to tell and complicates the demographic and economic outlook for local residents.

The Rail Corridor consists of parts of the several Census Blocks as show in the following map:

**Figure 2: Rail Corridor Census Geographies**



This collection of block groups and neighborhoods reflects broader regional trends in some ways, but is very different in others. The following chart compares the Rail Corridor against the City and the greater Metropolitan Statistical Area (MSA).

Please note the unemployment and population numbers included in the chart below were generated through ESRI Business Analyst Online. These numbers may differ from data collected from other sources presented within this report or published online. Since the data by block group is only available through Business Analyst Online, we used the same source for City and MSA data. The numbers included may be different from the same data presented by different sources and/or published on different websites. An in-depth comparison of unemployment rates by source may be found in [Appendix A](#).

	Roanoke Block	Roanoke City	Roanoke MSA
<b>Total Population 2000</b>	6,661	94,911	288,309
<b>Total Population 2010</b>	6,246	93,391	303,429
<b>Total Population 2015 Projected</b>	6,182	93,892	309,695
<b>Total Population 15-65 2000</b>	4,043	60,968	189,295
<b>Total Population 15-65 2010</b>	4,100	61,404	200,796
<b>Total Population 15-65 2015 Projected</b>	3,950	60,145	198,573
<b>Unemployment 2000</b>	15.30%	5.80%	3.80%
<b>Unemployment 2010</b>	18.80%	11.60%	8.70%
<b>Unemployment 2015 Projected</b>	14.50%	8.80%	6.50%

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	Roanoke Block	Roanoke City	Roanoke MSA
<b>Median Household Income 2000</b>	\$19,200	\$30,696	\$38,992
<b>Median Household Income 2010</b>	\$22,447	\$39,675	\$50,991
<b>Median Household Income 2015 Projected</b>	\$26,136	\$45,594	\$58,060
<b>Average Household Size 2000</b>	2.49	2.2	2.35
<b>Average Household Size 2010</b>	2.44	2.16	2.31
<b>Average Household Size 2015 Projected</b>	2.43	2.15	2.3
<b>Median Age 2000</b>	34.1	37.7	39.5
<b>Median Age 2010</b>	36.6	39.8	42.9
<b>Median Age 2015 Projected</b>	36.7	40.4	43.8

Data from ESRI BAO

2010 Population 25+ by Educational Attainment	Block Groups	City	MSA
<b>Total number of people</b>	3,968	64,660	215,171
<b>Less than 9th Grade</b>	8.8%	5.1%	5.3%
<b>9th - 12th Grade, No Diploma</b>	23.1%	12.1%	9.4%
<b>High School Graduate</b>	41.9%	31.7%	31.5%
<b>Some College, No Degree</b>	15.5%	20.1%	20.1%
<b>Associate Degree</b>	3.4%	8.2%	8.7%
<b>Bachelor's Degree</b>	5.3%	14.4%	16.1%
<b>Graduate/Professional Degree</b>	1.9%	8.5%	8.9%

Data from ESRI BAO

The Rail Corridor is striking in having elevated unemployment and significantly lower income levels than the surrounding area. Moreover, these levels are not due to the current recession, but are in fact symptoms of longer-term trends. Unemployment stands at 18%, compared to the City's level of 12% (itself higher than the MSA average of 8.7%), and median household income is less than half that for the broader MSA.

While the implications regarding needed interventions for the residents are implicit in the need for the present study, it is important to note the implications for potential investors in the Corridor itself. Clearly, labor costs will be less due to cost of living and household income levels in the Corridor than elsewhere. However, this will need to be coupled with possible deficiencies in workforce skills within the local population.

## Employment Trends

Even with the current levels of economic upheaval, understanding the region's current employment base gives a clue as to the talent base available, as well as the economic networks that might still be viable. This knowledge may then be used to either examine economic dynamics in those specific activities or determine how this workforce might be migrated into new opportunities.



The Bureau of Labor Statistics (BLS) tracks employment using the North American Industrial Classification System (or NAICS). Two- and three-digit NAICS numbers precede the industry or activity name through the following section.

BLS employment data is collected at the County (City in the case of the Independent City of Roanoke) or Metropolitan Area level. Of a total 2010 employment of 57,186 citywide, the largest employment sectors (those representing over 1% of the total employment) were:

Industry	Total Employment	Location Quotient
<b>Base Employment, All Industries</b>	<b>57,186</b>	1.00
<b>NAICS 722 Food services and drinking places</b>	5,302	1.05
<b>NAICS 561 Administrative and support services</b>	3,897	1.03
<b>NAICS 551 Management of companies and enterprises</b>	2,954	2.96
<b>NAICS 541 Professional and technical services</b>	2,894	0.72
<b>NAICS 621 Ambulatory health care services</b>	2,877	0.9
<b>NAICS 238 Specialty trade contractors</b>	1,886	1.01
<b>NAICS 423 Merchant wholesalers, durable goods</b>	1,771	1.21
<b>NAICS 452 General merchandise stores</b>	1,771	1.1
<b>NAICS 624 Social assistance</b>	1,331	1
<b>NAICS 237 Heavy and civil engineering construction</b>	1,268	2.9
<b>NAICS 524 Insurance carriers and related activities</b>	1,226	1.12
<b>NAICS 493 Warehousing and storage</b>	1,178	3.47
<b>NAICS 441 Motor vehicle and parts dealers</b>	1,093	1.24
<b>NAICS 492 Couriers and messengers</b>	1,082	3.87
<b>NAICS 445 Food and beverage stores</b>	1,000	0.66
<b>NAICS 812 Personal and laundry services</b>	962	1.41
<b>NAICS 522 Credit intermediation and related activities</b>	961	0.7
<b>NAICS 813 Membership associations and organizations</b>	887	1.25
<b>NAICS 448 Clothing and clothing accessories stores</b>	844	1.14
<b>NAICS 454 Nonstore retailers</b>	763	3.42
<b>NAICS 721 Accommodation</b>	758	0.81
<b>NAICS 484 Truck transportation</b>	757	1.12
<b>NAICS 444 Building material and garden supply stores</b>	663	1.08
<b>NAICS 424 Merchant wholesalers, nondurable goods</b>	604	0.58

Data from BLS

The industries noted above account for almost 68% of all employment in the City. Of these, NAICS mega groups 4 and 5 (retail and services, respectively) make up over 43% of the City's total employment. This is not unusual.

Within this, the large employment in areas such as merchant wholesalers, durable goods, truck transportation, and related areas also points to the City's role in regional logistics for the eastern seaboard.

## Location Quotient

Location Quotients are a method of identifying basic (domestic) and non-domestic (exported) employment in a region – basic industries are those exporting from the region and bringing wealth from outside; non-basic (or service) industries support basic industries. This provides additional insight into the economic base of a region beyond that which can be gained from employment levels alone.

Location Quotients can be used to examine:

1. A community's particular employment strengths, and
2. How a community's economic base is changing over time.

The table below lists those industry groups for which the City of Roanoke has a Location Quotient above 1.0 (as compared to the US as a whole) and therefore has an existing export advantage or nexus of activity. Also shown are the 2010 employment in each of these sectors and the overall change in Location Quotient between 2001 and 2010.

Industry	Employment	Location Quotient	Change in Lq
<b>NAICS 492 Couriers and messengers</b>	1082	3.87	0.97
<b>NAICS 493 Warehousing and storage</b>	1178	3.47	0.37
<b>NAICS 454 Nonstore retailers</b>	763	3.42	-2.09
<b>NAICS 551 Management of companies and enterprises</b>	2954	2.96	-0.27
<b>NAICS 237 Heavy and civil engineering construction</b>	1268	2.9	0.81
<b>NAICS 485 Transit and ground passenger transportation</b>	557	2.47	1.08
<b>NAICS 515 Broadcasting, except Internet</b>	301	1.9	0.23
<b>NAICS 339 Miscellaneous manufacturing</b>	544	1.78	0.73
<b>NAICS 335 Electrical equipment and appliance mfg.</b>	308	1.61	0.47
<b>NAICS 712 Museums, historical sites, zoos, and parks</b>	106	1.54	-0.22
<b>NAICS 337 Furniture and related product manufacturing</b>	285	1.49	0.02
<b>NAICS 812 Personal and laundry services</b>	962	1.41	0.15
<b>NAICS 443 Electronics and appliance stores</b>	373	1.38	0.38
<b>NAICS 442 Furniture and home furnishings stores</b>	324	1.38	0.21

Industry	Employment	Location Quotient	Change in Lq
<b>NAICS 813 Membership associations and organizations</b>	887	1.25	0.33
<b>NAICS 441 Motor vehicle and parts dealers</b>	1093	1.24	0.13
<b>NAICS 423 Merchant wholesalers, durable goods</b>	1771	1.21	0.12
<b>NAICS 451 Sports, hobby, music instrument, book stores</b>	378	1.16	-0.2
<b>NAICS 448 Clothing and clothing accessories stores</b>	844	1.14	0.08
<b>NAICS 524 Insurance carriers and related activities</b>	1226	1.12	-0.41
<b>NAICS 484 Truck transportation</b>	757	1.12	-0.13
<b>NAICS 452 General merchandise stores</b>	1771	1.1	-0.23
<b>NAICS 444 Building material and garden supply stores</b>	663	1.08	-0.18
<b>NAICS 722 Food services and drinking places</b>	5302	1.05	0.02
<b>NAICS 561 Administrative and support services</b>	3897	1.03	0.24
<b>NAICS 238 Specialty trade contractors</b>	1886	1.01	-0.03
<b>NAICS 488 Support activities for transportation</b>	294	1.01	0.12

Data from BLS – Location Quotient Calculator for 2001 and 2011 data

The City has desirable export advantages (high location quotient) in:

- Logistics and wholesale trade
- Management and administration
- Selected forms of manufacturing
- Construction

Overall, the City lost 9,187 jobs between 2001 and 2010, a net loss of 13.8%. The gross number of positions lost is only slightly smaller than the number of positions lost across the MSA over the same period (9,862) suggesting that the City bore the brunt of the region's hardships during the economic downturn. The greatest areas of loss were in trade, transportation, and utilities (3,375 positions), and manufacturing (2,202).

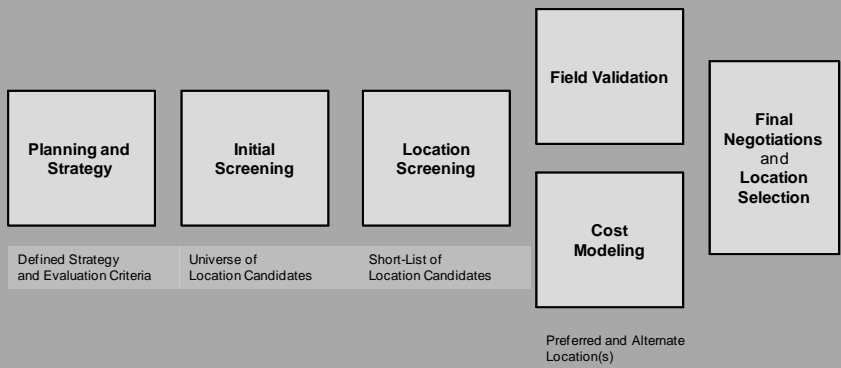
The City gained significantly in educational and health services, with 1,188 positions having been created (over 11.5% growth). Other growth areas were moderate and involved relatively small groups of positions.

Revitalization efforts for the Roanoke Rail Corridor are subject to the larger market context of the needs of both business and the community. These needs define the "demand" side of the supply and demand equation, which results in what can be successfully placed within the Corridor.

It is helpful to examine the Corridor at both the macro and micro level. Certainly, the real estate and demographic market dynamics within the Corridor itself will identify opportunities and constraints.

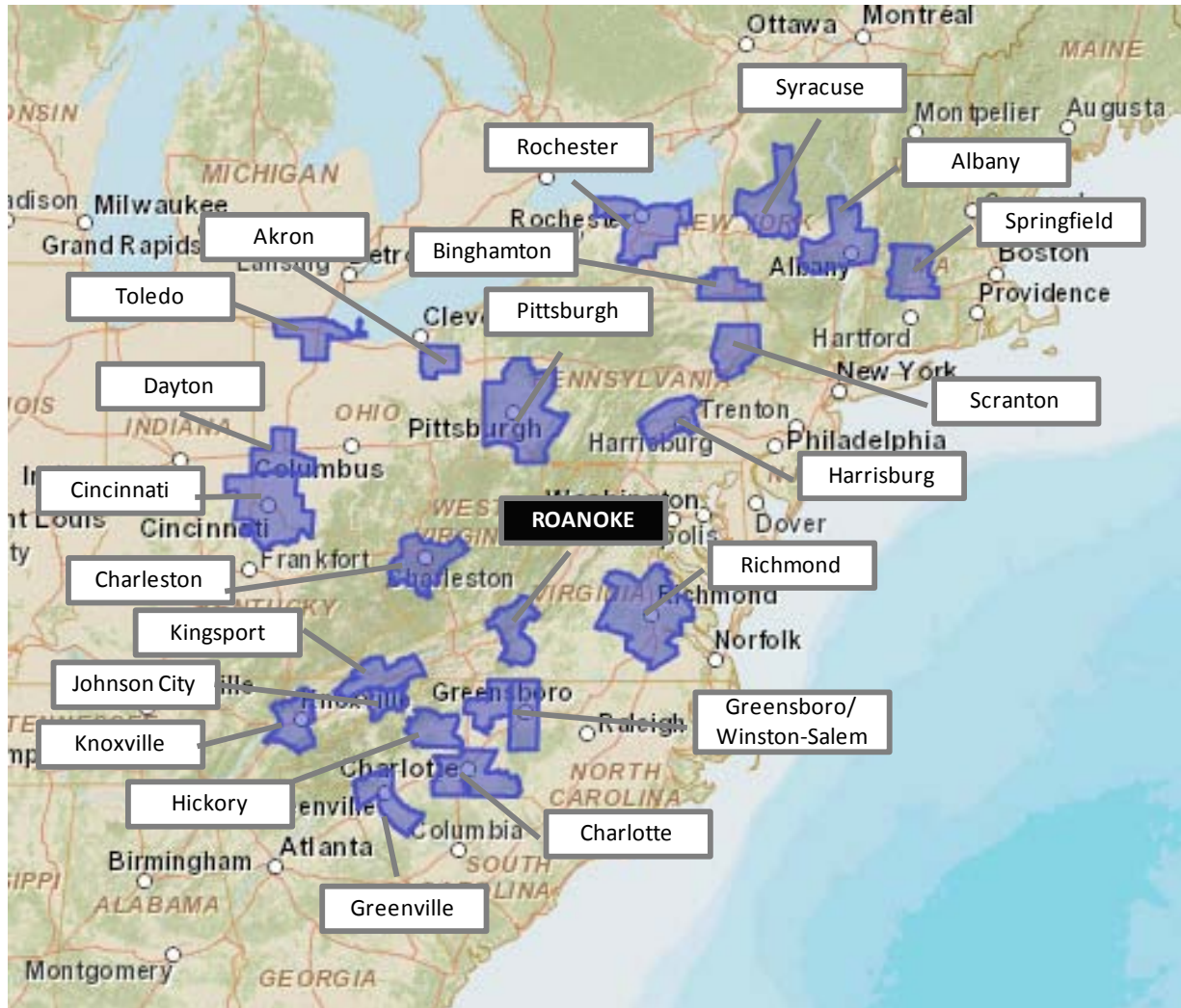
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These city areas are all generally within the Northern and mid-Atlantic region of the country stretching to the upper Midwest and upper South, and have strengths in industrial processes and manufacturing. All have strong logistic ties to markets.

**Figure 3: Rail Corridor Likely Competition**



The Roanoke Metropolitan Statistical Area (MSA) is made up of the City of Roanoke, Roanoke County, Craig County, Botetourt County, and Franklin County. An examination of the data collected in a typical location screening quickly shows Roanoke's strengths and weaknesses for attracting various forms of investment.

## Analysis by Factor

Following is an analysis of the region by each category type typically included in a location screening. The database of factors for each of the communities examined may be found in [Appendix A](#). Similarly, weights have been assigned to each criterion based on real-world experience in site selection projects. [Appendix B](#) includes a full set of sources for the screening model database.

### Population and Demographics

Population dynamics give an overall indication of a community's "health," or whether it is growing at a sustainable pace or not. Negative growth can indicate a failing economy or a struggling community. Explosive growth can be a warning sign for strain on infrastructure or on community finances.

This analysis, which typically examines growth of working age population over a specified time period, often favors young or newer communities. The Roanoke MSA is a slow or moderate growth community. The overall population growth rate between 2010 and 2015 is projected to be 2.1% – steady and manageable, but not excessive. Areas such as Greensboro, Greenville, and Knoxville are expected to have growth rates of 5%-7%. Charlotte is projected with a growth rate of 14%. On the other end of the spectrum, Springfield and Rochester are expected to lose population in real terms.

Please note that the Team is using general population and demographic data from Business Analyst Online.

### General Labor Force Availability

Given as a measure of Civilian Labor Force growth and an area's unemployment dynamics, this section measures the very general strength of the workforce as a whole, without regard for specific skills.

Unemployment, the change in unemployment, and the overall growth of the civilian labor force are used as measures in this category. On balance, the Roanoke MSA ranks highest in these measures, with moderate unemployment, favorable change, and stable labor force growth. The next most favorable communities are Richmond, Knoxville, and Harrisburg.

Please note that the Team is using workforce and unemployment numbers provided by Bureau of Labor Force Statistics (BLS). Please see [Appendix A](#) for a comparison of various unemployment sources.

### Industry- and Occupation-Specific Employment

This section contains information on the availability of workers within selected industries. Employment in Utilities, Construction, Manufacturing, and Professional/Technical/Scientific functions are analyzed as a percentage of overall employment in order to identify critical masses of industry partners and workforce. This industrial base – if found in combination – also tends to indicate the ability to support innovation and sustainable entrepreneurial activity.

Charlotte scores highest, as the model is set to favor a broad diversity of industrial activity. Roanoke scores very well in concentrations of Retail Trade and Finance, Insurance, and Real Estate (FIRE). Occupational concentrations tell a somewhat different story. When examining the concentrations of the specific talents required to support a vibrant economy, Harrisburg has the broadest diversity in talent base, but does have weaknesses in Production and Healthcare occupations. Roanoke ranks moderately, but does have strengths in Transportation and Logistics, Administration, and Business Operations.

#### Labor Force Cost

Salaries and benefits often make up companies' largest or second largest cost category overall. Hence, costs for specific occupations in each community show the relative cost of doing business for the assembled entity.

Roanoke ranks second behind Greensboro, NC, across the same broad range of occupations as was used in the occupation specific employment section. Roanoke consistently presents as a very cost-effective environment for each occupation salary examined.

#### Education

The education levels of a community's population (from high school to professional school graduates) indicate the capabilities of the workforce and can also be an indication of the regional school system as a quality-of-life measurement. Educational opportunities can also help attract talented people to relocate to the region.

Roanoke ranks moderately among the competitors for education. The numbers among the competitors hold steady until degrees above bachelors are considered. This may be a result of historic job opportunities not commanding an education higher than a bachelor's degree. The results are far more revealing, however, when Roanoke MSA is compared to Roanoke City and the Rail Corridor.

There are significant educational resources available proximate to the Rail Corridor as well. Chief among these is Virginia Western Community College, located approximately three miles away. This and other schools may be called upon to train for specific job skills as required by companies looking to expand or move into the area.

#### Transit and Infrastructure

Acting both as a measure of traffic within the community (and therefore workforce attraction) as well as the ability to move goods and personnel into and out of the community, transit and infrastructure measures the availability of air and road capability and its capacity.

Roanoke is of moderate ranking for transportation and infrastructure. The biggest asset to the area is relatively easy road and highway access with lower congestion levels than many competitors. The biggest drawbacks are difficult air access and low surrounding population base.



### **Tax Structure**

Tax structures can – intentionally or otherwise – be used as a regulatory tool to encourage or discourage corporate investments of various types. Property, income, and sales taxes all impact companies in different ways and should be examined on an institution-by-institution basis.

Roanoke has the best ranking for tax structure. Most notably, the state corporate tax climate score is among the most favorable of all competitors. In addition, the property tax as a percent of income is very favorable as compared to the competitive set.

### **Climate and Natural Hazards**

Climate is both a quality-of-life indicator and a measure of business interruption risk. Similarly, no location is without some form of natural hazard risk. Businesses will typically look to establish locations in such a way as to minimize their exposure to any one risk.

The Roanoke area shares many of the same risks and climate benefits of the competitive set. Roanoke comes in overall at third for climate and natural hazards behind Greensboro, NC, and Dayton, OH. Hurricane, tornado and seismic risk are all low for all locations. The number of sunny days and the amount of yearly snowfall both rank better in Roanoke than many others in the competitive set.

### **Crime and Quality-of-Life**

Quality-of-life is a subjective measure and the criteria to measure the concept vary from individual to individual. However, such subjects as housing cost (as compared to prevailing wages), cost of living, crime, and health care system capacity carry universal appeal and can have direct business impact.

Overall, Roanoke comes in as the best overall candidate for crime and quality of life. Roanoke ranks better than average for violent and property crime, a short commute time, and good access to medical care. The overall cost of living index ranks better than average among the competitive set as well as compared to the United States as a whole. It should also be noted that the model does not take into account the wide range and high-quality nature of the recreational activities available to those living in the Roanoke area.

### **Infrastructure**

For the Rail Corridor, a key component in the development/revitalization process is a critical evaluation of the service life and capacity of existing utility and other public infrastructure. In addition, the location of utility lines must be evaluated against the proposed development scenarios and a determination made as to whether or not the lines should remain in place or be abandoned.

The objective of this section is to present an evaluation of the existing utility and public infrastructure. The critical utilities and public infrastructure to be evaluated are: Roadways & Streets, Water System, Sanitary Sewer System, Storm Drainage System, Natural Gas, and Electrical System. The evaluation of these systems is based on publically-available information, discussions with utility provider representatives, and on-site visual inspections.

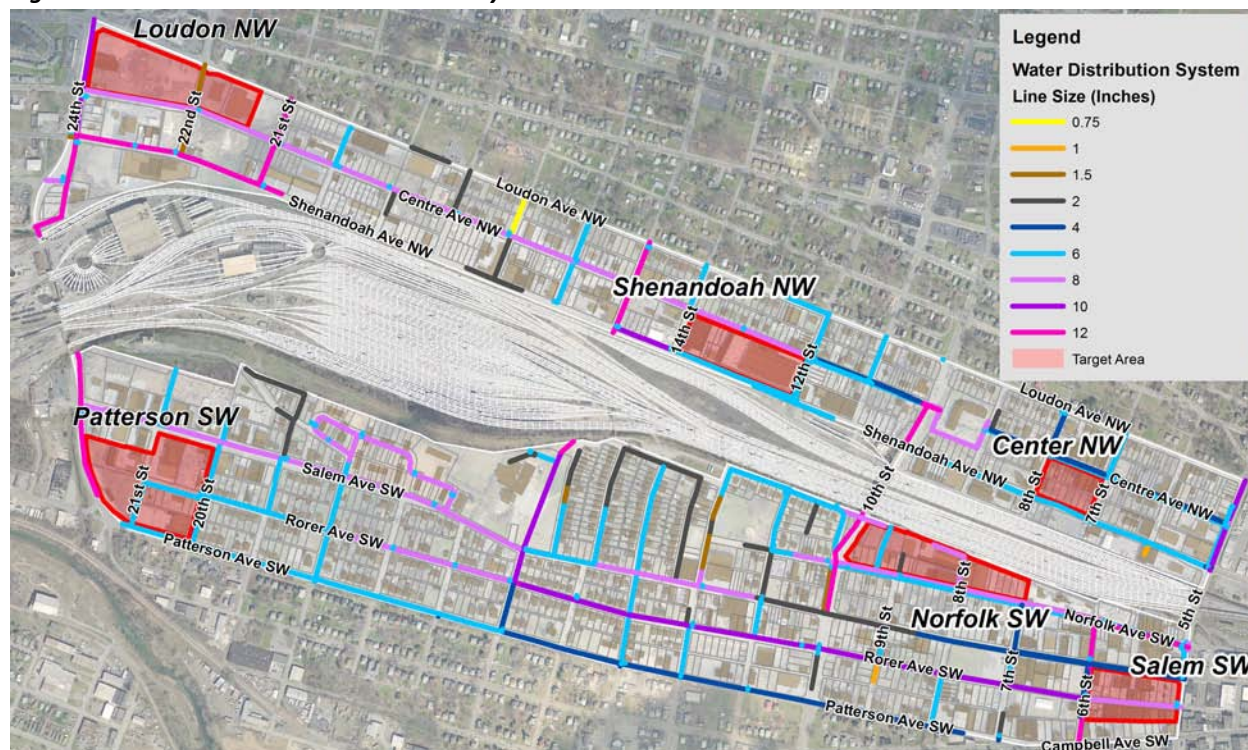


The utility systems within the Corridor study area are some of the oldest in the City. Much of the water and sanitary sewer system was constructed in the late 1800's and early 1900's. The piping and system appurtenances have been upgraded in several areas as development/re-development has occurred, but the extent of these upgrades is limited.

#### Water Distribution System

The water distribution system within the Brownfield Rail Corridor (the Corridor) is owned and operated by the Western Virginia Water Authority (WVWA). The Water Authority was formed in July 2004 by the consolidation of the water and wastewater operations of the City of Roanoke and Roanoke County. In November 2009, Franklin County joined the WVWA. The Water Authority is an incorporated public body independent of local government that provides water and wastewater services to its customers in the City of Roanoke, Roanoke County and Franklin County. The Water Authority has developed an extensive and useful Geographic Information System that may be used to view the water system network for its service areas.

**Figure 4: Rail Corridor Water Distribution System**



The study area is principally served by the Carroll Avenue tank – a 2,000,000 gallon standpipe located approximately  $\frac{3}{4}$  mile north of the study area and operating at an elevation of 1,136 feet. The tank serves the study area through a network of 12-inch supply lines and results in nominal static pressures as follows:

- 85 psi near the intersection of 5<sup>th</sup> Street & Salem Ave.;
- 40 psi near the intersection of Center Ave. and 20<sup>th</sup> Street; and
- As low as 30 psi near the intersection of Salem Ave. and 18<sup>th</sup> Street.

The water source for the study area is Carvins Cove Reservoir. With a storage capacity of 6.5 billion gallons and a treatment capacity of 28-million gallons per day, the Carvins Cove Reservoir and Treatment Facility is the largest storage and treatment facility in the Water Authority's system.

The water distribution system network within the study area is extensive. The water system in the northern section of the study area (north of the Norfolk Southern rail yard and tracks) is defined by a well-developed supply and distribution grid. The backbone of the main supply lines within the northern section are 12-inch mains running in Shenandoah Avenue, 21<sup>st</sup> Street, 15<sup>th</sup> Street, 10<sup>th</sup> Street, and 5<sup>th</sup> Street. The remaining water lines within the study area are 8-inch and 6-inch. The water system in the southern section of the study area (south of the Norfolk Southern rail yard and tracks) is also defined by a well-developed supply and distribution grid.

The main supply lines within the southern section are comprised of 12-inch and 10-inch mains running in Rorer Avenue (between 5<sup>th</sup> and 15<sup>th</sup> Street), 15<sup>th</sup> Street (from the NS tracks to Rorer Ave.), 10<sup>th</sup> Street, and 5<sup>th</sup> Street. The remaining water lines within the study area are 8-inch and 6-inch; however, there appear to be short sections of line or cross-connection lines where the size is 2-inches to 4-inches. The distribution grid provides a system that has multiple redundant feeds into the study area, thus reducing the chances for wide-spread service outages. Local service outages occur periodically as a result of local line breaks, but the distribution grid allows the Water Authority to isolate these breaks and generally limit outages to one-block areas.

A review of available mapping indicates that fire hydrants are generally uniformly spaced and well placed to serve the existing development within the study area. In most instances fire hydrants are spaced at intervals of 500 feet (typical block dimensions). In some less densely developed areas, the spacing is closer to 1,000 feet. The line sizes, along with the pressure and flow characteristics of the distribution system, result in fire hydrants that are able to provide fire flows between 1,000 and 2,000 gallons per minute (GPM). There are, however, areas within the study area where the available flow is between 500 and 1,000 GPM. A fire flow of 1,000 GPM is considered the minimum required for typical commercial/industrial use.

The water system infrastructure within the study area is some of the oldest in the City since the study area was one of the first concentrated industrial and residential development areas. Based on discussions with Water Authority representatives and feedback received during the community involvement meetings, the water system appears to meet the needs of the residential community and



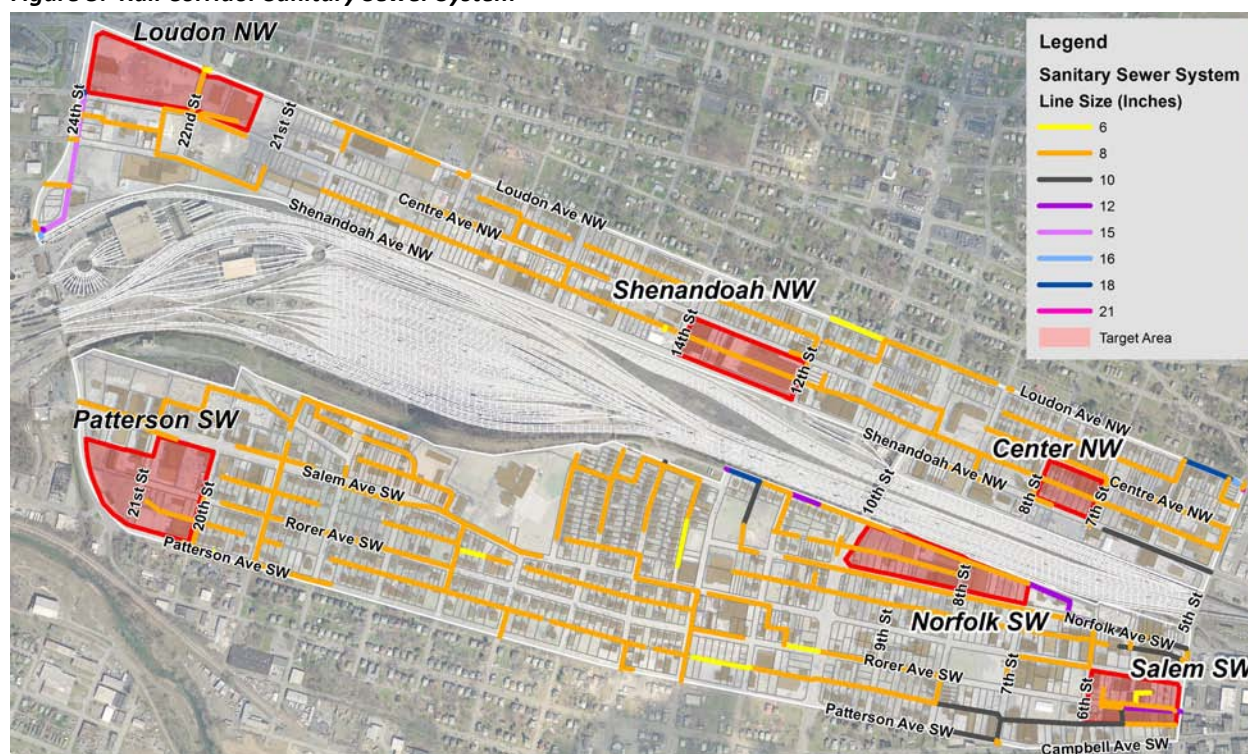
the industrial/business within the study area. In 2008/2009, the Water Authority completed water system improvements in the vicinity of Rorer and 19<sup>th</sup> to 21<sup>st</sup> Street. There are no significant water system improvements planned within the study area during the next five years.

### Sanitary Sewer System

The sanitary sewer (wastewater) collection system within the Brownfield Rail Corridor (the Corridor) is owned and operated by Western Virginia Water Authority (WVWA). The sanitary sewer within the study area is served by gravity piping – there are no Water Authority-owned pump stations within the study area, although some businesses may utilize a privately owned pump station to discharge into the public lines.

The study area is topographically split along a naturally occurring ridgeline generally running in a north-south direction roughly along 20<sup>th</sup>/21<sup>st</sup> Street and 18<sup>th</sup> Street. The areas north of the Norfolk Southern (NS) tracks fall within the Trout Run sewer shed. The sewer lines within this portion of the study area are 8-inch and 10-inch lines generally running west to east within Shenandoah, Centre, and Loudon Avenue and leave the service area via a 21-inch line at Centre and 5<sup>th</sup> Street.

**Figure 5: Rail Corridor Sanitary Sewer System**



The area south of the NS tracks falls within the Shaffer's Crossing, Roanoke River Upper, Roanoke River Middle, or Downtown Upper sewer sheds. The areas west of the ridgeline fall within the Shaffer's Crossing or Roanoke River Upper sewer shed (generally areas west of 18<sup>th</sup> street) and drain to the west and south and eventually discharge directly into the Roanoke River interceptor – a 60-inch line draining directly to the Roanoke Water Pollution Control Plant. The areas east of the ridgeline (generally east of

18<sup>th</sup> Street) fall within the Roanoke River Middle or Downtown Upper sewer sheds. The Roanoke River Middle drains to the south and eventually discharges directly into the Roanoke River Interceptor. The Downtown Upper sewer shed drains to the east and follows a natural low area, running west to east along the Rorer/Patterson Ave Corridor. The trunk-line is upsized to a 12-inch line as it exits the study area at 5<sup>th</sup> Street. A majority of the study area is within the Downtown Upper sewer shed.

As with the water system, the sanitary sewer system infrastructure within the study area is some of the oldest in the City since the study area was one of the first concentrated industrial and residential development areas. Based on discussions with Water Authority representatives and feedback received during the Community Involvement Meetings, the sanitary sewer system appears to meet the needs of the residential community and the industrial/business within the study area. The Water Authority recently improved the collection line running along the 24<sup>th</sup> Street/Boulevard Corridor in the vicinity of Shaffer's Crossing to minimize overtopping and illicit discharge. This improvement was a benefit to the customers in the northwest quadrant of the study area. There are no significant system improvements planned within the study area during the next five years.

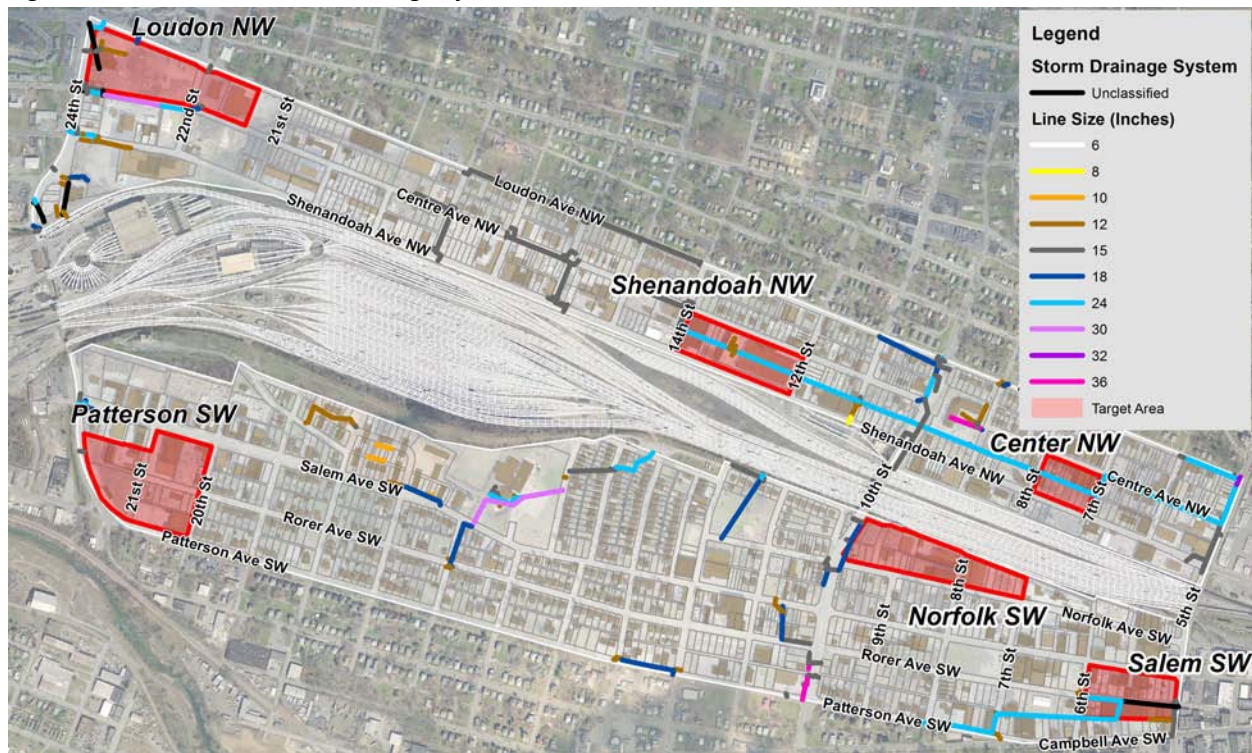
#### Storm Drainage System

The storm drainage system within the study area, where located within the right-of-way or easements, is owned and maintained by the City of Roanoke. The City Public Works Department is primarily responsible for the maintenance of the public portion of the storm drainage system. Storm drainage facilities located on private property and outside a dedicated easement, are owned and maintained by the property owner. The storm drainage system generally consists of curb and drop inlets located along and within the public streets, piping, outfall structures, and channels. The City does not generally maintain channels that are outside the public street right-of-way. Although not generally considered part of the storm drainage system, the streets bound by curb and gutter are significant components of the stormwater conveyance system.

In a manner similar to the sanitary sewer system, the storm drainage system generally responds to the natural and built topography. As such there are numerous watersheds and outfalls within the study area. The area north of the NS tracks is within the Trout Run watershed and generally drains from a high point just west of 20<sup>th</sup> Street to the east, eventually discharging from the study area near the intersection of 5<sup>th</sup> Street and Loudon Avenue. The area south of the NS tracks is broken into several smaller sub-watersheds that drain either to the south toward the Roanoke River or east toward downtown. A significant outfall in the southern direction is located along 12<sup>th</sup> Street and a significant outfall in the eastern direction is located along Rorer Avenue between 7<sup>th</sup> and 5<sup>th</sup> Streets. All stormwater runoff from the study area eventually discharges into the Roanoke River.



**Figure 6: Rail Corridor Storm Drainage System**



The presence of storm drainage (inlets and piping) is a reasonable predictor of the occurrence of local flooding. Local street flooding can impede commerce and disrupt the activities and movement of the residents living within the study area and those traveling through the study area. It can also negatively affect property values and be a deterrent to development/revitalization potential. In many areas the street itself, contained by curb and gutter, serves as the only stormwater conveyance system. In these instances and where the topography allows overland flow and in-street flow to occur over significant distances, no inlets may be located within a specific area. This is typical of the residential areas south of the NS tracks, where some areas as large as three square blocks are devoid of storm drain infrastructure. The result of these conditions is a higher occurrence of local street flooding, stormwater overflow from the street on to private developed land, and higher potential for erosion. The presence of these conditions was voiced by several participants in the Community Involvement Meetings.

A review of the topography and storm drainage system maps indicates that there are several low areas within the study area that may be prone to local flooding. The areas north of the NS tracks are:

- Shenandoah Avenue and 11<sup>th</sup> Street,
- Shenandoah Avenue and 16<sup>th</sup> Street,
- Shenandoah Avenue and 18<sup>th</sup> Street, and
- Centre Avenue between 5<sup>th</sup> and 9<sup>th</sup> Street.

The areas south of the NS tracks are:

- Rorer Avenue & 5<sup>th</sup> Street,
- 7<sup>th</sup> Street between Rorer and Patterson,
- Norfolk Avenue and 6<sup>th</sup> Street,
- Salem Avenue between 15<sup>th</sup> and 16<sup>th</sup> Street, and
- 15<sup>th</sup> and 14<sup>th</sup> Streets between Salem Avenue and Jackson Avenue.

It is noted that there are very few areas within the study area that are designated Special Flood Hazard Areas (within the “100-year floodplain”) by the Federal Emergency Management Agency. This is a significant positive factor since the presence of floodplain often presents a major development/revitalization hurdle. In a similar fashion, it is generally believed that the presence of wetlands or designated Waters of the U.S. (jurisdictional streams) within the study area are minimal.

Since the majority of the development within the study area was constructed prior to modern stormwater management requirements, there are no significant stormwater management measures within the study area. In 2007 the City of Roanoke adopted comprehensive stormwater management regulations that established minimum requirements for stormwater quality and quantity (detention). New construction, which results in a land disturbance of 5,000 square feet or greater, shall be subject to the requirements of the City’s Stormwater Management Ordinance.

#### Electrical System

Electrical transmission and distribution within the study area and within the City of Roanoke are provided by Appalachian Power (<https://www.appalachianpower.com>). Appalachian Power is a subsidiary of American Electric Power (AEP). The system infrastructure within the study area generally consists of local transmission lines (69 - 138kV), substations (69 - 138kV > 34.5kV, 12kV, or 7.25kV), primary distribution lines, and lateral distribution lines. The infrastructure is located either within the public right-of-ways, on private property within dedicated easements, or on property owned by Appalachian Power.

There are two substations located in or immediately adjacent the study area.

The sub-station located at 7<sup>th</sup> Street between Rorer and Salem Avenues is in the eastern portion of the study area. This sub-station serves the eastern portion of the study area from 5<sup>th</sup> Street to 10<sup>th</sup> Street and is fed by the Walnut Avenue transmission line and the Huntington Court transmission line (69 kV). The Walnut Avenue transmission line runs easterly along Rorer Avenue and then southerly along 6<sup>th</sup> Street, where it exits the study area at Patterson Avenue and 6<sup>th</sup> Street. The Huntington Court to 7<sup>th</sup> Street (69kV) transmission line runs westerly along Rorer Avenue to 9<sup>th</sup> Street, where it turns northerly and crosses the NS tracks at 9<sup>th</sup> Street and continues northerly where it exits the study area at 9<sup>th</sup> Street and Loudon Avenue.

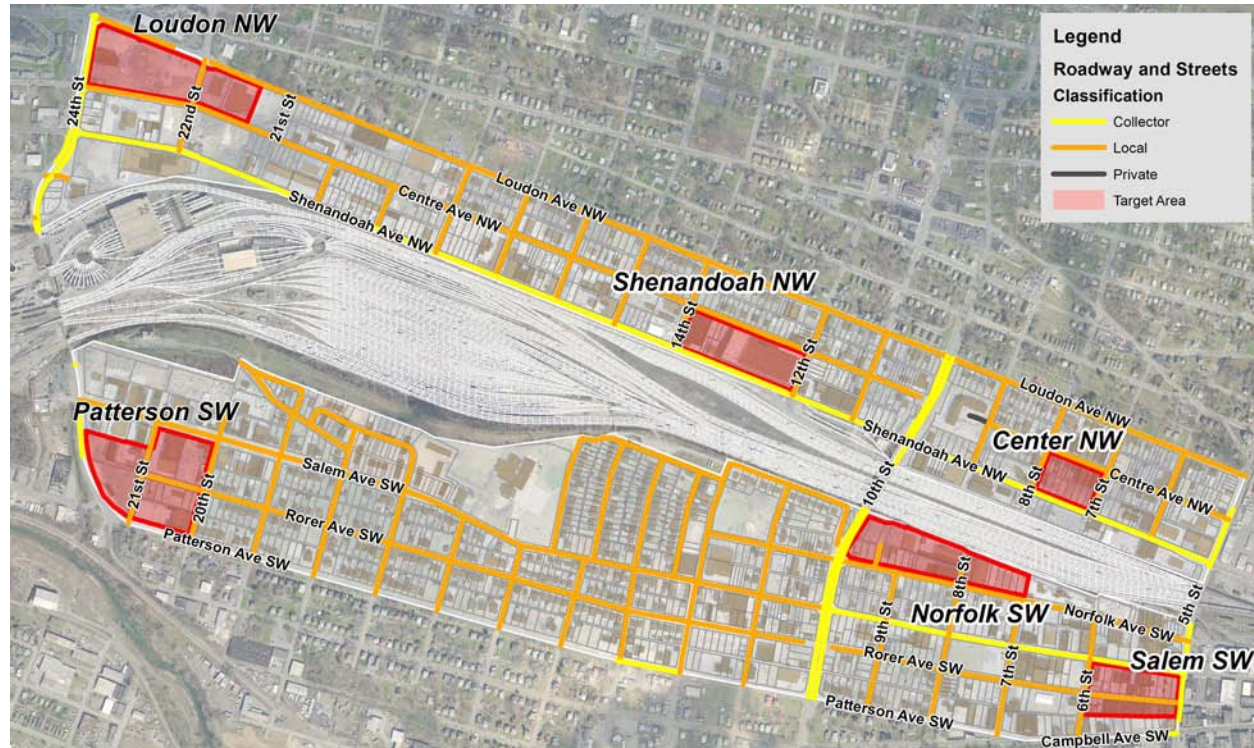


The substation located at Melrose Avenue and 24<sup>th</sup> Street is located just outside the study area but serves the western portion of the study area generally from 10<sup>th</sup> Street to 24<sup>th</sup> Street.

### Roadway and Streets

The streets and roadways within the study area are owned and maintained by the City of Roanoke. The City's Public Works Department is responsible for the maintenance of the streets and the traffic signals. The street network is a typical urban grid consisting of principal east-west and north-south oriented streets.

**Figure 6: Rail Corridor Roadway and Streets**



### North of NS Tracks

In the area north of the NS tracks the study area is comprised of three principal east-west streets: Shenandoah, Centre, and Loudon Avenues. Shenandoah and Loudon Avenues traverse the study area uninterrupted from 5<sup>th</sup> Street to 24<sup>th</sup> Street, whereas Centre Avenue is interrupted between 9<sup>th</sup> and 11<sup>th</sup> Street. Shenandoah Avenue is considered the major east-west street serving the industrial area along the NS tracks, and Loudon Avenue is considered the principal east-west street serving the residential area along the northern perimeter of the study area. On-street parking is permitted on Loudon Avenue but is prohibited on Shenandoah; however, a bike path is located along the north and south side of Shenandoah Avenue. Shenandoah Avenue is a fully developed collector street with curb and gutter on both sides. Sidewalk is located along the north side of Shenandoah Avenue between 5<sup>th</sup> Street and 12<sup>th</sup> Street, but is largely absent between 12<sup>th</sup> Street and 24<sup>th</sup> Street. Sidewalk is present in most of the developed residential areas along Centre and Loudon Avenues, but is absent in many of the

undeveloped or developed industrial areas.

The north-south aligned streets run from 5<sup>th</sup> Street on the eastern boundary to 24<sup>th</sup> Street on the western boundary. The principal north-south streets are: 5<sup>th</sup> Street (primarily in a southern direction), 10<sup>th</sup> Street, 11<sup>th</sup> Street, 15<sup>th</sup> Street, and 24<sup>th</sup> Street. The only north-south streets that traverse the study area are 5<sup>th</sup> Street, 10<sup>th</sup> Street, and 24<sup>th</sup> Street, and they connect the areas north and south of the NS tracks.

Principal signalized intersections include: Shenandoah Avenue and 5<sup>th</sup> Street, Shenandoah Avenue and 24<sup>th</sup> Street, and Loudon Avenue and 10<sup>th</sup> Street.

Depending on the intent of the traveler, significant points of ingress and egress from the study area are: Shenandoah Avenue at 24<sup>th</sup> Street, Shenandoah Avenue at 5<sup>th</sup> Street, and 10<sup>th</sup>/11<sup>th</sup> Street at Loudon Avenue. Interstate 581/U.S. 220 and U.S. 460 are major regional arterial highways that serve the study area. The most direct connection from these highways to the study area is through the I-581/Orange Avenue Exit (No. 5). From this exit the driver would travel west on Orange Avenue (U.S. 460) to 11<sup>th</sup> Street (a signalized intersection) and turn south onto 11<sup>th</sup> Street. 11<sup>th</sup> Street continues south until its terminus at Shenandoah Avenue. It is noted that 10<sup>th</sup> Street is a more direct connection from Orange Avenue to the study area; however, left turns at the Orange Avenue and 10<sup>th</sup> Street intersection are prohibited from 7 am to 7 pm. Due to this restriction, the 11<sup>th</sup> Street route is signed for tractor-trailer trucks wishing to travel to the area south of the NS tracks to turn left at the intersection of 11<sup>th</sup> Street and Loudon Avenue and proceed to 10<sup>th</sup> Street. Several attendees at the Community Involvement Meeting indicated that this arrangement can be difficult to convey to drivers entering the study area.

### ***South of NS Tracks***

South of the NS tracks the study area contains three principal east-west streets: Patterson, Rorer, and Salem Avenues. Patterson, and Salem Avenues traverse the study area uninterrupted from 5<sup>th</sup> Street to 24<sup>th</sup> Street. Norfolk Avenue is also a principal east-west street within the study area; however, it only runs from 5<sup>th</sup> Street to 12<sup>th</sup> Street. Patterson Avenue is considered a major east-west through street as it connects with Campbell Avenue to the east (a primary route into downtown Roanoke) and Boulevard to the west. Patterson, Rorer, and Salem Avenues are fully developed local streets with curb and gutter on each side. Large and frequently spaced commercial entrances are common in the densely developed industrial/manufacturing areas along Norfolk, Salem, and Rorer Avenues between 5<sup>th</sup> and 10<sup>th</sup> Streets. Sidewalks are generally located along these streets, except in some of the more industrial areas (e.g., Salem Avenue between 7<sup>th</sup> and 11<sup>th</sup> Streets and Rorer Avenue between 10<sup>th</sup> and 12<sup>th</sup> Streets). Sidewalk is largely present within the residential areas. On-street parking is permitted and is commonly used along these streets.

The north-south aligned streets run from 5<sup>th</sup> Street on the eastern boundary to 24<sup>th</sup> Street on the western boundary. The principal north-south streets are 5<sup>th</sup> Street, 10<sup>th</sup> Street, and 13<sup>th</sup> Street. The only north-south streets that traverse the study area are 5<sup>th</sup> Street, 10<sup>th</sup> Street, and Boulevard Street/24<sup>th</sup> Street, and they connect the areas north and south of the NS tracks. Many of the minor north-south



streets are not fully developed as they may lack curb & gutter and be narrower than the adjoining east-west streets.

Principal signalized intersections include: Campbell Avenue and 5<sup>th</sup> Street, Campbell Avenue and 6<sup>th</sup> Street, Patterson Avenue and 10<sup>th</sup> Street, Patterson Avenue and 13<sup>th</sup> Street, Salem Avenue and 5<sup>th</sup> Street, and Salem Avenue and 10<sup>th</sup> Street.

Ingress and egress into this area is primarily from the east using Campbell Avenue/Patterson Avenue; from the west using Boulevard/Patterson Avenue; from the north using either 5<sup>th</sup> Street or 10<sup>th</sup> Street; from the south using either 10<sup>th</sup> Street or 13<sup>th</sup> Street.

#### Public Transportation

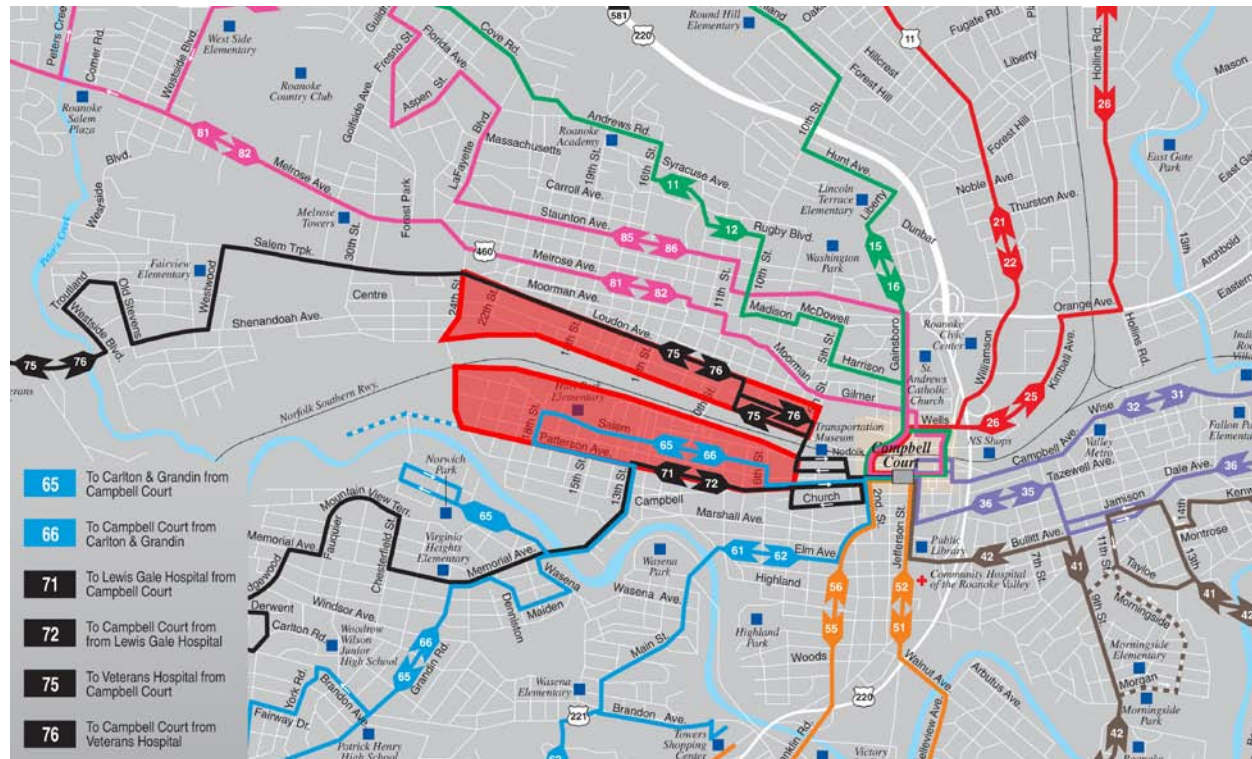
Public transportation within the study area is provided by The Greater Roanoke Transit Company, known locally as Valley Metro. Valley Metro is a private, non-profit, public service organization wholly owned by the City of Roanoke, provides a comprehensive range of transportation services to the residents of the greater Roanoke Valley area: bus service along fixed routes, special services for the disabled, commuter service to the New River Valley, and special event shuttle buses. Valley Metro contracts with First Transit, Inc., for its transportation professionals (the General Manager and Assistant General Manager), while the remainder of the staff are employees of Southwestern Virginia Transit Management Company, Inc. Funding sources include operating and capital grants from federal, state, and local agencies including the Federal Transit Administration (FTA), the Virginia Department of Rail and Public Transportation, and the City of Roanoke. Additional sources of funding include fare box revenues, advertising revenues, and the sale of passes.

The central hub for Valley Metro, Campbell Court Transportation Center, is located at 17 – 31 West Campbell Avenue, at the heart of downtown Roanoke's business and shopping districts. Campbell Court is just a block away from Roanoke's Historic City Market, where a variety of festivals and events take place throughout the year. Also nearby is Center in the Square, a cultural arts facility. Campbell Court comprises office and retail space, a public parking garage with 104 spaces available at monthly rates, and the Valley Metro Transportation Center, which provides passenger information, ticket sales, and a lobby for transit patrons, as well as easy transfer onto Valley Metro buses or other modes of transportation. A Greyhound Bus station is located within the terminal.

Bus service in the study area is provided in both the northern section (areas north of the NS tracks) and the southern section (areas south of the NS tracks). The southern section of the study area is served by Route 71/72 which runs east-west along Patterson and Campbell Avenue between 5<sup>th</sup> Street and 13<sup>th</sup> Street, and Route 65/66 which runs east-west along Salem Avenue between 6<sup>th</sup> Street and 18<sup>th</sup> Street. Route 71/72 runs between the Raleigh Court area and the Campbell Court Transportsations Center.

The northern section of the study area is served by Route 75/76, which runs east-west along Loudon Avenue between 9<sup>th</sup> Street and 24<sup>th</sup> Street (and farther west beyond the Corridor boundary) and to a limited extent, along Shenandoah Avenue between 5<sup>th</sup> Street and 9<sup>th</sup> Street. Route 75/76 runs between the Veteran Administration Hospital in Salem and Campbell Court Transportations Center.

**Figure 7: Rail Corridor Public Transit Options**





## Current Land Use and Zoning Displays

Figure 8: Roanoke Neighborhood Groups Map

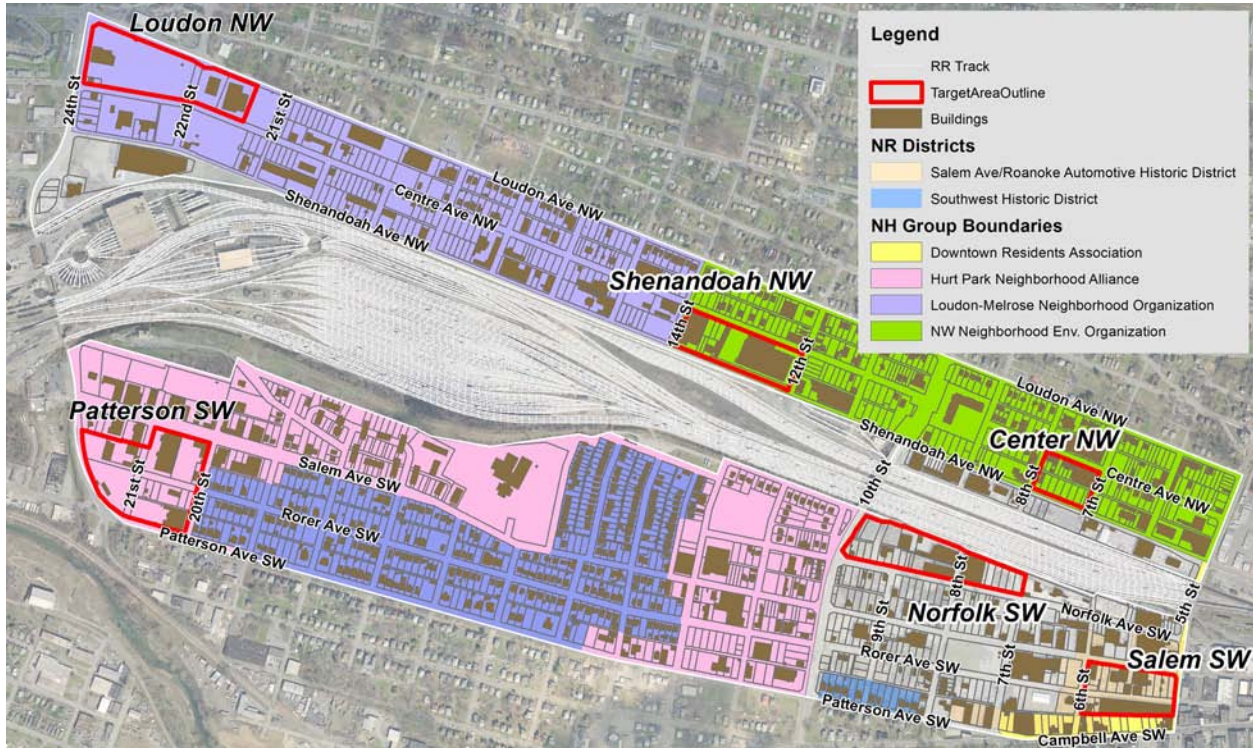
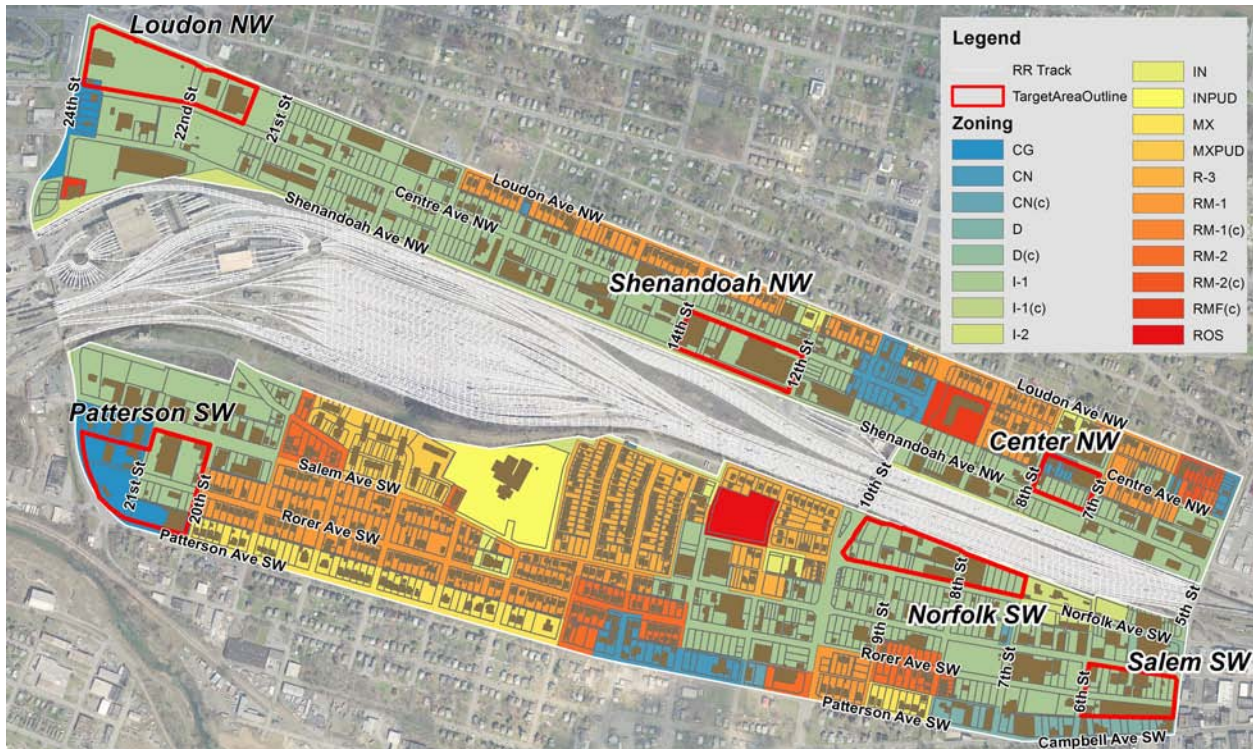


Figure 9: Roanoke Zoning Map

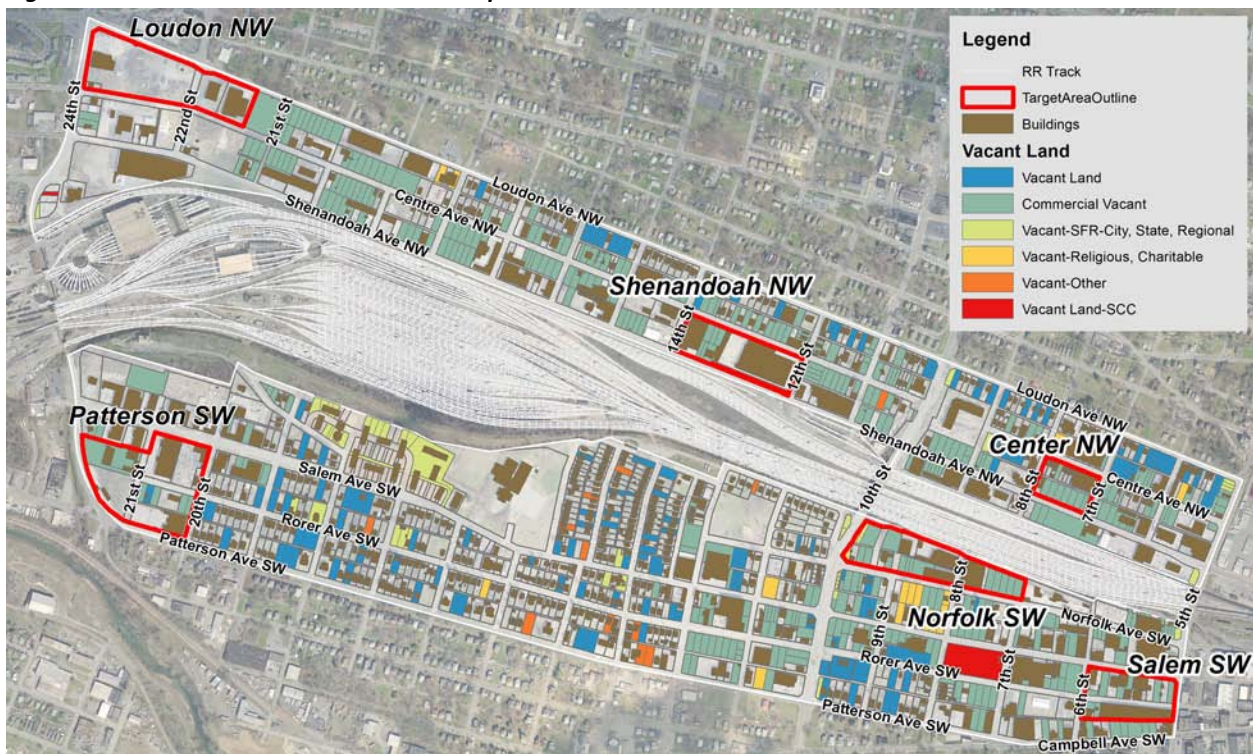




**Figure 10: Roanoke Land Use Parcel Map**



**Figure 11: Roanoke Vacant Land Status Map**



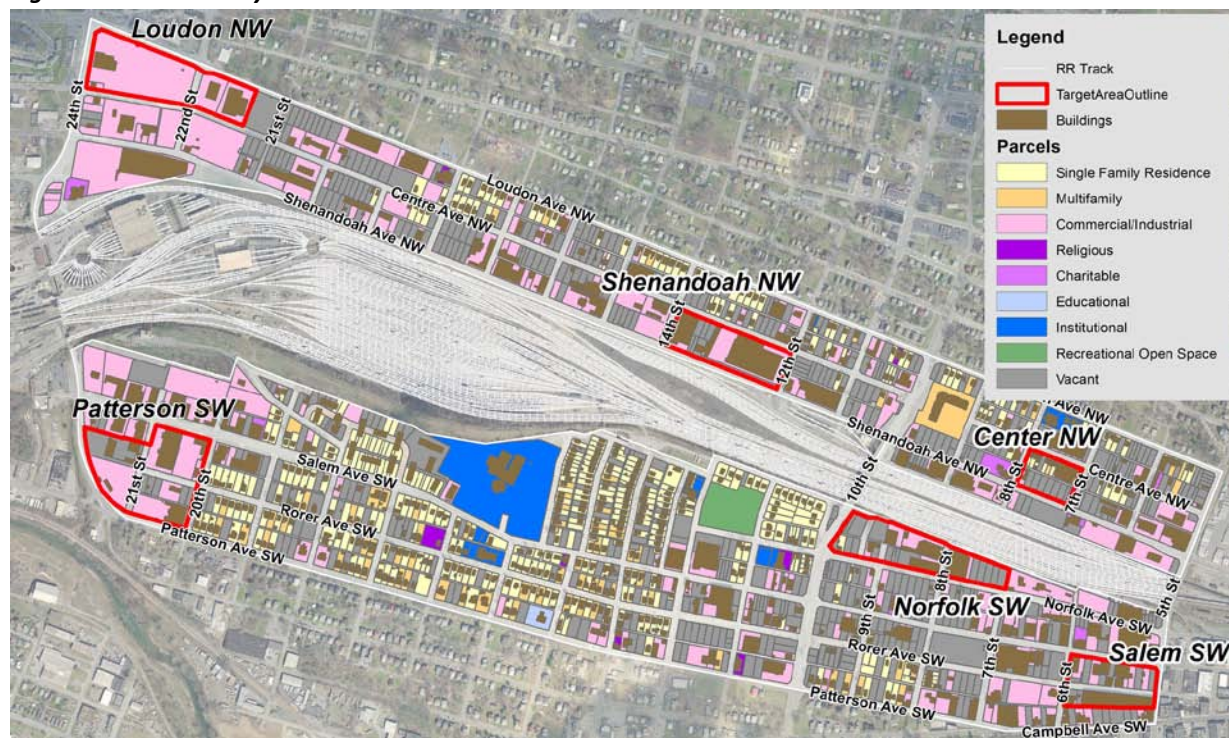


## Rail Corridor Target Areas

Through both the brownfield site inventory and discussions with the City and community, we have identified six distinct target areas across the Rail Corridor that provide significant opportunities for revitalization. The six areas are depicted in the figure below and are summarized below:

1. Loudon NW
2. Shenandoah NW
3. Center NW
4. Patterson SW
5. Norfolk SW
6. Salem SW

**Figure 12: Land Use by Parcel**



### Target Area 1 – Loudon NW

#### Target Area 1/Loudon NW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- Boundary – There are four parcels in this target area. The target area is bordered by Loudon Avenue NW to the north, Center Avenue NW to the south, between 21<sup>st</sup> and 22<sup>nd</sup> Streets to the east, and 24<sup>th</sup> Street to the west.

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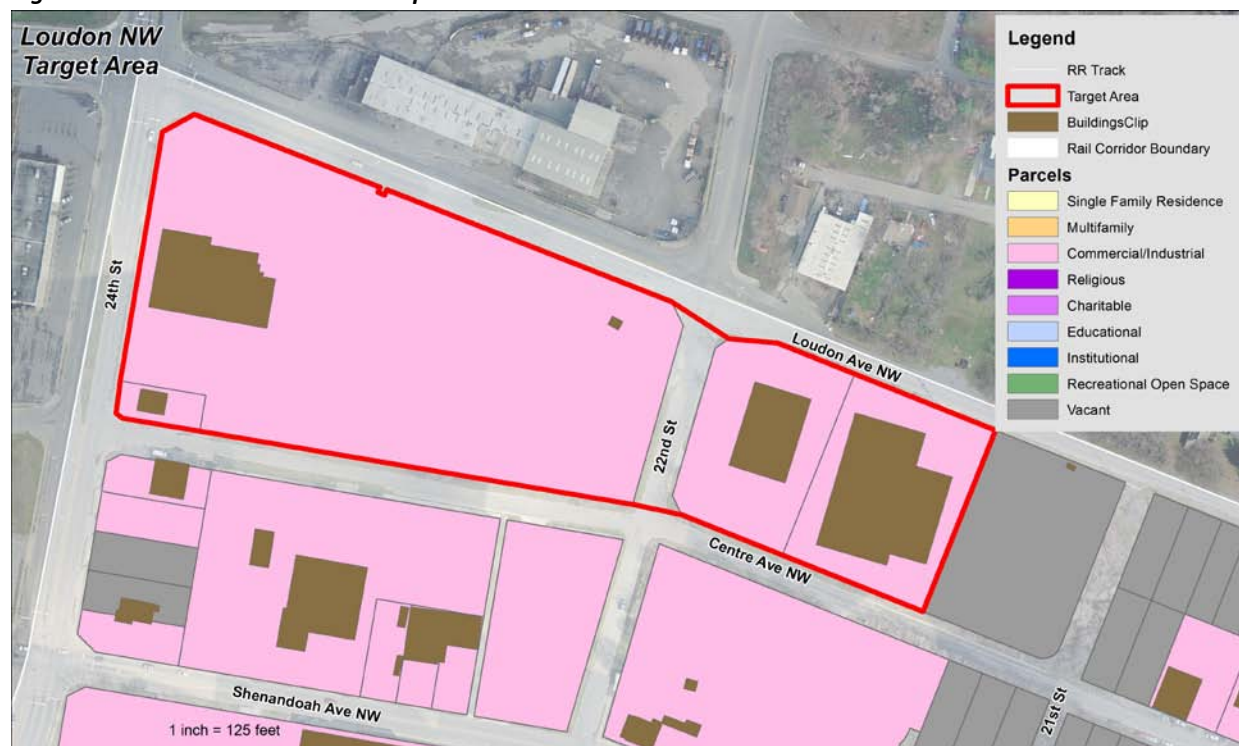
- Ownership – The four parcels are owned by four different private owners;
- Acres – The four parcels constitute approximately 8.5 acres of land area;
- Buildings – Four buildings are located on four parcels zoned commercial/industrial;
- Zoning – Three parcels are zoned industrial and one parcel is zoned commercial;
- Environmental Issues – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- Neighborhood Group – The neighborhood group representing this area is the Loudon-Melrose Neighborhood Organization.

**Target Area 1/Loudon NW Parcel Table**

Tax ID Number	Parcel Address	Owner	Environmental Concerns
2310101	315 24TH ST NW	ROBERTS ANDREW L III	None
2310102	301 24TH ST NW	YA SIN HABIBAH	Petroleum Inventory GIS Layer
2310201	315 22ND ST NW	WILLIAMS JOHN O & ESTHER M	Hazmat Waste Handler GIS Layer
2310207	2124 LOUDON AVE NW	ZIMMERMAN JUNE R	None

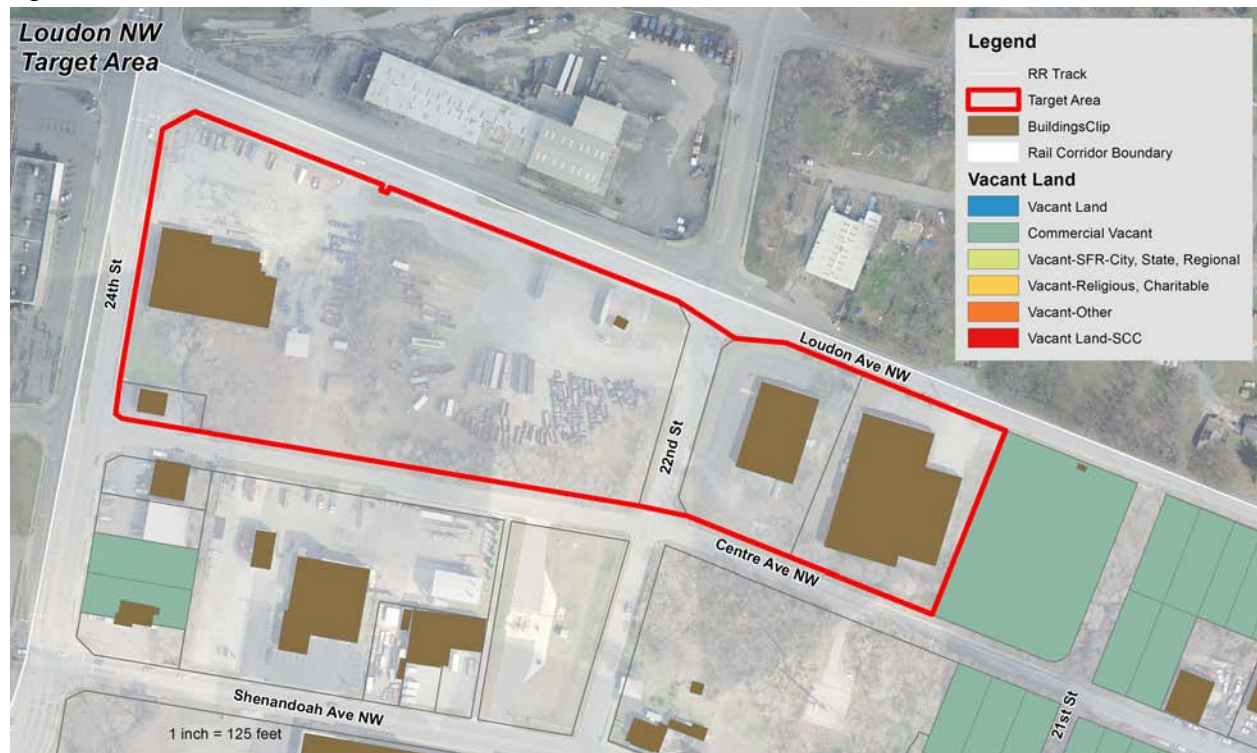
**Target Area 1/Loudon NW Maps**

**Figure 13: Loudon NW Land Use Map**

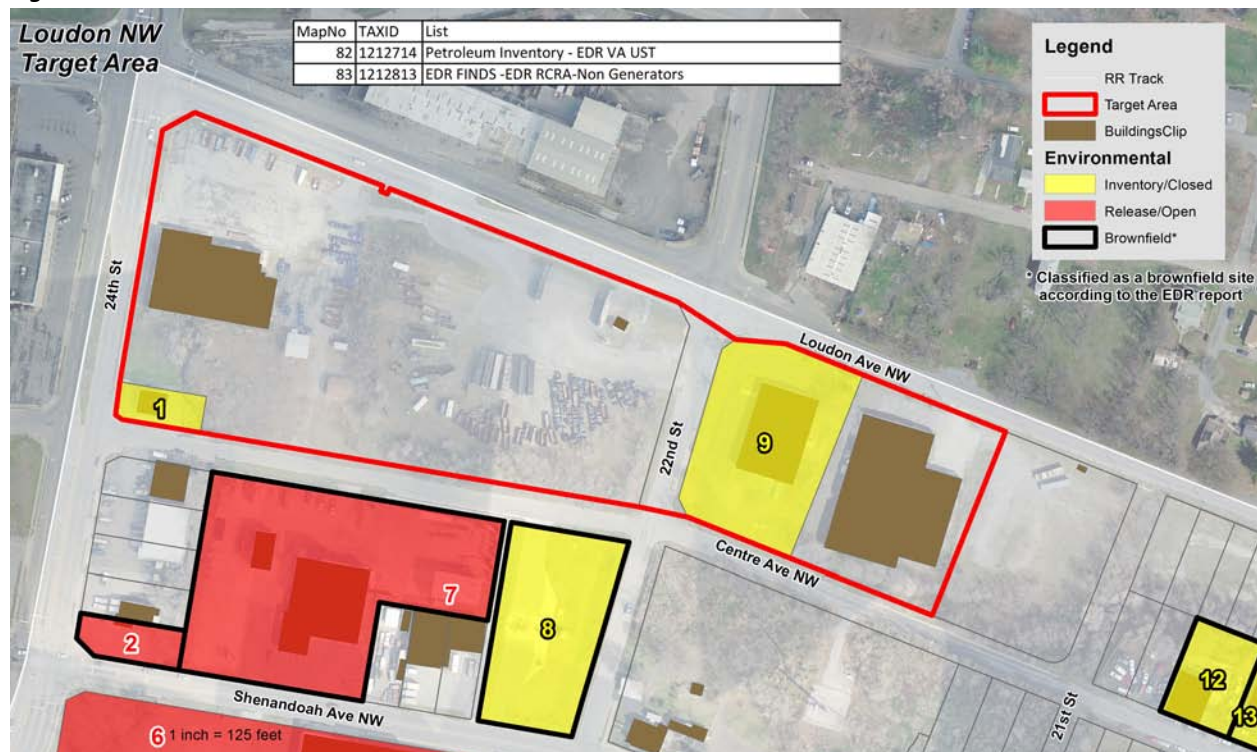




**Figure 14: Loudon NW Vacant Land**



**Figure 15: Loudon NW Environmental**



### Target Area 1/Loudon NW Industry and Use Targets

The area provides relatively large lots for the Rail Corridor, with no direct residential abutters. This reduces the potential for zoning use conflicts. Of the areas under consideration, Target Area I presents the greatest opportunity for reuse with the fewest barriers to overcome.

Parcel geography is relatively flat, with good access to the highway by way of Salem Turnpike to Orange Avenue.

Potential uses include warehouse/logistics assembly and light manufacturing. Note that the site is probably most valuable as a development site rather than for the buildings on the parcels.

### Target Area 1/Loudon NW Reuse Opportunities and Constraints

#### Opportunities

- Location is ideal to attract new industrial/commercial users to this area.
- Limited number of primarily large parcels can be helpful to revitalization even though each has a different owner.
- The area is zoned industrial/commercial; no rezoning would be required for these uses.
- There are no actionable environmental issues that have been identified.
- There are no residences within or in close proximity to this area.
- There are four buildings that have an older design so adapting them would be dependent on the specific reuse that is planned.
- Easy highway access via Melrose Avenue to U.S. 460, U.S. 220, and I-581/I-81.
- Water flow test of fire hydrant was adequate.
- The Loudon–Melrose neighborhood group could be a catalyst to facilitate revitalization.

#### Constraints

- Presence of discharge pipe and small stream running across southwest corner of the site.

## Target Area 2 – Shenandoah NW

### Target Area 2/Shenandoah NW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- Boundary – There are nine parcels within this target area. The target area is bordered by Center Avenue NW to the north, Shenandoah Avenue NW to the south, 12<sup>th</sup> Street to the east, and 14<sup>th</sup> Street to the west.
- Ownership – The nine parcels are owned by three different private owners;
- Acres – The nine parcels constitute approximately 4.4 acres of land area;
- Buildings – Three buildings across three parcels with two zoned commercial/industrial and one zoned commercial but vacant;
- Zoning – Two parcels are zoned commercial/industrial, six are zoned commercial but vacant, one is zoned vacant land SCC;

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- Environmental Issues – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- Neighborhood Group – The neighborhood group representing this area is the Gilmer Neighborhood Group.

#### Target Area 2/Shenandoah NW Parcel Table

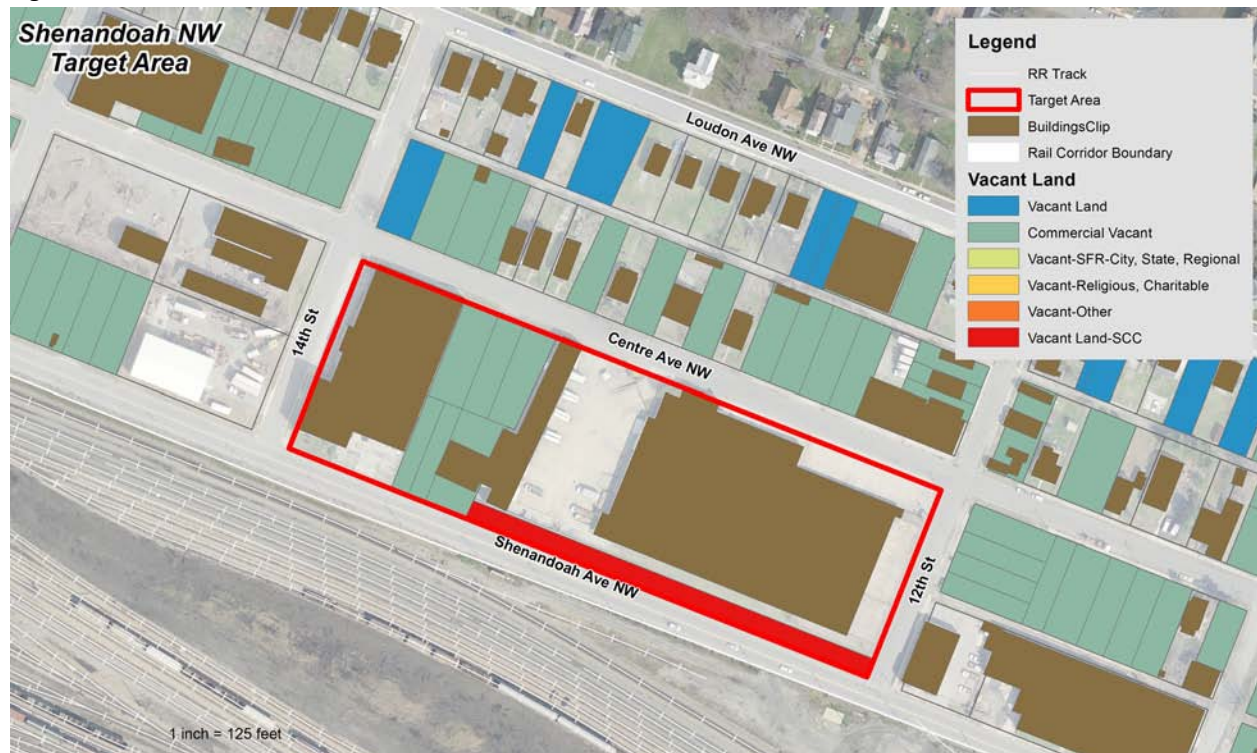
Tax ID Number	Parcel Address	Owner	Environmental Concerns
2212901	105 14TH ST NW	SIMS FAMILY LLC	None
2212905	0 CENTRE AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212906	0 CENTRE AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212907	0 CENTRE AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212913	0 SHENANDOAH AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212914	0 SHENANDOAH AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212915	0 SHENANDOAH AV NW	PENSCO TRUST COMPANY CUSTODIAN	None
2212916	1201 SHENANDOAH AVE NW	PENSCO TRUST COMPANY CUSTODIAN	EDR VA UST
2212919	0 SHENANDOAH AV NW	N & W RAILWAY CO	Petroleum Release GIS Layer

#### Target Area 2/Shenandoah NW Maps

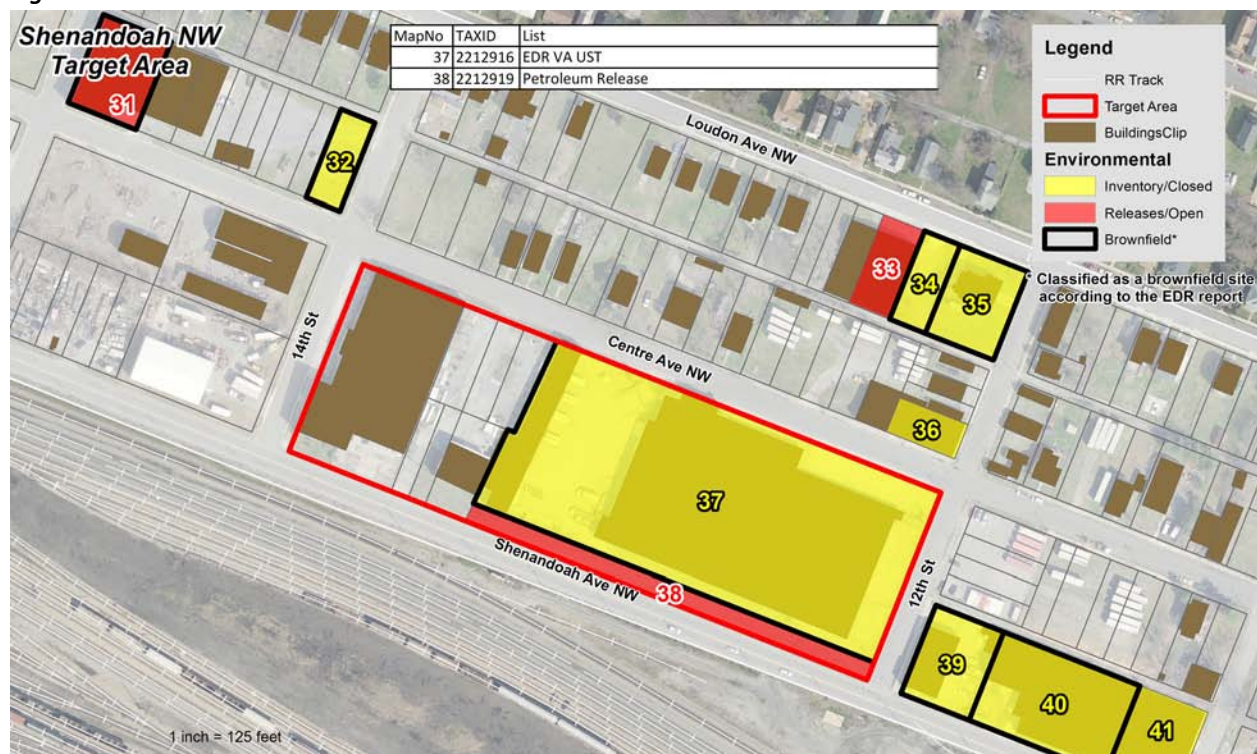
**Figure 16: Shenandoah NW Land Use Map**



**Figure 17: Shenandoah NW Vacant Land**



**Figure 18: Shenandoah NW Environmental**





### Target Area 2/Shenandoah NW Industry and Use Targets

This area would prove a challenge to land assembly, given the number of owners within it. Nonetheless, assembly of parcels into a larger, more attractive site should be manageable.

Logistics are not likely to be as appropriate a use for this area as heavy and consistent truck traffic will be difficult to accommodate along local roads. Centre Avenue faces residential parcels, while Shenandoah fronts the rail yard. In addition, the Noland building, the largest of the existing available buildings in the area, has ceiling heights that are too low to accommodate modern material movement tools and techniques.

A key feature, however, is that this is one of the two target areas that historically have had direct rail access. It is possible that the site could be converted once again to rail access with the cooperation of Norfolk Southern.

Potential uses include light manufacturing or assembly. It is possible that food manufacturing might also be accommodated in the area.

Even for manufacturing, most modern end users looking for sites of this floor area will also likely find ceiling height to be an issue and may prefer to develop a new building upon the site.

### Target Area 2/Shenandoah NW Reuse Opportunities and Constraints

#### Opportunities

- Two of the occupied parcels in this area are occupied and many parcels owned by a trust.
- The area is zoned industrial/commercial; no rezoning would be required for these uses.
- Three buildings have an older design so adapting them would be dependent on the specific reuse that is planned.
- Water flow test of fire hydrant was adequate.
- The Gilmer neighborhood group (Northwest Neighborhood Environmental Organization [NNEO]) could be a catalyst to facilitate revitalization.

#### Constraints

- There is one open UST release that needs to be addressed.
- There are no residences within the area, but there are residences across Center Avenue NW from this area.
- Sewer easements/sewer mains run underneath existing building(s).
- Several storm drain lines and inlets are located on the site and these lines discharge into the main line running through the site.

## Target Area 3 - Center NW

### Target Area 3/Center NW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- **Boundary** – There are 20 parcels within this target area. The target area is bordered by Center Avenue NW to the north, Shenandoah Avenue NW to the south, 7<sup>th</sup> Street to the east, and 8<sup>th</sup> Street to the west.
- **Ownership** – The 20 parcels are owned by eight different private owners and two companies;
- **Acres** – The 20 parcels constitute approximately 2.4 acres of land area;
- **Buildings** – Five buildings are located on single family zoned lots, one building on a multifamily zoned parcel and two buildings across five commercial/industrially zoned parcels;
- **Zoning** – Five parcels are zoned single family residences, one parcel is zoned multifamily, four parcels are zoned industrial/commercial and 10 parcels are zoned commercial but vacant;
- **Environmental Issues** – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- **Neighborhood Group** – The neighborhood group representing this area is the Northwest Neighborhood Environmental Organization.

### Target Area 3/Center NW Parcel Table

Tax ID Number	Parcel Address	Owner	Environmental Concerns
2112701	730 CENTRE AVE NW	KEATON JOSEPH A & MARY W	None
2112702	728 CENTRE AVE NW	WILLIAMS JAMES CORNELL ETAL	None
2112703	726 CENTRE AVE NW	SMALL SHEILA E	None
2112704	0 CENTRE AV NW	SMALL SHEILA E	None
2112705	720 CENTRE AVE NW	LEWIS DONNA HAMPTON	None
2112706	718 CENTRE AVE NW	RYE WILLIAM A	None
2112707	716 CENTRE AVE NW	MAYS TAMMY L	None
2112708	714 CENTRE AVE NW	PRILAND LLC	None
2112709	710 CENTRE AVE NW	PRILAND LLC	Petroleum Inventory GIS Layer
2112710	706 CENTRE AVE NW	PRILAND LLC	None
2112711	702 CENTRE AVE NW	LITTLEFIELD A ERNEST	Petroleum Inventory GIS Layer
2112712	731 SHENANDOAH AVE NW	HATCHER RUTH M	None
2112713	727 SHENANDOAH AVE NW	HATCHER RUTH M	None
2112714	723 SHENANDOAH AVE NW	HATCHER RUTH M	None
2112715	719 SHENANDOAH AVE NW	HATCHER RUTH M	None
2112716	715 SHENANDOAH AVE NW	HATCHER RUTH M	None
2112717	711 SHENANDOAH AVE NW	NESTLE BROOKE LLC	None
2112718	707 SHENANDOAH AVE NW	NESTLE BROOKE LLC	None

Tax ID Number	Parcel Address	Owner	Environmental Concerns
2112719	703 SHENANDOAH AVE NW	NESTLE BROOKE LLC	None
2112720	701 SHENANDOAH AVE NW	NESTLE BROOKE LLC	None

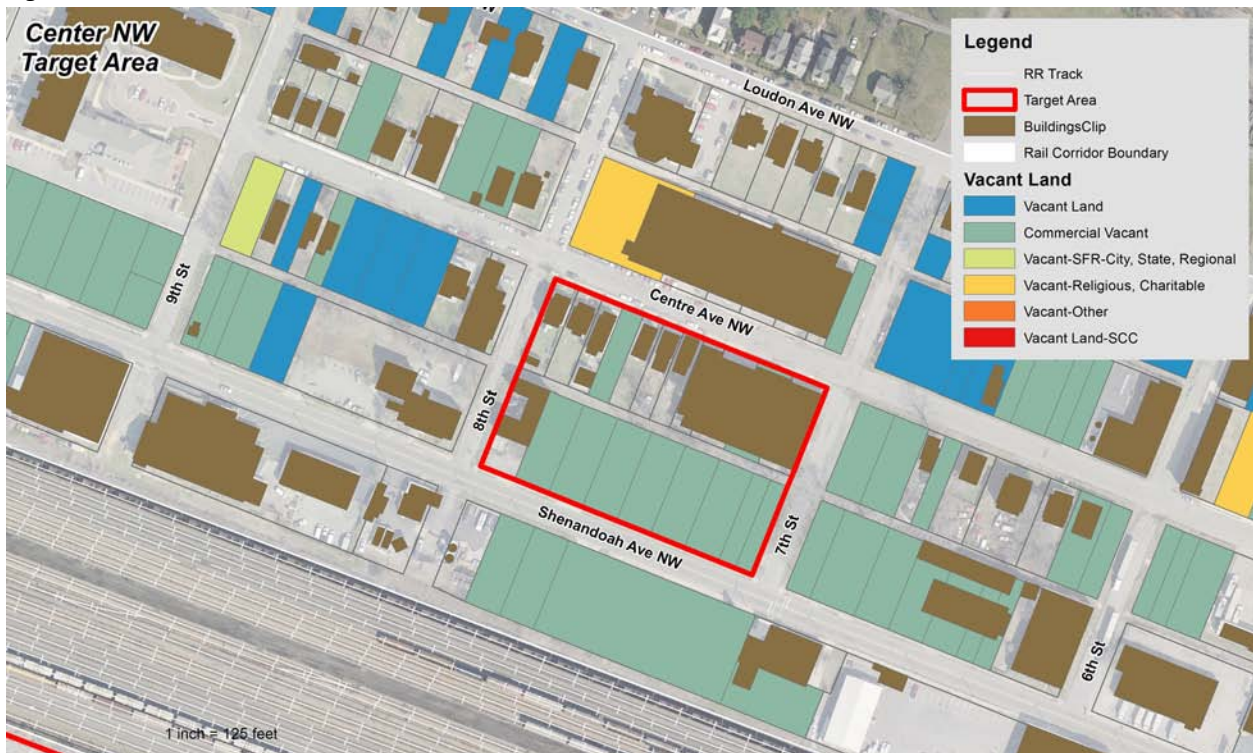
### Target Area 3/Center NW Maps

**Figure 19: Center NW Land Use Map**

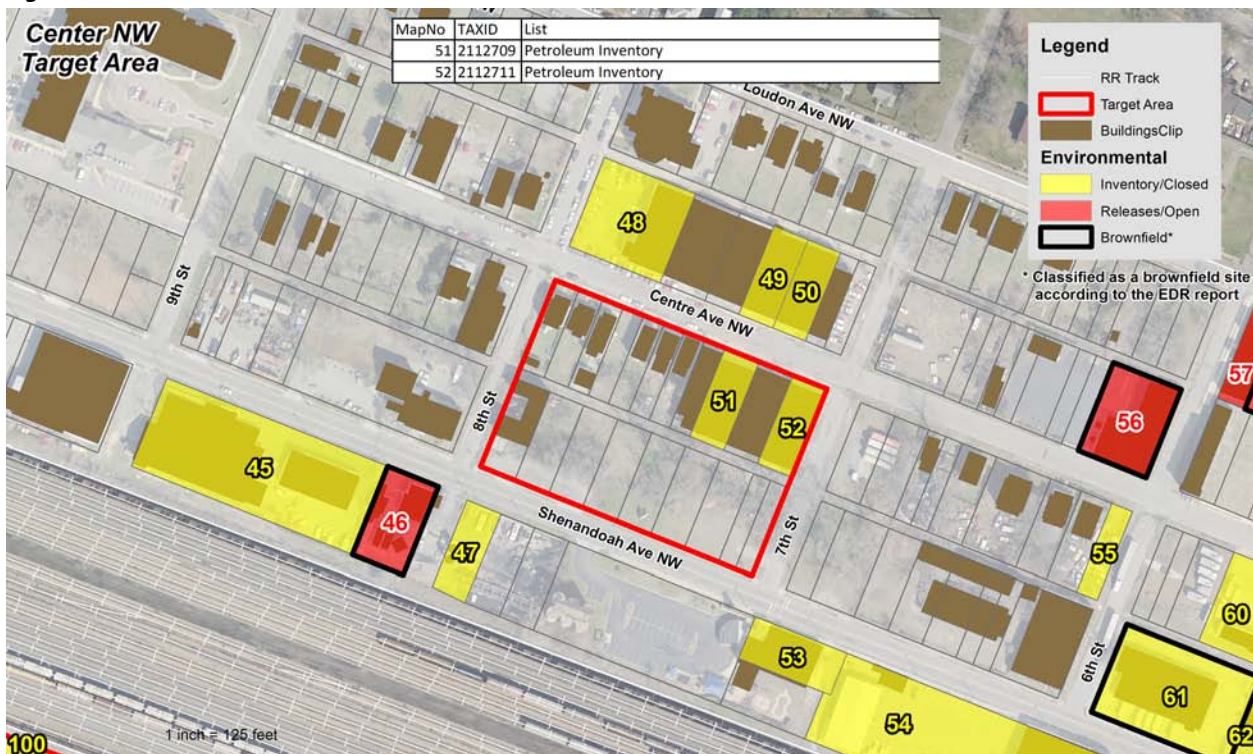




**Figure 20: Center NW Vacant Land**



**Figure 21: Center NW Environmental**



### Target Area 3/Center NW Industry and Use Targets

This target area characterizes the issue of zoning conflict, whereby land uses are interspersed within the Rail Corridor. It also presents an opportunity for directing change over time. The parcels along Centre Avenue NW should be encouraged to transition to commercial and/or community uses over the foreseeable future. This may include neighborhood shopping, training centers, daycare, and/or personal services.

The parcels located along Shenandoah Ave NW are more easily combined to accommodate either commercial or industrial uses requiring a larger facility footprint. These should be zoned and marketed accordingly. Appropriate uses would include light manufacturing or assembly and/or commercial activities.

Given the proximity to residences, heavy distribution and industrial traffic would become a disturbance.

Care must be taken to acknowledge residential uses on the urban blocks to the east and northwest of this target area. These adjacent areas should also be considered for future transition.

### Target Area 3/Center NW Reuse Opportunities and Constraints

#### Opportunities

- There are no actionable environmental issues that have been identified.
- The five single family buildings have an older design so adapting them would be dependent on the specific reuse that is planned.
- The Northwest Neighborhood Environmental Organization could be a catalyst to facilitate revitalization.

#### Constraints

- Many parcels of a small size with many owners may make reuse challenging.
- Five parcels are zoned residential which could require rezoning for future development.
- There are residences within the area, as well as in close proximity of the area.
- Sewer easement must be taken into account when considering future use.
- The storm drainage infrastructure is located within the dedicated alleyway.
- Water flow test of fire hydrant is adequate for a mainly residential area but inadequate for commercial/industrial zoning.

## Target Area 4 - Patterson SW

### Target Area 4/Patterson SW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- Boundary – There are 13 parcels within this target area. The target area is bordered by Salem Avenue SW to the north, Patterson Avenue SW to the south, 20<sup>th</sup> Street to the east, and 24<sup>th</sup> Street to the west.
- Ownership – The 13 parcels are owned by 10 different private owners;
- Acres – The 13 parcels constitute approximately 8.8 acres of land area;

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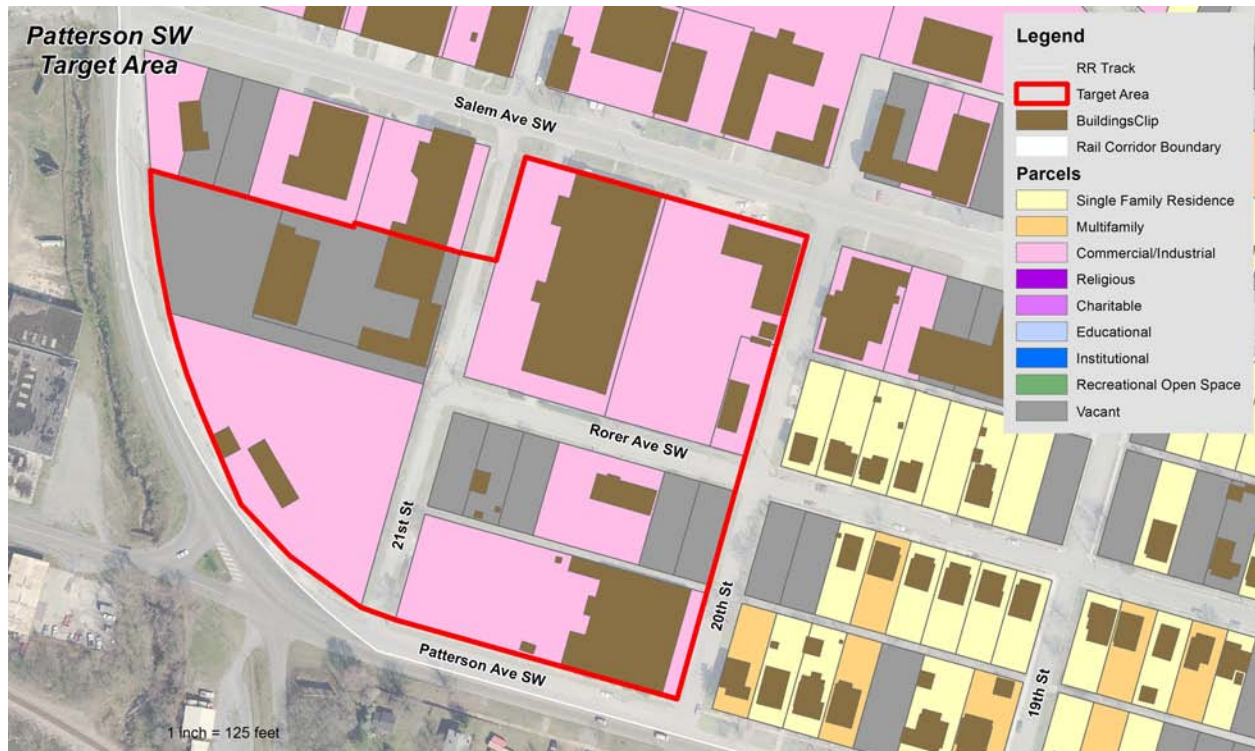
- Buildings –Seven buildings and some smaller structures on six parcels zoned commercial/industrial, two buildings on one commercial parcel that is vacant and one building and a structure on a parcel zoned vacant.
- Zoning – Six parcels are zoned commercial/industrial, one parcel is vacant and otherwise undesignated, and six are designated commercial but vacant;
- Environmental Issues – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- Neighborhood Group – The neighborhood group representing this area is the Hurt Park Neighborhood Alliance.

**Target Area 4/Patterson SW Parcel Table**

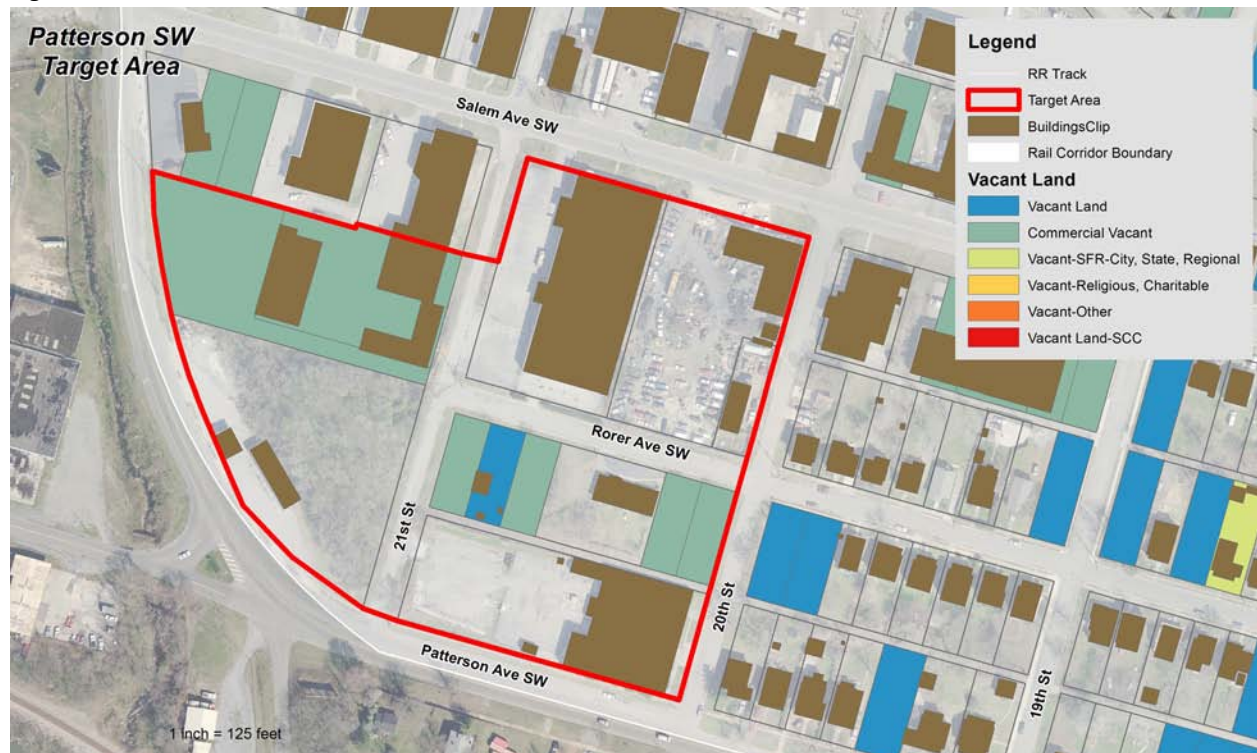
Tax ID Number	Parcel Address	Owner	Environmental Concerns
1311917	0 BOULEVARD ST SW	THE CY N BAHAKEL REVOCABLE TRUST II	None
1311919	2101 21ST ST SW	SILVERSTEIN ALFRED	None
1312004	2026 SALEM AVE SW	RITCHIE TIMOTHY LEE	DEQ Registered Petroleum Tanks GIS Layer; Petroleum Inventory GIS Layer; EDR VA UST
1312008	2002 SALEM AVE SW	BISHOP WARREN G & TONY BRIAN	Petroleum Inventory GIS Layer; EDR FINDS
1312016	104 20TH ST SW	BISHOP WARREN G & TONY BRIAN	None
1312606	322 BOULEVARD SW	WHITE LOTUS LLC	DEQ Registered Petroleum Tanks GIS Layer; Petroleum Inventory GIS Layer; EDR VA LUST (Open); EDR VA UST
1312701	0 RORER AV SW	WILLIAMS EUGENE III	None
1312702	2026 RORER AVE SW	EVERETT ALVIN J	None
1312703	0 RORER AV SW	EVERETT ALVIN J	None
1312706	2012 RORER AVE SW	ANSUN SOCIAL CLUB INC	None
1312707	0 RORER AV SW	CABBLER RANDY CARL ETALS	None
1312708	0 RORER AV SW	CABBLER RANDY CARL ETALS	None
1312709	2001 PATTERSON AVE SW	HAMMOND ALBIN B	Petroleum Inventory GIS Layer

### Target Area 4/Patterson SW Maps

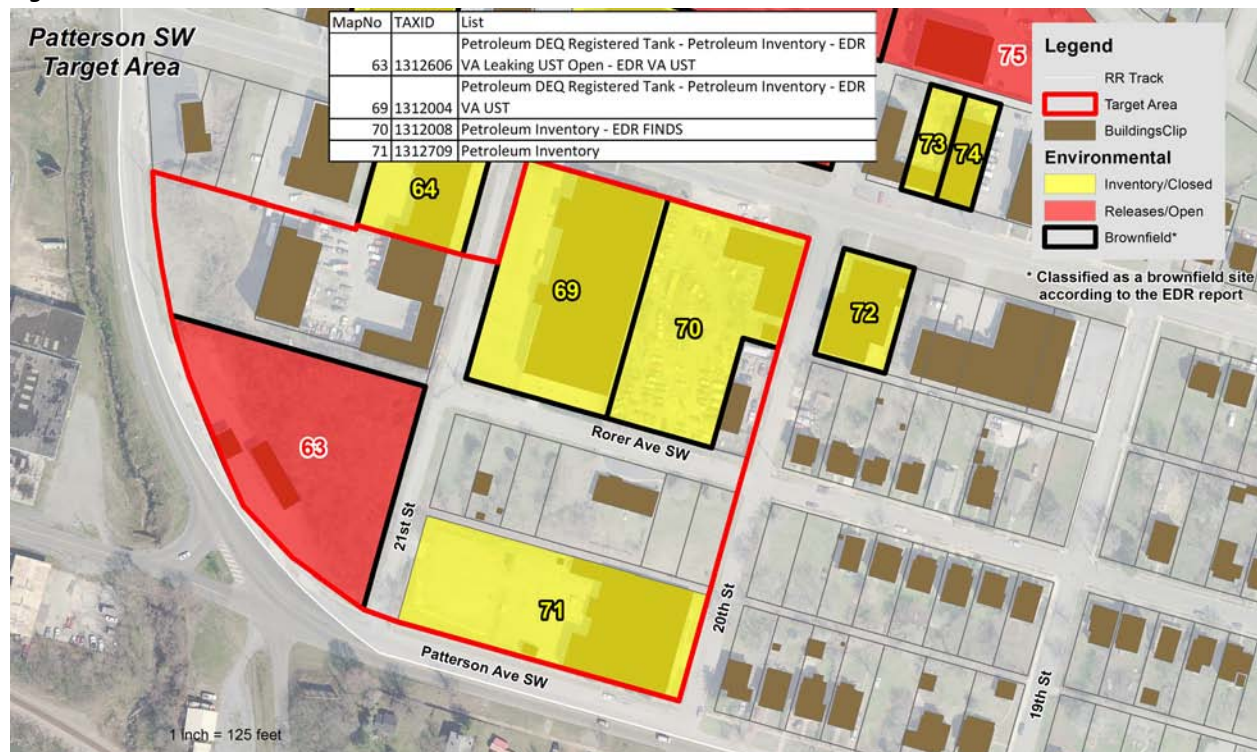
**Figure 22: Patterson SW Land Use Map**



**Figure 23: Patterson SW Vacant Land**



**Figure 24: Patterson SW Environmental**





#### Target Area 4/Patterson SW Industry and Use Targets

This target area poses additional challenges due to the topography of the region. The parcel at the extreme southwest of the target area begins at street level, but then experiences a dramatic upslope to 21<sup>st</sup> Street and Rohrer behind it. As such, the team recommends that this site be cleaned and then retained either for convenience/automotive use or considered for other adaptive use.

The parcels bordered by Salem Ave NW, 20<sup>th</sup> Street, Rorer Ave SW, and 21<sup>st</sup> Street provide more direct opportunity for re-use or revitalization. If cleaned and marketed either singly or collectively, these parcels may provide opportunities for mid-size light manufacturing, production, or assembly. Terrain and lot size are likely not conducive to more intensive logistics or warehousing activities.

#### Target Area 4/Patterson SW Reuse Opportunities and Constraints

##### Opportunities

- The area is zoned industrial/commercial; no rezoning would be required for these uses.
- There is one open UST release which needs to be addressed. The buildings and smaller structures have an older design so adapting them would be dependent on the specific reuse that is planned.
- Regional access to the site is available via major north-south streets (Boulevard and 24th Street) and east-west streets (Salem Avenue Patterson Avenue).
- The Hurt Park Neighborhood Alliance could be a catalyst to facilitate revitalization.

##### Constraints

- There are a significant number of different land owners in this area which could make reuse challenging.
- There is one open UST release which needs to be addressed.
- There are no residences within the area, but there are residences across 20th Street adjacent to this area.
- An area in the southwest corner of the site is currently undeveloped due to steep slopes (slopes between 3:1 and 4:1).
- Water flow test of fire hydrant was inadequate on the hydrant located near the intersection of Salem Avenue and 21<sup>st</sup> Street.
- There is minimal storm drainage infrastructure serving the target site and the adjoining areas.

## Target Area 5 - Norfolk SW

### Target Area 5/Norfolk SW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- **Boundary** – There are 23 parcels within this target area. The target area is bordered by railroad yard to the north, Norfolk Avenue SW to the south, 7<sup>th</sup> Street to the east, and 10<sup>th</sup> Street to the west.
- **Ownership** – 20 parcels are owned by eight different private owners. Three parcels are owned by the Commonwealth of VA;
- **Acres** – The 23 parcels constitute approximately six acres of land area;
- **Buildings** – One building is on a parcel zoned for single family residences and six buildings are on commercially/industrially zoned parcels with most of those parcels registering as occupied;
- **Zoning** – One parcel is zoned as single family, five parcels zoned commercial/industrial, 14 zoned commercial but vacant, and three parcels are zoned state owned and vacant;
- **Environmental Issues** – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- **Neighborhood Group** – There is no formal neighborhood group that represents this target area.

**Target Area 5/Norfolk SW Parcel Table**

Tax ID Number	Parcel Address	Owner	Environmental Concerns
1110205	0 JACKSON AV SW	COMMONWEALTH OF VIRGINIA	None
1110206	0 JACKSON AV SW	VIRGINIA HOLDINGS CORP ATTN: BILL TI	None
1110209	0 10 <sup>TH</sup> ST SW	COMMONWEALTH OF VIRGINIA	None
1110210	923 NORFOLK AVE SW	SPINNER VIOLA MARIE	None
1110211	0 NORFOLK AV SW	LYNCH GARY L & MARY R	None
1110212	0 NORFOLK AV SW	COLLINS LEROY	None
1110213	0 JACKSON AV SW	COMMONWEALTH OF VIRGINIA	None
1110301	0 JACKSON AV SW	VIRGINIA HOLDINGS CORP ATTN: BILL TI	None
1110302	905 NORFOLK AVE SW	GILES ROBIN L & CHRISTINE M	DEQ Registered Petroleum Tanks GIS Layer; Petroleum Inventory GIS Layer
1110303	0 NORFOLK AV SW	GILES ROBIN L & CHRISTINE M	Petroleum Inventory GIS Layer
1110401	2 9TH ST SW	BLUE RIDGE ASSOCIATES OF ROANOKE LLC	None
1110405	3 8TH ST SW	BLUE RIDGE ASSOICATES OF ROANOKE LLC	Petroleum Inventory GIS Layer
1110406	0 NORFOLK AV SW	BLUE RIDGE ASSOCIATES OF ROANOKE LLC	None
1110407	0 NORFOLK AV SW	BLUE RIDGE ASSOCIATES OF ROANOKE LLC	None
1110408	0 NORFOLK AV SW	BLUE RIDGE ASSOCIATES OF ROANOKE LLC	None

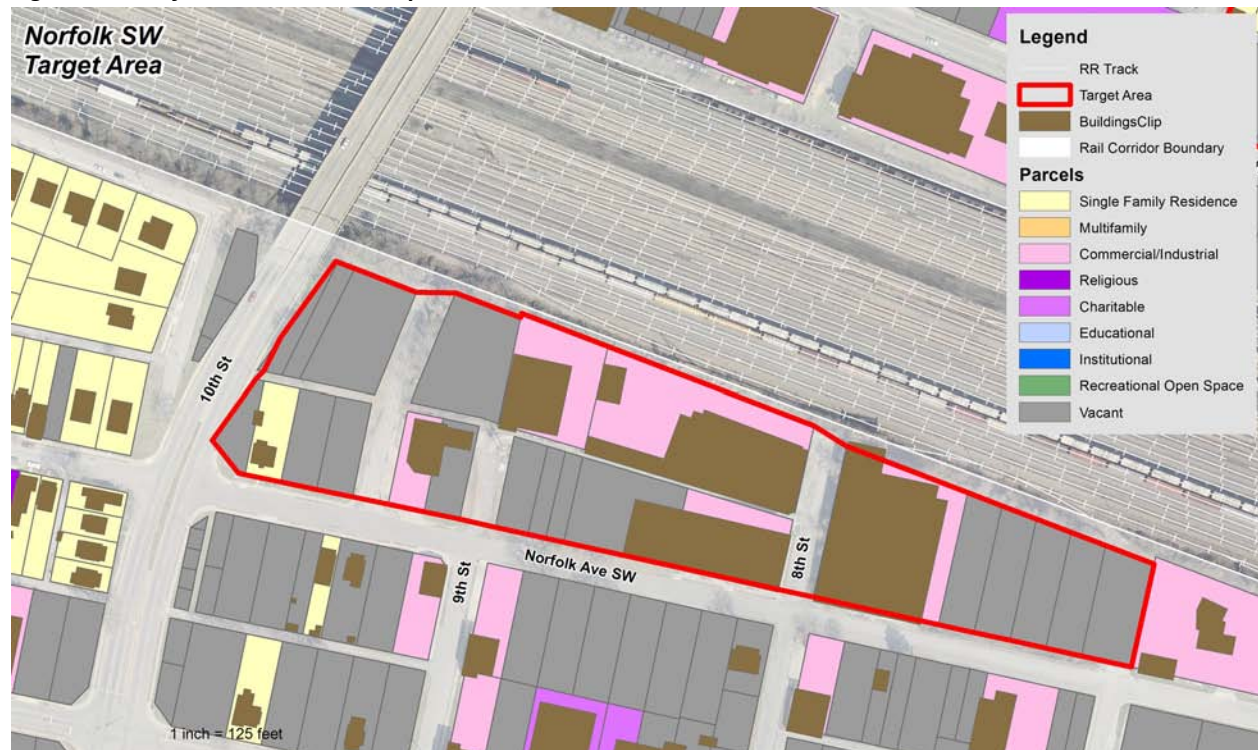
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Tax ID Number	Parcel Address	Owner	Environmental Concerns
1110409	0 NORFOLK AV SW	JIMENEZ JUAN	None
1110412	801 NORFOLK AVE SW	JIMENEZ JUAN	None
1110501	735 NORFOLK AVE SW	WTH PROPERTIES LLC	None
1110504	0 NORFOLK AV SW	WTH PROPERTIES LLC	None
1110505	0 NORFOLK AV SW	WTH PROPERTIES LLC	None
1110506	0 NORFOLK AV SW	WTH PROPERTIES LLC	Petroleum Inventory GIS Layer
1110507	0 NORFOLK AV SW	WTH PROPERTIES LLC	None
1110508	0 NORFOLK AV SW	WTH PROPERTIES LLC	None

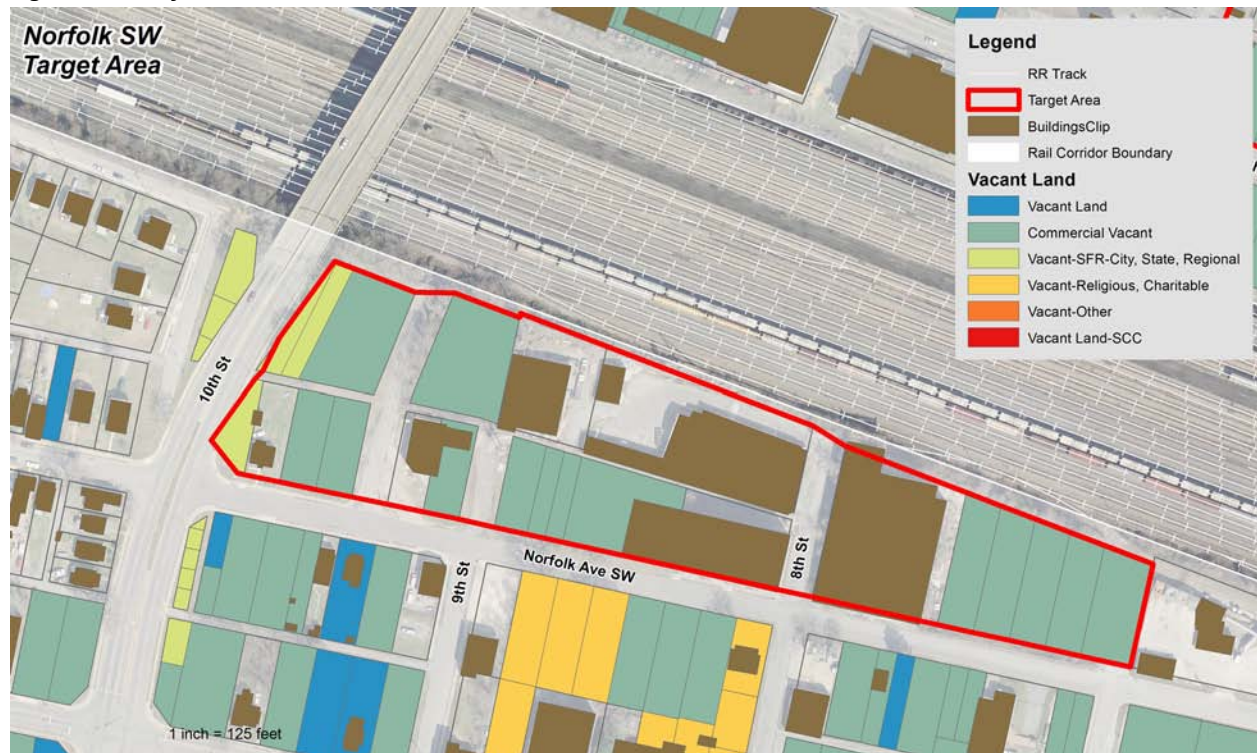
### Target Area 5/Norfolk SW Maps

**Figure 25: Norfolk SW Land Use Map**

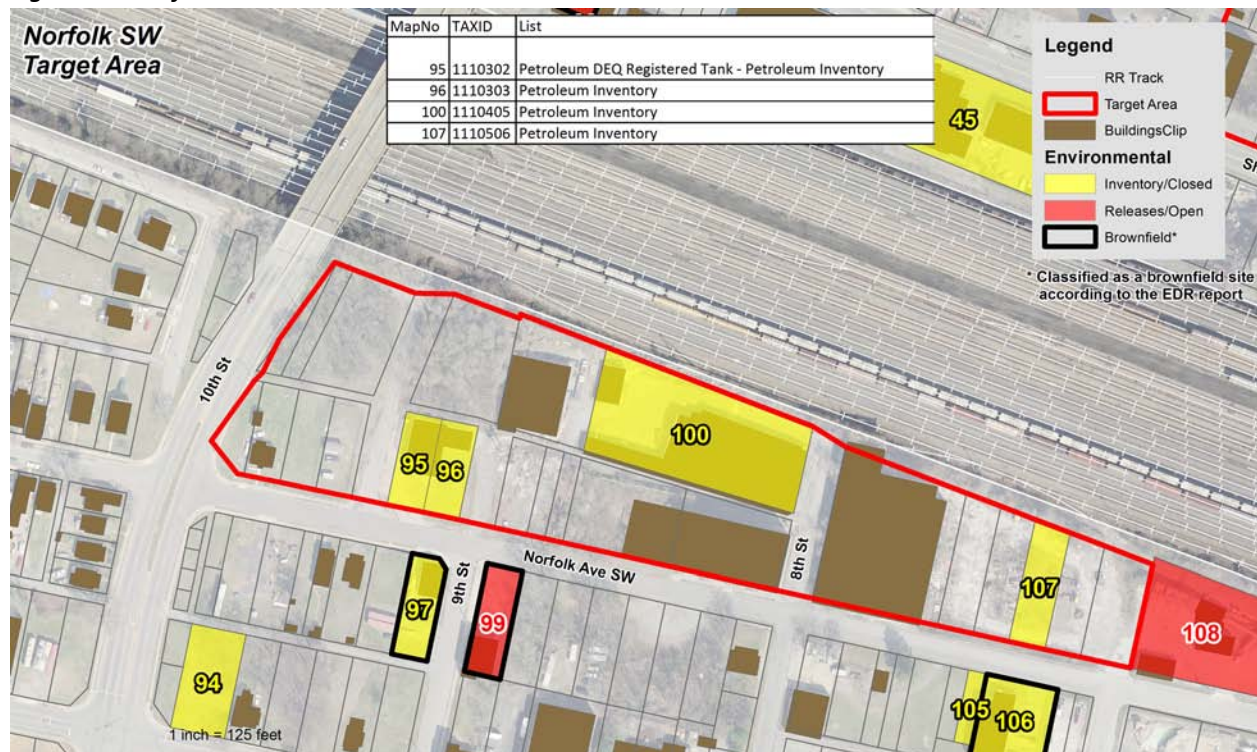




**Figure 26: Norfolk SW Vacant Land**



**Figure 27: Norfolk SW Environmental**





### Target Area 5/Norfolk SW Industry and Use Targets

As with other target areas, splintered land ownership will pose a challenge to revitalization of the western section. The current residential section is not in character with other existing uses in the immediate vicinity. It could pose safety and potential zoning conflict issues to residents and businesses alike.

There are three clusters of multiple properties with the same owners, suggesting that combinations or assemblages are possible within the target area. This fact, coupled with the area's direct rail access, suggests that light or heavy manufacturing or assembly may be accommodated at the area.

Structures on the parcels – particularly those directly along the rail line – do not appear to have been maintained and will likely have to be removed or significantly renovated in order to make them usable. It is more likely that a manufacturing user will have needs for different configuration, making replacement a more financially and practical option.

Parcels along Norfolk Avenue closer to 10<sup>th</sup> Street should transition from industrial to more commercial/adaptive uses in order to create a buffer between the development types.

### Target Area 5/Norfolk SW Reuse Opportunities and Constraints

#### Opportunities

- There have been no actionable environmental issues identified.
- Seven buildings have an older design including one zoned as single family residences, so adapting them would be dependent on the specific reuse that is planned.
- 10th Street is a regional 4-lane north-south street providing access to U.S. 460, U.S. 220, and I-581.

#### Constraints

- There are a significant number of small parcels owned by many different owners which could make reuse challenging.
- The area is a mix of residential, industrial/commercial, and state owned properties which could make reuse challenging.
- There is one residence within the area as well as residences within close proximity of the area.
- Water flow test of fire hydrant was inadequate on the hydrant located near the intersection of Norfolk Avenue and 8th Street and near the intersection of 9th Street & the NS Tracks.
- Sanitary sewer mains are located adjacent to and within the target site and may need to be relocated or encased.
- There is no storm drainage infrastructure (public or private) located on the target site.
- There is no formal neighborhood group that represents this target area.

## Target Area 6 - Salem SW

### Target Area 6/Salem SW Overview

The comprehensive tabulation of property information for each parcel in this target area is discussed in [Appendix A](#) and located on the CD on the back cover of this report. Below is a summary of that information.

- **Boundary** – There are 24 parcels within this target area. The target area is bordered by Salem Avenue SW to the north, the alley between Rorer Avenue SW and Campbell Avenue SW to the south, 5<sup>th</sup> Street to the east, and 6<sup>th</sup> Street to the west.
- **Ownership** – The 24 parcels are owned by 13 different private owners;
- **Acres** – The 24 parcels constitute approximately four acres of land area;
- **Buildings** – There are eight buildings and three smaller shed-like structures on parcels zoned commercial/industrial;
- **Zoning** – 16 parcels are zoned commercial/industrial and eight parcels are zoned commercial but vacant;
- **Environmental Issues** – For a summary of the parcels (within this target area) identified in the EDR survey with reportable environmental conditions, refer to the table below;
- **Neighborhood Group** – There is no formal neighborhood group that represents this target area.

**Target Area 6/Salem SW Parcel Table**

Tax ID Number	Parcel Address	Owner	Environmental Concerns
1111901	548 SALEM AVE SW	JONES MICHAEL EDWARD & ESTHER BARGER	Hazmat Air Release GIS Layer; Petroleum Inventory GIS Layer; EDR FINDS
1111904	0 6TH ST SW	JONES MICHAEL EDWARD & ESTHER BARGER	None
1111905	0 SALEM AV SW	JONES MICHAEL EDWARD & ESTHER BARGER	None
1111906	538 SALEM AVE SW	PRESCOTT PROPERTIES LLC	None
1111908	0 RORER AV SW	MASON RUBY SCOTT	None
1111909	0 SALEM AV SW	OVERINGTON GRAPHICS INC	None
1111910	522 SALEM AVE SW	HARMAN JAMES K	Hazmat Waste Handler GIS Layer; Petroleum Inventory GIS Layer; EDR FINDS; EDR RCRA-SQG
1111911	520 SALEM AVE SW	V J ENTERPRISES LLC	None
1111913	523 RORER AVE SW	WILLIAMSON RANDALL B	None
1111914	521 RORER AVE SW	LINDSEY ROBERT M & REBECCA D	Petroleum Inventory GIS Layer
1111916	516 SALEM AVE SW	LEONARD JAMES D	Petroleum Inventory GIS Layer
1111917	0 SALEM AV SW	LEONARD JAMES D	None
1111918	506 SALEM AVE SW	LEONARD JAMES D	Petroleum Inventory GIS Layer
1111919	0 SALEM AV SW	LEONARD JAMES D	Petroleum Inventory GIS Layer
1111920	534 SALEM AVE SW	OVERINGTON GRAPHICS	Petroleum Inventory GIS Layer

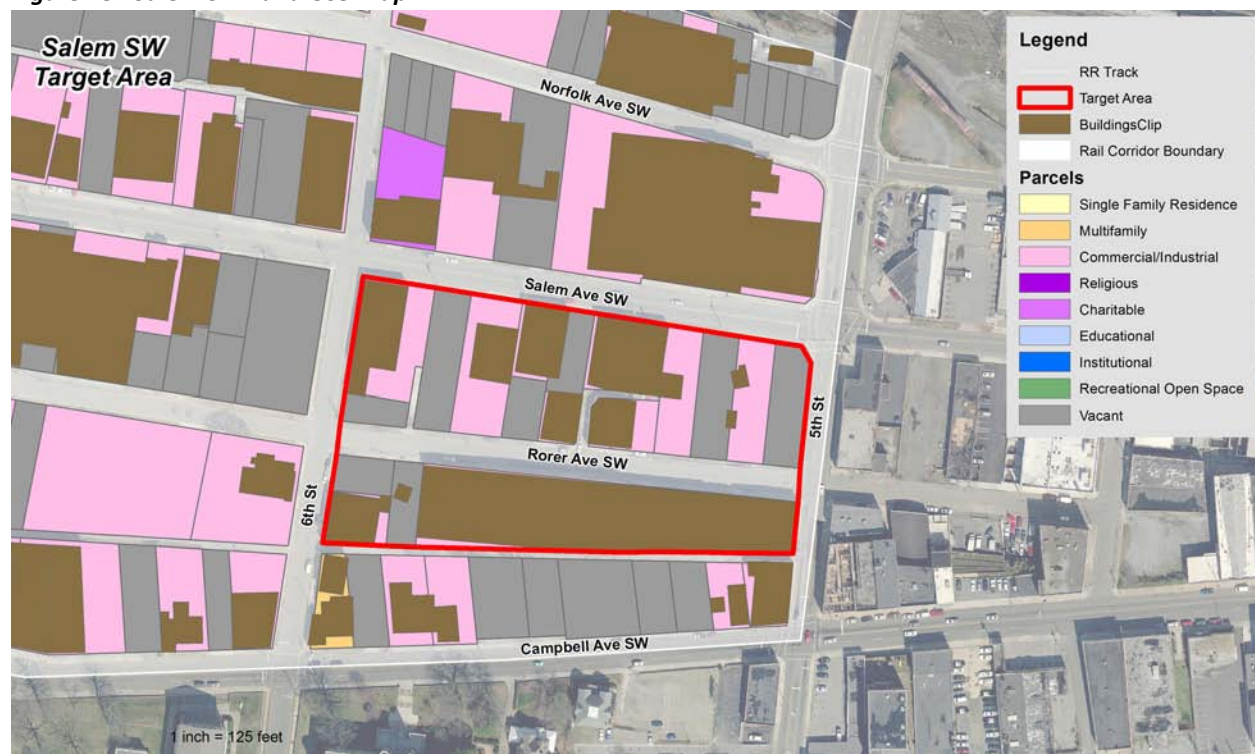
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Tax ID Number	Parcel Address	Owner	Environmental Concerns
1111921	525 RORER AVE SW	MASON RUBY SCOTT	Petroleum Inventory GIS Layer
1112501	0 RORER AV SW	MKL PROPERTIES LLC	None
1112502	306 6TH ST SW	MKL PROPERTIES LLC	Petroleum Inventory GIS Layer
1112504	0 RORER AV SW	MKL PROPERTIES LLC	None
1112505	520 RORER AVE SW	NESTLE BROOKE LLC	Petroleum Inventory GIS Layer
1112506	516 RORER AVE SW	NESTLE BROOKE LLC	
1112507	510 RORER AVE SW	NESTLE BROOKE LLC	Petroleum Inventory GIS Layer; EDR VA SPILLS - Unknown Substance in Floor Drain (Open)
1112509	502 RORER AVE SW	GROVES JON H	Petroleum Inventory GIS Layer; EDR VA SPILLS - Air-Waste issues (Open)
1112521	508 RORER AVE SW	CROUCH ROBERT L	Petroleum Inventory GIS Layer

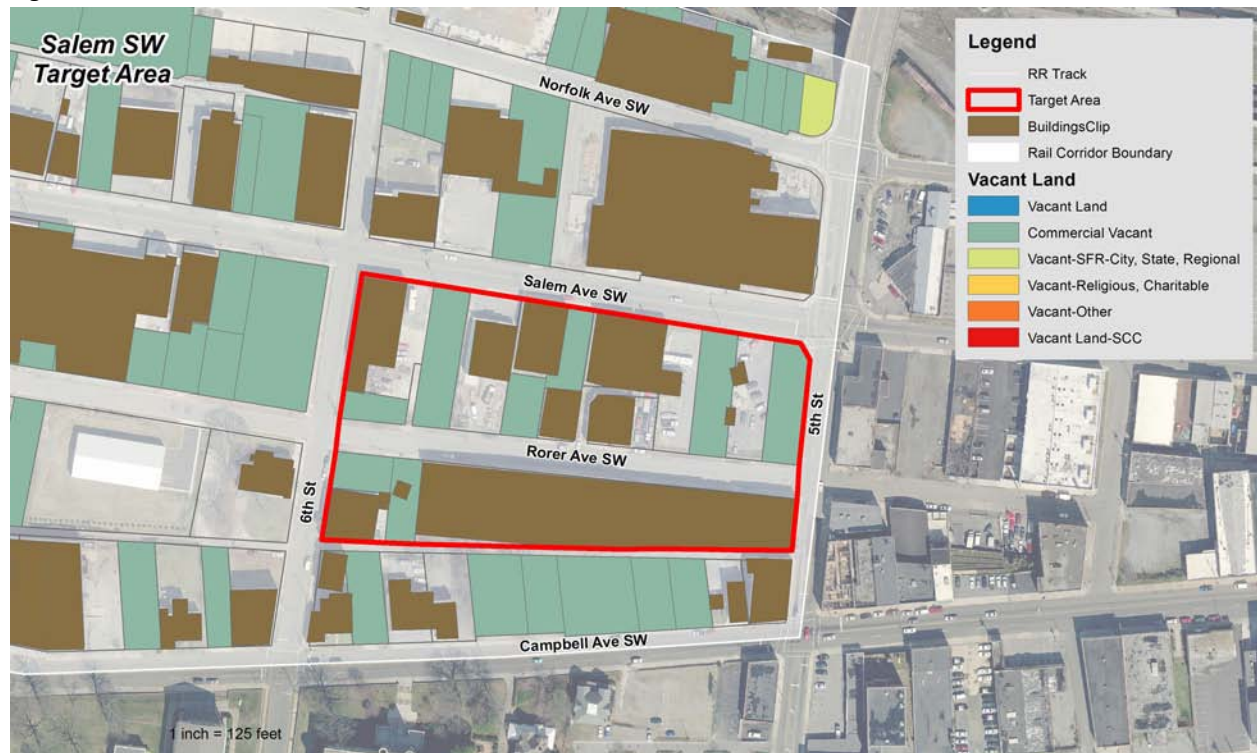
#### Target Area 6/Salem SW Maps

**Figure 28: Salem SW Land Use Map**

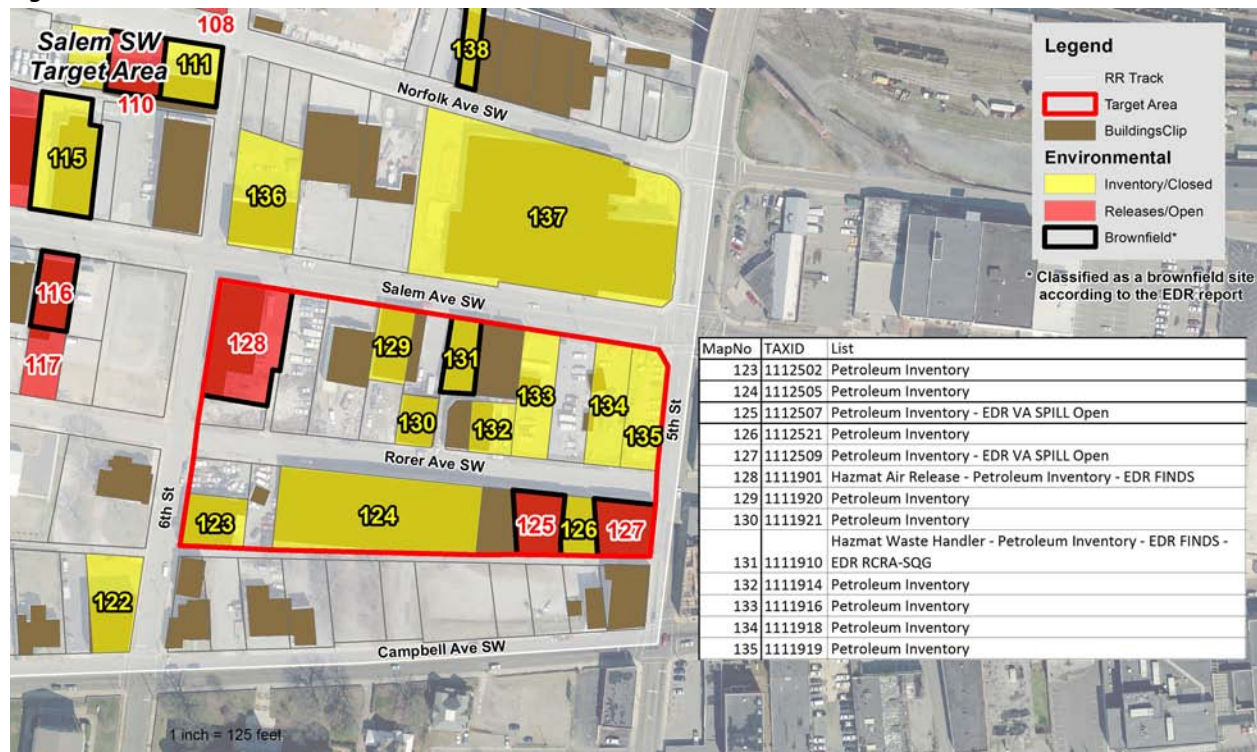




**Figure 29: Salem SW Vacant Land**



**Figure 30: Salem SW Environmental**



### Target Area 6/Salem SW Industry and Use Targets

The area as currently developed with industrial uses. There is also a considerable history of environmental contamination. As such, the area highlights the concern about the close proximity of industrial activity very near residential development.

The proximity to a revitalized downtown Roanoke suggests an additional avenue for revitalization however. The City should specifically rezone the southern edge of this area (along Rorer Avenue) to encourage mixed-use development, allowing commercial and residential activities to accommodate growth of the downtown core.

This re-designation should be accomplished while remaining mindful of the existing industrial uses to the North along gasoline alley. These uses may be allowed to remain if aesthetics, noise, and other nuisance issues can be addressed.

### Target Area 6/Salem SW Reuse Opportunities and Constraints

#### Opportunities

- The area is zoned industrial/commercial; no rezoning would be required for these uses.
- There are many buildings and sheds with an older design so adapting them would be dependent on the specific reuse that is planned.
- There are no residences within the area or in close proximity to the area.
- Water flow test of fire hydrant was adequate.

#### Constraints

- There are a total of 24 parcels, with 13 owners, and four acres of land.
- There are three open environmental issues that will need to be addressed.
- Sanitary sewer mains are located in an alleyway that runs through the site and may need to be relocated or encased.
- Several storm drain lines and inlets are located in the alleyway and a drain line appears to be located beneath existing buildings.
- There is no formal neighborhood group that represents this target area.

## 13<sup>th</sup> Street Corridor

### 13<sup>th</sup> Street Corridor Overview

The 13th Street Corridor is included as a nominal “seventh target area” only as it was identified in numerous conversations with both the City and with area residents. The area has been identified in earlier plans as the preferred location for a neighborhood commercial district to include local shopping and services.

As the Corridor has been treated in other plans, we include it here only to underline its continued relevance to revitalization discussions in the Rail Corridor. We also want to point out that two of the parcels of land abutting Patterson Ave SW at 13<sup>th</sup> Street do have a legacy of environmental contamination and would therefore be eligible for the programs identified in this plan.



### 13<sup>th</sup> Street Corridor Maps

**Figure 31: 13<sup>th</sup> Street Corridor Land Use Map**



**Figure 32: 13<sup>th</sup> Street Corridor Vacant Land**



**Figure 33: 13<sup>th</sup> Street Corridor Environmental**



### 13<sup>th</sup> Street Corridor Industry and Use Targets

A plan for the establishment of a commercial core along 13<sup>th</sup> Street has already been laid forth in the Hurt Park Neighborhood Plan. The team's analysis supports this commercial activity and we encourage this development, suggesting that the plan be implemented as originally stated.

### 13<sup>th</sup> Street Corridor Reuse Opportunities and Constraints

#### Opportunities

- This corridor has many positive attributes and provides an excellent opportunity to develop a neighborhood commercial district.
- The Hurt Park Neighborhood Alliance could be a catalyst to facilitate revitalization.

#### Constraints

- Lack of buffering and transitional spaces between residential and commercial/industrial uses (including vacant land and buildings).
- There are two open environmental issues on two parcels abutting Patterson Avenue SW at 13th Street Corridor which will need to be addressed.



## Summary of Findings and Goals

### Key Area Strengths and Opportunities

Strengths	Opportunities
<ul style="list-style-type: none"><li>• Strong regional strengths in workforce, transportation, and proximity to major markets</li><li>• Relatively low operational costs</li><li>• Availability of land at comparatively lower prices</li><li>• City policies, programs, and incentives to facilitate development</li><li>• Availability of grants/loans from EPA for advancing brownfield projects</li><li>• Roanoke ranks better than average for violent and property crime, a short commute time, and good access to medical care.</li><li>• The cost of living index ranks better than average among competitors as well as compared to the United States as a whole.</li><li>• High quality and wide range of recreational activities available to those living in the area.</li><li>• Roanoke has the best ranking for tax structure among competitors.</li></ul>	<ul style="list-style-type: none"><li>• Expansion of NS operations resulting in more economic activity in the area</li><li>• Expansion of Roanoke Downtown revitalization and development efforts northwest into the Rail Corridor</li><li>• Business attraction targets:<ul style="list-style-type: none"><li>○ Logistics and wholesale trade</li><li>○ Management and administration</li><li>○ Selected forms of manufacturing</li></ul></li></ul>



## Key Area Weaknesses and Threats

Weaknesses	Threats
<ul style="list-style-type: none"><li>• Educational weaknesses within the Corridor</li><li>• Perceptions of crime, poor upkeep, security</li><li>• Existing buildings/structures (built in the 20<sup>th</sup> century) are not easily adaptable for current uses</li><li>• Major air transportation hub not proximate</li></ul>	<ul style="list-style-type: none"><li>• Continued long-term impacts of economic recession</li><li>• Availability of alternate locations for new development</li></ul>

## Policies and Action Plan

### Overview

The Rail Corridor and its community are ready for positive change. The City can facilitate this through a series of policies and corresponding actions that will create an environment in which – over time – market forces will spur new investment.

The following section outlines recommendations. Policies are principles or strategies set forth that guide future decisions. Generally, policies are ongoing. Actions are projects or tasks that can be completed and have a definite end. The recommendations have been grouped into the four major focus areas for the plan:

- Environmental
- Economic and Business
- Infrastructure
- Community

<b>Environmental Policies</b>	<ul style="list-style-type: none"><li>• <b>Create an inventory of brownfield sites within the Rail Corridor:</b> There have been brownfield inventories undertaken by the City in the past but not a comprehensive one which captures environmental compliance information at the federal, state, local level.</li><li>• <b>Improve the Rail Corridor by cleaning up more properties and improving the area for the residences and businesses:</b> The City should continue to pursue the grants/incentives offered by EPA/VDEQ, as well as collaboration initiated through the January 2008 Brownfield Redevelopment Plan.</li><li>• <b>Promote revitalization of the Rail Corridor through a streamlined technical assistance process for dealing with perceived and real environmental liabilities:</b> The technical assistance program can be broadened that supports owners/developers and provide site evaluation services.</li><li>• <b>Promote sustainable development within the Rail Corridor:</b> The Brownfields Sustainability Pilots are an EPA effort to promote environmental sustainability at local brownfields projects. EPA is providing communities with technical assistance to help them achieve greener assessment, cleanup, and redevelopment at their brownfields.</li><li>• <b>Encourage policies/incentives at the State level to promote environmental clean up and facilitate redevelopment of brownfield properties:</b> Recommend programs at the State level to promote the clean up and redevelopment of brownfield properties.</li></ul>
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<b>Environmental Actions</b>	<ul style="list-style-type: none"> <li>• <b>Develop brownfield inventory for the Rail Corridor:</b> Through Environmental Data Resources (EDR's) comprehensive survey, the team obtained a listing of sites with reportable environmental conditions within the Rail Corridor. The search included federal, state, local, tribal and EDR proprietary records. The City should further develop the brownfield inventory for the Rail Corridor to incorporate other relevant information (beyond the environmental data) that can then be shared with other stakeholders to promote the redevelopment of brownfield properties.</li> <li>• <b>Continue to pursue incentives that promote clean up of sites:</b> The City should continue to pursue EPA/VDEQ incentives that will provide it greater leverage in promoting the redevelopment of brownfield properties in the Rail Corridor. A summary of available EPA/VDEQ incentives has been presented in <a href="#">Appendix C</a>.</li> <li>• <b>Develop a comprehensive technical assistance program:</b> Provide a comprehensive, one-stop road map to prospective developers/user's of the advantages of redeveloping brownfield properties including financial incentives, cost-effective clean up options, liability protections for prospective purchasers, and land use issues (zoning, institutional controls). A Project Development Team should be identified with designated individuals to interface with a developer/user to advance specific elements of a revitalization project.</li> <li>• <b>Submit a sustainability pilot application:</b> The City should submit a Sustainability Pilot application, which will need to be integrated with a proposed project. Some examples of sustainable development include installation of green roofs/solar array, recycling and reusing materials from demolition of structures, stormwater management and sustainable streetscape design, incorporating green design elements into the rehabilitation of historic buildings, etc.</li> <li>• <b>Identify Specific Policies/Incentives that can be implemented at the State level:</b> Refer to <a href="#">Appendix C</a> for a summary of the proposed policies/incentives.</li> </ul>
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See [Appendix C](#) for the Environmental Action Plan

<b>Economic and Business Policies</b>	<ul style="list-style-type: none"> <li>• <b>Encourage Effective Environmental Cleanup:</b> This will be appropriate for properties with a legacy of industrial use. Where possible, the cleanup should proceed with an identified future use in mind.</li> <li>• <b>Leverage Existing Incentive and Credit Programs:</b> The City already has at its disposal tools to make re-use of existing buildings cost effective. These include: <ul style="list-style-type: none"> <li>• Tax Exemption on Energy Efficient Buildings (Existing)</li> <li>• Federal Rehabilitation Tax Credits – non-historic commercial buildings</li> <li>• City of Roanoke Enterprise Zone (Existing)</li> </ul> </li> <li>• <b>Improve Workforce Skills:</b> While the overall skills base for Corridor residents will only be solved over the long term, programs are available to train for specific skills for new employers.</li> <li>• <b>Preserve Industrial and Commercial Land for Adaptive Reuse:</b> Many of the industrial facilities in the Corridor are now functionally obsolete due to configuration, roof height and other issues. However, the land itself is well suited for future industrial development and should be retained for such use.</li> <li>• <b>Preserve Rail Access for Future Industrial Use:</b> Virginia provides funding for just such initiatives through the Virginia Department of Transportation (VDOT) Rail and Industrial Access Programs.</li> <li>• <b>Encourage Adaptive Reuse:</b> As noted earlier, many of the facilities within the Corridor no longer meet the operational needs of today's industrial functions. The city should encourage the reuse or revitalization of these sites as a matter of policy.</li> </ul>
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<b>Economic and Business Actions</b>	<ul style="list-style-type: none"> <li>• <b>Coordinate all actions below with the Environmental actions laid out in this Plan</b></li> <li>• <b>Develop Profiles for the Six Target Areas:</b> This report contains market and fit profiles for the six target areas, including an assessment of the industries and uses that would most likely fit the sites. These should be further developed into a set of marketing profiles to be made available for the regional EDC's outreach efforts.</li> <li>• <b>Work with Existing Employers:</b> Involve existing local businesses in addressing the Corridor's issues.</li> <li>• <b>Expanded Brownfield Marketing Program:</b> With regards to the brownfield properties within the six target areas, the City should provide expanded marketing to specific developers who specialize in brownfield revitalization. The Profiles in this report will provide the first step in this process.</li> <li>• <b>Develop a Skills Catalog:</b> Work with the local employers to identify the skills base required for selected job categories. Provide this catalog to employment agencies and to local training programs.</li> <li>• <b>Designate a City Staff Member to act as Incentive Coordinator:</b> By providing a one-stop-shop for incentive and credit information for programs already available through the city or state, the City can create a clear path.</li> <li>• <b>Develop Vacant Building Revitalization Program/Incentives:</b> Such programs can include expedited plan review and permitting, and will require the coordination of several City agencies including but not limited to planning, building, and fire.</li> </ul>
<b>Infrastructure Policies</b>	<ul style="list-style-type: none"> <li>• <b>Water System:</b> Increase the flow, pressure, and reliability of the water distribution system in areas of the study area where deficiencies are known to exist.</li> <li>• <b>Water System:</b> Establish minimum levels of service within the study area that correspond to the existing or anticipated land uses (e.g., in commercial areas provide fire flows of 1,000 gallons per minute at 20 pounds per square inch). Businesses and homeowners within portions of the study area may pay higher property and casualty insurance rates due to low fire flow and pressure rates or location of fire hydrants relative to existing buildings/improvement.</li> <li>• <b>Sanitary Sewer System:</b> Increase the sewer system reliability and capacity and reduce inflow and exfiltration (thus reducing the total flow to WWTP) through systematic system improvements. Evaluate opportunities to relocate sanitary sewer lines to public street right-of-way, thus unencumbered private properties, resulting in more desirable development sites.</li> <li>• <b>Pedestrian Facilities:</b> Increase the areas served by reliable and adequate pedestrian facilities and handicapped accessible routes to public transportation. Create pedestrian-centric zones within portions of the study area where pedestrian-based travel is the predominate means of travel. Increase ridership of Valley Metro throughout the study area.</li> <li>• <b>Stormwater System:</b> Identify areas where flooding frequently occurs and causes disruptions to businesses and residents. Improve stormwater system functioning where deficiencies are known to exist. Focus in localized street flooding that impedes business and residential travel within the Rail Corridor.</li> </ul>



<p><b>Infrastructure Actions</b></p>	<ul style="list-style-type: none"> <li>• <b>WVWA Liaison:</b> Establish liaison to specifically coordinate with WVWA on matters related to water system and sanitary sewer system infrastructure in the Rail Corridor and provide input and coordination on capital improvement priorities.</li> <li>• <b>Update Hydraulic Analysis:</b> Work WVWA to update the hydraulic analysis of the study area to determine what system improvements may result in improved flows and pressures. If system pressures cannot be improved through line replacement/up-sizing, evaluate locations for possible new booster pumps and/or elevated tank to serve the Rail Corridor.</li> <li>• <b>Evaluate Placement of Fire Hydrants:</b> Utilize City Fire Marshall's office to evaluate placement of fire hydrants in predominately residential areas in order to identify under-served areas. Present findings to WVWA for consideration in capital improvement plan.</li> <li>• <b>Water and Sewer Upgrade Funding:</b> Evaluate feasibility of City-led initiatives for funding water and sewer system upgrades through HUD - Community Development Block Grants (CDBG), Department of Commerce – Economic Development Administration (EDA), and EPA – Clean Water State Revolving Fund (CWSRF).</li> <li>• <b>Pedestrian and Non-auto Transport Improvements:</b> Identify deficiencies in the pedestrian access and non-auto transportation infrastructure and develop strategy for making improvements. These may include: <ul style="list-style-type: none"> <li>○ Sidewalk maintenance and repair.</li> <li>○ Street lighting along key pedestrian routes (will require coordination with American Electric Power).</li> <li>○ Evaluation of bus routes based on feedback provided by residents and businesses (will require coordination with Valley Metro).</li> <li>○ Evaluation of need for new bus shelters at high-use bus stops.</li> <li>○ Evaluate presence of curb, curb and gutter, sidewalk, and lighting issues throughout the Corridor. Utilize and emphasize City's "Application for New Curbing and Sidewalk Improvements" and Capital Improvement Program process.</li> <li>○ Leverage existing City programs (e.g., Regional Greenway System Bicycle and Pedestrian Plan, Complete Street Policy, and Citizen Bicycle Advisory Council) to enhance opportunities for improvements with the Rail Corridor.</li> <li>○ Evaluate opportunities for VDOT Enhancement Grants or Revenue-sharing arrangement to improve pedestrian facilities within the Rail Corridor.</li> </ul> </li> <li>• <b>Strengthen NS Relationship:</b> Develop and strengthen relationships with Norfolk Southern (NS) facilities managers and real estate managers to identify and address stormwater run-off issues related to point-discharges from rail yard. Seek input from and involve NS in process to develop new City SWM Ordinances to address pending State and Federal SWM Regulations.</li> <li>• <b>Stormwater Outreach:</b> Continue to inform businesses and residents of the benefits of implementing City-wide Stormwater Utility or other capital improvement strategy for funding long-term stormwater needs.</li> </ul>
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<p><b>Community Policies</b></p>	<ul style="list-style-type: none"> <li>• <b>Create a seamless transition between industrial and residential uses:</b> Proposed by the Loudon-Melrose Neighborhood Plan using the UF, Urban Flex Zoning District.</li> <li>• <b>Allow for the Development of Uses to Support the Community:</b> This includes community retail, but also would allow for the development of green space, community agriculture, recreation, and even possibly healthcare over time.</li> <li>• <b>Empower Community Groups to Assist in Implementation.</b></li> </ul>
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<b>Community Actions</b>	<ul style="list-style-type: none"><li>• <b>Implement the findings of the Hurt Park Neighborhood Action Plan to support Facilitation of 13<sup>th</sup> Street Commercial Corridor:</b> This will include rezoning parcels along the Corridor and also those that transition to the Corridor:<ul style="list-style-type: none"><li>○ Light Manufacturing (LM) zoning transition into Residential (RM-2);</li><li>○ Allowing Commercial uses within Manufacturing zones;</li><li>○ Code enforcement: target code violations and maintain rental inspection program;</li><li>○ Compatible zoning with existing structures (set-backs, lot coverage);</li><li>○ With zoning, seed opportunities for green space, community agriculture and recreation;</li><li>○ Maximize development of potential vacant property and structures.</li></ul></li><li>• <b>Develop Neighborhood Clean-up Program:</b> two programs to assist the community to spruce up and maintain properties. Includes:<ul style="list-style-type: none"><li>○ Tool Lending Center Program – a trailer loaded with landscape tools available for loan to assist residents and community volunteer groups with repairs and yard work (minimum of five organized households);</li><li>○ Roll-Off Program implemented in conjunction with the Roanoke Department of Solid Waste Management – a 30-yard roll-off (refuse bin) available to assist residents with removing accumulated debris in their neighborhood (minimum of five organized households).</li></ul></li></ul>
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## Implementation

Implementation for revitalizing the Rail Corridor will require coordination of activities – with government and with the community as a whole. The team suggests the following schedule for implementation based upon the urgency of need, the availability of resources, and the sequence of events that might be required to achieve maximum results.

### Time Frame

		Year					
Action		1	2	3	4	5+	Agencies
Environmental							
	Develop Full Brownfield Inventory	X					City of Roanoke Planning, Building and Development
	Share inventory findings with stakeholders	X					City of Roanoke Planning, Building and Development; Roanoke Economic Development Authority
	Pursue the grants/incentives offered by EPA/VDEQ		X	X			City of Roanoke Planning, Building and Development
	Identify a project development team		X				City of Roanoke Planning, Building and Development; Roanoke Economic Development Authority
	Submit a sustainability pilot application			X			City of Roanoke Planning, Building and Development
Economic and Business							
	Develop Profiles for the Six Target Areas	X					Roanoke Economic Development Authority
	Work with Existing Employers		X	X	X	X	Roanoke Economic Development Authority
	Expanded Brownfield Marketing Program		X				Roanoke Economic Development Authority
	Develop a Workforce Skills Catalog			X			Roanoke Economic Development Authority
	Designate a City Incentive Coordinator			X			Roanoke Economic Development Authority
	Vacant Building Revitalization Program/Incentives			X			City of Roanoke Planning, Building and Development; Roanoke Economic Development Authority
Infrastructure							
	Continue to inform businesses and residents of the benefits of implementing City-Wide Stormwater Utility or other capital improvement strategy for funding long-term stormwater needs	X					City of Roanoke Planning, Building and Development; Office of City Engineer

Action	Year					Agencies
	1	2	3	4	5+	
Utilize City Fire Marshall's office to evaluate placement of fire hydrants in predominately residential areas		X				City of Roanoke Planning, Building and Development; Fire-EMS
Develop strategy for making improvements to identified deficiencies in the pedestrian access system and non-auto transportation infrastructure			X			City of Roanoke Planning, Building and Development; Office of City Engineer
Establish liaison with WVWA to coordinate on matters related to water system and sanitary sewer system infrastructure in the Rail Corridor.		X				City of Roanoke Planning, Building and Development; Western Virginia Water Authority
Evaluate feasibility of City-led initiatives for funding water and sewer system upgrades		X				City of Roanoke Planning, Building and Development; Office of City Engineer
<b>Community</b>						
Implement the Hurt Park Plan for 13 <sup>th</sup> Street		X	X			City of Roanoke Planning, Building and Development; Hurt Park Neighborhood Alliance; Roanoke Economic Development Authority
Develop Neighborhood Clean-up Program	X	X				City of Roanoke Planning, Building and Development

## Coordination, Management, and Evaluation

The process above also requires a means for coordinating, evaluating, and adapting efforts to meet changing requirements and altering circumstances. The plan will also benefit from a means for incorporating lessons learned from experience along the way. The activities laid out in this plan should not be interpreted as rigid, but as flexible enough to meet the ongoing changing needs of the area. Thoughtful, considered change is to be encouraged as long it is aligned to the Plan's overall goals.

The Plan itself will recommend initial policies and projects that will be implemented by a variety of groups.

Some of the areas to seek to monitor and measure include:

- Brownfield remediation;
- New investment into the area (capital expenditure);
- Jobs created and net job growth;
- New construction and refurbishment permits;
- Store openings;
- Community and neighborhood initiatives;
- Home ownership;
- Infrastructure renewal progress;
- Regulatory and zoning changes;
- Traffic-flow alteration and pedestrian access;

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- Crime rate;
- Tax roll increase; and
- Community participation.

Continual monitoring through reporting, site visits, interviews and testimony will help to ensure that the Plan is being implemented as effectively as possible. Success will take sustained commitment over time from the City and from community organizations willing to play their part.

## Detailed Catalog of Current and Proposed Policy Tools

Focus Areas	Policies	Actions
<b>A. Environmental Protection</b>	<b>1. Effectively Manage Corridor Brownfield Sites</b>	<ul style="list-style-type: none"> <li>a. Develop brownfield inventory for the Rail Corridor.</li> <li>b. Keep the environmental data current.</li> <li>c. Incorporate additional relevant information and data points.</li> <li>d. Share inventory findings with stakeholders to facilitate revitalization of these properties.</li> </ul>
	<b>2. Clean-Up and Improve Corridor Residences and Businesses</b>	<ul style="list-style-type: none"> <li>a. Continue to pursue grants and incentives offered by EPA/VDEQ.</li> <li>b. Continue collaboration initiated through the January 2008 Brownfield Revitalization Plan.</li> </ul>
	<b>3. Promote Revitalization of the Rail Corridor</b>	<ul style="list-style-type: none"> <li>a. Identify a project development team to advance specific elements of a revitalization project, with designated individuals to interface with developers/users.</li> <li>b. Develop a streamlined technical assistance process for dealing with perceived and real environmental liabilities.</li> </ul>
	<b>4. Promote Sustainable Development within the Rail Corridor</b>	<ul style="list-style-type: none"> <li>a. Submit a sustainability pilot application.</li> <li>b. Integrate the application with a proposed project.</li> </ul>
	<b>5. Develop and Implement Environmental Justice Plan</b>	<ul style="list-style-type: none"> <li>a. Develop an Environmental Justice Plan.</li> <li>b. Build on actions to date in the Rail Corridor, as well as within other communities across the City with clusters of brownfield properties.</li> </ul>
	<b>6. Encourage State-Level Policies/Incentives To Promote Environmental Clean Up And Revitalization Of Brownfield Properties</b>	<p>See <a href="#">Appendix C</a> for a summary of proposed state programs.</p> <p>See <a href="#">Appendix C</a> for the Environmental Action Plan.</p>
<b>B. Economic &amp; Business Development</b>	<b>1. Encourage Effective Environmental Cleanup of Former Industrial Use Properties</b>	<ul style="list-style-type: none"> <li>a. Develop marketing profiles for the six target areas identified in this report that can be provided for the regional EDC for its business development and outreach efforts.</li> <li>b. Work with existing local employers to engage them in addressing Corridor issues and actions.</li> <li>c. Coordinate cleanup and reuse actions with the Environmental policies and actions (above).</li> </ul>

Focus Areas	Policies	Actions
<b>B. Economic &amp; Business Development (con't)</b>	<b>2. Leverage Existing Incentive and Credit Programs Available to the City</b>	<p>a. Designate a City staff member as “Incentive Coordinator,” thereby providing developers and investors with a one-stop shop packaging information on incentive and credit programs already available through the City or state to industry targets.</p> <p>b. Provide consolidated information on existing incentive and credit programs relevant to Corridor revitalization, such as the Tax Exemption on Energy Efficient Buildings, Federal Rehabilitation Tax Credits for non-historic commercial buildings and the City of Roanoke Enterprise Zone.</p>
	<b>3. Support Workforce Skills Improvement for Corridor Residents</b>	<p>a. Develop a “Skills Catalog” by working with local employers to identify the skills base required for selected job categories.</p> <p>b. Provide the “Skills Catalog” to employment agencies and local training programs, particularly those closely connected to residential areas in the Corridor.</p>
	<b>4. Preserve Industrial and Commercial Land and Encourage Their Adaptive Reuse</b>	<p>a. Expand the Brownfield Marketing Program (and use the target area marketing profiles noted above) to facilitate interest from developers who specifically specialize in brownfield revitalization.</p> <p>b. Develop a Vacant Building Revitalization Program and/or Incentives, such as expedited plan review and permitting, facilitated coordination of relevant City agencies (e.g., Planning, Building, Fire, etc.).</p>
	<b>5. Preserve Rail Access for Future Industrial Use</b>	<p>a. Pursue rail access preservation funding through the Virginia Department of Rail and Public Transportation’s <a href="#">Rail Industrial Access Grants program</a>.</p>

Focus Areas	Policies	Actions
<b>C. Infrastructure Enhancement</b>	<b>1. Ensure the Water System within the Study Area Meets an Established Minimum Level of Service for Current and Anticipated Land Uses</b>	<p>a. Establish liaison to specifically coordinate with Western Virginia Water Authority (WVWA) on matters related to water and sewer system infrastructure in the Corridor and provide coordination on capital improvement priorities.</p> <p>b. Establish minimum levels of service within the study area that correspond to the existing or anticipated land uses (e.g. in commercial areas, provide fire flows of 1,000 gallons per minute at 20 pounds per square inch).<sup>1</sup></p> <p>c. Work with WVWA to update the hydraulic analysis of the study area to determine what system improvements may result in improved flows and pressures. If system pressures cannot be improved through line replacement or up-sizing, evaluate locations for possible new booster pumps and/or an elevated tank to serve the Rail Corridor.</p> <p>d. Utilize the City Fire Marshall's office to evaluate placement of fire hydrants in predominately residential areas and identify under-served areas. Present findings to WVWA for consideration in capital improvement plan.</p> <p>e. Evaluate feasibility of City-led initiatives for funding water and sewer system upgrades through HUD - Community Development Block Grants (CDBG), Department of Commerce – Economic Development Administration (EDA), and EPA – Clean Water State Revolving Fund (CWSRF).</p>
	<b>2. Ensure the Reliability and Capacity of the Sanitary Sewer System within the Study Area Meets the Needs of Future Development</b>	<p>a. Establish liaison to specifically coordinate with Western Virginia Water Authority (WVWA) on matters related to water and sewer system infrastructure in the Corridor and provide coordination on capital improvement priorities.</p> <p>b. Increase the sewer system and reduce inflow and exfiltration (thus reducing the total flow to WWTP) through systematic system improvements.</p> <p>c. Evaluate opportunities to relocate sanitary sewer lines to public street right-of-way, thus unencumbered private properties, resulting in more desirable development sites.</p>

<sup>1</sup>Businesses and homeowners within portions of the study area may pay higher property and casualty insurance rates due to low fire flow and pressure rates or location of fire hydrants relative to existing buildings/improvement.



Focus Areas	Policies	Actions
<b>C. Infrastructure Enhancement (con't)</b>	<b>2. Ensure the Reliability and Capacity of the Sanitary Sewer System within the Study Area Meets the Needs of Future Development (con't)</b>	d. Evaluate feasibility of City-led initiatives for funding water and sewer system upgrades through HUD - Community Development Block Grants (CDBG), Department of Commerce – Economic Development Administration (EDA), and EPA – Clean Water State Revolving Fund (CWSRF).
	<b>3. Increase the Amount of Pedestrian-friendly and Transit-supportive Facilities and Zones within the Study Area</b>	<p>a. Identify deficiencies in the pedestrian access and non-auto transportation infrastructure and develop strategy for making improvements:</p> <ul style="list-style-type: none"> <li>i. Evaluate presence of curb, curb and gutter, sidewalk, and lighting issues throughout the Corridor.</li> <li>ii. Utilize and emphasize City's "Application for New Curbing and Sidewalk Improvements" and Capital Improvement Program process.</li> <li>iii. Leverage existing City programs (e.g., Regional Greenway System Bicycle and Pedestrian Plan, Complete Street Policy, and Citizen Bicycle Advisory Council) to enhance opportunities for improvements with the Rail Corridor.</li> <li>iv. Evaluate opportunities for VDOT Enhancement Grants or Revenue-sharing arrangement to improve pedestrian facilities within the Rail Corridor.</li> </ul> <p>b. Create pedestrian-centric zones within portions of the study area where pedestrian-based travel is the predominate means of travel:</p> <ul style="list-style-type: none"> <li>i. Sidewalk maintenance and repair.</li> <li>ii. Street lighting along key pedestrian routes (will require coordination with American Electric Power).</li> </ul> <p>c. Increase ridership of Valley Metro throughout the study area:</p> <ul style="list-style-type: none"> <li>i. Evaluation of bus routes based on feedback provided by residents and businesses (will require coordination with Valley Metro).</li> <li>ii. Evaluation of need for new bus shelters at high-use bus stops.</li> </ul>

<b>Focus Areas</b>	<b>Policies</b>	<b>Actions</b>
<b>C. Infrastructure Enhancement (con't)</b>	<b>4. Improve the Stormwater Management System Functionality Where Deficiencies Exist within the Study Area</b>	<p>a. Identify areas where flooding frequently occurs and causes disruptions to businesses and residents.</p> <p>b. Improve stormwater system functionality where deficiencies are known to exist.</p> <p>c. Focus in localized street flooding that impedes business and residential travel within the Corridor.</p> <p>d. Develop and strengthen relationships with Norfolk Southern (NS) facility and real estate managers to identify and address stormwater run-off issues related to point-discharges from the rail yard.</p> <p>e. Seek input from and involve NS in a process to develop new City stormwater management (SWM) ordinances to address pending state and federal SWM Regulations.</p>
<b>D. Community Development</b>	<b>1. Pursue More Appropriate Separation Between Industrial and Residential/Community Land Uses</b>	<p>a. Create a seamless transition between industrial and residential uses as proposed by the various neighborhood plans using the UF, Urban Flex Zoning District.</p> <p>b. Enforce zoning and building codes more effectively, including targeting code violations and maintaining the rental inspection program.</p>
	<b>2. Allow for the Development of Uses to Support the Community</b>	<p>a. Implement the findings of the Hurt Park Neighborhood Action Plan to support Facilitation of 13<sup>th</sup> Street Commercial Corridor, particularly appropriate zoning to provide opportunities for green space, community agriculture, recreation and potentially health care.</p>
	<b>3. Develop and Support Community-based Initiatives that Facilitate Corridor Plan Implementation</b>	<p>a. Develop a Neighborhood Clean-up Program, which may include two initiatives that help residents spruce up and maintain properties: a Tool Lending Center Program and a Roll-Off Refuse Bin Program.</p>

## Appendices

### Appendix A: Databases

#### Reverse Site Selection Model

The reverse site selection model data is included as an Excel spreadsheet in the CD located on the back cover of this report. The sources used to generate this screening model are located in [Appendix B](#) of this report.

#### Unemployment Rate Database

Unemployment rates for the reverse site selection model were obtained at the MSA level from the Bureau of Labor Statistics (BLS). These figures closely, if not identically, match the numbers published on the Virginia state website. However, the numbers used in the [demographics section](#) were taken from ESRI Business Analyst Online (BAO) as were all the other data points in order to ensure consistent source and comparability. In addition, the BAO numbers included important block group data points. The team has prepared the following comparison chart which examines three sources of the data and how the data points compare. An Excel version of this data is in the CD on the back cover of this report.

	Roanoke MSA BLS MAY	Roanoke MSA BLS Annual	Roanoke MSA from VAC	BAO MSA	Roanoke City BLS Annual	Roanoke City from VAC	BAO City
2000	2.20%	2.20%		2.40%	2.40%		5.80%
2001	2.80%	3.10%	3.10%		3.50%	3.50%	
2002	4.20%	4.20%	4.20%		4.90%	4.90%	
2003	4.10%	4.20%	4.20%		5.20%	5.20%	
2004	3.70%	3.70%	3.70%		4.50%	4.50%	
2005	3.50%	3.50%	3.50%		4.20%	4.20%	
2006	2.90%	3.10%	3.10%		3.70%	3.70%	
2007	2.90%	3.10%	3.10%		3.80%	3.80%	
2008	3.70%	3.90%	3.90%		4.60%	4.60%	
2009	7.40%	7.30%	7.30%		8.80%	8.70%	
2010	7.20%	7.40%	7.40%	8.70%	8.90%	8.90%	11.60%
2011	6.30%		6.60%		8.20%	8.20%	
2015				6.50%			8.80%

	Roanoke County BLS Annual	Roanoke County from VAC	BAO County	Roanoke Planning region from VAC	BAO Block Group
<b>2000</b>	1.70%		1.40%		15.30%
<b>2001</b>	2.40%	2.40%		3.20%	
<b>2002</b>	3.20%	3.20%		4.30%	
<b>2003</b>	3.40%	3.40%		4.20%	
<b>2004</b>	3.20%	3.20%		3.80%	
<b>2005</b>	3.00%	3.00%		3.60%	
<b>2006</b>	2.60%	2.60%		3.20%	
<b>2007</b>	2.50%	2.50%		3.20%	
<b>2008</b>	3.20%	3.20%		4.10%	
<b>2009</b>	6.00%	6.00%		7.50%	
<b>2010</b>	6.30%	6.30%	6.80%	7.60%	18.80%
<b>2011</b>	5.60%	5.60%		6.70%	
<b>2015</b>			5.10%		14.50%

#### Environmental Database/Brownfields Database

The Environmental Database is a cleaned up export of all the information available in the revised parcel database. It includes tabs for simplified environmental data sorted by target area. The environmental database is included in the CD on the back cover of this report. Also included in this folder are a series of jpg maps categorizing and noting parcels that have regulated activities, current concerns and/or are Brownfield sites according to the EDR report. There is one Excel file that summarizes the environmental concern data alongside the 11x17 Rail Corridor Environmental Concerns map.

#### Property Characteristics Database

The property characteristics database is the full export of all information available in the CD on the back cover of this report. Also included is the field definition spreadsheet, which provides some basic metadata about the field names and data origins. Finally, a series of jpg maps are also included in the property characteristic database folder.

#### Parcel Shapefile

The Rail Corridor parcel shapefile is the primary GIS deliverable. It is located in the CD on the back cover of this report. As with the property characteristic database noted above, the folder will include a field definition spreadsheet, which provides some basic metadata about the field names and data origin.

#### GIS files

A copy of all important GIS mxds as well as any shapefiles used for analysis are included on the CD on the back cover of this report.



## Appendix B: Model Sources

### Population and Demographics

- ESRI Business Analyst Online (BAO)

### Labor Force and Availability and Unemployment

- <http://data.bls.gov/cgi-bin/dsrv?la>

### Industry Specific Employment

- ESRI Business Analyst Online (BAO)

### Occupation Specific Employment

- <http://stats.bls.gov/oes/current/oessrcma.htm>

### Occupation Specific Salaries (Annual)

- <http://stats.bls.gov/oes/current/oessrcma.htm>

### Education

- ESRI Business Analyst Online (BAO)

### Transportation and Market Access

- ESRI Business Analyst Online (BAO)
- Google Maps for distance to Airport
- CWS determination of airport type based on number and length of runways
- Google Maps for interstate highway count

### Tax Regime

- <http://taxfoundation.org/> document “bp60.pdf” no longer located on the taxfoundation.org website

### Climate and Natural Hazards

- Cities Ranked and Rated - 2007 Edition

### Crime

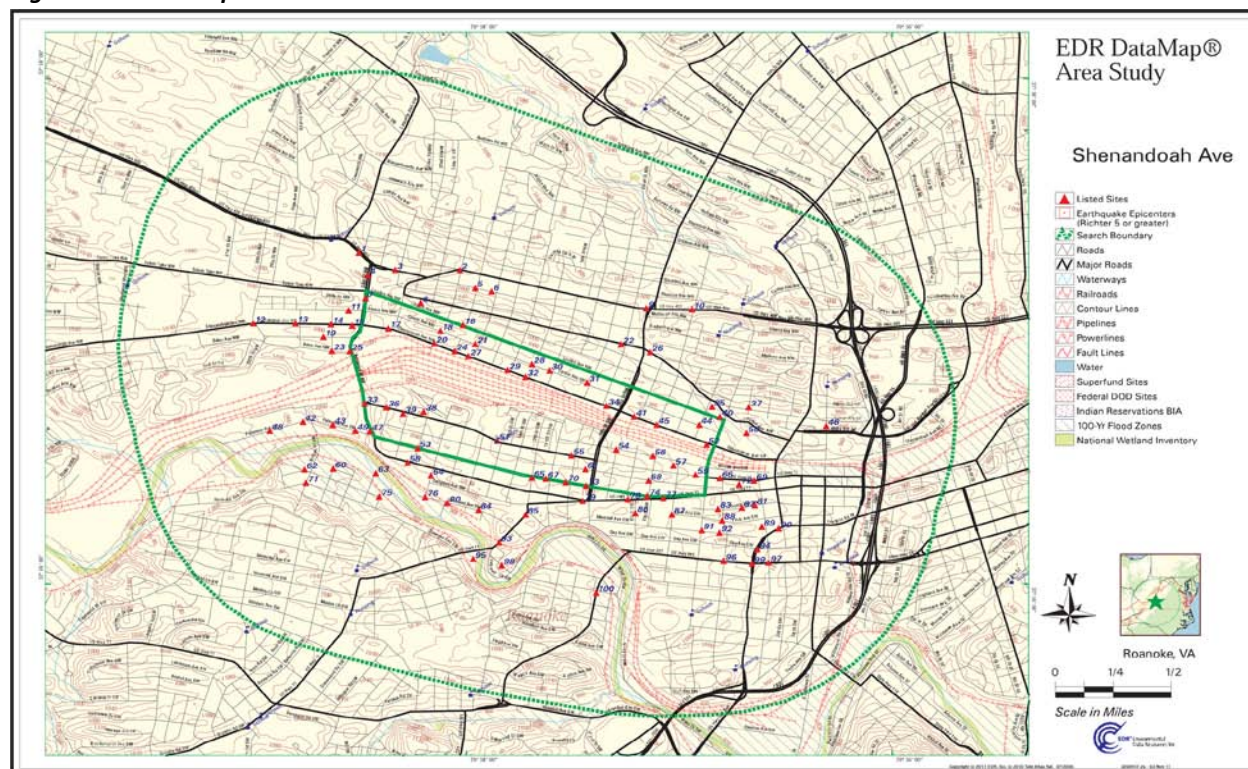
- Cities Ranked and Rated - 2007 Edition

### Quality of Life

- Cities Ranked and Rated - 2007 Edition

## Appendix C: Environmental Action Plan

**Figure C1: EDR Map**



### Environmental Actions

**Brownfield Inventory** - Through Environmental Data Resources (EDR's) comprehensive survey, we obtained a listing of sites with reportable environmental conditions within the Rail Corridor. The search included federal, state, local, tribal, and EDR proprietary records. The complete EDR Report has been included in the CD on the back cover of this report.

The City should further develop the brownfield inventory for the Rail Corridor to incorporate other relevant information (beyond the environmental data) that can then be shared with other stakeholder's to promote the revitalization of brownfield properties.

### Federal/State Incentives

Continue to promote the clean-up of brownfield properties in the Rail Corridor by utilizing the federal and state incentives available from the City. Since 2006, the City of Roanoke has received EPA Brownfield Assessment Grants, Revolving Loan Fund (RLFs), a brownfield cleanup grant, a petroleum assessment grant and the Area Wide Planning Grant, under which this project is being conducted. The City of Roanoke has a \$200,000 and \$80,000 brownfield assessment grant available that could be used for properties in the Rail Corridor. The grants were received from EPA in 2010 and 2008, respectively. There is also an \$1,000,000 Revolving Loan Fund (RLF) available that could be used for properties in the Rail Corridor. The RLF was received from EPA in 2007. In addition, there was a \$50,000 grant received from Virginia Department of Environmental Quality (VDEQ). The City has sent letters to bank managers

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in the city and county, real estate brokers/developers, and real estate organizations promoting the grants and RLF to encourage development of brownfield sites. Use of these funds in the future is dependent upon future funding awarded by the EPA.

The City-wide Brownfield Revitalization Plan (adapted by the City Council in January 2008) establishes the role for the City in the revitalization process. That role is to serve as a clearinghouse and facilitator for revitalization that meets the goal of the Comprehensive Plan and supporting documents. This role includes developing partnerships with property owners, prospective developers, and community stakeholders, and providing financial resources through various grants and other programs, as well as working with other City departments and government agencies to leverage projects that support revitalization efforts.

The City should continue to pursue the grants/incentives offered by EPA/VDEQ as well as collaboration initiated through the January 2008 Brownfield Revitalization Plan.

#### ***Technical Assistance***

The technical assistance program can be broadened that support owner/developers and provide site evaluation services. It can provide a comprehensive, one-stop road map to prospective developers/users of the advantages of redeveloping brownfield properties, including financial incentives, cost-effective clean up options, liability protections for prospective purchasers, and land use issues (zoning, institutional controls).

A Project Development Team should be identified with designated individuals to interface with a developer/user to advance specific elements of a revitalization project.

#### ***Sustainability Pilot***

The Brownfields Sustainability Pilots program is an EPA effort to promote environmental sustainability at local brownfields projects. EPA is providing communities with technical assistance to help them achieve greener assessment, cleanup, and revitalization at their brownfields. Assistance will support activities such as the reuse and recycling of construction and demolition materials, green building and infrastructure design, energy efficiency, water conservation, renewable energy development, and native landscaping.

The City should submit a Sustainability Pilot application, which will need to be integrated with a proposed project. Some examples of sustainable development include installation of green roofs/solar array, recycling and reusing materials from demolition of structures, stormwater management and sustainable streetscape design, incorporating green design elements into the rehabilitation of historic buildings, etc.

#### ***Environmental Justice Plan***

EPA understands that communities must be the driver for local solutions. However, far too many communities lack the capacity to truly affect environmental conditions. As a result, many low-income, minority, tribal, and indigenous communities continue to live in the shadows of the worst pollution and

face some of the harshest impacts. Consequently, EPA has implemented numerous programs to support community empowerment and provide benefits that range from basic educational and leadership development to comprehensive approaches.

EPA's Environmental Justice (EJ) 2014 Plan builds upon an Agency effort to improve the effectiveness of EPA's community-based programs through better information access, coordination, and leveraging. The goal of EJ 2014 Plan is to strengthen community-based programs to engage overburdened communities and build partnerships that promote healthy, sustainable, and green communities. EPA is piloting an area-wide planning approach to brownfields in 23 communities nationwide, recognizing that revitalization of the area surrounding a brownfield is just as critical to the successful reuse of the property as site assessment, cleanup, and revitalization. Each community has received up to \$175,000 in grants and technical assistance. **The City of Roanoke is one of the 23 communities that have received the grant.** The pilot program will help further community-based partnership efforts within underserved or economically disadvantaged neighborhoods by confronting local environmental and public health challenges related to brownfields, while creating a planning framework to advance economic development and job creation. The Plan that is being developed for the City of Roanoke Rail Corridor Area Wide Planning Study will address the goals and objectives of the Community Based Action Programs defined in EJ 2014.

The City needs to develop an EJ Plan that builds on its actions to date in the Rail Corridor, as well as within other communities across the City with clusters of brownfield properties. The Plan should satisfy the goals of the Community Based Action Programs defined in EJ 2014.

#### **Proposed State Programs**

The following programs are proposed at the state level to promote the clean-up and revitalization of brownfield properties. It is understood that the City does not have the political or legal authority to put these policies/programs in place. They are meant, however, as recommendations to pursue with the state to provide additional tools for brownfield revitalization.

##### ***Environmental Insurance Subsidy (State)***

This program subsidizes the cost of high-quality, comprehensive environmental insurance to protect parties from environmental risks and overruns on cleanup expenses.

- Model – MA, NY

##### ***Brownfield Tax Credit (State)***

At the completion of a cleanup, eligible parties can take a tax credit on cleanup costs incurred to reach a permanent solution under state cleanup laws.

- Model – CO, DE, IL, KY, LA, MA, MD, MI, MO, NY

##### ***Brownfields Liability Protections (State)***

The state provides site-specific liability protection in exchange for commitments to clean up and redevelop sites in ways that contribute to the economic or physical revitalization of the community.

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This program would be an enhancement to the existing Liability Protection program offer by the state.

- Model – CA, MA

#### ***Area Wide Planning Grant (State)***

Modeled after the EPA Area Wide Planning Grant under which this study is being conducted, the state can initiate a planning grant that provides communities an opportunity to determine market based community focused re-use approaches for brownfield sites. The number of properties can be more targeted and the grants can be smaller, in the \$50,000 range.

- Model – NY

#### ***Brownfield Revitalization Action Team (State)***

The Brownfield revitalization Action Team (BRAT) will be responsible for expediting the remediation, reclamation, reuse and revitalization of brownfields sites for locally identified, high priority revitalization and reuse projects. This team manages and coordinates remediation program development activities, permitting procedures and funding efforts related to revitalization projects.

- Model – CT, NJ, PA

#### ***Brownfield Remediation Tax Increment Financing (State)***

This TIF variant allows municipalities to establish a brownfield revitalization authority (BRA), adopt brownfield revitalization financing plans, and capture incremental local and school property taxes from redeveloped contaminated properties to pay for the environmental costs associated with those properties.

- Model – CT, KY, MI, PA, WI

#### ***Expanded Brownfield Marketing Program***

This program builds on the existing outreach efforts and work with the City economic development team to target a larger subset of developers, users, brokers/consultants, and other organizations at the local/state level. Develop a database of companies/organizations within the City and Statewide that are directly involved in real estate development or represent developers and end users.

#### ***Develop Profiles for the Six Target Areas***

The City has the opportunity to develop a profile (1 page, 2-sided brochure) for each of the six target areas. Information on the brochure should describe the target area (land, buildings, infrastructure etc.), environmental issues and availability of assessment/remediation grants and loans and liability protections, reuse options, and public sector financial incentives.

#### **Existing Programs**

- Identify and Support Opportunities (City)
- Owner/Developer Support (City)
- Request for Site Evaluation (City)
- Inventory of Brownfield Sites (State)

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- Grants/Loans (State)
- Liability Protection (State)
- Site Screening Services (State)
- Voluntary Remediation Program (State)
- Federal Programs Supporting Brownfield Revitalization

### ***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.

### ***Owner/Developer Support***

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; and
- Developing land use restrictions that are consistent with current zoning and future land uses to offer maximum flexibility in site use.

### ***Request for Site Evaluation***

If an owner has an inactive or under used commercial or industrial properties with real or perceived environmental issues, the owner may be eligible for participation in the City of Roanoke's Brownfields Program. The City of Roanoke has a page on the website specifically to request an evaluation. It may be found here: <http://www.roanokeva.gov/85256A8D0062AF37/CurrentBaseLink/N272TQYL825JCOTEN>

### **State Programs Supporting Brownfield Revitalization**

#### ***Inventory of Brownfield Sites***

VDEQ has partnered with the Virginia Economic Development Partnership to present a searchable inventory containing potential Virginia Brownfields sites that are currently on the market. Sites found in the inventory are sites that may be eligible for Virginia's innovative brownfields liability protections. This inventory of reusable properties and economic opportunities provides readily available site information including topographical maps, aerial photographs, utility locations, and other vital information.

#### ***Grant***

VDEQ Brownfield Restoration Fund provides \$50,000 grants for the purpose of promoting the restoration and redevelopment of brownfield sites.

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### ***Loans***

Low interest loans for cleanup are also available through VDEQ and Virginia Resources Authority.

### ***Liability Protection***

Liability for pre-existing contamination has historically been a leading deterrent to brownfield development activities. DEQ provides immunity to future state regulatory compliance action through its Voluntary Remediation Program via a “certificate of completion” which “runs with the land.” To provide further liability comfort, DEQ and EPA have executed a Memorandum of Agreement with EPA, which will provide federal concurrence with DEQ's decisions on site requirements.

### ***Site Screening Services***

Currently, DEQ is offering site screening services made available through a Cooperative Agreement with EPA. This service is free and can be easily applied for. The free service is available to local communities, Industrial Development Authorities, and economic development agencies and can be applied to private industry provided they allow the local public entity to apply for the funds on their behalf.

### ***Voluntary Remediation Program***

Virginia's Voluntary Remediation Program (VRP) is a non-enforcement based cleanup program that provides a formal mechanism for DEQ oversight while providing flexibility to the participant. The VRP utilizes a risk-based approach that provides reasonable clean up goals and allows for institutional and engineering controls, as well as deed restrictions, to be considered as remediation. Participants of the VRP can withdraw any time provided they notify DEQ in writing and there is no time limit on the duration of clean up.

## **Federal Programs Supporting Brownfield Revitalization**

### ***Brownfield Programs***

Brownfield clean-up funding (assessments, revolving loans, job training, technical advice, etc.) flow primarily from the federal government's Environmental Protection Agency (EPA). The assistance can be delivered directly or through other federal partners and state agencies. In Virginia, this activity is performed by the Department of Environmental Quality (DEQ).

- Area-Wide Planning Pilot Program – grant funding and direct assistance (through Agency contract support) resulting in an area-wide plan, which will inform the assessment, cleanup and reuse of brownfields properties and promote area-wide revitalization.
- Assessment Grants – provide funding for a grant recipient to inventory, characterize, assess, and conduct planning and community involvement related to brownfield sites.
- Revolving Loan Fund Grants – enables states, political subdivisions, and Indian tribes to make low-interest loans to carryout cleanup activities at brownfield properties.
- Cleanup Grants – provide funding for grant recipients to carry out cleanup activities at brownfield sites.
- Environmental Workforce Development and Job Training Grants – designed to provide funding to eligible entities, including nonprofit organizations, to recruit, train, and place predominantly low-income and minority, unemployed and under-employed residents of solid and hazardous waste-impacted communities with the skills needed to secure full-time, sustainable employment in the environmental

field and in the assessment and cleanup work taking place in their communities.

- Multi-Purpose Pilot Grants – a new program providing a single grant to an eligible entity for both assessment and cleanup work at a specific brownfield site, owned by the applicant.
- Training, Research, and Technical Assistance Grants – provide funding to eligible organizations to offer training, research, and technical assistance to facilitate brownfield revitalization.

### ***Federal Tax Incentives***

In August 1997, President Clinton signed the Taxpayer Relief Act (HR2014/PL 105-34), which includes a brownfields tax incentive designed to spur the cleanup and redevelopment of brownfields. Under this federal tax incentive, environmental cleanup costs for properties are fully deductible business expenses in the year in which costs are incurred or paid. This Act was expanded on December 15, 2000, to extend the tax incentive to January 1, 2004, and include any site with a release or disposal of hazardous substances (with some exclusions). The tax incentive is administrated by the IRS and is applicable to properties that meet the requirements specified in the EPA Brownfield Tax Incentives Guidelines.



## Appendix D: Lessons from Other Communities

In developing the current plan, Roanoke is following the lead of other communities who have successfully transitioned older industrial areas back into productivity. The lessons from these previous efforts have informed the current effort, and several of the lessons learned are outlined below. Three examples with particularly pertinent lessons for Roanoke may be found in Greater Philadelphia, Milwaukee, and Chicago.

### Plymouth, Norristown, and Conshohocken, PA

In 2004 and 2005, the Delaware Valley Regional Planning Commission (DVRPC) undertook an effort to revitalize the Rail Corridor spanning three communities in Montgomery County, PA, directly northwest of the City of Philadelphia. These communities had experienced a legacy of industrial development along the Schuylkill River and its associated rail lines over the previous century. In addition to the environmental legacy left by these uses, the community was also experiencing stress due to population growth and increased demands on a crumbling transportation system.

The two part study and plan identified the community goals for each municipality, catalogued the current situation with regards to built environment and transportation capacity, and identified assets and problems along the corridor.

The plan then laid forth a set of specific recommendations to address:

- Road traffic alleviation, especially regarding truck traffic
- Residential preservation and rehabilitation
- Reclaiming access to natural areas such as the riverfront
- Historic preservation
- Future plans to address economic development, business retention and attraction

A summary of the full plan may be found at <http://www.dvrpc.org/reports/05006.pdf>

### Milwaukee Near North Side Area Plan

As in Roanoke, Milwaukee's 30<sup>th</sup> street corridor had historically been the location for industrial activity due to the presence of the former Milwaukee Road rail yard. The area had more recently become home to a host of derelict industrial properties, scrap metal, and environmental issues that were a source of concern.

The plan itself put forth a vision of sustainable planning practices, community involvement and enablement, and developing major "catalytic" projects throughout the study area. As one component to its overall plan for revitalizing the corridor, the City adopted a strategy of fostering and becoming directly involved in the redevelopment of key targeted sites throughout the corridor. These included the 84-acre Tower Automotive Site, long a derelict property which reinforced the area's perceptions as unsafe and run down.

At present, the site has been made available for purchase to the City, and should be cleared and ready

for development by 2013.

More on these initiatives may be found at

<http://city.milwaukee.gov/Projects/30thStreetIndustrialCorridor.htm>

#### **North Lawndale (Chicago, IL)**

The North Lawndale section of Chicago (located west of the Loop), was one of the first industrial suburbs of the City. The area grew throughout the early part of the 20th century, up to and including the 1950's. After this point it began to suffer the same symptoms of urban dislocation and deterioration symptomatic of so many other American cities of the time. Whereas the neighborhood had once been a major location for many companies and aspiring homeowners, the economic and racial issues of the 1960's resulted in underutilized or – worse yet – burned out blocks of urban decay.

The City and Neighborhood developed a plan in 2007 to put forth a four-part strategy for revitalizing the region. These included:

- Redevelopment of the manufacturing sector, by bringing in industries to provide revenue and employment;
- Development of affordable housing projects, which will help service the new industries in the area and best utilize the currently vacant land;
- Develop the neighborhood's prime commercial corridor of North Lawndale along Ogden Avenue; and lastly
- Provide suggested uses for the increased tax revenue for future investment in North Lawndale

The first phase – that of rebuilding the industrial base – built heavily on the concept of leveraging state and federal incentive programs to entice businesses into the area or encourage them to grow in place. Industrial targeting was based upon knowledge of targets that broader Metropolitan Chicago agencies were already pursuing.

The plan may be found at <http://condor.depaul.edu/fdemissi/lawndale5.pdf>

## Appendix E: Acknowledgements

Person	Company
Ann Carroll	Environmental Protection Agency
Lee Martin	B&M Metals
Ted and Tyson Smith	British Auto Restorations
Alvin Gillespie	Chandler Concrete
Rob Ledger and Lindsay Hurt	Department of Economic Development
Paul Phillips	Freedom First Credit Union
Karen Mason	Habitat for Humanity
Jimmy Cook	Hurt Park and TAP
Faisal Khan	Kahn Builders and Contractors
Clarice Walker	Loudon Melrose
John Leftwich, Pam Scott, Ed Murray	Rebuilding Together
Dezi Wynter	Redevelopment and Housing Authority
Claude Ferguson	Sav A Lot Grocery
Tom Cain	Impact and Amplify
Joy Parrish	West End Center
Brian Townsend	City of Roanoke Assistant City Manager for Community Development
BT Fitzpatrick and Frederick Gusler	City of Roanoke Planning Department

## Appendix F: Previous Reports Submitted

All Task deliverable items are included in a CD on the back cover of this report.

### Task 1 Report – October 14, 2011

- Summary of GIS information
- Brownfield Overview
- Stakeholder Outreach
- Review of neighborhood Plans
- Baseline Goals
- Appendix: Neighborhood Plan Reviews

### Task 2 Report – February 1, 2012

- Introduction
- GIS Database Update
- Inventory of Brownfield Sites and Development Areas
- Environmental Justice Issues
- Infrastructure, Utility and Transportation Systems
- Public Involvement and Feedback
- Location Assessment
- Development and Incentive Programs
- SWOT Analysis
- Re-Use Alternatives Evaluation
- Redevelopment Strategy/Next Steps
- Appendix
  - A: Brownfield Property Inventory
  - B: Summary of Environmental Concerns

### Task 3 Report – March 9, 2012

- Evaluation of and Plan for Reuse of Utility and Public Infrastructure
- Executive Summary
- Target Area 1/Loudon NW
- Target Area 2/Shenandoah NW
- Target Area 3/Center NW
- Target Area 4/Patterson SW
- Target Area 5/Norfolk SW
- Target Area 6/Salem SW



**Task 4: Revitalization Policy Framework April 30, 2012**

- Introduction
- Goals
- Issues, Objectives, and Tools
- Policy Framework and Suggested Changes
- Continual Process Improvement