

## **Merrick-Memorial Neighborhood** Redevelopment Plan

West Springfield, Massachusetts

#### Prepared for:

Pioneer Valley Planning Commission West Springfield, Massachusetts



Prepared by: **WHB** Vanasse Hangen Brustlin, Inc.

> In association with: Basile Baumann Prost & Associates, Inc. Hatch Mott MacDonald, Inc Reebie Associates

December I, 2004

This document was developed through the assistance of the: Federal Highway Administration, Federal Transit Administration, Massachusetts Executive Office of Transportation, and **MassHighway** 

# Merrick-Memorial Neighborhood Redevelopment Plan

West Springfield, Massachusetts

Prepared for	Pioneer Valley Planning Commission West Springfield, MA	
Prepared by	<b>VHB</b> /Vanasse Hangen Brustlin, Inc. Watertown, MA	
	Basile Bauman Prost Associates Annapolis, MD	
	Hatch Mott MacDonald, Inc. Boston, MA	
	Reebie Associates Stamford, CT	December 1, 2004



## **Table of Contents**

Overview	
Study Area	2
Planning Process	2
History	2
Process	5
Consistency with Office for Commonwealth Development	Sustainable Development
Principles	
Redevelop First	7
Concentrate Development	7
Be Fair	7
Restore/Enhance the Environment	
Conserve Natural Resources	
Expand Housing Opportunities	
Provide Transportation Choice	
Increase Job Opportunities	9
Foster Sustainable Businesses	9
Plan Regionally	9
Project Goals	
Summary of Recommendations	
Infrastructure Improvements	
Rail Yard Improvements:	
Neighborhood Improvements	
Economic Impacts	
Chapter 2: Existing Conditions	
Introduction	
Study Area	
Land Use	
Industrial	
Residential	
Commercial	2-5



	Zoning	
	Industrial Districts	
	Residential Districts	
	Business Districts	2-9
	Transportation	2-9
	Study Area	2-10
	Data Collection	2-10
	Traffic Operations	2-11
	Roadway Infrastructure	2-12
	Safety	2-14
	Pedestrian and Bicycle Facilities	2-14
	Transportation Network and Relationship to CSX Rail Yard	2-15
	Rail and Intermodal Operations	2-16
	CSX Operations	2-16
	Safety and Security Procedures	2-18
	Regional Freight Market Conditions	2-22
	Real Estate Market Conditions	2-23
	Business Survey	2-24
	Economic/Demographic Analysis	2-24
Chup	er 3: Redevelopment Plan	•••••
Chup	Introduction	3-1
Chup	Introduction Redevelopment Goals	
Chup	Introduction Redevelopment Goals Community Input and Public Outreach	
Cinup	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan	3-1 3-1 3-1 3-2
Cimp	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development	3-1 3-1 3-1 3-2 3-3
Cimp	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements	3-1 3-1 3-2 3-3 3-4
Cimp	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites	3-1 3-1 3-1 3-2 3-2 3-3 3-4 3-4 3-7
Chup	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation	3-1 3-1 3-1 3-2 3-3 3-4 3-7 3-25
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites. Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements. Traffic Impacts of Redevelopment Plans	3-1 3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35 3-38
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements Traffic Impacts of Redevelopment Plans Rail Yard Improvements	3-1 3-1 3-2 3-3 3-3 3-4 3-25 3-25 3-26 3-38 3-38 3-43
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites. Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements. Traffic Impacts of Redevelopment Plans Rail Yard Improvements Intermodal Terminal Improvement.	3-1 3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35 3-38 3-43 3-43
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites. Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements. Traffic Impacts of Redevelopment Plans Rail Yard Improvements Intermodal Terminal Improvements to West Springfield Yard and Terminal	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35 3-38 3-43 3-43 3-43
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements Traffic Impacts of Redevelopment Plans Rail Yard Improvements Intermodal Terminal Improvement to West Springfield Yard and Terminal Market Development for West Springfield Intermodal Terminal	3-1 3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35 3-38 3-43 3-43 3-43 3-53
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements Traffic Impacts of Redevelopment Plans Rail Yard Improvements Intermodal Terminal Improvement to West Springfield Yard and Terminal Market Development for West Springfield Intermodal Terminal Neighborhood Improvement	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-38 3-38 3-43 3-43 3-53 3-54
	Introduction	3-1 3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-26 3-35 3-38 3-43 3-43 3-43 3-53 3-54 3-54
	Introduction Redevelopment Goals Community Input and Public Outreach Four Part Redevelopment Plan Economic Development Common Elements Redevelopment Plans and Priority Sites Transportation Transportation Improvements Overview Short-term Recommendations Phasing Plan for Transportation Improvements Traffic Impacts of Redevelopment Plans Rail Yard Improvements Intermodal Terminal Improvement to West Springfield Yard and Terminal Market Development for West Springfield Intermodal Terminal Neighborhood Improvement Neighborhood Preservation Program Potential Funding Sources	3-1 3-1 3-2 3-3 3-4 3-7 3-25 3-25 3-25 3-26 3-35 3-38 3-43 3-43 3-53 3-54 3-54 3-54 3-54



Chapter 4: Economic Feasibility		
Introduc	tion	
	Redevelopment Plans	
	Market Support	

### Chapter 5: Environmental Benefits and Impacts

Introducti	on	. 5-1
	Noise	. 5-1
	Air Quality	. 5-2
	Wetlands and Wildlife	. 5-2
	Hazardous/Contaminated Risk Sites	. 5-3

## Chapter 6: Land Use Planning and Zoning

Land Us	,e	6-1
	Industrial	6-1
	Residential	6-2
	Commercial	6-5
Zoning		6-5

### Chapter 7: Public Improvements and Cost Estimates

Introduction	'-1
Infrastructure Area Enhancements7	'-1
Improvement Cost Matrix7	-5

#### Chapter 8: Implementation Strategy

Introduction	8-1
Phasing and Prioritization	
Funding Sources	8-2
Marketing and Disposition Strategies	8-11

### Appendices (Separate Document) ..... A. Transportation System Inventory and Rail Operational Overview..... B. Freight Rail Study..... C. Real Estate Market Study .....



## **List of Tables**

Table 3-1: Trip Generation Summary: Industrial Development	3-40
Table 3-2: Trip Generation Summary: Flex-Space/Industrial Mix	3-41
Table 3-3: Trip Distribution	3-43
Table 3-4: Proposed Safety and Security Improvements	3-52
Table 3-5: Plan Components Matrix	3-60
Table 4-1: Economic Impacts	4-10
Table 4-2: Projected Commercial Square Footage	4-11
Table 4-3: Total Projected Employment	4-12
Table 4-4: Employment Projections	4-13
Table 4-5: Projected At-Place Employment	4-14
Table 4-6: Projected Payrolls	4-14
Table 7-1: Improvement Cost Matrix	7-7



## **List of Figures**

Figure 1-1: Study Area	1-3
Figure 2-1: Existing Land Use	2-3
Figure 2-2: Existing Zoning	2-7
Figure 3-1: Potential Truck Service Road Alignment	3-5
Figure 3-2: Focus: Industrial Development	3-9
Figure 3-3: Western Avenue / Bliss Street Industrial Development	3-11
Figure 3-4: West Springfield Trade Center Industrial Development	3-13
Figure 3-5: Southern Industrial District	3-17
Figure 3-6: Focus: Flex-Space / Industrial Mix	3-19
Figure 3-7: Western Avenue / Bliss Street Flex-Space / Industrial Mix	3-21
Figure 3-8: West Springfield Trade Center Flex-Space / Industrial Mix	3-23
Figure 3-9: No Intervention / Infrastructure Enhancements	
Figure 3-10: Transportation Improvements	
Figure 3-11: Rail Yard Improvements	3-45
Figure 6-1: Proposed Preservation and Development Areas	6-3



# **1** Executive Summary

#### **Overview**

The West Springfield CSX Rail Yard has long dominated the physical landscape and functioned as the economic engine for the surrounding Merrick and Memorial neighborhoods. The community's rail heritage dates back to the turn of the century when the prosperous rail yard was the center of the area's industrial economy. The businesses that the rail yard attracts, the jobs that it creates, and the traffic and environmental impacts that it generates all directly influence the quality of life for the more than 5,000 people who reside in the immediate area.

West Springfield experienced an economic boom in terms of residential and commercial retail growth during the 1980's and 1990's. During the same time period, however, the local industrial and manufacturing base declined significantly. Today, West Springfield has an opportunity to reverse this trend through a series of strategic improvements to the industrial areas surrounding the West Springfield CSX rail yard while at the same time enhancing the quality of life for residents in the surrounding Merrick and Memorial neighborhoods. This requires the creation of a comprehensive redevelopment plan that can become the framework for pinpointing future infrastructure improvements and re-development options within the Merrick-Memorial study area.

Vanasse Hangen Brustlin, Inc., working in conjunction with the Pioneer Valley Planning Commission and the Town of West Springfield, has prepared this report to assist efforts aimed at developing a redevelopment strategy for the West Springfield CSX rail yard and surrounding neighborhood. The report includes the following:

- □ A summary of **existing conditions** including transportation system (roadway, rail, pedestrian, bicycle and transit), safety and security procedures, real estate market conditions, and land use patterns.
- A redevelopment plan including identification of targeted areas for economic development and a series of transportation and rail yard infrastructure improvements aimed at enhancing the viability of the existing rail yard. The plan also identifies a neighborhood improvement strategy including actions aimed at preserving and reinforcing the quality of life within the surrounding residential areas.



- □ A comprehensive **economic analysis** of the various redevelopment plans in terms of available market support, private sector financial feasibility and public sector fiscal impact.
- □ A summary of anticipated **environmental benefits and impacts** associated with area redevelopment.
- □ Identification of **public improvements and cost estimates** associated with the redevelopment plans.
- □ An **implementation strategy** including prioritized actions, phasing, responsible parties, and schedule for action.

### Study Area

The Merrick-Memorial Neighborhood Study Area is located in the southeastern portion of the Town of West Springfield (See Figure 1-1). The study area is generally bordered by Route 5 and the Connecticut River to the east, the Eastern States Exposition ("The Big E"), Memorial Avenue and Agawam Avenue to the south, River Street to the west, and Park Avenue to the north. The study area includes an industrial core centered adjacent to the CSX rail yard. Two distinct residential districts are located on either side of the yard. They include the Merrick Neighborhood located north of Union Street and the Memorial Neighborhood located south of Lowell and Windsor Street. The study area covers approximately 1.1 square miles (over 700 acres of land) and contains a population of approximately 5,300 people.

### **Planning Process**

### History

Planning for the Merrick-Memorial Neighborhood dates back to 1999 at which time a strategic statewide economic planning effort in Connecticut identified the CSX West Springfield rail yard and terminal as a critical strategic asset for the Interstate 91 corridor in Massachusetts and Connecticut. In addition, West Springfield's newly elected Mayor sought to focus attention on a neighborhood which has long faced challenging quality of life issues and at the same time expand and diversify the business mix in the Town.



Prepared by Pioneer Valley Planning Commission, September 2002.

#### Vanasse Hangen Brustlin, Inc.

#### Figure 1-1

#### Study Area

Merrick-Memorial Neighborhood Redevelopment Plan West Springfield, Massachusetts



The Pioneer Valley Planning Commission (PVPC) identified redevelopment of the Merrick-Memorial Neighborhood as one of its top priorities in 2001. The neighborhood is home to the CSX rail yard which is a major component to the regional transportation system. The PVPC allocated funding as part of its FY 2002 Unified Planning Work Program to perform initial data collection and identify potential alternatives to improve access to the rail yard. With the support of Congressman John Olver, the PVPC received a Transportation and Community and System Preservation (TCSP) grant to fund the neighborhood redevelopment planning effort.

A brownfields planning study is currently underway for the West Springfield Trade Center, a 7.5-acre redevelopment site adjacent to the CSX Rail Yard. The project, separately funded through a grant from the Environmental Protection Agency, entails an environmental assessment of soil and groundwater, a hazardous material and structural assessment of the existing Trade Center building, and preparation of feasible redevelopment options for the site. The planning and market feasibility work for the Trade Center was conducted by Vanasse Hangen Brustlin, Inc. under separate contract and was coordinated with the work on the Merrick-Memorial Neighborhood.

#### Process

The planning process began in June 2003. The consultant team met with stakeholders and town officials throughout the process to identify issues and concerns regarding the rail yard and related activities as well as solicit input and develop consensus around one or more of the redevelopment options. Meetings were held with the following groups:

- Merrick-Memorial Advisory Committee
- West Springfield Redevelopment Authority
- West Springfield Town Council
- □ Community Meetings

#### Merrick-Memorial Advisory Committee

The consultant team presented its work to the Merrick-Memorial Advisory Committee. The committee is comprised of representatives from variety of different organizations and local businesses who all share an interest in planning for the future of the area. The Merrick-Memorial Advisory Committee consists of the following individuals:

- Deaul Boudo, At-Large Member, West Springfield City Council
- □ Timothy Brennen, Executive Director, Pioneer Valley Planning Commission
- Stephen Buoniconti, State Senator

### VHB

- Development, CSX
- David Chenard, CSXI, West Springfield
- □ James Cronin, CSX Trainmaster
- Kenneth Delude, Senior Vice President, Western Massachusetts Economic Development Corporation
- □ Edward Gibson, Mayor of West Springfield
- □ Astrid Glynn, Massachusetts Executive Office of Transportation
- □ Joseph LaPlante, West Springfield Community Development Department
- □ Chris Nekitopoulos, A.C. Motor Express
- Tom Maziarz, Director of Transportation Planning, Capital Regional Council of Governments
- □ G. Wayne McCary, Eastern States Exposition
- □ Angus Rushlow, Precinct 1, West Springfield City Council
- Edward Sullivan, Council President, West Springfield City Council
- □ James Welch, State Representative
- □ Kristen Wood, Office of Congressman John Olver

A total of six meetings were held with the Advisory Group over the 18-month planning period.

## West Springfield Redevelopment Authority and Town Council

The planning team also met with and made presentations to representatives from the West Springfield Redevelopment Authority and West Springfield Town Council at key milestones during the planning process.

### **Community Meetings**

Two community meetings were held to gain insight into issues and concerns regarding rail and related activities in the neighborhood. This input highlighted a variety of quality of life issues for the surrounding neighborhood that need to be considered in any future planning. These include the following:

- □ Impact of trucks and truck-related activities (speeding, routing, dangerous intersections, noise, blocking of streets)
- □ Rail yard safety and security
- □ Lack of pedestrian sidewalks
- □ Inadequate bridge underpasses (vehicles and pedestrians)
- □ Lack of enforcement of existing codes



### Consistency with Office for Commonwealth Development Sustainable Development Principles

The Merrick-Memorial Neighborhood Redevelopment Plan acknowledges and addresses the sustainable development principles established by the Commonwealth.

#### 

#### **Redevelop First**

The Merrick-Memorial Neighborhood Redevelopment Plan supports the revitalization of the Merrick and Memorial neighborhoods in West Springfield, meeting the criterion of choosing reuse and rehabilitation rather than new construction. This effort will lead to improvements in existing housing, the rehabilitation of existing infrastructure – bridge underpass, streets, and sidewalks – and redevelopment of key properties, including the Trade Center, a brownfields site.

#### **Concentrate Development**

Because this project involves infill housing and industrial development as well as the rehabilitation of existing infrastructure in an urban neighborhood, it directly supports compact development, land conservation, and the creation and improvement of transportation districts. Additional housing and neighborhood preservation efforts can only promote diversity by attracting new residents and focusing the growth of industry in specific locations in the neighborhood. Moreover, in a neighborhood where 7% of the residents indicate that they walk to work, the Merrick-Memorial Neighborhood Redevelopment Plan and its redevelopment initiatives will give people the opportunity to find employment within walking distance. And, by locating housing close to public transportation, the plan will permit those residents to expand their employment, educational, and recreational horizons as well.

#### Be Fair

The Merrick-Memorial Neighborhood Redevelopment Plan was developed with an extensive public participation process, described on page 3-1, which encouraged input from members of the community at every social and economic level. Over the past two decades, the Town has utilized various funding resources to undertake a multi-pronged approach to improve and expand housing, increase neighborhood safety, provide social services, and implement infrastructure improvements.



#### Restore/Enhance the Environment

It is anticipated that the Merrick-Memorial Neighborhood Redevelopment Plan will have environmental consequences in the following categories: noise, air quality, wetlands and wildlife, and hazardous/contaminated risk sites. Each of these impacts and the associated mitigation measures are discussed in Chapter 5 of this plan. Briefly put, every effort will be made to respect and protect natural resources, wildlife habitats, and the landscape.

#### Conserve Natural Resources

This plan will not adversely affect renewable energy sources, nor will it result in the waste of water, energy, or other natural resources. While open space in the Merrick and Memorial neighborhoods is limited, this plan encourages the development of additional area for recreational use, and seeks to enhance existing streetscapes with sidewalks and pedestrian amenities. The plan will promote building that uses land, water, and materials efficiently.

#### Expand Housing Opportunities

Improvements to the Merrick-Memorial Neighborhood will encourage the reuse and rehabilitation of the area's existing older housing stock. (The Neighborhood Preservation Program can be found on page 3-54). This plan supports the rehabilitation of housing to meet the needs of people of all abilities and various income levels. Opportunities for employment and public transportation are available nearby. The Town has identified affordable-housing ownership as a priority and is focusing efforts on a neighborhood in which 67 percent of the housing units are renter-occupied. The addition of affordable-homeowner units will have a significant neighborhood impact. Families benefit from homeownership because it creates stability and improves their economic well being. Neighborhoods benefit from a mix of owners and renters because owners are longer-term residents who have a stake in the neighborhood and who can – and often will – invest in improving and maintaining something that is their own.

#### **Provide Transportation Choice**

This plan meets the criterion of locating new development where a variety of transportation modes can be made available. The Pioneer Valley Planning Council is using grant funding from the TCSP program to develop a comprehensive redevelopment plan addressing transportation improvements, such as expansion of rail-related uses and services and appropriate neighborhood linkages designed to



encourage economic development as well as neighborhood preservation and revitalization. During the public hearings held for this plan, many residents complained about the limited pedestrian access, particularly at the railroad underpasses. The proposed improvements will result in improved conditions for pedestrians – those who are able-bodied and those with mobility limiting disabilities – as well as for bicyclists and motor vehicles, particularly larger freight vehicles.

#### Increase Job Opportunities

Local and regional business growth and expansion is expected to result from this plan, in light of enhanced pedestrian activity and public transportation improvements. The number of full- and part-time jobs that will result from economic activity linked to the implementation of the transportation enhancements phase of the project is estimated to exceed 1,500. Also, because development spurs more development, this project has the potential to attract additional businesses, including entrepreneurial enterprises, which can employ the many neighborhood residents who walk to work or use public transportation. At full build-out, it is projected that an additional 2,000 jobs will be created.

#### Foster Sustainable Businesses

The design and subsequent construction improvements pertaining to access to the Merrick-Memorial Neighborhood and the CSX rail yard will not adversely affect any sustainable businesses. This project will encourage the use of affordable energy sources and reduced dependency on imported fossil fuels.

### **Plan Regionally**

This plan is consistent with the state's initiative for the investment in, and development of, urban centers, which by their very nature affect surrounding communities and the region as well as the host community. This plan is included in the Pioneer Valley Regional Plan for Progress. The project is also being acknowledged on the public policy agenda of the Hartford Springfield Economic Partnership. In addition, the plan is consistent with the town's Community Development Strategy, Master Plan, Subregional Housing Plan, and other related local plans and initiatives.



### Project Goals

The Merrick-Memorial Neighborhood Redevelopment Plan seeks to identify ways to enhance the longstanding relationship between the rail yard and the neighborhood's various constituencies including residents, industrial users and commercial businesses. The plan, currently being administered by the Pioneer Valley Planning Commission through a grant from the federal government, is focused on identifying transportation improvements, economic development options, and appropriate neighborhood linkages between the yard and the surrounding neighborhoods. A key objective of the plan is to identify a series of improvements that result in the following:

- □ Thriving intermodal rail yard
- □ Revitalized and/or remediated industrial areas
- □ Job creation
- □ Improved vehicular and pedestrian circulation
- Neighborhood stabilization
- Streetscape improvements

### Summary of Recommendations

During the planning process, three areas were identified for potential redevelopment. These areas were selected based on a variety of factors including ownership, access, size, location, and the age and condition of existing facilities on the sites. Incorporating this analysis, and taking current market trends and realities into consideration, the following priority sites were determined to provide the greatest opportunity for new development:

- West Springfield Trade Center site (7.5-acre site; future industrial and/or flexspace use)
- Western Avenue and Bliss Street site (9.5-acre site; future "cross dock" warehouse or flex-space use)
- □ Southern Industrial District/Union Street Extension South Area (30-acre site; future industrial/manufacturing/distribution use)

The plan recommends that a series of infrastructure improvements and neighborhood protection strategies be incorporated within any and all redevelopment strategies. The recommendations are intended to ensure that short and long-term redevelopment within the rail yard and on adjacent sites is in concert with the quality of life concerns of the neighborhoods. Key recommendations include the following:



#### Infrastructure Improvements

- □ Improve truck signage throughout the Town.
- □ Improve bridge clearance and site distance at Union Street and River Street.
- □ Provide truck route enhancements with improved routing system to include a new internal truck service road and a new access road and linkage to Route 5.
- □ Implement improvements to signal timing along Park Street, Union Street, and Memorial Avenue.
- □ Improve access on Park Street with removal of some on-street parking.
- □ Improve geometry and alignment at Baldwin/River Street intersection.
- □ Provide new sidewalks in areas where none currently exist.
- □ Implement improvements to Memorial Avenue and North End rotaries.

**Rail Yard Improvements:** 

- □ Install new perimeter fencing.
- □ Install cantilevered sliding gates at all access points.
- □ Provide security CCTV system.
- □ Install security lighting that focuses on perimeter areas, access locations, and areas of the yard where rail cars are parked for an extended period of time.
- □ Install warning signs discouraging potential trespassers along the perimeter of the rail yard.
- □ Pave land immediately north of the rail tracks.

**Neighborhood Improvements** 

- **D** Exclude truck traffic on Main Street (in conjunction with the new access road).
- Provide pedestrian enhancements and streetscape improvements along Union Street and Park Street including sidewalks, lighting, planting, and furniture.
- Implement an economic development and business retention program to assist existing businesses including streamlined permitting/approvals for businesses seeking to locate or expand in West Springfield and a designated point person for economic development projects.
- □ Implement selective residential infill and rehabilitation to strengthen the mix of uses and home ownership potential within the neighborhood.
- Increase the amount of open space in the neighborhood through the development of pocket parks and reclaiming of flood plain and dikes for recreational purposes.



### **Economic Impacts**

An economic and fiscal impact analysis of the construction and annual operations associated with the various redevelopment options was conducted. The analysis quantified the direct and indirect economic benefits (jobs, payroll) generated during the construction and at the sustained annual build out of each redevelopment. In addition, the analysis also examined the local tax implications of the projected development. Key findings of the economic impact analysis include the following:

- □ <u>Employment</u> The redevelopment plans at full build out are expected to create 1,500 to 2,000 new jobs.
- □ <u>Construction Employment</u> The redevelopment is projected to generate approximately 100 construction jobs.
- <u>Payroll</u> The projected payroll is estimated to be between \$68 million and \$87 million, a substantial increase over the existing \$8 million payroll level within the study area.
- Tax Revenue The estimate tax revenue associated with the redevelopment is projected to be in the range of \$1.2 million (industrial development) and \$1.6 million (flex-space/industrial mix), an increase of over \$1 million over current levels (\$300,000).



#### Introduction

This chapter presents an existing conditions summary of land use, transportation infrastructure, rail yard operations, and market conditions within the Merrick-Memorial Neighborhood.

### Study Area

The Merrick-Memorial Neighborhood Study Area is located in the southeastern portion of the Town of West Springfield. The study area is generally bordered by Route 5 and the Connecticut River to the east, the Eastern States Exposition ("The Big E"), Memorial Avenue and Agawam Avenue to the south, River Street to the west, and Park Avenue to the north. The study area includes an industrial core centered adjacent to the CSX rail yard. Two distinct residential districts are located on either side of the yard. They include the Merrick Neighborhood located north of Union Street and the Memorial Neighborhood located south of Lowell and Windsor Street. The study area covers approximately 1.1 square miles (over 700 acres of land) and contains a population of approximately 5,300 people.

### Land Use

Land use patterns within the Merrick-Memorial Neighborhood Redevelopment Plan study area reflect its historic role as a functioning rail yard surrounded by supporting residential, commercial, and industrial uses (See Figure 2-1). The site's rail heritage dates back to the turn of the century when the prosperous rail yard was the center of the area's industrial economy, exerting a dominant influence on the physical landscape and stimulating the development of the Merrick and Memorial neighborhoods and commercial corridors.





Merrick-Memorial Neighborhood, circa 1949

### Industrial

The study area includes an industrial core centered around the CSX Rail Yard, with intermodal facilities concentrated north of the rail line and freight yard on the south side. An additional industrial district, located south of the Century Shopping Center, is comprised of more modern industrial uses. While both of these areas are zoned for high density, heavy and light industrial uses, they are characterized by underutilized or vacant land and structures,



Trailer Parking

modest reuse of older buildings, and significant trailer and chassis parking areas. Noteworthy sites with potential for industrial development or revitalization include the West Springfield Trade Center, a site at the intersection of Western Avenue and Bliss Street, the Sears Way building, the Union Street Extension South Area (Southern Industrial District), the Omniglow facility on Windsor Street, and land currently owned by Con Edison.





Figure 2-1

Existing Land Use

Merrick-Memorial Neighborhood Redevelopment Plan West Springfield, Massachusetts



#### Residential

Two distinct residential neighborhoods, split by the rail yard, exist in the study area. The Northern Residential Subdistrict, part of the historic Merrick neighborhood northeast of the rail yard, is a higher density, primarily residential neighborhood of low and moderately priced multi-family housing. The area is zoned for mixed residential and office uses. Isolated gaps in the otherwise consistent residential fabric of the



**Typical Residential Street** 

Merrick neighborhood are ideally suited for housing infill or pocket parks. The Memorial neighborhood, located south of the rail yard, is a less cohesive residential neighborhood comprised of an often incompatible, awkward mix of residences, industrial users, and small businesses. It is zoned for a higher density mix of industrial, multi-family residential, and limited commercial uses.

#### Commercial

Commercial uses within the study area are concentrated along the Memorial Avenue and near the Eastern States Exposition (the Big E). The Memorial Avenue corridor, which is zoned for a range of retail uses and commercial activities of higher densities accommodating high volume traffic, includes the Century Shopping Center, strip malls, restaurants, older motels, and auto sales and repair shops, among a variety of other individual retail uses. In addition to Memorial Avenue, secondary



**Century Shopping Center** 

commercial corridors exist along Park Avenue and Union and Main Streets. Park Avenue is a mixed use area of medium density containing institutional, civic and professional uses, multi-family dwellings, and limited quantity commercial uses. The northern side of Union Street, abutting the Merrick residential neighborhood to the north, is zoned to provide a higher density area for a mix of business and industrial uses, while the southern side is zoned for industrial uses. Properties along both sides of Union Street are occupied by a mixture of professional offices, service oriented businesses, and manufacturing companies. Both Main Street, whose commercial areas follow the same zoning as Memorial Avenue, and Union Street are experiencing moderate commercial activity and would benefit considerably from some form of revitalization.

2-5



### **Open Space**

Open space in the study area is limited to two baseball fields, one adjacent to Route 5 in the Merrick neighborhood and the other adjacent to River Street between the rail yard and Memorial neighborhood. A park along Park Avenue borders the northwest edge of the study area.

### Zoning

This section documents existing zoning within the study area (See Figure 2-2).

### Industrial Districts

In the center of the study area is a large Industrial ("I") district encompassing the West Springfield Rail Yard and surrounding land as far north as Union Street and as far south as Windsor Street. This district includes some of the more modern industrial uses within the study area.

The stated purpose of the I district is to provide high-density areas for both heavy and light industrial uses.

### **Residential Districts**

Only one primarily residential district exists within the study area. This is the Residence C ("RC") district located within the Merrick neighborhood. Generally bounded by Route 5 to the north, Bridge Street to the east, Union Street to the south, and Bliss Street to the west, the district is characterized by multi-family housing uses. A number of smaller business districts are located within the RC district (primarily along Main Street) and along the district's Bridge Street, Union Street, and Park Avenue edges.

The stated purpose of the RC district is to provide for residential neighborhoods of higher densities that allow for a mix of residential and professional office uses.



### Legend

BA	Business A
BA-1	Business A-1
BB	Business B
BB-1	Business B-1
CBD	Central Business District
FP	Flood Plain
Ι	Industrial
NB	Neighborhood Business
RA-2	Residence A-2
RB	Residence B
RC	Residence C



Vanasse Hangen Brustlin, Inc.

Figure 2-2

Existing Zoning

Merrick-Memorial Neighborhood Redevelopment Plan West Springfield, Massachusetts



#### **Business Districts**

Several types of business districts exist within the study area, each allowing for a different intensity of commercial development. The largest business district in the study area is the Business A ("BA") district located along Memorial Avenue, including the Century Shopping Center, the Big E (outside the study area), and other auto-oriented retail uses. Other smaller BA districts exist within and adjacent to the Merrick neighborhood RC district.

The stated purpose of the BA district is to provide areas for a wide range of retail services and commercial activities, of higher densities, along primary roads to serve as business highway corridors within West Springfield. BA districts are especially capable of accommodating high-volume traffic generating uses, such as drivethrough restaurants, convenience stores, gas stations, and drive-in banks.

Much of the Memorial neighborhood south of the West Springfield Rail Yard and between Memorial Avenue and River Street is zoned Business B-1 ("BB-1"). The stated purpose of the BB-1 district is to provide a higher density area for a mix of industrial, multi-family residential, and limited commercial uses.

A strip of Business B ("BB") zoned land exists along Union Street, between the West Springfield Rail Yard Industrial district and the RC residential district to the north. The stated purpose of the BB district is to provide a higher density area for a mix of business and industrial uses.

Similarly, a strip of Business A-1 ("BA-1") zoned land exists along Park Avenue. The stated purpose of the BA-1 district is to provide a mixed use area, of medium density, containing a wide variety of institutional, civic and professional/business uses with multi-family residential uses and a limited quantity of commercial uses.

### Transportation

This section identifies and reviews existing transportation infrastructure and traffic conditions within the Merrick-Memorial study area, including an existing conditions review of roadway and bridge infrastructure, transit service, pedestrian and bicycle concerns, observed traffic flow and operations, safety issues, and local roadway constraints. A more detailed review of the existing transportation system can be found in the Appendix.

2-9



### Study Area

The Merrick-Memorial Neighborhood is situated along the western banks of the Connecticut River between Route 20, Route 147, and Route 5. These local roadways provide access to the Merrick-Memorial Neighborhood and to the regional highways of Interstate 91 (I-91) and the Massachusetts Turnpike (Mass Pike). I-91 and the Mass Pike intersect Route 5 to the north and south forming three interchanges. Route 5 intersects I-91 to the north in West Springfield and again to the south in Springfield to the east of the Connecticut River. The third interchange intersects Route 5, I-91, and the Mass Pike near the Holyoke City Line in the north.

Neighborhood streets and roadways providing access to the local and regional roadway network include River Street, Main Street, Union Street, Western Avenue, and Day Street. Several intersections along these roadways were individually reviewed. This study reviewed the following 11 intersections:

- □ Park Avenue (Route 20) at Main Street;
- □ Park Avenue (Route 20) at Elm Street/Union Street;
- □ Park Street at Western Avenue/Van Deene Avenue;
- □ Park Street at River Street/South Boulevard;
- □ Memorial Avenue (Route 147) at River Street;
- □ Memorial Avenue (Route 147) at Union Street/Union Street Extension;
- □ Memorial Avenue at Century Plaza;
- □ Memorial Avenue (Route 147) at Bresnahan Street;
- □ Memorial Avenue (Route 147) at Baldwin Street;
- Union Street at Day Street; and
- River Street at Baldwin Street.

#### **Data Collection**

The following section summarizes the data collected at key study area roadways and intersections. The data were compiled by VHB, MassHighway, the Town of West Springfield and PVPC. It should be noted that a more detailed summary, including tables and figures, can be found in the Appendix.

*Daily Traffic Counts* – Average Daily Traffic (ADT) volumes were compiled by the PVPC using automatic traffic recorder (ATR) counts for a typical weekday 48-hour period at various mid-block locations with the study area. The daily traffic counts conducted as part of this study were performed from 2001 – 2003. Traffic counts performed prior to 2003 were increased by 1% per year to reflect 2003 conditions.

*Intersection Traffic Counts* – In addition to ATR collection, commuter peak period turning movement counts (TMCs) were conducted at several intersections within the



limits of the study area. The weekday commuter periods were counted, which occur during the morning hours of 7:00 AM to 9:00 AM and the afternoon hours of 4:00 PM to 6:00 PM. At each location two-hour TMCs were conducted to identify the peak four consecutive 15-minute periods of traffic through the intersection. These consecutive peak 15-minute periods constitute the "Peak Hour Volume". The peak hour of traffic volume represents the most critical period for operations and was the focus for the intersection analysis.

*Vehicle Classification* – Vehicle classification data is used to identify the percentage of heavy vehicles and passenger cars on the roadway. Heavy vehicles include trucks, recreational vehicles and buses. These vehicles are classified based on the number of axles and distance between each axle. Buses, two axle, six tire vehicles and vehicles with three or more axles are classified as a "truck" or heavy vehicles. The percentage of heavy vehicle traffic on a roadway is important as large vehicles have different operating characteristics than normal passenger vehicles. This information is also an important factor in the pavement design of the roadway and calculating the serviceability of a corridor or intersection. Classification counts were conducted at key roadways in the vicinity of the CSX facility to gain a better understanding of how trucks travel in the study area.

*Vehicle Speeds* – Vehicle speed data was collected using the ATRs along a number of roadways within the study area. The "Pace Speed" consists of the range in which most vehicles were recorded to travel. Most vehicles on Union Street were measured to be traveling in the 31–35 mph range while most on Sylvan Street were measured to be traveling between 21–25 mph. Western Avenue ranged between 26–30 mph and Progress Street were measured to be traveling somewhat slower in the 16–25 mph range depending on the direction.

*Travel Times* – In addition to travel speeds on local roadways, average travel times were collected from the study area to points along the major interstates during the morning and afternoon peak hours. Travel time information was gathered starting and ending from the intersection of Union/Day Street to several interstates destinations including I-291 (Chicopee), I-91 (Vermont Border and Bradley International Airport Exit), I-90 (Stockbridge and Worcester), and the Route 5 rotaries. Travel times for inbound and outbound trips were not found to vary significantly. Under typical traffic conditions all of the locations traveled could be reached in less than one hour.

#### **Traffic Operations**

Traffic operations analyses measure existing traffic volumes and quantify traffic flow within the study area intersections. To assess this quality of flow, intersection capacity analyses were compiled, with respect to existing traffic volumes. These analyses provide an indication of how well an intersection serves the traffic demands placed on it. Operating conditions are classified by calculating level of service (LOS),



which is the term used to denote the different operating conditions. LOS is a qualitative measure of the effect of a number of factors, including roadway geometry, speed, travel delay, and freedom to maneuver. The analysis provides an index to the operational qualities of an intersection ranging from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Generally, for this type of area, intersections are considered to operate at an acceptable level of service if they operate at LOS D or better

*Unsignalized Intersection Analysis* – Level of service designation is reported differently for unsignalized than signalized intersections. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. The level of service is only determined for left-turns from the main street and all movements from the minor street. The critical movement is most often the left-turn out of the side street. The following existing deficiencies were identified:

- □ Vehicles attempting to turn left out of the Century Plaza driveway were calculated to operate at LOS F during the afternoon peak hour, and
- □ Left-turns were also calculated to operate at LOS F from Baldwin Street during the afternoon peak hour at its intersection with Union Street.

*Signalized Intersection Analysis* – For signalized intersections, the analysis considers the operation of each lane or lane group entering the intersection in addition to a level of service designation for the overall conditions at the intersection. The following existing deficiencies were identified:

- Left turning vehicles from the southbound approach of the Union Street/Memorial Avenue intersection currently experience very long delays and therefore operate at LOS F during the afternoon peak hour;
- □ The northbound approach of Western Avenue/Park Street intersection also operates at a LOS F;
- □ The intersection of Park Street with South Boulevard and River Street experiences significant delay as it was calculated to operate at an overall LOS D in the morning peak hour and LOS E in the afternoon peak hour.

#### Roadway Infrastructure

The following section provides a summary of the existing roadway infrastructure within the Merrick-Memorial Neighborhood.

*Sign Inventory* – The location of all traffic warning signs in the study area was inventoried. All of the signs observed were in poor condition and most were small making them easy to be overlooked by truck drivers unfamiliar with the area. In addition, no advance warning signs or preferred truck route signs are located along Interstate roadways and major arterials such as Route 5. The following were identified throughout the study area:



- Low clearance signs are present on the approaches to all three railroad underpasses, however, they are not located sufficiently in advance of the Main Street and Union Street underpasses to allow an over height vehicle to detour without backing up or using a local residential street.
- The River Street underpass has an overhead advance warning sign located on Park Street prior to its intersection with South Boulevard that allows over height vehicles to detour down South Boulevard and seek an alternate route.
- Voluntary truck route signs are located along Union Street in the vicinity of side streets and businesses that generate truck traffic. These signs are positioned to alert exiting vehicles of the low clearance underpass and that the preferred truck route is via Park Street and Park Avenue.

*On-Street Parking* – All areas designed as "No Parking" zones and areas with restricted parking were identified. Many residential streets have a temporary winter parking ban along one side from December through April and no parking is allowed on the southern side of Park Avenue between 7AM and 3PM. The restriction of onstreet parking in this area could be contributing to roadway congestion during the afternoon peak hour.

*Bridges* – Railroad underpasses are present on Main Street, River Street and Union Street in the study area. All three underpasses provide 12-feet of vertical clearance, which restricts the ability of larger vehicles to serve the study area. The American Association of State Highway and Transportation Officials (AASHTO) recommend a minimum of 14.5 feet of vertical clearance with a desirable vertical clearance of 16.5 feet to compensate for roadway resurfacing and snow and ice accumulation.<sup>1</sup> In addition, the sight distance at the Union Street Bridge is limited when traveling through this area as a result of the bridge abutments and existing horizontal curvature in the roadway.

*Pavement Markings* – Several areas within the study area have faded pavement markings. Pavement markings serve as a way to provide regulatory and warning information to the driver without diverting his/her attention from the roadway. It is important to maintain pavement markings on a regular basis to ensure maximum visibility. The following areas deserve specific attention:

- The exclusive left turn arrow on the westbound approach of Park Street at its intersection with Van Deene Avenue appears to have been a left/through movement arrow at one time where the through movement arrowhead has been removed. This is confusing and could cause motorists to think that through movements are permitted from this lane.
- Union Street is very wide between its intersection with Memorial Avenue and the railroad underpass and lanes are not clearly identified.

American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets, 4<sup>th</sup> edition, (AASHTO, 2001).



#### Safety

In order to identify vehicle crash trends, safety concerns, and/or roadway deficiencies within the study area, crash data were obtained from the West Springfield Police Department from January 1, 2001 to December 31, 2002. A review of this data indicates that a total of 214 crashes were recorded for the thirteen intersections over the two-year period. Nearly 20 percent of all crashes resulted in a personal injury and most crashes occurred under dry roadway conditions indicating that weather did not contribute to the crash. Also, some form of moving vehicle citation was issued in nearly all of the crashes. The following summary presents some of the highest crash intersections:

- □ The intersection of Park Street with Park Avenue, Union Street and Elm Street resulted in an average of 26 crashes/year over this two-year period. Most of the crashes were of the rear end or angle variety and nearly one third of all crashes occurred during the afternoon peak hours of 4PM to 6PM. This is quite different from the other intersections studied where very few crashes occurred during the morning or afternoon peak hours.
- Eight of the twelve intersections averaged five or more crashes over the two-year period reviewed. Six of these eight intersections are currently controlled by a traffic signal. A common citation issued for many of these crashes was for a vehicle following too close to the leading vehicle.
- □ The intersection of Main Street with Park Street averaged 11.5 crashes from 2001–2002. Park Street has been changed to one-way traffic flow away from this intersection, which could reduce the number of crashes at this intersection.
- □ The number of crashes at the intersection of Union Street with Memorial Avenue was observed to more than double from 2001 to 2002. Most crashes were of the angle variety and many motorists were cited for failure to yield.
- Another intersection with a large increase in crashes from 2001 to 2002 was the intersection of River Street with Baldwin Street. This intersection is somewhat confusing as Sears Way intersects with Baldwin Street in close proximity to Union Street.

*Public transportation* – Two bus service routes are available in the study area, which is provided by the Pioneer Valley Transit Authority (PVTA). PVTA's Red 10 route currently serves the cities of Springfield, West Springfield and Westfield via Main Street. Transit service between Springfield and Agawam is also provided along Memorial Avenue via the Red 14 route.

#### Pedestrian and Bicycle Facilities

A pedestrian and bicycle inventory was completed and the data shows that a wellconnected sidewalk system is present through the residential area of the Merrick-



Memorial Neighborhood but there are no dedicated bicycle facilities. However, the data also presents that existing sidewalks do not exist within the industrial areas of the study area.

*Pedestrian Activity* – An inventory of existing sidewalks within the study area was conducted. Sidewalks are present on at least one side of the roadway in residential areas with the exception of a portion of Allston Avenue, Exposition Terrace, Windsor Street and Burford Avenue. Many streets such as Western Avenue that consist almost entirely of commercial land uses do not have sidewalks. These issues may need to be reviewed on a periodic basis depending on changes to the type of land uses along study area roadways.

*Bicycle Facilities* – As previously mentioned, the study area has no designated bicycle facilities. Bicyclists who choose to bike along the roadways must share the road with vehicular traffic. However, several of the main roadways within the study area provide shoulders that accommodate bicyclists and provide a buffer from traffic. The PVPC has calculated a bicycle suitability index for the local roadways within the study area. This index is a useful tool for evaluating local conditions for bicycling. The methodology and results of this index are presented in the Appendix.

## Transportation Network and Relationship to CSX Rail Yard

The CSX Rail Yard occupies approximately 83 acres in the Merrick-Memorial Neighborhood. Primary access to the CSX Intermodal facility is via Day Street and Western Avenue. Day Street intersects Union Street to the east of the yard and just to the north of the Union Street railroad overpass. Western Avenue intersects Park Street to the north of the site. This section discusses the relationship between the transportation network and the rail yard.

*Airport Facilities* – The closest major airport in the vicinity of the Merrick-Memorial Neighborhood is Bradley International Airport (BDL), which is 15 minutes from Springfield. This airport provides passenger travel as well as freight forwarders and other cargo professionals. The airport is conveniently located off Interstate 91 using Exit 40 in Windsor Locks. Interstate 91 (I-91) can be accessed from the Merrick-Memorial community via Route 20 or Memorial Avenue.

*Double-stack Intermodal Clearances* – The ability of CSX Transportation to accommodate intermodal traffic is limited due to the vertical clearances along the existing rail line. Numerous overhead clearance restrictions exist limiting the flow of double-stacked rail shipments into the Merrick-Memorial Neighborhood.

*Local Roadway Constraints* – Local roadway constraints within the Merrick-Memorial study area include low bridges and poor truck routes. Three bridges located on River Street, Union Street, and Main Street does not provide enough clearance for vehicles



requiring more than 12 feet of vertical clearance to access the study area from the south. In addition, the site has poor highway access for larger trucks in the north, which include poor truck route signing and intersection operations.

### Rail and Intermodal Operations

This section summarizes existing CSX operations at the West Springfield Rail Yard, documents existing safety and security procedures, and summarizes current market conditions for regional freight activity.

#### **CSX** Operations

The following description of current operations at the West Springfield Rail Yard was developed based on site visits and two separate meetings with representatives of CSX Transportation (CSXT)<sup>2</sup> and CSX Intermodal (CSXI)<sup>3</sup> and a letter from CSXT<sup>4</sup>.

#### Physical Layout

The existing CSX Rail Yard includes a total of 30 tracks that are used for a variety of operations. The two Boston Line main tracks run through the middle of the yard. The yard tracks to the south of the main line are primarily used for receiving, holding, classifying, and make-up of the general merchandise and mixed-freight trains. There are also several locomotive storage and car repair tracks. The municipal waste transfer track is located on the yard's former team track. The yard tracks to the north of the main line are used for the intermodal operation (east end) and locomotive storage and maintenance of way equipment (west end). In addition, the yard is also capable of handling autoracks, over-dimensioned shipments, and trap rock shipments. CSX has the capability to perform minor locomotive and car repairs in the yard.

#### **Rail Yard Operations**

CSX Transportation currently operates a mix of container-on-flatcar (COFC) and trailer-on-flatcar (TOFC) services between the Midwestern United States and New England. Although CSX Transportation theoretically connects numerous city pairs between the two regions, two primary corridors – Chicago and St. Louis – represent the preponderance of the traffic. Current service in these corridors is provided by

#### ▼

<sup>2</sup> CSXT Meeting Notes, September 10, 2003

<sup>3</sup> CSXI Meeting Notes, July 22, 2003

<sup>&</sup>lt;sup>4</sup> Letter from CSXT to PVPC, September 15, 2003



two pairs of east-west trains (one pair equals one inbound and one outbound train): Q116/117 and Q114/115.

On a typical day, 14 trains are active in the yard including three yard switchers, four locals, three inbounds, two outbounds, and a shortline connection in and out. Annually, the yard handles approximately 30,000 units of intermodal traffic (17,000 inbound and 13,000 outbound) and 23,500 carloads of traffic interchanged with five short line railroads: Connecticut Southern, Central New England Railroad, New England Central Railroad, Pioneer Valley Railroad, and the Massachusetts Central Railroad.

Westbound trains departing West Springfield are limited to 7,500 tons and/or 10,000 feet in length due to the grade of the track. Eastbound trains departing Pittsfield are limited to 9,000 tons. Cold weather can reduce the overall length limitation to as little as 6,000 feet. The mixed freight trains are impacted more by the weight restriction while the intermodal trains that are generally lighter are impacted by the maximum length. The intermodal trains are currently running near the maximum train length.

#### Intermodal Operations

CSX Intermodal operates the intermodal facility at West Springfield Yard. The productivity and capacity of the facility is measured by the number of lifts. A lift is either the removal of a container or trailer from a rail car or the placement of a container or trailer on to a rail car. Currently, the West Springfield facility is handling approximately 37,000 lifts a year. For comparison, Worcester is handling 105,000 lifts with 425 trailer spaces and Boston is handling up to 57,000 lifts. In the past, West Springfield has handled up to 52,000 lifts.

The physical features of the proximately 31-acre intermodal facility include:

- □ Three tracks used for loading and unloading of containers and trailers. The capacity of the tracks for intermodal purposes is based on a typical 95 foot COFC car length rather than the 50 foot boxcar standard mentioned in the previous section. Using the 95 foot standard, the capacity of Track 501 is 24 cars, the capacity of Track 502 is 22 cars, and the capacity of Track 503 is 17 cars.
- □ A two bay repair facility housed in a small industrial building where minor repairs are completed.
- Three packers for loading and unloading stored adjacent to maintenance building.
- Parking spaces for 375 trailers and chassis at various locations around the site.
  Parking space size is approximately 53 feet by 10 feet.

The current customer base includes:

- □ United Parcel Service (UPS) approximately 9,000 lifts per year;
- □ US Postal Service approximately 3,500 lifts per year;
- □ Milton Bradley quarterly business only, heaviest in September and October;
- □ Hallmark ;
- □ Wal-Mart;
- □ JC Penney;
- □ Ashley Furniture; and
- □ Fertilizer Suppliers spring business only (10-15 lifts per day).

There are significant spikes in the amount of activity in the yard due to the nature of the principal customers. The US Postal Service and UPS have a significant increase in business during September and October prior to the Christmas season. To help handle the increase in rail traffic, resources are shared between the three local facilities (Worcester, Boston, West Springfield). In some cases, empty trailers and containers will be driven between the yards to help balance out the flows. This facility does not handle any bonded international traffic. Customs for eastbound traffic must be cleared through Chicago or handled in Worcester at the Providence and Worcester yard.

Once trailers are unloaded and placed into parking spaces the customer is notified and has three days to pick up the trailer. After three days additional charges are assessed for storage (weekend days don't count). In general most trailers are picked up on the same day or within a day. For a customer like UPS, the drivers are waiting for the trailers when they unload because they are time sensitive. These customers require no parking. Fifty percent of the business in Worcester is UPS which is why that facility can do 105,000 lifts per year but have only 425 trailer spaces.

#### Safety and Security Procedures

The following summary of existing safety and security procedures at the CSX Rail Yard was prepared by Hatch Mott MacDonald, Inc., who conducted on-site day and nighttime inspections of the yard on August 18, 2004. The Safety and Security Plan, including recommended rail yard improvements, can be found in Chapter 3.

#### CSX Transportation

CSX Corporation, a global freight transportation company, is the parent company of subsidiaries that provide freight transportation services throughout the United States. Its main subsidiary, CSX Transportation (CSXT), operates the largest rail system in the eastern United States. Freight carried by CSX includes chemicals; phosphates and fertilizer; lumber and industrial products. Subsidiary CSX



Intermodal (CSXI) arranges the transportation of freight by combinations of road and rail carriers.

The West Springfield Rail Yard (QB-100) comprises a system of tracks primarily for the purposes of making up trains and storing rail cars. The northern portion of the yard contains transportation facilities that support CSXI and other industrial uses. Because of the commodities they transport, intermodal train cars have a potential risk of being targeted for theft and vandalism.

The tracks on the south side of the yard are routinely used to store chemicals such as chlorine, styrene, propane, and liquefied petroleum gas. Placarded cars are typically stored for 24 hours and rarely sit in the rail yard for longer than 48 hours.

The yard is often used as an overflow storage facility for some clients, such as Solutia and Nova. It is desirable that these cars be stored empty to minimize the potential for hazardous situations.

## Compliance with Federal and State Regulatory Programs and Guidelines

The TERP Facility Plan serves as a single document which fully addresses the needs and requirements of:

- DOT Hazardous Materials Regulations (HMR);
- □ OPA-90 Regulations Affecting Transportation;
- □ National Transportation Safety Board (NTSB) Guidance (R-95-18 and 19);
- U.S. Department of Transportation / Federal Railroad Admin. (Form 99-(7-90));
- □ CSXT Instructions for Handling Hazardous Materials (HM-1);
- □ Responsible Care Code of Management Practices; and
- □ CSXT Responsible Care Program.

Hazmat Safety Partnerships CSXT is a voluntary partner of the Responsible Care program, a program of the American Chemistry Council (ACC). The program promotes continuously improving environmental, health and safety performance in handling of chemical products. The program addresses community awareness and emergency response, process safety, pollution prevention, distribution, employee health and safety and product stewardship.

The West Springfield Rail Yard maintains working partnerships with local fire, police and emergency response personnel. CSXT provides all emergency response partners with the Community Awareness Emergency Planning Guide to help them understand the steps required to handle railroad-based emergencies, should they occur. In addition, the CSXT area Hazmat Field Services Manager is required to conduct emergency preparedness exercises for the protection and the safety of the public.



### **Defined Assets**

The West Springfield Yard has assets that are common to all freight rail yards that contain an intermodal facility and handle hazardous material. These assets are:

- Transported Commodities By nature, intermodal freight is valuable. Hazardous materials are less valuable in concrete terms but are of critical importance due to the associated risk of a targeted attack by an individual with malicious intent.
- □ **Rail equipment** Rail equipment is expensive and some, if damaged, could pose safety hazards to rail yard and railroad staff.
- Surrounding community CSX has an amicable working relationship with the city and community. Maintaining this relationship through security implementation is to everyone's advantage.

### **Threat Assessment**

### **Trespassing and Encroachment**

Trespassing by local residents within the rail yard and adjacent Connecticut River Bridge is frequently a security problem that involves theft and vandalism. Based upon observations made while touring the yard, it was noted that trespassers, both on foot and in vehicles, are relatively unrestricted. Because of the hazardous materials, dangerous equipment and unsafe settings found within the rail yard, this unhindered trespass is significant and needs to be addressed.



**Existing Pedestrian/Rail Conflict** 

The West Springfield Police Department indicated that homeless individuals often take up residence in unused highway trailers and containers that abut the north yard
fence line adjacent to the Intermodal Terminal. Upon inspection of the area, evidence of illegal entry into the rail yard was discovered at numerous locations where the fence had been cut and security violated. This was determined by the debris found on the secure side of the fence. The Police representative also indicated that the homeless are known to reside on the south side of the west spur.

The Connecticut River Bridge is used by residents to cross to and from Springfield, presenting a dangerous condition for the operating railroads and the trespassers. One fatality has occurred in this area, where the rail tracks cross Route 5.

CSX reported that the installation of fencing on part of the site adjacent to the intermodal facility has resulted in decreased trespass.



**Connecticut River Rail Bridge** 

#### Theft and Vandalism

Intermodal train cars are potential targets for theft and vandalism due to the commodities that they transport. Though the issue of trespass is ongoing, there has not been a major incidence of vandalism or theft at the site, with the exception of UPS trucks during the holiday season. The east spur, where theft has occurred in the past, is an area of high risk due to poor lighting conditions, inadequate patrol of facilities, few people in the area and the slow speeds of intermodal trains pulling into or out of the yard. It also sounded as if the overall crime rate in the area was high.

#### **Hazardous Materials**

CSXT maintains working partnerships with the fire, police and emergency response personnel in the community, providing them with the Community Awareness Emergency Planning Guide to explain the steps required to handle railroad-based emergencies, should they occur. According to the TERP, 10 to 20 placarded Hazmat cars are routinely transported through the yard per day. They normally are turned around within 24-hours but do not sit in the rail yard for longer than 48 hours. Chemicals such as chlorine, styrene, propane, and liquefied petroleum gas are some of the types of chemicals that CSXT transports.

#### **Vulnerability Analysis**

#### Fencing

New fencing has been installed around much of the perimeter of the intermodal facility which abuts properties on Union Street. Other sections of the yard also contain fencing, but of poorer quality. Fencing on the north side of the yard, where unused highway trailers and containers are situated, shows signs of intrusion.



#### Signage

The TERP Facility mentions the use of warning signs. The assessment found that although warning signs were used, very few were located properly. The warning signs that do exist have the following problems:

- □ Signs are poorly oriented or not visible due to placement. They are old, faded and overgrown by brush.
- □ Signs are not threatening. The verbiage does not give one the impression of being warned.
- Wording is in English only, without universal graphics or additional languages. Many people in the area speak Russian, Polish and Spanish, among other languages.

#### Lighting

The West Springfield Yard has several high intensity light towers that are intended to illuminate the rail yard or yard perimeter, depending upon the location. The towers in the intermodal yard are used to provide general area lighting. The other towers are at the entrance to the Yardmaster's Office, the west spur near Park Street and the rail material storage area. Overall, the lighting in the yard as well as under the bridges was deemed to be inadequate.

The tower lights at the west spur were out. Since there are multiple lights on a tower, either the tower lost power or the lights have all burned out. Lighting on the towers is not on emergency power supply. If there were to be a major outage, there would be insufficient lighting for current security measures.

#### **Regional Freight Market Conditions**

The following summary was extracted from the Regional Freight Analysis prepared by Reebie Associates on January 15, 2003. The full report can be found in the Appendix of this document.

Over the past six decades, New England has seen the migration of industries to southern states and the erosion of its traditional manufacturing base. Concurrently, the emergence of North American Free Trade Agreement (NAFTA) and the shift in global trade patterns have created new high-volume and often long-distance transportation corridors for consumer markets. These factors have combined to significantly alter the transportation landscape.

As these trends have emerged, there has been an increasing recognition of the importance of multi-modal planning for state and regional transportation agencies. Both public and private sector officials are attempting to tackle freight transportation planning issues, and identify opportunities to use transportation investment to leverage regional economic development.



Despite the growing awareness of the link between transportation investment and economic development, not all transportation agencies consider economic impacts as a factor in setting policies, allocating resources, or establishing programs. Such is not the case in Western Massachusetts however, as the Pioneer Valley Planning Commission has undertaken a significant regional effort to explore the linkage between transportation investment and economic development in the Merrick Neighborhood.

The current composition of traffic in the Pioneer Valley favors irregular route truckload movements and short-haul deliveries. The regional economy is closely tied to the metropolitan markets of Boston and New York, and most high volume corridors – for both truck and rail -- are short-haul in nature. The eroding manufacturing base is continuing to weaken rail carload opportunities, and a lack of divertible through traffic volumes portends only average growth. The CSX West Springfield Intermodal Terminal, while a valuable regional asset, does not appear to be serving as a significant leverage point for economic development in the Pioneer Valley region.

CSX appears to be pursuing a logical strategy for intermodal market development in West Springfield, but one that may delay desirable improvements to the West Springfield Terminal, and thus additional economic development in the Pioneer Valley.

While the primary features of West Springfield Intermodal Terminal measure up well against other successful intermodal terminals nationally, incremental investment opportunities to improve the Terminal's efficiency exist, and provide an opportunity for a regional public-private partnership initiative. Economic conditions do not suggest that such an initiative be substantial, rather improvements in highway access, terminal paving, or security lighting appear to be all that could be needed to further secure the current base of traffic and help to attract new customers. In addition, banking adjacent land parcels in the course of economic development efforts can protect even significant upside growth, and reduce the likelihood that such growth would invite a relocation of the current terminal activity.

Such incremental steps appear to be all that is necessary to satisfy the projected transportation demands of the region, and to safeguard the prospect of any foreseeable traffic growth.

## **Real Estate Market Conditions**

This section summarizes the Merrick-Memorial Neighborhood Market Study conducted by Basile Baumann Prost Associates in October 2003. The complete Market Study can be found in the Appendix.



#### **Business Survey**

A business survey was conducted to determine business expansion, contraction, and/or relocation plans and the importance of rail infrastructure in enhancing industrial growth potential. The survey was distributed to 601 local businesses within the study area. A total of ninety-four surveys were completed and submitted. This level of participation represented a response rate of nearly 16 percent. Key findings of the survey are as follows:

- □ 52 percent of all establishments lease their business spaces.
- □ 52 percent of all business leases expire/will expire within the next one or two years.
- □ 54 percent of all businesses do not plan on renewing their current leases.
- □ 39 percent of all businesses increased their labor force by at least 6 percent in the last five years.
- □ 51 percent of all establishments plan to hire more employees over the next five years.
- □ 98 percent of the businesses do not receive shipments via rail transportation.
- □ Only 10 percent reported a possibility of receiving shipments by rail.
- □ 39 percent reported the discontinued use of rail.

# Economic/Demographic Analysis

An economic and demographic analysis of the study area was conducted in order to identify primary and secondary market areas with which the neighborhood competes for employment and housing activities. Key findings include the following:

- □ Between 1990 and 2000, the Merrick-Memorial Neighborhood population grew by 9.3 percent.
- □ The Merrick-Memorial Neighborhood population is projected to grow by an additional 8 percent between 2000 and 2020.
- □ The percentage of blue collar workers (38.2 percent) in the Merrick-Memorial Neighborhood is nearly double that of the Springfield Labor Market Area (21.1 percent).
- □ Less than 10 percent of the Merrick-Memorial Neighborhood's adult population possesses a Bachelor's Degree or higher.
- □ The number of at-place employees (6,683) exceeds the number of residents in the Merrick-Memorial Neighborhood (5,859) for a Day/Night Population Ratio of 1.12.
- Retail Trade and Services represent the two largest industrial sectors in the Merrick-Memorial Neighborhood employing 26 percent and 25 percent of the total employees respectively.



- Despite housing only about one-fifth of the Town's population, the Merrick-Memorial Neighborhood is home to 9 of the 20 major employers in West Springfield.
- In the context of the Springfield Labor Market Area, the Merrick-Memorial Neighborhood employs higher than expected shares in Retail Trade, Manufacturing, Wholesale Trade, and FIRE (finance, insurance, real estate).



## Introduction

This chapter presents the Merrick-Memorial Neighborhood Redevelopment Plan, including an account of community outreach, a summary of the four-part plan, and detailed sections describing proposed economic development, transportation, rail yard, and neighborhood improvements. A matrix summarizing the main components of the Redevelopment Plan is provided at the end of this chapter.

## **Redevelopment Goals**

The Merrick-Memorial Neighborhood Redevelopment Plan seeks to identify ways to enhance the longstanding relationship between the rail yard and the neighborhood's various constituencies including residents, industrial users and commercial businesses. The plan, currently being administered by the Pioneer Valley Planning Commission through a grant from the federal government, is focused on identifying transportation improvements, economic development options, and appropriate neighborhood linkages between the yard and the surrounding neighborhoods. A key objective of the plan is to identify a series of improvements that result in the following:

- □ Thriving intermodal rail yard;
- □ Revitalized and/or remediated industrial areas;
- □ Job creation;
- □ Improved vehicular and pedestrian circulation;
- Neighborhood stabilization; and
- □ Streetscape improvements.

## **Community Input and Public Outreach**

During the study process the planning team met with the Merrick-Memorial Advisory Committee and community representatives and conducted a series of



community meetings in order to identify issues and concerns regarding the rail yard and related activities. This input highlighted a variety of quality of life issues for the surrounding neighborhoods:

- Impact of trucks and truck related activities (speeding, routing, noise, dangerous intersections, blocking of streets);
- □ Rail yard security and safety;
- □ Lack of sidewalks;
- □ Inadequate bridge underpasses (vehicles and pedestrians);
- Lack of enforcement of existing codes; and
- □ Inefficient snow removal.

### Four Part Redevelopment Plan

Building upon neighborhood input, the planning process developed a number of recommendations to be incorporated within any and all redevelopment strategies. These recommendations are intended to ensure that short and long term redevelopment within the rail yard and on adjacent sites is in concert with the quality of life concerns of the neighborhoods. Recommendations fall within four categories:

#### **Economic Development**

Focus redevelopment efforts on priority sites within the study area, including the West Springfield Trade Center, property at the intersection of Western Avenue and Bliss Street, and the Southern Industrial District for a range of warehouse, flex-space, and industrial uses.

#### **Transportation Improvements**

- □ Improve truck signage throughout the Town;
- □ Improve bridge clearance and site distance at Union Street and River Street;
- Provide truck route enhancements with improved routing system to include a new internal truck service road and a new access road and linkage to Route 5;
- □ Implement improvements to signal timing along Park Street , Union Street, and Memorial Drive;
- □ Improve access on Park Street with removal of some on-street parking;
- □ Improve geometry and alignment at Baldwin/River Street intersection;
- □ Provide new sidewalks in areas where none currently exist; and
- □ Implement improvements to Memorial Avenue and North End rotaries.

#### **Rail Yard Improvements**

Implement improvements to the rail yard, including new pavement, lighting, access control, and fencing; and



Provide improved truck access to the rail yard to facilitate intermodal operations and ease the burden on neighborhood streets.

#### Neighborhood Improvements

- **D** Exclude truck traffic on Main Street (in conjunction with new access road);
- Provide pedestrian enhancements and streetscape improvements along Union Street and Park Street including sidewalks, lighting, planting, and furniture;
- □ Enforce existing building codes;
- Implement an economic development and business retention program to assist existing businesses including streamlined permitting/approvals for businesses seeking to locate or expand in the neighborhood and a designated point person for economic development projects;
- □ Provide truck exclusions on certain streets;
- Implement selective infill and rehabilitation of residential structures to strengthen the mix of uses and homeownership potential within the neighborhood; and
- Increase the amount of open space in the neighborhood through the development of pocket parks and reclaiming of flood plain and dike areas for recreational purposes.

## **Economic Development**

During the planning process for the Merrick-Memorial Neighborhood, a number of sites were identified for potential redevelopment opportunities. These sites were selected based on a variety of factors, including access, site size, location, and the age and condition of existing facilities on the sites. Incorporating this analysis, and taking current market trends and realities into consideration, the following sites were determined to provide the greatest opportunity for new development:

- □ West Springfield Trade Center Site;
- □ Western Avenue and Bliss Street Site; and
- □ Union Street Extension South Area (Southern Industrial District).

The following section documents schematic-level redevelopment plans prepared for these three priority sites. The overall goal of the redevelopment study is to enhance opportunities within the rail yard while also improving the quality of life for the residents of the Merrick-Memorial Neighborhood, thus strengthening the relationship between the rail area, its related uses, and the larger community. The planning process recognizes that this neighborhood has a strong sense of community, with affordable housing and excellent access to public facilities, entertainment, and shopping. Leveraging the rail yard as an economic development opportunity can bring significant improvements to the neighborhood and the greater West Springfield area.



#### **Common Elements**

The Merrick-Memorial Neighborhood Redevelopment Planning Study has produced alternatives which focus on market strength, development opportunities at the three priority sites listed above, and opportunities to expand rail related activity. Regardless of which redevelopment option is pursued, the Plan recommends that a series of infrastructure improvements be implemented to provide for enhanced circulation and safety and that enhancements directed at the surrounding neighborhoods be implemented over time.

#### Infrastructure Improvements

- □ Improve truck signage throughout the Town;
- □ Improve bridge clearance and site distance at Union Street and River Street;
- □ Provide truck route enhancements with improved routing system (see below);
- Implement improvements to signal timing along Park Street, Union Street, and Memorial Avenue;
- □ Improve access on Park Street with removal of some on-street parking;
- □ Improve geometry and alignment at Baldwin/River Street intersection;
- Derivide new sidewalks in areas where none currently exist; and
- □ Implement improvements to Memorial Avenue and North End rotaries.

To provide improved truck access and reduce neighborhood impacts, two new road segments are proposed:

- □ A truck access road located along the north side of the rail yard from Western Avenue/Day Street to Union Street at the Merrick Street intersection is recommended. This new road will service the yard and the redevelopment opportunity sites while allowing trucks to get to the Union Street Bridge with minimal impact on Main Street (See Figure 3-1).
- A second access road is proposed between Union Street Extension and Route 5.
  Beginning at the intersection of Union Street Extension and Pearson Way, this road will link the rail area and the opportunity development sites directly to Route 5, again minimizing truck traffic through the neighborhoods.

#### **Rail Yard Improvements**

Regardless of which redevelopment strategy is selected, CSX is expected to implement the following safety and security measures at the West Springfield Rail Yard:





## Vanasse Hangen Brustlin, Inc.

Figure 3-1 Potential Truck Service Road Alignment



- □ Installation of new perimeter fencing;
- □ Installation of cantilevered sliding gates at regular access points;
- □ Provision of security CCTV system;
- □ Installation of security lighting focusing on perimeter areas, access locations, and areas of the yard where rail cars are parked for an extended period of time;
- Provisions for standby power supply to guarantee the continuation of sufficient lighting in the event of a major outage;
- □ Installation of new warning signs discouraging potential trespassers along the perimeter of the rail yard, with particular attention to access points; and
- Paving of land immediately north of the rail tracks.

#### **Neighborhood Improvements**

The alternative strategies also have in common a package of neighborhood programs aimed at preserving and enhancing neighborhood quality of life, including:

- Exclusions to truck traffic on Main Street (in conjunction with the new access roads);
- □ Edge enhancements to strengthen neighborhood definition;
- □ Reconciliation of land uses (assistance in relocation of incompatible uses);
- Development of an economic development and business retention program to assist existing businesses;
- □ Selective infill development (housing above retail or business) and rehab;
- Pedestrian enhancements to key streets, including provisions for new street trees, lighting, and street furniture;
- □ Code reinforcement of existing building and zoning codes; and
- □ Creation of more neighborhood open space opportunities.

#### **Redevelopment Plans and Priority Sites**

Three potential redevelopment plans for the Merrick-Memorial Neighborhood were developed. They include the following:

- □ Focus: Industrial Development;
- □ Focus: Flex-Space/Industrial Mix; and
- □ No Intervention/Infrastructure Enhancements.

For each of these plans, specific redevelopment options are discussed for the West Springfield Trade Center, Western Avenue/Bliss Street site, and Southern Industrial District.



#### Focus: Industrial Development

The "Focus: Industrial Development" plan promotes the provision of land for industrial development which can take advantage of proximity to the rail area (See Figure 3-2). The opportunity sites provide for a means to meet multiple market niches.

#### Western/Bliss Site

The 9.5-acre Western/Bliss site is well suited for a "cross dock" warehouse facility as illustrated in the attached plan (See Figure 3-3). Such facilities typically require a warehouse building of 150 foot depth with looped circulation such that truck loading and unloading can be accommodated on opposing sides of the building. Trailer storage requires a paved apron area, which this site can easily accommodate. Since the work day is divided into shifts, employee parking requirements are spread out over 24 hours, minimizing the need for large parking lots. Generally, 1.5-2.0 spaces per 1,000 square feet of building area will meet parking needs for most operations. As the plan shows, this site can accommodate all these needs within the existing envelope – 90,000 square feet of one- story building area and 200 spaces – with sufficient perimeter area to provide landscaped buffers.

Access is well served by existing Western Avenue and proposed additional truck access roads as described in this report.

#### West Springfield Trade Center

The 7.5-acre Trade Center site, if cleared, can accommodate a large one-story distribution center or light manufacturing operation. Figure 3-4 illustrates such a facility, assuming clearance of the existing site, environmental remediation and full redevelopment. Maximum development potential can be achieved by the orientation shown with loading functions at the east and west ends of the building and employee parking to the north and south.

The plan illustrates the maximum area of a one-story facility, approximately 110,000 square feet. A smaller trailer storage area is typically required than with cross dock facilities and the plan provides for this. Shift employment is typical which means parking requirements can be met with 1.5-2.5 spaces per 1,000 square feet of building area.

As with the Western/Bliss site, access is provided via Western Avenue and proposed truck access roads.

#### Southern Industrial District

The Southern Industrial District represents the greatest potential for creating an opportunity to attract a large industrial user to the area. Whether a manufacturing and distribution operation or a mix of uses for a single business, such users typically



- Assemble large site (30 AC) at end of Union Street Extension.
- Rehabilitate Trade Center site for light industrial use (100,000-120,000 SF).
- Redevelop Western/Bliss site for warehouse/cold storage.
- Zoning changes to encourage new industrial use.
- New truck service road north of yard.
- New access road between Union Street Extention and Route 5
- Improved bridge clearance at Union Street.
- Local intersection and streetscape improvements.
- Truck route rationalization and enforcement.
- Neighborhood preservation program.



Figure 3-2

Focus: Industrial Development



## Vanasse Hangen Brustlin, Inc.

## Figure 3-3

Western Avenue / Bliss Street Site Focus: Industrial Development



- Remove all existing buildings.
- Attract large single user or multiple related users by removing development constraints.

 Potential uses include warehouse/distribution, light manufacturing, or large facility with multiple flex-space users.

## SITE CLEARANCE / REDEVELOPMENT

#### Vanasse Hangen Brustlin, Inc.

Figure 3-4

West Springfield Trade Center Focus: Industrial Development



require sites in excess of 30 acres with easy access to major regional highways. Rail access can also be a plus in attracting this type of development.

Figure 3-5 illustrates how such a site can be created at the end of Union Street Extension. To illustrate the flexibility the site affords, the plan shows how a single user might accommodate a variety of operations on the site to create a campus. The eastern portion of the site is devoted to three functions: administration (typically the office headquarters), shown on the plan as a three-story building of 125,000 square feet which terminates at Agawam Avenue;



Southern Industrial District Existing Conditions

a 100,000 square foot research and development building; and a 70,000 square foot lab facility. The buildings have been organized around a central pedestrian courtyard with parking at their periphery. Parking for these buildings can be accommodated on site in a ratio of 3-3.5 spaces per 1,000 square feet of building area.

The west side of the site accommodates the warehouse and distribution functions in a large one-story building of 337,500 square feet. Also shown is a small maintenance and operations building. Parking on this side of the site is provided at 1.5 spaces/1,000 square feet anticipating shift operations and shared parking opportunities on site. The warehouse can be rail served by an existing spur.

Union Street Extension also terminates at the site and a proposed new access road immediately north provides a direct linkage to Route 5 and Interstate 91. This site can provide for almost 500,000 square feet of new industrial development. The plan assumes a new zoning category is created for this special district to encourage creative solutions.

#### Focus: Flex-Space/Industrial Mix

The "Focus: Flex-Space/Industrial Mix" plan is the second strategy for redevelopment (See Figure 3-6). It illustrates how the opportunity sites can meet the needs of a different market niche while still meeting the goal of the redevelopment study — to enhance opportunities within the rail yard while also improving the quality of life for the residents of the Merrick-Memorial neighborhood, thus strengthening the relationship between the rail area, its related uses, and the larger community. Again, the infrastructure improvements and neighborhood programs previously outlined are the same in this alternative.



Flex-space is a hybrid product derived from combining high-end office building amenities with the flexibility of industrial space. This "flexible" office space allows for alternative work schemes without major office renovation, and leaves open the option to change building use from office to industrial or vice versa with a relatively small investment.

#### Western/Bliss Site

The Western/Bliss site provides an excellent opportunity for Flex-Space development. The nature of this type of use calls for smaller footprint buildings—60 feet to 100 feet in depth—which can be divided internally to meet a wide variety of small user space needs. Flexibility is the key from an operational standpoint. One user may require 10,000 square feet; another may only need 2,000 square feet. Employee parking needs are minimal. Most uses need ground level loading access, typically an overhead door at the rear of the building.

The plan illustrates four one-story buildings ranging from 25,000 to 40,000 square feet for a total of 125,000 square feet (See Figure 3-7). Each is served by a rear system of service bays off a common drive with a centralized parking lot that provides parking at a ratio of 3 spaces per 1,000 square feet of building area, more than adequate to meet the needs of potential users.

Architecture for Flex-Space uses can range from simple building construction to more "designed" buildings, but in either case, because of the smaller scale, they can fit well into a neighborhood "pedestrian" scaled environment.

#### West Springfield Trade Center

The Trade Center property can also easily accommodate this type of development. In the example shown, the two north-south buildings are the remainder of the existing building once the high-bay portion has been removed. This alternative then allows existing small users to remain and draws new uses attracted by the clean-up and modernization of the site. New service access is provided to these buildings by a common drive located where the high-bay space was.

The site plan shown on Figure 3-8 illustrates how the site might work if the existing power plant building and lumber facility were removed and replaced with additional flex-space buildings which mimic the first two. Parking for all buildings is at the street side or front of each. A new access drive extends Western Avenue to Day Street thus allowing the lower portion of Western to become part of the truck access road which runs along the north edge of the rail yard, ultimately linking up with Main Street at Merrick Avenue



## SOUTHERN INDUSTRIAL AREA

SINGLE USER OPTION: LARGE INDUSTRIAL OPERATION WITH MULTIPLE FUNCTIONS

CORPORATE/ADMINISTRATION - 125,000SF PGD - 100,000 LAB SPACE - 70,000 WAREHOUSE/DISTRIENTION - 337,500 MAINTENANCE - 10,000 SF 642,500 SF

#### Vanasse Hangen Brustlin, Inc.

Figure 3-5

Southern Industrial District



- Promote develoment north of CSX yard for small Flex-Space users.
- Assemble large site (30 AC) at end of Union Street Extension.
- Rehabilitate Trade Center site for Flex-Space (100,000 SF).
- Promote redevelopment of Western/Bliss site for Flex-Space use.
- Zoning changes to encourage new industrial use.
- New truck service road north of yard.
- New access road between Union Street Extention and Route 5
- Improved bridge clearance at Union Street.
- Local intersection and streetscape improvements.
- *Truck route rationalization and enforcement.*
- Neighborhood preservation program.



Figure 3-6

Focus: Flex-Space / Industrial Mix



## Vanasse Hangen Brustlin, Inc.

Figure 3-7

Western Avenue / Bliss Street Site Focus: Flex-Space / Industrial Mix



STRATEGIC DECONSTRUCTION

- Remove power plant.
- Remove high bay area to create more remarkable flex-space park i.e., service access to rear of building, outdoor storage.
- Remove Specialty Lumber for new "modern" building.
- Create new thru-road access from Western to Day Street.
- Retain existing businesses and attract complimentary uses R&D, flex-space, and light manufacturing in new building.
- Create "park" identity with coordinated parking, landscaping, signage, lighting.



WEST SPRINGFIELD TRADE CENTER OFTION 2: L.I.- FLEX. PARK WEST. EAST SITE SECTION A: A VIT: 6 1=30 01 + 160

#### Vanasse Hangen Brustlin, Inc.

Figure 3-8

West Springfield Trade Center Focus: Flex-Space/Industrial Mix



#### Southern Industrial District

Because the Southern Industrial site provides the best opportunity to attract a large user, the plan previously illustrated for the area is the same in this alternative. This will provide for a strong mix of both light industrial and flex-space uses for the study area.

#### No Intervention/Infrastructure Enhancements

The No Intervention/Infrastructure Enhancements plan addresses the immediate infrastructure needs in the Merrick-Memorial Neighborhood by increasing access, promoting safety, and enhancing streetscapes. It accommodates incremental growth in freight rail activity within the existing rail yard footprint. While the No Intervention/Infrastructure Enhancements plan does not directly use the rail yard as an opportunity to leverage new development, assemble land, or attract large users, it does facilitate development in the surrounding area through a series of access improvements, including improved bridge clearance at Union Street, truck route rationalization and enforcement, and local intersection improvements. Without assuming a proactive approach to redevelopment, though, the West Springfield Trade Center site, Western/Bliss site, and Southern Industrial District are expected to develop at their own pace in a piecemeal fashion (See Figure 3-9).

### Transportation

This section identifies a series of proposed transportation improvements associated with the redevelopment plans. Short, medium, and long-term recommendations are identified addressing existing and future deficiencies.

#### Transportation Improvements Overview

A series of recommendations was developed as a result of the existing transportation conditions analysis and an understanding of the potential traffic impacts associated with redevelopment. These recommendations are divided into two categories general recommendations and redevelopment recommendations. General recommendations can be implemented at any time and are independent of the redevelopment recommendations. Redevelopment recommendations address deficiencies created by each of the redevelopment plans discussed above.

For the purposes of this study, each of the recommendations has been further categorized into short, medium, or long-term recommendations, as illustrated in Figure 3-10. *Short-term recommendations* are defined as those that can be implemented in a reasonably short amount of time (less than 5 years). They may require minor



land takings, environmental permitting, and a capital investment from either the Town or a private developer. *Medium-term recommendations* are more intensive and could take between 5 and 10 years to implement. *Long-term recommendations* are defined as those that would require significant capital and political effort to permit and construct. These might require major land takings, significant environmental permitting, and/or a significant amount of capital investment. It is expected that these actions would be implemented over an extended period of time (10+ years).

Several transportation improvements are currently planned that can be expected to correct existing deficiencies in the study area. The following transportation improvements have either been recently completed or are being planned within the study area:

- □ The intersection of Park Street at River Street/ South Boulevard received a new emergency traffic controller, and
- The intersection of Memorial Avenue and River Street is included as part of a Main Street improvement project in Agawam that would coordinate the traffic signals on both sides of the Agawam Bridge.

Preliminary cost estimates for these recommendations have been developed and are incorporated in Chapter 7 of this report.

#### Short-term Recommendations

The following short-term recommendations could be implemented throughout the Merrick-Memorial Neighborhood independent of other recommendations presented later in this section.

#### Traffic Monitoring

Traffic monitoring should occur continuously to ensure that roadways and intersections are operating safely and efficiently.

*Traffic Volumes* – Traffic volumes throughout the study area should be monitored to determine changes in travel patterns as a result of growth. This data could include roadway daily traffic volumes and classification or intersection turning movement counts. It should be noted that the PVPC has a traffic counting program and performs traffic counts at the request of local communities. Traffic counts can also be performed by outside vendors for a fixed cost, which depends on the level of detail and duration of the data needs.

*Crash History* – Crash history should continue to be monitored at intersections with high crash rates such as Union Street/Elm Street at Park Street/Park Avenue, Union Street at Memorial Avenue, and the intersection of Park Street at River Street/South Boulevard. Collision diagrams should be prepared periodically for each intersection



- Does not use yard as opportuntiy to leverage new development, assemble land, attract large users.
- Accommodates incremental growth/freight rail activity within existing yard.
- "Piecemeal" development around yard/surrounding area.



- Improved bridge clearance at Union Street.
- Local intersection and streetscape improvements.
- Truck route rationalization and enforcement.
- Neighborhood preservation program.



Figure 3-9

No Intervention / Infrastructure Enhancements





## Vanasse Hangen Brustlin, Inc.

Figure 3-10

Transportation Improvements



to identify common crash patterns. This information could be obtained through the West Springfield Police Department and MassHighway.

*Traffic Signals* – Signalized intersections in the study area should be periodically checked to ensure that the most effective signal timing and phasing plans are in use. Traffic volumes change over time as a result of changes in land use, population, and roadway improvements. This is of particular importance at the intersection of Park Street with Park Avenue, Union Street and Elm Street where vehicle queues between Park Street and Park Avenue contribute to congestion in this area.

#### Improved Signage

Several signs within the neighborhood are not clearly visible, and only a few truck warning signs and truck route signs are present, which lead to larger vehicles intruding on local residential streets. Additional signs need to be installed throughout the study area and older signs need to be replaced. The following signs should be considered:

*Truck Exclusions* – The Town of West Springfield should consider applying for a "<u>No Truck"</u> zone along Main Street between Park Avenue and Bridge Street. Many trucks use the residential side streets that link Main Street to Union Street. Excluding trucks from Main Street could assist in reducing truck



**Existing Signage** 

traffic on the residential connector streets in this area. A truck exclusion zone requires the permission of the Massachusetts Highway Department.

*Designation Truck Route* – <u>"Truck Route</u>" signs should be installed along Park Street, Park Avenue, Western Avenue, and Union Street in the vicinity of businesses that generate a high volume of truck traffic. A specific truck route should be designated – Western Avenue – and these signs should supplement the low clearance warning signs in the area.

*Low Bridge Clearances* – Advance warning <u>"Low Clearance"</u> signs are required for the Union Street, River Street, and Main Street railroad underpasses. As currently signed, it is very easy for a vehicle over 12 feet in height to get trapped on one of these streets prior to the underpass, which requires the vehicle to back up or detour down a residential street. It should be noted that it is common for trucks to hit these bridges on a monthly basis. Advance warning signs should be considered on Park Street prior to Union Street; and Memorial Avenue prior to Main Street.

*No Parking Zones* – The Town of West Springfield should consider extending the <u>"No</u> <u>Parking"</u> zones in the vicinity of the intersection of Union Street and Day Street. Onstreet parking is not permitted along Day Street, but on-street parking along Union



Street near this intersection can make it difficult for larger vehicles to make turns in and out of Day Street. In addition, on-street parking should either be eliminated or restricted, possibly during peak periods, along the Park Avenue eastbound approach to Main Street. Field observations indicate that on-street parking utilizes the travel lane creating safety and capacity issues during the peak hours when traffic demands are heaviest.

*No U-Turn* – Many vehicles were observed performing U-turns from Park Street to Park Avenue at the intersection of Park Street and Van Deene Avenue/Western Avenue. The Town of West Springfield should consider either posting this approach with <u>"No U-Turn"</u> signs to discourage this movement or providing a protected left turn arrow phase, either of which could improve safety at this intersection.

The Manual on Uniform Traffic Control Devices (MUTCD)<sup>1</sup> should be consulted to determine the type, color, and size of these new and additional signs.

#### Signal Timings

*Park Avenue/Park Street at Elm Street/Union Street* – The traffic signal timings for this intersection should be periodically checked to ensure that the most effective timing and phasing plans are in use. Vehicle queues at this intersection between Park Street and Park Avenue contribute to congestion in the area. This intersection should be viewed as a secondary access to the rail yard with Western Avenue being the primary truck route, especially for larger trucks.

#### Geometric Improvements

Several intersections currently need geometric improvements to accommodate existing traffic – especially trucks – within the study area. The following existing deficiencies should be considered as part of the short-term improvements:

*Park Street at Western Avenue/VanDeene Avenue* – The Town of West Springfield should develop a preferred truck route in conjunction with businesses in the study area. Western Avenue should be utilized as much as possible as this preferred route in and out of the CSX rail yard and industrial area. This could require a combination of removing on-street parking near the intersection (on Western Avenue) and geometric improvements to the turning radii to Western Avenue from Park Street westbound. (It should be noted that this could require the acquisition of private property.) The benefit of this improvement would be a reduction in the number of heavy vehicles performing left-turn movements at the intersection of Park Street and Union Street, which currently creates long queues between Park Street and Park Avenue. Improvements to Park Street/Western Avenue may include a new traffic controller, traffic signal arrows, pavement markings, signage, and minor roadway

<sup>&</sup>lt;sup>1</sup> Manual on Uniform Traffic Control Devices (MUTCD) Federal Highway Administration, 2003 Edition.



widening. The Town should consider <u>"No Parking"</u> areas on Western Avenue and may require that <u>"No Parking"</u> signs be replaced or improved. The existing roadway curvature where Western Avenue meets Day Street makes it difficult for trucks to access the CSX Rail Yard from Park Street. This roadway alignment deficiency prohibits trucks from traveling Western Avenue and therefore trucks use the Union Street/Day Street intersection as the main access. The Western/Day deficiency should be improved, possibly in conjunction with redevelopment of the Trade Center, before designating Western Avenue as the primary truck route.

*River Street at Baldwin Avenue / Sears Way* – Baldwin Street and Sears Way intersect approximately 50 feet to the east of River Street, which creates a wide paved area between the three roadways with no pavement markings. This open area appears to accommodate the turning radii of larger trucks accessing Sears Way from River Street northbound (since trucks cannot access the site from the north due to the low underpass at the railroad bridge) and there is not a well defined area for vehicles to queue when accessing River Street from either Sears Way or Baldwin Street. Furthermore, these side streets intersect at an angle to River Street that causes more frequent vehicle conflicts and could worsen with any redevelopment on Sears Way.

Improvements could include realigning Sears Way to form a "T" intersection with River Street north of its current location to improve traffic flow (should traffic increase on Sears Way), or simply improving pavement markings and signage. Realignment of Sears Way would require Baldwin Street to intersect Sears Way to the east of River Street. Consolidating turning movements along River Street could increase safety at this location. Improvements to this intersection should be considered with any increase in the amount of traffic accessing the intersection from new development or occupancy proposed along Sears Way. In addition, the realignment could help eliminate cut-through traffic along Baldwin Street. It is important to note that this realignment is not feasible without the proper property acquisition. In addition, drainage improvements, roadway widening, pavement markings, and curbing would be required. Improvements to this intersection could impact the existing school playground.

#### **Pavement Markings**

*Park Street at Western Avenue/VanDeene* – Pavement markings throughout the study area should be maintained to provide maximum visibility. The exclusive left-turn arrow on the westbound approach of Park Street at its intersection with Van Deene Avenue appears to have been a left/through movement arrow at one time, but the through movement arrowhead has been removed. This is confusing and causes motorists to think that through movements are permitted from this lane. New left turn only arrows should be painted in this lane.

*Main Street at Bresnahan Street* – Roadway pavement markings and designated parking areas are required from Memorial Avenue to the intersection of Main Street and Bresnahan Street. The two roadways operate as one-way roads to and from



Memorial Avenue just south of the Main Street underpass. Currently, there is no designated on-street parking and pavement markings are faded. The southbound approach to Memorial Avenue is wider than a normal one-way approach as a result of this section of roadway being changed from two-way operation to one-way. Recommended improvements include identifying no parking and parking zones with signs and providing new pavement markings for lanes and on-street parking.

*Route 5 at Park Avenue and Memorial Avenue (rotaries)* – The Route 5 rotaries do not operate efficiently and are not safe. In PVPC's 2003 Regional Transportation Plan, the West Springfield Police Department identified an average of 109 crashes at the Route 5/20 rotary from 1999 to 2000. This is most likely due to the lack of pavement markings present for this two-lane rotary. The Town has requested that MassHighway implement new pavement markings to improve traffic operations and safety. However, MassHighway has requested additional information and study prior to implementation. In addition, the Town is also reviewing the conversion of Main Street to a one-way to the south to help reduce crashes in the rotary.

#### Railroad Crossings

Two of the five at grade crossings of CSX's Main Line in Hampden County occur just to the west of the study area at First and Second Streets in West Springfield. These two crossings have been the subject of concern to both CSX and its predecessor Conrail and should not be overlooked. Observations conducted during the study process noted that many vehicles were ignoring and driving around the existing gates when in the lower position. PVPC conducted traffic counts at the two locations in July 2004. The average annual weekday traffic for the two crossings was 415 for First Street and 8,427 for Second Street.

In addition to increased periodic police enforcement at these two locations, the following actions are recommended:

*First Street Crossing* – CSX should request that the Town of West Springfield close the lower volume crossing at First Street. This action would require the approval of the Town Council.

*Second Street Crossing* – The gate should either be replaced with a longer gate or barriers installed to discourage this practice. The following guidelines should be followed when addressing this deficiency:

- □ The gate arm should extend only 90% of the approach length and should not extend across the centerline of the roadway;
- □ The rail road gate arm should be perpendicular to the roadway not parallel to the crossing; and
- □ The maximum length of a gate arm is 38 feet.



The use of breakaway barriers (such as Quik Curb) could be implemented to deter people from running around this gate. In addition, the Town of West Springfield may also wish to consider periodic police enforcement at this location.

#### 

#### Phasing Plan for Transportation Improvements

#### No Intervention/Infrastructure Enhancements Plan

This plan enhances the neighborhood through a series of transportation improvements that address existing roadway and capacity deficiencies. The following recommendations are made to address these deficiencies that are expected to worsen in the future; especially should truck traffic increase.

#### Short-term Recommendations

Memorial Avenue at Union Street/Union Street Extension – The southbound approach at this intersection currently operates over capacity and it is recommended that one of the southbound lanes be designated as a left-turn only lane. In addition, signal timings should be modified to include a protected left-turn phase for Union Street and Union Street Extension in anticipation of future development. This short-term recommendation should be considered regardless of the recommended improvements for the Union Street underpass. Should the clearance height be increased at the Union Street Bridge there is the potential for a new truck route via Memorial Avenue, which will add traffic to this southbound approach and more specifically to the left-turn lane. Improvements for this intersection would include new signal equipment and pavement markings.

*Neighborhood Preservation Programs (Short-term)* – Neighborhood preservation programs are intended to enhance the Merrick and Memorial Neighborhoods adjacent to the existing rail yard. This short-term recommendation is based on feedback from local residents that live within these communities. The following enhancements are proposed as part of this plan:

- □ Edge enhancements,
- □ Reconciliation of land uses,
- Business retention programs,
- □ Selective infill and rehabilitation of properties,
- □ Code enforcement,
- Pedestrian enhancement especially sidewalks and lighting, and
- □ Street beautification.



#### Medium-term Recommendations

Union Street Bridge Underpass – The railroad underpass on Union Street provides only 12 feet of vertical clearance which restricts the ability of larger vehicles to access the study area. The American Association of State Highway and Transportation Officials (AASHTO) recommend a minimum clearance of 14.5 feet, with a desirable clearance of 16.5 feet to compensate for roadway resurfacing and snow and ice accumulation.<sup>2</sup> In



**Union Street Bridge Underpass** 

addition, existing horizontal curvature on the Union Street southbound approach together with the structural supports of the bridge restricts sight distances.

To correct the existing deficiencies at this location, the bridge abutment should be widened and the roadway lowered. The cost estimate provided in Chapter 9 assumes the total replacement of the bridge structure to meet a minimum clearance of 14.5 feet (an increase of 2.5 feet) and the maintenance of traffic and rail operations during construction. Items not included in this estimate are property takings and driveway impacts to adjacent businesses. (It is important to note that to improve the clearance at this location lowering the roadway incurs less of an impact than raising the bridge.) With this bridge, reconstruction of the Union Street Truck Service Road, described in the next section, should also be considered.

### Redevelopment Program Improvements (Industrial Development or Flex-Space/Industrial Mix)

The "Industrial Development" and "Flex-Space/Industrial Mix" redevelopment plans share the same recommendations. The only difference between these two plans is the type of redevelopment planned (Industrial or Flex-Space). It should be noted that redeveloping to an industrial type use could generate more truck traffic than a Flex-Space use. The following roadway improvements should be considered in addition to those proposed under the "Infrastructure Enhancement" Plan.

#### Short-term Recommendations

*Baldwin Street Corridor* – Local residents indicate that Baldwin Street is currently being used as a cut-through roadway for vehicles (especially trucks) traveling to and from River Street and Memorial Avenue rather than using the intersection at River

A Policy on Geometric Design of Highways and Streets, 4<sup>th</sup> edition, (AASHTO, 2001).

<sup>▼</sup> 

<sup>&</sup>lt;sup>2</sup> American Association of State Highway and Transportation Officials,

Street/Memorial Avenue. Traffic calming techniques along Baldwin Street should be considered to discourage this cut-through movement such as speed enforcement and installation of a 4-way stop (if warranted) at Cold Spring Avenue which will slow traffic down and make this an undesirable route.

#### Medium-term Recommendations

*River Street Bridge Clearance* – The railroad underpass on River Street, just to the north of Baldwin Street, provides only 12-feet of vertical clearance, which restricts the ability of larger vehicles to serve the study area. As previously stated a minimum clearance of 14.5 feet is recommended. To correct this deficiency the existing roadway needs to be lowered approximately 2.5 feet, which could require the reconstruction of the bridge



**River Street Bridge** 

abutments and maintaining rail service during construction. The cost estimate in Chapter 7 assumes a total replacement of the bridge structure, similar to the reconstruction of the Union Street Bridge. It is important to note that since River Street to the north of this underpass is at a steep incline, the feasibility of this improvement may depend on a major reconstruction of the intersection at River Street/Park Street. This improvement should only be considered if the Union Street Bridge cannot be improved. Improvements to the River Street Bridge clearance would only benefit future development on Sears Way and/or northern Baldwin Street. This could have the potential to direct truck traffic to/from Park Street and away from Memorial Avenue and Baldwin Street from the south.

Union Street Truck Service Road – In order to alleviate the additional traffic increases on Union Street resulting from the development of several site and/or the rail yard, a service road could be constructed adjacent to the rail yard extending from Day Street to Union Street to the north of the Union Street Bridge. This improvement would only be implemented in conjunction with addressing the Union Street underpass constraint. It is estimated that this roadway would be approximately 1,800 feet long with either a 2-lane cross section (32 feet) or 4-lane cross section (60 feet). The 4-lane cross section would include an additional left-turn lane from Union Street into the rail yard and a right-turn lane to the rail yard from Day Street. These turn lanes could accommodate the queuing of truck traffic when the rail yard is not open, which was observed as an existing deficiency. This improvement also includes minor widening on Day Street (approximately 500 feet) to provide additional truck storage in the right turn lane. This extended right-turn lane should be considered with the proposal to designate a truck route via Western Avenue. It should be noted that depending on the exact location of the roadway there may need to be some property acquisitions, but the majority of the roadway is proposed to be located within CSX property and no impact to the rail spurs is expected. Should this roadway be constructed, it has the potential to:

VHB Var

- Eliminate a majority of truck/vehicle traffic from Union Street destined only to the rail yard;
- □ Eliminate a majority of truck traffic from Park Street, Park Avenue, and Western Avenue;
- □ Add traffic to Memorial Avenue and Union Street south of underpass;
- Address existing turning radii deficiencies at the intersection of Union Street and Day Street and;
- □ Impact the southern end of Union Street (The size of this impact depends on the location of this intersection.)

#### Long-term Recommendations

Union Street Extension Route 5 Access Road – This access road, approximately a half mile long, would be required as part of the development of 30-acres of land on Union Street Extension. There is the potential to construct a roadway along an existing street called "M" Street, which is located in Agawam. This street traverses from the east at a Route 5 interchange, just to the south of the Memorial Avenue Rotary in Agawam, to Agawam Avenue in West Springfield. The interchange serves as the only access to a treatment plant and Bondi's landfill, which is all owned by the City of Springfield. "M" Street is currently not paved and is not a recognized street in the Town of Agawam but is used frequently by automobiles and heavy vehicles accessing the landfill. Access to "M" Street from Agawam Avenue is available but fenced off with a guarded entrance currently in use at the Route 5 interchange.

Should the landfill close, "M" Street could be used as a secondary access from future development along Union Street Extension to this Route 5 rotary; however, the existing ramps at the interchange are approximately 20 feet wide and would need to be widened to accommodate the increase in two-way traffic. In addition, the underpass could be too narrow to provide adequate access under Route 5, especially of trucks, to the northbound on-off ramps and widening the bridge abutments could be too costly to implement this improvement. This roadway could be used as a limited access road only.

#### Traffic Impacts of Redevelopment Plans

This section reviews the estimated traffic impacts associated with the three development plans. These plans promote growth primarily within three areas of the study area. VHB has evaluated the potential number of trips expected for these plans along with a preliminary review of current traffic patterns. This provides a general understanding of where potential traffic impacts could occur with future development. This information will assist in identifying future recommendations later in this chapter.



## **Trip Generation**

VHB has evaluated the potential number of weekday daily vehicle trips and the corresponding morning and evening peak hour vehicle trips that could be generated. These estimates are based on information compiled by the Institute of Traffic Engineers (ITE) <u>Trip Generation</u><sup>3</sup>. The ITE data are based on averages of other similar developments and land uses through studies conducted throughout the United States. It is a generally accepted transportation engineering method for forecasting future traffic at development sites. A preliminary building square footage was determined for each of the sites. Trip generation estimates were based on square feet for each building using the ITE Land Use Code (LUC) that most closely resembles the type of development proposed. The following estimates were developed for each of the future development plans.

## Focus: Industrial Development

The "Focus: Industrial Development" plan promotes primarily industrial developments in the study area with particular attention paid to the area north of the rail yard and on Union Street Extension. The plan also includes improvements to the rail yard such as additional paved area, track improvements, and new fencing and lighting. Development to the north of the CSX yard could include light industrial use at the West Springfield Trade Center (100,000 – 120,000 SF) and warehouse/cold storage facilities (90,000 SF) to the southwest of the intersection of Western Avenue/Bliss Street. This scenario also encourages the assemblage of a 30-acre site (650,000 SF) at the end of Union Street Extension for industrial/commercial development.

For this plan, ITE LUC 110 – General Light Industrial was used as the focus for this development. Light Industrial facilities usually employ fewer than 500 persons, have an emphasis on activities other than manufacturing, and typically have minimal office space. Typical light industrial uses include, but are not limited to, printing, material testing and assembly facilities. These are free standing facilities devoted to a single use. Table 3-1 on the following page presents the traffic generation estimates for this development plan.

<sup>&</sup>lt;sup>3</sup> Trip Generation, 7<sup>th</sup> Edition; Institute of Transportation Engineers, Washington DC (2004)



Redevelopment Site	West Springfield Trade Center	Southwest corner of Western Avenue/Bliss Street	Southern Portion of Union Street Extension	<u>Total</u>
ITE Land Use Code (LUC)	110	110	110	
Description	Light Industrial	Light Industrial	Light Industrial	
Land Use Option	Industrial	Industrial	Industrial	
Gross Square Feet	120 KSF	90 KSF	650 KSF	860 KSF
Daily				
Entering	420	315	2,375	3,110
Exiting	420	<u>315</u>	<u>2,375</u>	<u>3,110</u>
Total	840	630	4,750	6,220
Weekday Morning Peak Hour				
Entering	95	75	600	770
Exiting	<u>15</u>	<u>10</u>	<u>80</u>	<u>105</u>
Total	110	85	680	875
Weekday Evening Peak Hour				
Entering	15	10	90	115
Exiting	<u>105</u>	<u>80</u>	<u>680</u>	<u>865</u>
Total	120	90	770	980

## Table 3-1 Trip Generation Summary: Industrial Development

As shown in Table 3-1, under the Focus: Industrial Development plan, the three sites individually could be expected to generate between 630 (315 entering and 315 exiting) and 4,750 (2,375 entering and 2,375 exiting) daily trips. The weekday morning peak hour is expected to generate between 85 trips (75 entering and 10 exiting) and 680 trips (600 entering and 80 exiting) for each of these sites. The weekday evening peak hour is expected to generate between 90 trips (10 entering and 80 exiting) and 80 exiting) and 770 trips (90 entering and 680 exiting).

Full build-out under the Focus: Industrial Development plan could generate a total of 6,220 daily trips, 875 weekday morning peak hour trips, and 980 weekday evening peak hour trips. The 30 acres of land on the southern end of Union Street Extension have the potential to generate the most significant amount of traffic, if developed. It should be noted that this type of development could expect to generate a significant amount of truck traffic; however, this varies depending on the type of facility proposed.

### Focus: Flex-Space/Industrial Mix

The Focus: Flex-Space/Industrial Mix plan promotes a mix development of flexspace and industrial uses, as well as improvements to the rail yard, including additional paved areas, truck improvements, and new fencing and lighting. Development to the north of the CSX yard could include small flex-space uses through rehabilitation of the West Springfield Trade Center to accommodate



approximately 100,000 SF. The plan also promotes the redevelopment of a site (to flex-space) at the southwest corner of the Western Avenue/Bliss Street intersection (125,000 SF), and the development of a large 30-acre (650,000 SF) site at the end of Union Street Extension.

The Land Use Codes ITE LUC 760 – Research and Development Center and LUC 110 – General Light Industrial were used for the Focus: Flex-Space/Industrial Mix plan. General Light Industrial type uses were identified in the previous development plan and typical flex-space or Research and Development uses are facilities or groups of facilities devoted almost exclusively to research and development activities. The range of specific types of businesses contained in flex-space use varies significantly and may contain some office and light fabrication areas. Flex-space is a hybrid product derived from combining high-end office building amenities with the flexibility of industrial space. This "flexible" office space allows for alternative work schemes without major office renovation, and leaves open the option to change building use from office to industrial or vice versa with a relatively small investment. Table 3-2 presents the traffic generation estimates for this redevelopment plan.

	J			
Redevelopment Site	West Springfield Trade Center	Southwest corner of Western Avenue/Bliss Street	Southern Portion of Union Street Extension	<u>Total</u>
ITE Land Use Code (LUC)	760	760	110	
Description	Research Development	Research Development	Light Industrial	
Land Use Option	Flex-Space <sup>1</sup>	Flex-Space	Industrial	
Gross Square Feet	100 KSF	125 KSF	650 KSF	875 KSF
Daily				
Entering	505	605	2,375	3,485
Exiting	<u>505</u>	<u>605</u>	<u>2,375</u>	<u>3,485</u>
Total	1,010	1,210	4,750	6,970
Weekday Morning Peak Hour				
Entering	115	140	600	855
Exiting	<u>25</u>	<u>30</u>	<u>80</u>	<u>135</u>
Total	140	170	680	990
Weekday Evening Peak Hour				
Entering	20	25	90	135
Exiting	<u>115</u>	<u>135</u>	<u>680</u>	<u>930</u>
Total	135	160	770	1,065

#### Table 3-2 Trip Generation Summary: Flex-Space/Industrial Mix

1 Flex-Space is more labor-intensive than Light Industrial and is generally broken down into smaller modules that can be reconfigured for a variety of uses.

As shown in Table 3-2, under the Focus: Flex-Space/Industrial Mix plan, the three sites individually can be expected to generate between 1,010 (505 entering and 505 exiting) and 4,750 (2,375 entering and 2,375 exiting) daily trips depending on the


development assumptions. The weekday morning peak hour is expected to generate between 140 trips (115 entering and 25 exiting) and 680 trips (600 entering and 80 exiting) for each of these sites. The weekday evening peak hour is expected to generate between 135 trips (20 entering and 115 exiting) and 770 trips (90 entering and 680 exiting).

Full build-out under the Focus: Industrial Development plan would generate a total of 6,970 daily trips, 990 weekday morning peak hour trips, and 1,065 weekday evening peak hour trips. As in the Focus: Industrial Development plan, the 30 acres of land on the southern end of Union Street Extension have the potential to generate the most significant amount of traffic, if developed. It should be noted that this type of development can expect to generate truck traffic; however, the number of trucks depends on the type of facility proposed.

#### No Intervention/Infrastructure Enhancements

The No Intervention/Infrastructure Enhancements plan does not use the rail yard as an opportunity to leverage new development, assemble land, or attract large users. Rather, it accommodates incremental growth in freight rail activity within the existing rail yard while other developments are "piecemealed" around the yard and surrounding areas. Future developments were not identified in this plan as the intent is to enhance existing conditions; therefore, trip generation estimates are not provided.

#### **Trip Distribution**

A preliminary review of the existing traffic volume network, within the vicinity of the CSX Rail Yard, was conducted to get a better understanding of current travel patterns. This distribution provides a good indication of how new traffic from future development could access this area. It should be noted that the trip distribution discussed below would not apply to the potential future development on Union Street Extension. The majority of this traffic could be expected to use Memorial Drive (Route 147) and depending on the type of development most traffic could travel between Memorial Avenue and Route 5.

Existing daily traffic volumes and turning movement counts (TMCs) collected on surrounding roadways were used to estimate a preliminary trip distribution. Since transit access to the CSX Rail Yard is poor, it is expected that transit will not generate a significant amount of traffic unless additional public transit services along Union Street are provided. With this in mind, the trip distribution was estimated and is summarized below in Table 3-3.



			_
Roadway	To/From	Percent	_
Western Avenue	North	15%	
Union Street	North	55%	
Union Street	South	<u>30%</u>	
		100%	

### Table 3-3 Trip Distribution<sup>1</sup>

1 Trip distribution estimates are based on TMCs collected at surrounding intersections by PVPC.

As illustrated in Table 3-3 a large percentage (70 percent) of vehicles currently enter the study area from the north via Union Street or Western Avenue. This is most likely a result of the low bridge clearance (12-feet) at the Union Street underpass. This distribution indicates that with future development and without infrastructure improvements the majority of the traffic related impacts will occur on study area roadways and intersections to the north. The following sections in this chapter suggest recommendations to alleviate congestion within the study area especially to the north.

### **Rail Yard Improvements**

#### 

#### Intermodal Terminal Improvement

Improvements to the intermodal terminal consist of infrastructure enhancements to improve access to the rail yard. These include new paving, lighting, and fencing in the yard, improved signage throughout the study area, formalized truck routes, and a proposed internal truck service road to facilitate intermodal operations.

### Safety and Security Improvements to West Springfield Yard and Terminal

A series of safety and security improvements are recommended that address hazardous materials procedures, existing vulnerabilities, and overall security at the CSX Rail Yard so that security planning may be implemented in advance of an incident, rather than in response to an incident as mitigation. It is expected that these improvements will be implemented by CSX.

Many options are available to enhance the security and safety of the West Springfield Yard site. There are a variety of means of improving both the likelihood of observing a trespass and the quickness of response. These include:



- Installing physical barriers;
- Installing and securing access gates at portals;
- □ Installing a closed circuit television system;
- □ Posting conspicuously located signage;
- Establishing surveillance patrols utilizing two-way radio communications building in sensors; and
- Implementing local sensors, alarms and detectors using localized audible / visual alerts / deterrents.

A discussion of the options which are most appropriate to the geography, location, needs, and use of the site is presented below. Figure 3-11 depicts proposed improvements to the safety and security of the rail yard.

#### Chain Link Fencing

A chain link fence is one of the primary building blocks for a facility's perimeter security system. The physical barrier provided by a chain link fence at the West Springfield Rail Yard will perform the following functions:

- Gives notice of the legal boundary of the outermost limits of the rail yard;
- Assists in controlling and screening authorized entries into the area by deterring entry elsewhere along the boundary;
- Supports surveillance, detection, assessment, and other security functions by providing a zone for installing intrusion detection equipment and closed circuit television (CCTV);
- Deters casual intruders from penetrating a secured area by presenting a barrier that requires an overt action to enter;
- Demonstrates the intent of an intruder by their overt action of gaining entry;
- Delays access to the rail yard facility, thereby increasing the possibility of detection;
- Creates a psychological deterrent. Reduces the number of security guards required to secure the yard;
- Optimizes the use of security personnel while enhancing the capabilities for detection and apprehension of unauthorized individuals;
- Demonstrates a corporate concern for facility security; and
- □ Provides a cost effective method of protecting the rail yard facility.

The old fencing should be replaced and new fencing should be installed around the yard. Fencing should also be installed at both sides of the Connecticut River railroad bridge to deter pedestrians from using the bridge walkway to gain access to the rail yard. It will still be possible for an individual to gain access from the Springfield side of the river by walking across the bridge, but once the trespasser is on the yard property, he will be detected because the only points of egress will be the main gates.

A chain link fence will reduce overall risk, secure the environment, and reduce security costs if designed and installed properly. However, believing that a fence will



Existing Fence



Proposed Fence



New Pavement Area



Gate Improvements (Alarms, Acces Control, CCTV)

Other: Perimeter and Yard Lighting Stand-By Power Signage



Figure 3-11

Rail Yard Improvements

Merrick-Memorial Neighborhood Redevelopment Plan West Springfield, Massachusetts



eliminate all illegal access is not prudent. A fence system will only delay or reduce intrusion.

In order to ensure the ongoing effectiveness of the facility security fence, a maintenance program should be developed for the proper care and treatment of the fence system, gates, gate operators and related access controls.

#### Framework

The framework for a chain link fence consists of the line posts, end posts, corner posts, gateposts, and, if required, top, mid, bottom or brace rail. The Federal Specification and CLFMI "Wind Load Guide for the Selection of Line Post Spacing and Size" provides recommended post sizes for the various fence heights. This document also provides choices of line post types, sizes and spacing to accommodate selected fence heights and fabric sizes for wind loads at various geographical project locations. The CLFMI Product Manual, ASTM F1043 & ASTM F1083, as well as the Federal Specification, list the material specifications for the framework.

#### Chain Link Fabric

The material specification for chain link fabric is thoroughly spelled out in the CLFMI Product Manual, ASTM and the Federal Specifications. The choice of chain link fabric will govern the desired security level, and the various fabric-coating choices will govern the corrosion resistance. Light gauge residential chain link fabric will not be considered in this document. Provided are only those chain link fabrics that offer a level of security, thus the gauge of wire and mesh size has been narrowed down to the following:

- □ 11 gauge (0.120" diameter)having minimum break strength of 850 lbf
- **9** gauge (0.148" diameter) having minimum break strength of 1290 lbf
- □ 6 gauge (0.192"diameter)having minimum break strength of 2170 lbf

Mesh sizes to consider (mesh size is the minimum clear distance between the wires forming the parallel sides of the mesh) are 2"mesh, 1" mesh and 3/8" mesh. Consider the following regarding mesh size:

- □ The smaller the mesh size the more difficult to climb or cut
- □ The heavier the gauge wire the more difficult to cut
- □ The various mesh sizes available in the three previously discussed gauges are listed in the order of their penetration resistance/security:

A. Extremely high security	3/8"mesh 11 gauge
B. Very high security	1" mesh 9 gauge
C. High security	1" mesh 11 gauge
D. Greater security	2" mesh 6 gauge
E. Normal Industrial security	2" mesh 9 gauge



Since cutting of the fence appears to be an ongoing problem, it is recommended that 8-foot/6 gauge fencing be used. If cutting of fencing by trespassers is not a concern, 6-foot/9 gauge is recommended.

#### Gates

Gates are the only moveable part of a fence and therefore should be properly constructed with appropriate fittings. Chain link gate specifications are listed in the CLFMI Product Manual, ASTM, and the Federal Specification.

Limiting the size of the opening increases vehicular security, reduces the possibility of one vehicle passing another, and reduces the open close cycle time. The cantilever slide gate is the most effective for vehicle security, especially one that is electrically operated and tied into an access control system. High-speed cantilever slide gate operators are available for certain applications.

Pedestrian/personnel gates can be constructed using a basic padlock or designed with an electrical or mechanical lock or a keypad/card key system tied into an access control system.

### Design Features and Considerations

Basic fence design features to consider that enhance security include:

- **Height** the higher the barrier the more difficult and time consuming to broach.
- □ Eliminating top rail the omission of a rail at the top of the fence eliminates a handhold thus making the fence more difficult to climb. A 7-gauge coil spring wire can be installed in place of the top rail.
- Adding barbed wire the addition of three or six strands at the top of the fence increases the level of difficulty and time to broach. When using the three-strand 45-degree arm it is recommended to angle the arm out from the secured area.
- Bolt or rivet barbed wire arms to post barbed wire arms are normally held to the post by the top tension wire or top rail. For added security, they can be bolted or riveted to the post.
- □ Adding barbed tape stainless steel barbed tape added to the top and, in some cases, the bottom of the fence greatly increases the difficulty and time to broach.
- Adding bottom rail the addition of a bottom rail that is secured in the center of the two line posts using a 3/8" diameter eye hook anchored into a concrete footing basically eliminates the possibility of forcing the mesh up to crawl under the fence. The bottom of the fence, with or without a bottom rail, should be installed no greater than 2" above grade.
- □ **Bury the chain link fabric** Burying the fabric 12" or more will also eliminate the possibility of forcing the mesh up.
- Color chain link fabric one of the security features of a chain link fence is visibility, allowing one to monitor what is taking place inside or outside of the fence line more efficiently. Color polymer coated chain link fabric enhances



visibility, especially at night. Complete polymer coated systems, coated fabric, fittings, framework and gates not only increase visibility, but also provide greater corrosion resistance, especially for use in areas adjacent to the seacoast.

- □ **Clear zon**e In wooded or high grass areas it is advisable to clear and grub a clear zone on either side of the fence to aid surveillance.
- **Peen all bolts** this eliminates the removal of the bolt nut.
- □ Addition of lighting increases visibility as well as raises the level of psychological deterrent.
- 1. **Signage** along the fence line, signs are important to indicate private secured areas and warn that violators may be subject to arrest. The presence of alarms and monitoring systems may also be noted.

#### Installation

Installation requirements for the fence line, terminal posts and gates will vary depending on the security level required, geographical location, and site, soil and weather conditions. Installation should be in accordance with ASTM F 567, "Standard Practice for Installation of Chain Link Fence" and the CLFMI "Wind Load Guide for the Selection of the Line Post Spacing and Size".

#### Project Inspection

Improper material or installation can have a dramatic effect on the required security. It is important to verify that the project's materials are in compliance with the contract specifications and that the fence has been installed properly. Procurement or facility managers may want to consider a mandatory requirement of their reviewing material certifications and shop drawings prior to start of the project. This will ensure that proper products will be installed and that specific installation guidelines have been provided. CLFMI offers a Field Inspection Guide document to assist in this process.

#### **Closed Circuit Television**

Installation of a security closed circuit television (CCTV) system is recommended as a minimum at the gates. It is suggested that the system have cameras in the yard and the spur ends if additional ones were to be added. A control center with a monitor and a video recorder would either be available on site or monitored remotely by a third party. If a CCTV security system is decided upon, a technical survey would be required.

#### Lighting

Several core issues have been the cause of insufficient lighting. Existing light towers are very old and rusty, one without lights, some with inoperable lights and others not providing the intensity required. Proper lighting is very effective in reducing future incidents and preventing crimes.



It is recommended that a "Lighting Study" be performed to make recommendations regarding the installation of security lighting to augment the existing light towers and municipal lighting or replace the light towers with new high mast lighting. Lighting should focus on perimeter areas, access locations, and areas of the yard where rail cars are parked for an extended period of time, as well as under area bridges.

The City Maintenance Department should be notified that lights on city streets adjacent to the rail yard need to be inspected for outages, especially on Western and Day Streets.

#### Signage

New signage, conspicuously located, should replace existing signs and be installed in areas of need. Signs should warn people to stay away and convey the consequences of trespassing.

Signs should be understood in all languages, written in English and a secondary predominant language.

#### Audible/Visual Alerts

Audible / Visual Alerts can be tied into a CCTV system or an alarm system for alerting trespassers. Such a system would be of most benefit at gate locations.

#### **Examination of TERP Facility Plan**

Preliminary review of the TERP Facility Plan found a well-prepared, comprehensive document. Upon completion of the safety and security assessment, the TERP Facility Plan was reviewed yet again, but with a greater understanding of the facility, policies and procedures.

One area of concern is found in Section 2.3 *Facility Security*. Several items currently are not being met or require revision.

- CSXT police monitoring and patrol There is only one CSXT police officer assigned to the yard. West Springfield Yard is only one of many yards for which he is responsible. Therefore, he does not spend much time patrolling this facility.
- Controlled access and warning signs We encountered no controlled access and very few warning signs were visible.
- □ The facilities are illuminated adequately ...safe working...deter vandalism As it was observed during the night assessment, the lighting was ineffective and lacking in some areas.



Trainmasters Office – The Yardmaster position, a 24/7 position, occupies the office facility on the south side of the yard. This facility is labeled "Trainmasters Office". It was referred to as the Yardmaster's Office by a number of individuals. The label on all the drawings should be revised to reflect "Yardmaster's" office.

#### Implementation

Section 1.3 of the TERP Facility Plan, *Plan Implementation and Updating*, provides a vehicle for implementation recommendations made regarding physical security, policy and procedures as well as updating of the TERP Facility Plan itself.

Continued communication, cooperation, and exercise drills with EMS are important and required per the site plan. It is recommended that when a security upgrade has been completed, an agency outside of CSX Corporation and PVPC assist with the preparations and facilitation of a Tabletop Drill or an exercise drill.

After the recommended security measures have been agreed upon by PVPC and CSXT, they will be organized into a total program, ensuring that each proposed security measure will work in concert with the others and with existing procedures and policies. Existing security measures will require a new review and will be modified, supplemented and/or replaced as necessary to counter the exposures highlighted by the vulnerability analysis. Any exposures which have been defined as "risks worth taking" will not require the application of countermeasures.

In this phase the security program is transformed into specifications for people, systems and policies. The objective is to translate the security plan into bidding and purchasing documents, procedures, organizational programs and processes.

#### Preliminary Quantity and Cost Estimate

Based upon the daytime and evening site inspections conducted, a preliminary list of quantities and costs for the recommended security enhancements has been prepared (See Table 3-4).

The quantities and costs provided are based neither upon survey nor upon preliminary design information. At present, they serve as a best guess of what might be provided, and should be used for preliminary planning and budgeting purposes only. Further detailed discussions with CSX, the Town of West Springfield, and local Emergency Service providers must be conducted to generate a more accurate representation of the security needs for the site.



## Table 3-4Proposed Safety and Security Improvements

	11 .4	0 (1)	36 1 1	T 1	17 ''	T.
Item	unit	Quantity	Material	Labor	unit	Item
			Cost	Cost	Cost	Cost
Chain Link Fonce						
Drovision of new foncing	16	12 000			¢10.04	¢216 422 60
	11	12,000	-	-	\$18.04	\$216,423.60
Removal & disposal of existing fencing	lf	2,500	-	-	\$12.73	\$31,827.00
Gates						
Provision of new sliding gates	ea	10	\$2,600.00	\$10,000.00	\$12,600.00	\$126,000.00
Gate operator	ea	10	\$2,000.00	\$2,500.00	\$4,500.00	\$45,000.00
1				. ,		
Gate Access Control						
Keypad	ea	4	\$286.00	\$2,500.00	\$2,786.00	\$11,144.00
Intercom	ea	4	\$504.00	\$2,500.00	\$3,004.00	\$12,016.00
Wiring	lf	5,000	\$3.00	\$3.00	\$6.00	\$30,000.00
Conduit	lf	5,000	-	-	\$16.97	\$84,872.00
Control board	ea	1	\$350.00	\$8,563.00	\$8,913.00	\$8,913.00
Gate CCTV						
Cameras with pan/tilt/zoom control	ea	10	\$10,611.00	\$1,713.00	\$12,324.00	\$123,240.00
Control equipment	ea	1	\$108,214.00	\$8,563.00	\$116,777.00	\$116,777.00
Conductor THHN 312 AWG	lf	1,000	\$0.13	\$1.93	\$2.06	\$2,060.00
CCTV control & video composite cable	lf	16,000	\$4.55	\$5.78	\$10.33	\$165,280.00
Cata Alarma						
Gute Aturns		10	¢2(E.00	¢1 000 00	¢1 2(E 00	¢12 (E0.00
Klaxon shen/w strobe light	ea	10	\$203.00	\$1,000.00	\$1,203.00	\$12,650.00
Lighting - Perimeter & Yard						
Light poles	ea	200	-	-	\$1,000.00	\$200,000.00
Light fixtures	ea	500	\$85.50	\$100.00	\$185.50	\$92,750.00
Light pole foundation	ea	200	-	-	\$500.00	
Conduit	lf	125,000	-	-	\$16.97	\$2,121,800.00
#8 Cable	lf	125,000	\$0.32	\$2.90	\$3.22	\$402,500.00
Standby Power						
Emergency Generator	ea	1	\$33,000.00	\$8,563.00	\$41,563.00	\$41,563.00
Transfer Switch Unit	ea	1	\$22,750.00	\$8,563.00	\$31,313.00	\$31,313.00
Battery Pack	ea	1	\$180.00		\$180.00	\$180.00
Foundations, Slab on Grade	ea	1	-	-	\$2,000.00	\$2,000.00
Lockable Fiberglass Enclosure	ea	1	-	-	\$10,000.00	\$10,000.00
Signage						
Perimeter Warning Signs	ea	60	\$20.00	\$5.00	\$25.00	\$1,500.00
Warning Signs in Second Language	ea	60	\$20.00	\$5.00	\$25.00	\$1,500.00

Total Cost \$3,891,308.60



#### Assumptions

Beyond the quantity list, the assumptions and caveats used in the preparation of the Proposed Safety and Security Improvements table have been provided. These assumptions will enable the reader to form an independent opinion as to the reasonableness of the quantities provided.

- 1. New perimeter fencing is provided between east and west site limits with the exception of the following areas:
  - a. North Side Extent of new fencing area on Union Street, between Union Street Bridge, and the existing trailer storage area.
  - b. South Side Between Sears Way and the Yardmaster's Offices.
- 2. Existing fencing on the north side of the intermodal yard and the Maintenance of Way Yard in various conditions of distress will be removed and replaced.
- 3. Cantilevered sliding gates will be provided at regular access points, and at additional specific locations to be agreed upon with local Emergency Services. Provision for inclusion of ten gates has been made.
- 4. The main gates, which see regular traffic, such as Sears Way, Day Street, and Lowell Street, are kept in an open position during regular daylight hours. In evening and night hours, the gates are maintained in a closed position, opened only to allow passage of scheduled vehicles.
- 5. Gates required for emergency service access will remain locked at all times. EMS will retain lock keys for use.
- 6. Subject to the performance of a more detailed lighting study for the yard, the quantity estimate ignores current yard lighting, which was variable in type, intensity and performance. The lighting estimate also currently ignores the Town lighting on Day Street.
- 7. Given the size of the yard, it is assumed that the lighting will be powered from multiple feed sources.
- 8. At this stage, it is assumed that lighting wire is conduit encased.

#### 

## Market Development for West Springfield Intermodal Terminal

With the transportation improvements underway, it is suggested that the Town of West Springfield partner with CSX to ensure that the utilization of the terminal meets mutual expectations. With the envisioned significant investment of public funds to improve transportation access to the region, it is important that this investment be realized by the region's shippers. A marketing partnership is one measure to ensure a successful public investment in a public/private partnership. It is recommended that the partnership include joint marketing activities to promote the use of the terminal by local and regional shippers, as well as possible incentives for new traffic to the terminal. Specific measures and strategies for the Market Development program will be created in a later phase of the project in conjunction with the transportation improvements.



#### Neighborhood Improvement

The following section identifies and recommends programs and actions to preserve and reinforce designated preservation and development areas, including streetscape beautification, infill and rehabilitation, traffic improvements, code enforcement, economic development and business retention programs, and open space.

#### **Neighborhood Preservation Program**

The study area contains two distinct residential neighborhoods separated by the CSX Rail Yard. North of the yard, the historic Merrick neighborhood is a higher density, primarily residential neighborhood of low and moderately priced multi-family homes and is zoned for mixed residential and office uses. The Memorial neighborhood, located south of the rail yard, is a less cohesive residential neighborhood comprised of an often incompatible mix of residences, industrial users, and small businesses. It is zoned for a higher density mix of industrial, multi-family residential, and limited commercial uses.

The Neighborhood Preservation Program is a short term priority of the Merrick-Memorial Redevelopment Plan. It is an integral part of the Town of West Springfield's reinforcement strategy and should be implemented and maintained to meet the immediate needs of area residents, including streetscape and pedestrian enhancements, street beautification, access enhancements, buffering of incompatible uses, reconciliation of land uses, and bolstered code enforcement. Additional ongoing activities should include business retention efforts, selective infill and building rehabilitation, and the development of recreational open space. In addition to enhancing access, safety, and residential quality of life, the Neighborhood Preservation Program, in conjunction with rail yard and access improvements, can be expected to help leverage private investment in the future.

#### Streetscape Beautification and Pedestrian Enhancements

A streetscape beautification program is proposed within the Merrick and Memorial neighborhoods and along key streets such as Park Avenue and Union Street. Pedestrian enhancements such as landscaping (street trees), new sidewalks, street lighting, furniture (benches, trash receptacles, etc.), and wayfinding will provide a new layer of continuity and create a more resident-friendly environment. Edge enhancements will strengthen and preserve neighborhood identity and definition.



#### **Residential Selective Infill and Rehabilitation**

Infill and rehabilitation are encouraged as a means of increasing the consistency, stability, and attractiveness of the Merrick and Memorial neighborhoods, enhancing the quality of life for area residents through revitalization. Selective infill and rehabilitation are recommended to address isolated areas of blight in the Merrick neighborhood, to begin to reconcile incompatible land uses in the Memorial Neighborhood, and otherwise strengthen the mix of uses. Currently 67 percent of the housing in the study area is rental property. To encourage investment and increase the percentage of owner occupied housing, the Town of West Springfield should assume a proactive role in identifying infill and rehabilitation sites which are appropriate for this use. The Town should also assume a proactive role in the relocation of incompatible uses.

#### **Traffic Improvements**

The Merrick-Memorial Redevelopment Plan includes a variety of strategies to reduce traffic noise and pollution impacts within the study area. Reconstruction of the Union Street Bridge and construction of a new truck service road, with access closer to the bridge than the currently used Day Street, will remove the majority of truck traffic along Union Street headed for the rail yard. This streamlined truck access to the rail yard will ease the burden on neighborhood streets. In addition, formalized truck routes will be indicated with improved signage, and truck exclusions will be implemented along certain roads. Figure 3.10 depicts traffic improvements throughout the study area.

#### Code Enforcement

A stepped-up residential code enforcement program is recommended, with regulations strictly enforced to address building code and zoning violations, blight issues, and the abandonment of garbage and other refuse items on neighborhood streets and properties. Enforcement of codes and regulations will facilitate community pride, enhance the appearance, and maintain the character of the Merrick and Memorial neighborhoods. It is recommended that different Town departments, including health and police, coordinate regular code compliance inspections.

#### **Economic Development and Business Retention**

Results of the business survey indicate that over fifty percent of the existing establishments within the study area have leases that will expire within the next two years. Development and implementation of an Economic Development and Business Retention Program aimed at maintaining existing businesses and supporting business growth and job creation is a key element of the Neighborhood



Reinforcement Strategy. The program should provide assistance to local commercial, industrial, and neighborhood businesses through community partnerships, strategic planning efforts, and the provision of federal, state, local, and private resources. The Town should formalize a one-step process for permitting and approvals for businesses seeking to locate or expand in West Springfield. Further, the Town may want to consider appointing a point person for economic development projects.

#### **Open Space**

It is recommended that the Town explore increasing the amount of open space in the study area through the development of small urban pocket parks and reclaiming flood plain and dike areas for recreational purposes. Existing vacant, underutilized, decrepit or Brownfield sites may provide opportunities to be cleaned and reclaimed as recreational open space within the study area's neighborhoods. In addition, the existing flood control dikes on the edges of the study area may provide opportunities to create bike paths that could link with paths in neighboring communities and with recreational areas in West Springfield.

#### Potential Funding Sources

Following is a summary of potential funding sources which may be applicable to the Neighborhood Preservation Program. A comprehensive list of funding sources can be found in Chapter 8, Implementation Strategy.

#### District Improvement Financing (DIF)

Beginning in the fall of 2004, cities and towns in Massachusetts will have access to a new development tool designed to help them revitalize blighted districts and finance infrastructure improvements. Nationally known as Tax Increment Financing (TIF), the Commonwealth's newly instituted District Improvement Financing (DIF) mechanism will permit a local jurisdiction to borrow funds for infrastructure improvements (e.g. master planning, parking facilities, streetscape improvements) linked to the revitalization of a predefined district. The bonds are financed by the future real estate tax increases or increments for the designated district.

#### Town of West Springfield

At the West Springfield Trade Center site, Town-initiated incentives are expected to include environmental clean-up, selected demolition, site improvements, access improvements, marketing programs, and business retention efforts.



#### Statewide Private Sector Incentives

## Economic Development Incentive Program (EDIP)

The Economic Development Incentive Program (EDIP), administered by the Massachusetts Office of Business Development (MOBD), offers tax and other incentives to attract new businesses in targeted areas. The program aims to stimulate economic growth by offering incentives to businesses that expand, relocate, or build new facilities.

EDIP requires that sites be located in one of the Commonwealth's 40 designated Economic Target Areas (ETAs) to be eligible for their incentives. While the Town of West Springfield currently meets the eligibility requirements to become an ETA, the Commonwealth is not issuing any new ETA designations. However, West Springfield may join an existing ETA in either Springfield or Holyoke. The Town of West Springfield is currently negotiating with both Springfield and Holyoke to identify which ETA would be the most appropriate, and to ultimately achieve ETA status.

#### Economic Development and Housing

#### MassDevelopment

MassDevelopment provides financial and technical assistance for real estate and business projects that generate economic benefits for local communities and the state as a whole. Development services to cities and towns bring complex real estate development projects to fruition, and advance projects that support job creation and community development.

#### Massachusetts Community Capital Fund (MCCF)

The Massachusetts Community Capital Fund (MCCF) offers businesses located within eligible municipalities flexible debt financing. This program targets businesses which create and retain jobs for low- and moderate-income residents.

#### Ready Resource Fund

The Ready Resource Fund supports a wide range of economic development activities and provides funding for projects that create and retain jobs, improve the local and regional tax base, or otherwise enhance the quality of life in a community. Funding can be used to help small businesses and micro-enterprises to implement programs



that promote growth, assist an array of public facilities, infrastructure and public facility projects in support of economic development.

#### Priority Development Fund (PDF)

The Priority Development Fund provides assistance to communities seeking to increase housing production, especially mixed-income rental housing. Priority will be given to projects that address or encourage new housing production within city or town centers, on brownfields or underutilized commercial or institutional land, or as part of a transit-oriented development opportunity. Priority will also be given to the adaptive re-use of existing structures not currently used for housing purposes.

## Community Development Fund (CDF)

The Community Development Fund is comprised of two levels based on local need indicators. A project must meet criteria of benefit to low- and moderate-income individuals, remove slum and blight, or address critical community need. Grants can be used to undertake a wide range of projects or activities, based upon a comprehensive and creative approach to local community development needs.

## Community Development Action Grant (CDAG)

The Community Development Action Grant provides public infrastructure support in those instances where private investment would not occur without assistance, with the goal of stimulating economic development activities that will attract and leverage private investment, create and retain long-term employment and revitalize distressed areas. Grants can be used for projects that involve the installation, improvement, construction, alteration, enlargement, repair, rehabilitation, remodeling and reconstruction of publicly-owned or managed properties. Other projects include the building, repair and rehabilitation of facades, streets, roads, sidewalks, utilities, demolition, and relocation assistance. The community must be housing certified under EO418 to be eligible.

### Public Works Economic Development (PWED)

The Public Works Economic Development fund supports the design and construction of roads and other transportation related projects deemed necessary for economic development. Projects should retain, establish or revitalize industrial or commercial facilities, create or retain long-term employment opportunities, have a positive impact on local tax base, leverage a high ration of private investment, and strengthen the partnership between public and private sectors.



#### Miscellaneous Programs

## Mass ReLeaf Community Tree Planting

Mass ReLeaf is a fund within the Conservation Trust of the DCR designed to foster partnerships between business, government and non-profit groups for the planting and care of public trees. The fund provides matching grants to communities to purchase trees for public planting projects that enhance community quality of life; improve urban ecosystems and enhance air and water quality, brownfields sites, and community parks; promote sustainable urban forests; and strengthen community involvement and partnerships. The standard category is for projects up to \$5,000, but projects can range up to \$25,000 for urban communities with lower income neighborhoods, communities of diverse populations, communities that have a prevalence of industrial sites and brownfields, and communities that lack adequate green space.

### Plan Components Matrix

Table 3-5, Plan Components Matrix, summarizes the main elements of the Merrick-Memorial Neighborhood Redevelopment Plan, including the redevelopment of priority sites and the various transportation, rail yard, and neighborhood improvement recommendations identified in this chapter. These components are presented for each of the three redevelopment plans: Focus: Industrial Development, Focus: Flex-Space/Industrial Mix, and No Intervention/Infrastructure Enhancements.



### Table 3-5 Merrick-Memorial Neighborhood Redevelopment Plan Plan Components Matrix

IMPROVEMENTS	REDEVELOPMENT PLANS			
	Focus: Industrial Development	Focus: Flex-Space / Industrial Mix	No Intervention / Infrastructure Improvements	
Redevelopment Areas			•	
West Springfield Trade Center	110,000 SF Warehouse/ Distribution Building	100,000 SF Flex-Space "Park"		
Western Avenue/ Bliss Street Site	90,000 SF "Cross Dock" Warehouse	125,000 SF Flex-Space Buildings		
Southern Industrial District	642,500 SF Industrial Use with Multiple Functions	642,500 SF Industrial Use with Multiple Functions		
Transportation Improvements				
Traffic monitoring				
Roadway volume/classification data	✓	✓	✓	
Intersection count data	✓	1	✓	
Crash history	✓	✓	✓	
Traffic signal modifications	✓	✓	✓	
Baldwin Street (traffic monitoring and calming)	✓	✓	✓	
Park Ave./Park St. at Elm St./Union St. (signal monitoring and truck access)	<b>√</b>	✓	√	
Signs				
No Trucks (MUTCD sign R5-2)	✓	✓	✓	
Truck Route (MUTCD sign R14-1)	✓	1	✓	
Warning Low Clearance (MUTCD sign W12-2)	✓	✓	✓	
No Parking (MUTCD sign R8-3)	✓	✓	✓	
No U-Turn (MUTCD sign R3-4)	✓	✓	✓	
Pavement markings				
Thermoplastic 4-inch lane striping (2 edge lines and a double yellow center)	✓	✓	✓	

IMPROVEMENTS	REDEVELOPMENT PLANS			
	Focus: Industrial Development	Focus: Flex-Space / Industrial Mix	No Intervention / Infrastructure Improvements	
Arrows, legends, stop lines, and crosswalks	✓	✓	1	
Main Street at Bresnahan Street (pavement markings and parking signage)	√	✓	✓	
Geometric, circulation, and other improvements				
Park Street at Western Avenue (geometric improvements)	✓	✓	✓	
River Street/Baldwin Street/Sears Way (circulation improvements) Markings only	✓	✓	✓	
River Street/Baldwin Street/Sears Way (circulation improvements) Realignment	✓	✓	✓	
Memorial Ave. at Union St./Union St. Ext. (lane geometry and signal timing)	√	1	√	
At grade railroad crossing improvements	√	✓ <b>√</b>	√	
Rotary improvements (pavement markings only)				
Memorial Bridge (Route 147)	✓	✓	✓	
North End Bridge (Route 20)	√	✓	✓	
Bridge improvements				
Union Street Bridge reconstruction	✓	✓	✓	
River Street Bridge clearance	√	✓		
Truck service/access roads				
New Truck Service Road	✓	✓	✓	
New Route 5 Access Road from Union Street Extension	✓	✓		
Rail Yard Improvements				
Fencing	✓	✓	✓	
Controlled access				
Gates	✓	✓	✓	



IMPROVEMENTS	REDEVELOPMENT PLANS				
	Focus: Industrial Development	Focus: Flex-Space / Industrial Mix	No Intervention / Infrastructure Improvements		
Access control systems	✓	✓	✓		
CCTV systems	✓	✓	✓		
Alarms (Klaxon siren with strobe light)	✓	×	✓		
Lighting	✓	✓	✓		
Standby power supply	✓	✓ ✓	✓		
Signs	4	✓	✓		
Paving	✓	✓	✓		
Neighborhood Improvements					
Streetscape improvements (trees, lighting, curbing)	✓	✓	✓		
Main Street	✓	✓	✓		
Union Street	✓	✓	✓		
Park Avenue	✓	✓	✓		
Memorial Avenue/River Street	✓	✓	✓		
Residential infill/rehabilitation	✓	✓	✓		



## **Economic Feasibility**

#### Introduction

The following chapter presents national and local outlooks for manufacturing, wholesale trade and transportation, and flex/research and development uses, and evaluates each redevelopment plan in terms of available market support, private sector financial feasibility, and local economic impacts, including tax revenues, jobs, and payrolls. The economic feasibility analysis was prepared by Basile Bauman Prost Associates.

#### **Redevelopment Plans**

The CSX Rail Yard has historically functioned as the economic engine for the surrounding Merrick and Memorial Neighborhoods in West Springfield. The objective of the three redevelopment plans listed below is to enhance this symbiotic relationship by directly or indirectly promoting a strengthened intermodal rail yard, revitalized industrial areas, business retention and expansion, job creation, residential rehabilitation and infill, and neighborhood preservation. Rather than exist as discrete alternatives, the three plans have the potential to be implemented concurrently or consecutively and phased over time.

The No Intervention/Infrastructure Enhancements plan is intended to address immediate infrastructure needs in the Merrick-Memorial Neighborhood. By so doing, it will set the stage for future redevelopment by increasing access, promoting safety, and enhancing streetscapes. It accommodates incremental growth in freight rail activity within the existing rail yard by enhancing safety and security. It does not directly use the rail yard as an opportunity to leverage new development, assemble land, or attract large users. The plan facilitates industrial and residential development in the surrounding area through a series of access improvements and neighborhood preservation techniques. An aggressive business retention and expansion program should complement implementation by growing existing establishments and keeping them apprised of project benefits and status.

The Focus: Industrial Development plan promotes industrial development throughout the study area with particular attention paid to the north side of the rail yard and the Union Street Extension. It also includes improving the rail yard by providing additional trailer container storage, track improvements, and new fencing and lighting. Development to the north of the CSX yard could include light industrial use at the West Springfield Trade Center (100,000 – 120,000 SF) and warehouse/cold storage facilities to the southwest of the intersection of Western Avenue/Bliss Street. This scenario encourages zoning changes for new industrial development with particular attention to assembling a 30-acre site at the end of Union Street Extension.

The Focus: Flex-Space/Industrial Mix plan promotes a mix development of flex space and industrial uses. Development to the north of the CSX yard could include small flex-space and research and development (R&D) users at the West Springfield Trade Center site. The Western Avenue / Bliss Street opportunity area could be recreated to accommodate similar users. Like the Industrial Development focus, this scenario also promotes industrial development through zoning changes and the assembly of a large 30-acre site at the end of Union Street Extension.

### Market Support

- Based upon employment projections for 2003-2020, the Merrick-Memorial Neighborhood is projected to absorb an additional (compared to existing levels) 345,000 square feet of "industrial" space over the seventeen-year period.
- □ Between 2003 and 2020, the projected space demand for Services is 192,000 square feet (11,300 per year).
- □ Between 2003 and 2020, the projected space demand for Wholesale Trade is 46,000 square feet (2,700 per year).
- □ Between 2003 and 2020, the projected space demand for Transportation (500 per year).
- □ There is no projected net new space demand for Manufacturing although the sector's employment is expected to remain stable.

National and Merrick-Memorial Neighborhood industrial outlooks are listed below:

#### National Manufacturing Outlook

The market share of manufacturing facilities continued to decline in the United States. Between 1992 and 2001, the total square footage in the nation increased by 8.2 percent. During the same period, the square footage of warehouse distribution and flex spaces increased by 20.1 percent and 21.3 percent respectively. In response, the role of manufacturing facilities is evolving from pure manufacturing and assembly to include warehousing and distribution.

Due to their functional flexibility – the ability to house manufacturing, warehousing, and distribution functions – light manufacturing buildings are more common than other types of manufacturing facilities. Therefore, light manufacturing buildings are expected to remain the predominant type of manufacturing space on the market.



Compared to warehouse/distribution facilities, light manufacturing facilities typically employ a higher number of workers per square foot. West Springfield's strong labor pool should be attractive to light manufacturing firms.

According to Torto Wheaton Research, the national availability rate for manufacturing space declined between 1992 and 2000, with the exception of a minor rise in 1997, since which construction has outpaced absorption. In response to the manufacturing recession, net absorption turned negative in 2001, thereby elevating availability rates to their 1993 levels.

According to a 2004 National Board of Realtors (NAR) report, a recovery in commercial real estate continues to lag behind a gradual recovery in the general U.S. economy. The growing U.S. economy, however, will eventually need to add workers, thereby increasing the demand for commercial space. As a result, NAR expects a marked increase in space absorption for industrial segments with lease rate growth surpassing the Consumer Price Index in 2005.

In the warehouse sector, projected growth in the manufacturing sector is expected to increase demand for space through 2005. Net absorption is expected to rise to 88.3 million square feet in 2004 and grow at an even stronger pace in 2005, reaching 125.7 million square feet. The vacancy rate should shrink to 10.0 percent in 2004, while lease rates are expected to experience an average decline of 0.6 percent before rising 2.0 percent in 2005.

Grubb & Ellis' 2004 second quarter market report for the industrial sector supports a more optimistic outlook. Led primarily by large owner-users locking in low interest rates, industrial vacancy rates continued to slowly decline. A second positive indicator, an increase in construction activity, however, limited the absorption of existing facilities.

Despite export expansion and manufacturer retooling, the Massachusetts Division of Employment and Training projects a statewide reduction in manufacturing jobs of 11 percent by 2008. According to PVPC projections, the Pioneer Valley region is estimated to lose 14 percent of its manufacturing employment by 2010 and more than 50 percent by 2030. In the competition for fewer firms, municipalities with strong site assets can be expected to have an advantage, making West Springfield's history and existing pattern of manufacturing employment significant. Enabled with a vigorous retention program, the Merrick-Memorial Neighborhood is in position to maintain a stable manufacturing employment base.

Manufacturing facilities are more likely than flex/R&D to be owner-occupied. In cases where spaces are leased, tenant improvements can be expected to exceed warehouse distribution enhancements although they are less costly for manufacturing facilities than for flex spaces. In addition to increasing rents, the improvements can be expected to increase investor risk by elevating the expected retrofit expenditures. However, tenant-relocation expenditures for manufacturing



facilities can be cost-prohibitive. Thus, owners are more likely to retain tenants and secure longer lease arrangements.

#### Local Manufacturing Outlook

As competition intensifies for limited manufacturing firms, the Merrick-Memorial Neighborhood's strong assets and industrial heritage will provide the area with significant advantages over competing sites. BBP's projections factor in these advantages and allow for potential market dynamics afforded by an established industrial area.

BBP expects the Manufacturing sector in the Merrick-Memorial Neighborhood to remain stable between 2003 and 2020. Responses to the Merrick-Memorial Neighborhood Business Surveys suggest that area firms do not foresee additional labor-force contraction. Responses were validated by follow-up interviews with area employers. Area manufacturers indicated that cuts in surplus labor and services were complete and plans to expand once again were not out of the question.

New manufacturing firms in projected state growth industries, including the production of medical equipment, instruments, and supplies, could potentially support employment retention and offset unforeseen losses. The production of medical equipment is the only manufacturing segment expected to experience significant growth (1.2 percent) within the Commonwealth by 2008. BBP's projections for this growing industry segment assume the introduction of one small firm each projection period and a growth rate comparable to that of the Commonwealth for existing firms, for a total of 12 new employees.

Neighborhood expansion in the manufacturing sector is likely to be constrained by a number of factors. Primarily, the existing availability and potential assembly of land in the Merrick-Memorial Neighborhood is limited. Industrial users are not likely to be attracted to the area until sites can be assembled (e.g., Southern Industrial Area) and, in some cases, undergo varying degrees of environmental remediation (e.g., Trade Center). The vacancy of existing facilities also suggests that improved sites do not meet the needs of industrial firms. Despite its locational advantages, the Sears Way Building, for instance, has no room for expansion or surface parking. Until site constraints can be alleviated, larger industrial firms can be expected to opt for alternative facilities in the region or build-to-suit green field sites.

#### National Wholesale Trade and Transportation Outlook

Growth in local and interurban passenger transportation, air travel, and trucking and courier services should account for approximately 80 percent of new jobs in transportation. Freight operational improvements – better control of inventories, bigger containers, and greater fuel efficiencies – coupled with slower population and economic growth should prevent employment from expanding faster. Due to



increasing business capital spending and manufacturing output and the replenishment of inventories, the warehouse/distribution sector is expected to be the first among all industrial property types to recover from current economic difficulties. Other trends impacting industry growth and site selection include:

- Consolidation of major manufacturing and distribution operations fewer locations and larger facilities;
- □ Speed-to-market demand and logistics of "just-in-time" shipping;
- □ Strategic importance of proximity to intermodal transportation and suppliers;
- □ Flexibility to accommodate industry growth and change;
- □ Sophisticated materials handling systems that support increasing market demands for efficiency, customization and "high touch";
- □ Access to a competitive labor market;
- □ Return to the urban core and adaptive reuse;
- □ Increased awareness of energy and environmental issues;
- □ Leasing activity in warehouse/distribution properties in the early stages of recovery for small- to medium-size multi-tenant properties of 100,000 square feet or less (DB Real Estate Research);
- □ Larger regional distribution facilities average between 500,000 to 1 million square feet being sited on larger tracts of land (35-40 percent site coverage); and
- □ Preference for taller ceilings (36′-40′) over the 30′-32′ standard of the past.

As the selling and distribution processes become increasingly automated and more goods and services are bought and sold over the internet, jobs in wholesaling should expand for the foreseeable future. According to the Massachusetts Division of Employment & Training, Commonwealth wholesaling jobs should expand in conjunction with the growing demand for Massachusetts' high-tech products. Underlying factors driving consumer spending—income growth, low inflation, and low unemployment—should remain robust over the initial projection period of 2003-2010. Segments of wholesaling, however, will remain relatively stable as competition increases and more powerful new computer systems eliminate redundancies, especially in the supply lines.

#### Local Wholesale Trade and Transportation Outlook

Given the potential for significant local and regional public investment in the CSX Rail Yard and its environs, BBP expects the Transportation and Wholesale Trade sectors to increase the Merrick-Memorial Neighborhood employment modestly for both the short-term (2010) and long-term (2020) planning periods. Assuming a midpoint for the PVPC's Merrick-Memorial Neighborhood redevelopment options, infrastructure area enhancements (e.g., bridge improvements, truck routing, and street beautification) and space allocation should enhance the attractiveness of the area for wholesale traders, trucking companies, small to mid-size third-party logistics, and distribution centers. The marketing and reuse of other underutilized facilities within the projection periods will contribute to new employment. Retention



of existing transportation and whole trade firms and the attraction of new ones should yield growth rates of 0.7 percent and 0.5 percent respectively. Both of these estimates are based on Commonwealth projections for the industry.

#### National Flex/R&D Outlook

Flex-space is a hybrid product derived from combining high-end office building amenities with the flexibility of industrial space and convenience of garden office developments popular in the 1970s and 1980s. Flex-space is a by-product of the technology and workforce changes of the last decade. More and more professional service companies are moving to "flexible" office space that allows for alternative work schemes without major office renovation. It also leaves open the option to change building use from office to industrial or vice versa with a relatively small investment. Flex-space is a hybrid and could include both R/D and office. These terms are used interchangedly.

According to various business publications, industrial flex-space is the "chameleon of commercial real estate." It goes on to define it as a single-story industrial-type building that is generally 25 to 100 percent office space. Ceiling heights are 14 to 16 feet, and the parking ratio is usually four to one in case the building goes 100 percent office. In general, the depth is somewhere between 70 and 120 feet. The roof can accommodate the weight of extra air-conditioning units, and the building is designed to handle power demands that may be greater than the typical warehouse. At the front door is likely to be traditional street-style landscaping. The space may or may not be equipped with loading docks and bays.

Tenants in the market for industrial flex-space vary significantly. Prior to the downturn of the dot-com industry, flex spaces were in high demand among Internet companies. At the time, the firms were not generally concerned with the exterior appearances of their structures. Recently, the fiber-optic capabilities and existing infrastructure associated with the vacated properties and new flex spaces have appealed to telecommunications companies such as Sprint and Cricket. Nationally, R&D space vacancies in the major tech market are expected to improve marginally by attracting these new tenants.

Flex spaces are more commonly owned by investors. According to the PWC Korpacz Real Estate Investor Survey, flex spaces command a higher rate of return on investment than the overall industrial sector since their level of risk tends to vary over time. The level of risk is naturally higher when users are start-up technology firms with low or nonexistent credit. Further enhancing risk are the higher investment costs per square foot. R&D flex facilities, for instance, typically require more tenant improvements than other industrial properties.

As of 2004, demand for second-generation flex / R&D products is constrained by two primary factors. Many potential flexible users are taking advantage of the surplus



and affordability of available office space. Users with more specific site requirements, on the other hand, are struggling to find suitable facilities that adequately meet their needs.

#### Local Flex/R&D Outlook

The market for flex and R&D space in West Springfield and the Merrick-Memorial Neighborhood in particular is expected to involve less risk than the national norm. Unlike most flex buildings, the opportunity sites are not located in a higher income area. Thus, land acquisition and construction costs are likely to be more reasonable than in other real estate markets.

In addition, local realtors and economic development officials indicate that the region is experiencing a shortage of flex-space most notably spaces with higher ceilings and room to expand. Low vacancy rates suggest that the area's stock of flex-space could support the conversion and modernization of Trade Center condominium units and/or the redevelopment of the Western Avenue / Bliss Street site. Potential tenants could include back-office operations for the Springfield MSA and scientific R&D firms.

The Trade Center needs to establish an enhanced market image that will help attract service business types with higher expected growth rates and average salaries. Assuming the Town of West Springfield invests in and markets the Trade Center in the short-term (0 – 5 years), there is a potential to attract service industries including flex users such as business services and R&D. BBP projections for the Services industry reflect a 1.7 percent growth rate, which is 80 percent of the Commonwealth's projected 2.3 percent.

BBP's projections include a 3.2 percent growth rate for business services. This rate matches that of the Commonwealth's projections. A targeted marketing campaign coupled with competitive lease rates may attract small to mid-size firms who desire the Trade Center's central location within the region.

#### **Financial Feasibility**

New construction in and relocation to the Merrick-Memorial Neighborhood in the short-term is expected to be limited. For build-to-suite users, the availability of land is limited and development costs in an urban setting are significantly higher than those at a greenfield site. New construction in the area is estimated to be \$51 per square foot. In comparison, the interior and exterior rehabilitation of the Trade Center is expected to average \$41 per square foot. Given the surplus and affordability of manufacturing and warehouse distribution facilities in the Springfield area, relocating users are likely to lease or buy existing facilities on the market.

The implementation of the No Intervention/Infrastructure Enhancements plan will help leverage private investment by demonstrating the public sector's commitment to the Merrick-Memorial Neighborhood and its willingness to shoulder some of the risk. The development community is more likely to be attracted to the neighborhood's location assets and strong labor force once constraints such as transportation deficiencies and neighborhood concern have been ameliorated.

Given limited growth in manufacturing and an orientation to warehouse distribution uses, a market analysis of the West Springfield Trade Center suggests that the Industrial Re-development Plan is not financially feasible without any incentives for the site in the short-term. The private sector clearance and re-development of the site is not economically viable without public sector assistance. The cost of new private sector construction does not support the economic value, or price, the private sector would be willing to pay for the space. This is even if the public sector would provide all site improvements, site cleanup, and a free land. There is almost a \$2.5 million gap between the economic value and costs to the private sector components. Under this plan, not only would the public sector have to provide \$5.3 million in site improvements, it would also have to subsidize the project by reducing the private costs of development by an additional \$2.5 million, creating a total public sector deficit of almost \$7.8 million. This is notwithstanding the currently relatively weak demand for distribution and warehouse space in the Merrick-Memorial Neighborhood.

As the national and regional economies continue their recovery and the No Intervention/Infrastructure Enhancements plan is implemented, the demand for existing and new industrial facilities with the Merrick-Memorial Neighborhood's site assets can be expected to increase. In particular, CSX Rail Yard improvements and truck rerouting should increase the demand for a modernized warehouse distribution facility at the Western Avenue / Bliss Street site. In the longer-term, neighborhood redevelopment activity and public or private land assembly can be expected to yield a marketable Southern Industrial Area. Significant industrial development at this site will require the economies of scale made possible through greater acreage (over 30 acres). Given the current competitive costs to purchase existing buildings or develop on a greenfield site, site assembly and preparation of the Southern Industrial Area including clearance, potential environmental remediation, and site work will likely require public sector financial involvement.

#### **Economic Impact**

This section presents the summary of findings of the direct and indirect economic impact analyses of the construction and annual operations of the No Intervention/Infrastructure Enhancements, Focus: Industrial Development, and Focus: Flex-Space/Industrial Mix Merrick-Memorial Neighborhood Redevelopment plans (see tables below). This analysis quantifies the economic benefits (e.g. jobs, payroll) generated during the construction and at the sustained annual (build out) of



each redevelopment element. It provides a context for understanding the order of magnitude of impacts related to each segment. Since the economic and fiscal impacts of expected development generates "spin off" benefits which occur beyond the study area itself, this analysis captures projected indirect outcomes within the study area and throughout West Springfield and the Pioneer Valley.

The economic and fiscal impact analysis examines the direct and indirect job, payroll and local tax implications of projected development. The onetime economic impacts from the ongoing development related construction are measured along with the sustained, annual economic and fiscal impacts from the continual operation of the occupied development. All amounts are in constant \$2004 to eliminate consideration of any impacts that may stem from inflation or changing price levels. The dollar amounts thus reflect the amounts in today's dollars.

The economic and fiscal impacts represent projections given the current development cost, employment density, payroll levels, and tax structure. The cost implications to service the perspective development have not been calculated at this time.

A significant portion of the incremental development related to the redevelopment plans should represent net new development to the Town of West Springfield. Incremental office and flex-space development is assumed to be derived from a metropolitan commercial market whereas incremental warehouse distribution development is assumed to be derived from a larger regional market.

#### Assumptions

- The Bureau of Economic Analysis' RIMS II model was the source for the final demand output and income multipliers by industry sector that were utilized to estimate indirect employment and income effects during the project's construction period and annual operations (at build out).
- Direct employment projections are based on industry standard space demands:
  250 square feet per office employee, 350 square feet per flex space employee, and
  650 square feet per warehouse distribution employee.
- □ Construction costs per square foot estimates for each use provided by RS Means 2004 Square Foot Costs.
- Average earnings per construction worker based on 2002 Architects, Engineers & Contractors Guide to Construction Costs 60 Metropolitan Areas, Weighted Index.
  Represents hourly combined earnings for contract construction (80 percent skilled, 20 percent laborer).
- Real property tax rates (\$33.02 per \$1,000 of assessed value) were obtained from the Town of West Springfield's Assessor's Office.
- Economic values of new development are based on comparable sales data in the Pioneer Valley commercial real estate market.
- □ Tax revenue per investment cost represents the annual return in local real property tax revenues as a percentage of the total construction value.



- □ Investment cost per job represents the amount of investment per new incremental job.
- □ All amounts are in constant 2004 dollars to avoid including any inflationary impacts in the analysis.

Table 4-1					
Merrick-Memoria	l Neiahborhood	Redevelopment	Plans:	Economic	Impacts

	No Intervention / Infrastructure Enhancements 1/	Industrial Development 2/	Flex-Space / Industrial Development 3/
Construction Value	\$18,873,500	\$42,457,500	\$46,027,500
Commercial Square Footage	693,702	832,500	902,500
Construction Employment	76	172	186
Employment Multiplier	1.8728	1.8728	1.8728
Indirect Employment	66	150	162
Total Construction Employment	142	322	348
Direct Payroll	\$3,800,000	\$8,600,000	\$9,300,000
Earnings Multiplier	1.7718	1.7718	1.7718
Indirect Payroll	\$2,932,840	\$6,637,480	\$7,177,740
Total Payroll	\$6,732,840	\$15,237,480	\$16,477,740
Assessments	\$9,465,650	\$36,337,500	\$48,237,500
Current Tax Revenue	\$312,556	\$312,556	\$312,556
Estimated Tax Revenues	\$312,556	\$1,199,864	\$1,592,802
Tax Revenue/Investment Cost	\$0.02	\$0.03	\$0.03
New Property Tax Revenues	\$0	\$887,308	\$1,280,246
Current Employment	225	225	225
Projected Employment	225	1,813	2,276
Total Payroll	\$7,875,000	\$68,200,000	\$86,840,000
Investment Cost per New Job	-	\$26,743	\$22,437
New Direct Permanent Employment	N/A	1,588	2,051
New Indirect Permanent Employment	N/A	1,511	1,875
Direct/Indirect Permanent Jobs	N/A	3,324	4,151

Source: BBP Associates

1/ Public Sector Improvements

2/ Expansion of 140,000 sq. ft.

3/ Expansion of 210,000 sq. ft.







Projected commercial square footage varies significantly among the three redevelopment plans for the Merrick-Memorial Neighborhood. The No Intervention/Infrastructure Enhancements plan would maintain the approximate 693,000 square feet of existing commercial square footage. In the Industrial Development plan, industrial space is planned to expand to approximately 832,500 square feet, an increase of nearly 140,000 square feet. The Flex-Space/Industrial Mix plan envisions 902,500 square feet, representing an increase of nearly 210,000 square feet of new industrial and flex-space.







Table 4-3 displays the projected employment levels for the three redevelopment plans. Again, since the No Intervention/Infrastructure Enhancements plan does not assume a private development plan to coincide with the public investments, it does not increase the current levels of private employment. The Flex-Space/Industrial Mix plan projects an increase of over 2,000 jobs to 2,276. Given the lower employment densities associated with warehouse and distribution space, the Industrial Development plan yields fewer new jobs, but still represents an increase of over 1,500 jobs from existing levels.



#### Table 4-4 Merrick-Memorial Redevelopment Plans: Employment Projections

#### Industrial Development

Use	Sq Ft	Sq Ft/Employee	Projected Employment
Office - So. Industrial Area	125,000	250	500
Warehouse - Trade Center	110,000	650	169
Warehouse - Bliss St	90,000	650	138
Warehouse - So. Industrial Area	337,500	650	519
R&D - So. Industrial Area	100,000	350	286
Lab - So. Industrial Area	70,000	350	200
Totals	832,500	459	1,813

#### Flex-Space/Industrial Mix

Use	Sq Ft	Sq Ft/Employee	Projected Employment
Office - So. Industrial Area	125,000	250	500
Warehouse - So. Industrial Area	337,500	650	519
R&D - Trade Center	145,000	350	414
R&D - Bliss St	125,000	350	357
R&D - So. Industrial Area	100,000	350	286
Lab - So. Industrial Area	70,000	350	200
Totals	902,500	396	2,276

Source: BBP Associates

New employment projections for Industrial Development and Flex-Space/Industrial Mix are based on industry standards for employee space demand. Projections by use and location are derived by dividing the square footage for each development program component by industry standards. Given the higher employment densities of R&D space when compared to warehouse distribution, the Flex-Space/Industrial Mix plan yields over 400 more jobs than the Industrial Development plan. In both cases, however, the most significant number of jobs (519) is created by the planned warehouse space for the Southern Industrial Area. This along with the other projections for Southern Industrial Area spaces suggests that the bulk of new employment will be generated in the longer-term (over 10 years).

Tables 4-5 and 4-6 on the following page display the total neighborhood at-place employment and payroll projections for each redevelopment plan. The No Intervention/Infrastructure Enhancements plan reflects current estimated employment and payroll levels.



Vanasse Hangen Brustlin, Inc.









4-14



# 5 Environmental Benefits and Impacts

### Introduction

The purpose of this chapter is to examine the environmental consequences of the Merrick-Memorial Neighborhood Redevelopment Plan, including both positive consequences (benefits) and negative consequences (impacts). Note that these estimations are very preliminary and would need to be refined based upon subsequent investigations and refinements to the plan.

It is anticipated that the Merrick-Memorial Neighborhood Redevelopment Plan will have environmental consequences in the following categories:

- Noise
- □ Air Quality
- □ Wetlands and Wildlife
- □ Hazardous/Contaminated Risk Sites

Additional information on each category is provided in the following sections. Note that transportation impacts, including traffic, bicycle, and pedestrian modes, are addressed in Chapter 3, Redevelopment Plan.

#### Noise

The existing noise environment within the study area is heavily influenced by vehicle-related noise along major travel corridors including Route 5, Main Street, Union Street, Bridge Street, Memorial Avenue, River Street, and Park Avenue. Rail and intermodal operations within the CSX Rail Yard also generate noise within the study area. In particular, heavy truck traffic associated with the rail yard operations appears to be of significant concern to neighbors, and one may assume that the land uses along the routes most traveled by heavy trucks experience the highest noise levels in the study area. Where residential uses are located along these truck routes, as on Union Street, noise sensitivity is at its highest.

One objective of the proposed Merrick-Memorial Neighborhood Redevelopment Plan is to create economic development opportunities within the study area, potentially including industrial and rail-dependent uses. New industrial facilities within the study area will result in additional traffic and the potential for additional noise impacts along major travel corridors and truck routes.

To mitigate these potential impacts, the redevelopment plan includes a variety of strategies to reduce noise impacts within the study area. Truck routes will be formalized and indicated with improved signage. Truck exclusions will be formalized along certain roads. A truck haul road is contemplated within the rail yard to provide drivers with a way to avoid much of Union Street, thereby reducing noise impacts along portions of this corridor.

### Air Quality

The existing air quality environment in the Merrick-Memorial Neighborhood study area is typical of an industrialized urban area. The majority of emissions in the area are likely related non-point source emissions (vehicle congestion at key intersections). Rail and intermodal operations result in emissions but likely far less than those associated with vehicle traffic. It does not seem likely that any of the remaining industrial uses within the study area contribute significantly to emissions.

A goal of the proposed Merrick-Memorial Neighborhood Redevelopment Plan is to create economic development opportunities within the study area, potentially including new uses resulting in additional traffic along major travel corridors and truck routes, and potentially increased congestion-related air quality impacts.

To mitigate these potential impacts, the redevelopment plan includes a variety of strategies to reduce air quality impacts within the study area. Truck routes will be formalized and indicated with improved signage. Truck exclusions will be formalized along certain roads. Additional traffic-related improvements are described more fully in Chapter 3 of this document.

#### Wetlands and Wildlife

As an industrialized urban area, the Merrick-Memorial Neighborhood study area is largely free of wetlands and wildlife resources. While it is bounded by the Connecticut River to the northeast and the Westfield River to the south, the area is largely built out at this point and it is unlikely that any significant wetlands resources or wildlife exist in it.

The Merrick-Memorial Neighborhood Redevelopment Plan aims to create economic development opportunities within the study area, potentially resulting in the


development and redevelopment of sites and associated access improvements. As there are no documented wetlands or wildlife resources within the study area, no mitigation is proposed. The potential creation of a new connector road to Route 5 southeast of the study area could have some minor impacts on wetlands in the area, but given the highly disturbed nature of this area, these impacts will likely be minimal.

It should be noted that future development will be required to conform with all applicable federal, state, and local guidelines for stormwater quality, which will result in no significant impacts to water quality in the surrounding rivers.

### Hazardous/Contaminated Risk Sites

Given the long industrial history of the Merrick-Memorial Neighborhood study area, it is assumed that a substantial percentage of its sites may have some hazardous and/or contamination issues. Remediation actions are already planned for certain sites such as the West Springfield Trade Center. It is likely that similar remediation steps will be required for other sites in the study area.

A goal of the Merrick-Memorial Neighborhood Redevelopment Plan is to create economic development opportunities within the study area, potentially resulting in the development and redevelopment of sites and associated access improvements. As part of site planning for these projects, environmental assessments will be conducted. Where reportable concentrations are discovered, remediation plans will need to be developed prior to commencement of construction. This will result in the eventual improvement of overall hazardous/contaminated conditions in the study area, on a site by site basis.



# 6 Land Use Planning and Zoning

### Land Use

This section of the report documents proposed land uses in the Merrick-Memorial Neighborhood and summarizes recommendations for the preservation of desirable existing uses. Preservation and development areas are discussed for each of the study area's primary land uses, including industrial, commercial, and residential, and are depicted on Figure 6-1.

### Industrial

The Merrick-Memorial Neighborhood Redevelopment Plan proposes industrial redevelopment on a number of priority sites, including the West Springfield Trade Center, the Western Avenue/Bliss Street site, and the Southern Industrial District. Redevelopment of the West Springfield Trade Center site is a top priority. This site can accommodate a large one-story distribution center or light manufacturing facility. The Trade Center also provides an excellent opportunity for flex-space development. Such a proposal removes the power plant structure, and the specialty lumber facility, to create space for a new "modern" building, and the high bay area to create a more marketable flex-space park with service access to the rear of buildings and sufficient space for outdoor storage. The strategic deconstruction method employed at the site enables the retention of existing businesses while encouraging the attraction of complementary uses, such as research and development, flex-space, and light manufacturing in new buildings. New throughroad access from Western Street to Day Street will be created, and coordinated parking, landscaping, signage, and lighting will form a new "park" identity for the Trade Center.

Redevelopment of the site at the intersection of Western Avenue and Bliss Street also represents a substantial development opportunity. Currently comprised of a warehouse and vacant land, the Western/Bliss site is ideally suited for warehouse distribution, cold storage, or flex-space uses.



A new truck service road, built in conjunction with the Union Street Bridge reconstruction, will streamline truck access to sites north of the rail yard, including the West Springfield Trade Center, Western/Bliss site, and CSX intermodal facility, while reducing truck traffic on Western and Park Avenues and nearly eliminating truck traffic on Union Street.

The Southern Industrial District represents a long-term opportunity for significant industrial development south of Memorial Avenue at the end of Union Street Extension. The site presently consists of active industrial uses as well as vacant land. Investment in this nearly 30-acre site will generate an ideal location for the development of a manufacturing/distribution operation or mix of uses for a single business, including corporate and administration, research and development, lab space, warehouse and distribution, and maintenance. Additionally, the site will be served by a new access road between Union Street Extension and Route 5, enhancing the Southern Industrial District's marketability.

Chapter 3 contains a more detailed description of the redevelopment options proposed for the Merrick-Memorial area.

### Residential

The Plan recommends that a Neighborhood Preservation Program be implemented within the Merrick and Memorial residential neighborhoods. A streetscape beautification program is proposed within each neighborhood and along major roads such as Park Avenue and Union Street. Pedestrian enhancements such as new sidewalks, street lighting, furniture, and wayfinding will provide continuity and create more resident-friendly environments, thereby bolstering each residential community's sense of identity and pride.

Selective infill and rehabilitation in the Merrick neighborhood will address isolated pockets of blight within the otherwise cohesive residential fabric. Residential infill and rehabilitation will begin to address incompatible land uses in the Memorial neighborhood.

Neighborhood truck exclusions and traffic calming improvements will reduce localized noise and air pollution. Reconstruction of the Union Street Bridge and construction of a new truck service road, with access closer to the bridge than the currently used Day Street, will remove a substantial amount of truck traffic along Union Street headed for the rail yard.

Expansion of current efforts to enforce existing residential code is recommended, with regulations strictly enforced to ensure that negligent property owners are not permitted to degrade the collective neighborhood character.





Figure 6-1

Proposed Preservation and Development Areas

Merrick-Memorial Neighborhood Redevelopment Plan West Springfield, Massachusetts



### Commercial

While the majority of current commercial uses are concentrated along Memorial Avenue and near the Big E, Main and Union Streets have potential as corridors of lively neighborhood commercial activity and would benefit from the establishment of a business retention program. Such a program would seek to revitalize all aspects of these commercial districts, including the rehabilitation of select buildings, attraction of new businesses, streetscape improvements, and strengthened public and private participation and investment.

### Zoning

Zoning in the Merrick-Memorial Neighborhood is generally consistent with existing land use conditions. In fact, it appears that the existing zoning districts may have been carefully developed and drawn around existing uses in order to preserve and enhance this pattern of development, particularly with the commercial districts located throughout the study area. In areas lacking land use cohesiveness, such as the interior of the Memorial neighborhood, most of the incompatible land uses appear to be non-conforming uses that could have been established prior to establishment of the Zoning Bylaw. It should be noted that most land uses in the zoning districts within the Merrick-Memorial Neighborhood require Site Plan Review and approval by the Planning Board.

The proposed land use patterns, and the targeted areas for redevelopment, including the West Springfield Trade Center, opportunities at Western Avenue and Bliss Street, and the Southern Industrial District, are consistent with the existing Industrial (I) District's permitted uses and would require Site Plan Review and approval by the Planning Board. Recommended changes to the Zoning Bylaw do not appear to be necessary to achieve any of the recommendations of the redevelopment plan. In fact, the Town's current approval process for Site Plan Review is fairly streamlined and efficient, especially in comparison to processes in other municipalities. The approval process offers the Planning Board considerable leeway to make decisions regarding future development within the neighborhood. In order to ensure that future development of these sites is consistent with the goals and objectives of this Merrick-Memorial Neighborhood Redevelopment Plan, the Plan should be adopted by the Planning Board as a tool for action and referred to during review of all redevelopment projects within the neighborhood.

The Town's zoning requirements for non-conforming uses allows inconsistent land use patterns for pre-existing non-conforming structures and uses, and further allows expansion or alteration of such structures with approval of a Special Permit by the



applicable Granting Authority. To eliminate or reduce existing and future land use conflicts in the Merrick-Memorial Neighborhood, the Town may want to consider adopting an amortization process and schedule to encourage undesirable uses to relocate to appropriate areas. Such a process could be initiated by the West Springfield Redevelopment Authority under their powers allowed through enabling legislation. As noted above, the Merrick-Memorial Neighborhood Redevelopment Plan should be used to advise the Planning Board and the Redevelopment Authority when making decisions about future development proposals in the Neighborhood.



# **7** Public Improvements and Cost Estimates

### Introduction

This chapter documents recommended improvements to the study area's infrastructure designed to meet the present and future demands of industrial, commercial, and residential users. Infrastructure Area Enhancement recommendations fall into the following three categories:

- □ Transportation Improvements (T)
- □ Rail Yard Improvements (RY)
- □ Neighborhood Preservation (NP)

Infrastructure Area Enhancements

Transportation Improvements

### T-1: Traffic Monitoring

It is recommended that traffic monitoring continue to occur regularly as a means of ensuring the safe and efficient operation of area roadways and intersections. Traffic volumes throughout the study area should be monitored to determine changes in travel patterns as a result of growth; crash history should continue to be monitored at intersections with high crash rates and collision diagrams should be prepared to identify common crash patterns; and signalized intersections in the study area should be checked periodically to ensure that the most effective signal timing and phasing plans are in use.

### T-2: Roadway Signs

New signs should be distributed and older signs replaced throughout the study area. Signs are recommended to designate Park Street, Park Avenue, Western Avenue, and Union Street as truck routes; exclude trucks from traveling along Main Street



between Park Avenue and Bridge Street; warn of low bridge clearances for Union Street and Main Street railroad underpasses; extend a no parking zone in the vicinity of the intersection of Union Street and Day Avenue; and enforce no u-turns at the intersection of Park Street and Van Deene Avenue/Western Avenue.

### T-3: Pavement Markings

Pavement markings throughout the study area, including lane striping, arrows, legends, stop lines, and crosswalks, should be maintained to provide maximum visibility.

### **T-4: Geometric Improvements**

Geometric improvements are recommended at several intersections to accommodate existing traffic, especially trucks, within the study area. These improvements include a new traffic controller, traffic signal arrows, pavement markings, signage, and minor roadway widening at the intersection of Park Street and Western Avenue; the realignment of Sears way to form a "T" intersection with River Street or simply improving pavement markings and signage in the area; and new signal equipment and pavement markings on Memorial Avenue at Union Street/Union Street Extension.

### T-5: Railroad Crossing

The southernmost railroad crossing gate on Second Street, in the vicinity of Front Street, could be too short and should be replaced with a longer gate. Other methods of deterring vehicles from driving around the gate may be considered, including the use of breakaway barriers such as Quik Curb. Note: This location is outside the defined study area.

### T-6: Rotary Improvements

Pavement marking improvements to the Route 5 rotaries are currently being designed by MassHighway in conjunction with the Town of West Springfield.

### T-7: Bridge Improvements

The Union Street Bridge underpass provides only 12-feet of vertical clearance, restricting access to larger vehicles to the area. To improve clearance, the existing bridge abutment should be widened and the roadway lowered. The recommended reconstruction includes replacing the bridge structure to meet a minimum clearance of 14.5 feet (an increase of 2.5 feet) and maintaining traffic and rail operations during construction



The River Street Bridge underpass, like the Union Street Bridge, provides only 12-feet of vertical clearance. The existing roadway should be lowered approximately 2.5 feet to improve clearance.

### T-8: Truck Service/Access Roads

It is recommended that a new truck service road be built adjacent to the rail yard in conjunction with the reconstruction of the Union Street Bridge. The new Union Street Truck Service Road should extend from Day Street to Union Street just north of the Union Street Bridge, thereby streamlining truck access to the intermodal facility, removing truck traffic from Union Street, and alleviating traffic increases resulting from future development in the area.

There is potential to create a new Route 5 Access Road from Union Street Extension. This half-mile access road would be built as part of the development of the Southern Industrial District.

### **Rail Yard Improvements**

### **RY-1: Fencing**

The installation of approximately 12,000 linear feet of new perimeter fencing, and the removal of all existing fencing, is recommended to secure and protect the West Springfield Rail Yard. The chain link fence is a fundamental security element, clearly defining the rail yard boundary line, deterring unauthorized entry to the site, and providing a framework for additional security functions such as intrusion detection equipment and closed circuit television (CCTV).

### **RY-2: Controlled Access**

Cantilevered sliding gates should be provided at regular access points, and at additional specific locations to be agreed with local Emergency Services. Gates which accommodate regular truck traffic, such as Sears Way, Day Street, and Lowell Street, can be kept in an open position during peak traffic times, but should be maintained in a closed position during non-business hours, opened only to allow passage of scheduled vehicles. The use of electronic access control systems is suggested at the rail yard's primary access points.

Installation of a security CCTV system is recommended as a minimum at each gate, with a control center and monitor located on site or monitored remotely by a third party. It is suggested that the system also include cameras in the yard to monitor areas where rail cars are parked for an extended period of time. Alarms (Klaxon siren with strobe light) should be installed at each gate to further mitigate against trespassing.



### **RY-3: Lighting**

The installation of security lighting is recommended to augment the existing light tower and municipal lighting, and, in some cases, replace existing light towers with new high mast lighting. Lighting should focus on perimeter areas, access locations, and areas of the yard where rail cars are parked for an extended period of time. A preliminary recommendation for the provision of 200 new light poles has been made, but a more detailed lighting study should be performed to finalize specific recommendations.

### **RY-4: Standby Power Supply**

The installation of a standby power supply is recommended. In the event of a major outage on the site, the emergency generator guarantees the continuation of sufficient lighting for security measures.

### RY-5: Signs

The installation of 120 new signs, including the replacement of existing signs, is recommended. Warning signs discouraging potential trespassers should be located conspicuously along the perimeter of the rail yard, with particular attention to access points. Given the diverse local community, signs should contain English and a secondary predominant language.

### RY-6: Paving

Approximately 45,500 square yards of land immediately north of the rail tracks should be paved to provide an improved, consistent surface for intermodal operations.

### **Neighborhood Preservation**

### NP-1: Streetscape Improvements

The Neighborhood Preservation Program proposes select improvements to the Merrick and Memorial residential neighborhoods. Pedestrian enhancements, including landscaping, lighting, street furniture, and curbing, are proposed on key roads. Neighborhood truck exclusions and traffic calming are recommended to reduce localized noise and air pollution. Existing codes should be enforced.

### NP-2: Residential Infill/Rehabilitation

Selective infill and rehabilitation are recommended to address isolated areas of blight in the Merrick neighborhood, begin to reconcile incompatible land uses in the Memorial Neighborhood, and otherwise strengthen mix of uses. Appropriate



residential infill and rehabilitation sites should be identified by the Town of West Springfield.

### Improvement Cost Matrix

The Merrick-Memorial Neighborhood Redevelopment Plan Improvement Cost Matrix on the following pages summarizes anticipated improvements and their associated costs. Improvements fall under two main categories—Infrastructure Area Enhancements and Area Development. Infrastructure Area Enhancements consist of transportation improvements (T), rail yard improvements (RY), and neighborhood preservation (NP). Area Redevelopment includes the study area's three key development opportunity sites—the West Springfield Trade Center, the Western Avenue/Bliss Street site, and the Southern Industrial District. For each improvement, the matrix provides an estimated cost, funding source, projected timing (short, medium, or long term), and additional comments, as needed. Where available and applicable, costs are broken down into units and quantities. Otherwise, the estimated improvement costs are provided as lump sums. Note: The quantities and costs provided are based upon preliminary concept planning work done to date. At present, they serve only as a best guess of what might be provided, and should be used for preliminary planning and budgeting purposes only.

Merri	ck-Memorial Neighborhood Redevelopment Plan										
Impro	vement Cost Matrix					1					
#	Improvement			Estimated	Cost			Funding Source	Tim	ing	
									Me		
									S	5	
									po m	guç	
										' <u>-</u>	
									err	ern	
									n (5	i la	
									5 0	; P	
									ĭe ĭe	: <b> </b> ⊀	
			Unit Coot	11	0				ars	ars	
			Unit Cost	Unit	Quantity		ESI. COSI		<u> </u>	. <u> </u>	
	INFRASTRUCTURE AREA ENHANCEMENTS										
	Transportation Improvements										
T-1											
	Roadway volume/classification data	\$	250.00	DAY	24	\$	6 000 00	2004 Transportation Bond Bill	x		
-		¢	200.00		27	¢	4 400 00	2004 Transportation Bond Bill	~	_	
		ф Ф	200.00		22	φ	4,400.00	2004 Transportation Bond Bill	^ 		
		¢	500.00		11	\$	5,500.00	2004 Transportation Bond Bill	X		
	I rattic signal modifications	\$	5,000.00	INT	9	\$	45,000.00	2004 Transportation Bond Bill	X		
	Baldwin Street (traffic monitoring and calming)	\$	30,000.00	LS	1	\$	30,000.00	2004 Transportation Bond Bill	X		
	Park Ave./Park St. at Elm St./Union St. (signal monitoring and truck access)	\$	5,000.00	LS	1	\$	5,000.00	2004 Transportation Bond Bill	x		
						\$	95,900.00				
T-2	Signs <sup>2</sup>										
	No Trucks (MUTCD sign R5-2)	\$	150.00	EA	10	\$	1,500.00	2004 Transportation Bond Bill	х		
	Truck Route (MUTCD sign R14-1)	\$	150.00	EA	10	\$	1,500.00	2004 Transportation Bond Bill	х		
	Warning Low Clearance (MUTCD sign W12-2)	\$	300.00	EA	20	\$	6,000.00	2004 Transportation Bond Bill	x		
	No Parking (MUTCD sign R8-3)	\$	150.00	EA	10	\$	1.500.00	2004 Transportation Bond Bill	x		
	No U-Turn (MUTCD sign R3-4)	\$	150.00	FA	1	\$	150.00	2004 Transportation Bond Bill	x		
		Ť.	100100	273		¢	10 650 00		-		
-						Ψ	10,030.00			_	
т_2	Payamant markings <sup>3</sup>										
1-3	Thermonlastic 4-inch lane strining (2 edge lines and a double vellow center)	¢	2.00	IE	26.400	¢	52 800 00	2004 Transportation Bond Bill	v		
	Arreue Jacondo aton lines and areasuurilys	Ψ	5.00	LI 05	20,400	ψ	32,000.00	2004 Transportation Bond Bill	^		
		3	5.00	35	10,500	Φ	82,500.00		×		
	Main Street at Bresnahan Street (pavement markings and parking signage)	\$	15,000.00	LS	1	\$	15,000.00	2004 Transportation Bond Bill	x		
						\$	150,300.00				
T-4	Geometric, circulation, and other improvements										
	Park Street at Western Avenue (geometric improvements)	\$	40,000.00	LS	1	\$	40,000.00	2004 Transportation Bond Bill	X		
	River Street/Baldwin Street/Sears Way (circulation improvements) Markings only	\$	5,000.00	LS	1	\$	5,000.00	2004 Transportation Bond Bill	x		
	River Street/Baldwin Street/Sears Way (circulation improvements) Realignment	\$	110,000.00	LS	1	\$	110,000.00	2004 Transportation Bond Bill	x		
	Memorial Ave. at Union St./Union St. Ext. (lane geometry and signal timing)	\$	30,000.00	LS	1	\$	30,000.00	2004 Transportation Bond Bill	x		
						\$	185,000.00				
T-5	At grade railroad crossing improvements	\$	5,000.00	EA	1	\$	5,000.00	2004 Transportation Bond Bill	x		
						1					
T-6	Rotary improvements (pavement markings only)					1					
	Memorial Bridge (Route 147)	\$	15,000.00	EA	1	\$	15,000.00	MassHighway	x		Pavement marking improvements currently under design
	North End Bridge (Route 20)	\$	10,000.00	EA	1	\$	10,000.00	MassHighway	x		Pavement marking improvements currently under design
		1	, × <del>-</del>			\$	25.000.00		+		
T-7	Bridge improvements					1 T	.,				
	Union Street Bridge reconstruction	\$	10,000,000.00	LS	1	\$	10,000,000.00	2004 Transportation Bond Bill	×	(	Bridge to be reconstructed in conjunction with construct
	River Street Bridge clearance	\$	10,000.000.00	LS	1	\$	10,000.000.00	2004 Transportation Bond Bill	×	c	Assumes a total replacement of the bridge structure sir
		HŤ.	.,,			\$	20.000 000 00	Den and Para Para Para Para			
		+				Ψ	20,000,000.00			-	
Т-8	Truck service/access roads					-					
	1140/100/40000010440					1					Road to be built in conjunction with Union Street Bridge
						1					signs; also includes cost of turn lanes (assumes right to
	New Truck Service Road	\$	650,000.00	LS	1	\$	650,000.00	2004 Transportation Bond Bill	×	c	half of truck service roadway; excludes land acquisition
	New Route 5 Access Road from Union Street Extension	\$	1,500,000.00	LS	1	\$	1,500.000.00	2004 Transportation Bond Bill		x	
			,,	-		\$	2,150.000.00				
	1	11		1	L	•	_,,				

### Table 7-1 Improvement Cost Matrix

	12/01/04
Prepared	by VHB, Inc.

Comments
gn by MassHighway and Town of West Springfield.
gn by MassHighway and Town of West Springfield.
tion of Union Street truck service road.
nilar to Union Street Bridge.
a reconstruction; includes pavement, drainage, markings, and
irn lane to extend onto Day Street) into new rail yard access for cost.

	Rail Yard Improvements <sup>4</sup>											
τΥ-1	Fencing	\$	20.67	LF	12,000	\$	248,000.00	2004 Transportation Bond Bill	x		+	Includes provision of new fencing and removal and disp
RY-2	Controlled access										+	
	Gates	\$	17,100.00	EA	10	\$	171,000.00	2004 Transportation Bond Bill	x			Includes provision of new sliding gates and gate operat
	Access control systems	\$	36,750.00	EA	4	\$	147,000.00	2004 Transportation Bond Bill	x			Includes provision of keypads, intercoms, control board
	CCTV systems	\$	40,700.00	EA	10	\$	407,000.00	2004 Transportation Bond Bill	x			Includes provision of cameras, control equipment, cond
	Alarms (Klaxon siren with strobe light)	\$	1,265.00	EA	10	\$	12,650.00	2004 Transportation Bond Bill	x			
						\$	737,650.00					
V_2	Lighting	¢	14 500 00	Polo	200	¢	2 000 000 00	2004 Transportation Road Bill				Includes provision of light poles, fixtures, pole foundation
1-3		φ	14,500.00	Fule	200	φ	2,900,000.00		<b>^</b>			
												Includes provision of emergency generator, transfer sw
RY-4	Standby power supply	\$	85,000.00	EA	1	\$	85,000.00	2004 Transportation Bond Bill	x			fiberglass enclosure; excludes installation cost of batter
			05.00		400							
RY-5	Signs	\$	25.00	EA	120	\$	3,000.00	2004 Transportation Bond Bill	X			Includes provision of perimeter warning signs and warn
<u> </u>	Paving	¢	20.00	<b>S</b> V	45 500	¢	910 000 00	2004 Transportation Bond Bill				Includes provision of five inches of payement and eight
1-0		ψ	20.00	51	43,300	Ψ	310,000.00					includes provision of five inclues of pavement and eight
	Neighborhood Preservation									-		
NF-1	Succescape improvements (nees, lighting, curbing)	¢	60.00	15	4000	¢	276 000 00	State Grants <sup>5</sup>		-	+	
	Main Street	\$	60.00		4600	\$	276,000.00		X	_		
	Derk Avenue	\$	60.00		4500	\$	270,000.00	State Grants	X			
	Park Avenue Momorial Avenue/Diver Street	\$	60.00		2200	¢	750,000,00	State Grants	X	_		
		φ	60.00	LF	12,500	Ф С	1 428 000 00		×	_		
						Ψ	1,420,000.00					
NP-2	Residential infill/rebabilitation		N/A	N/A	N/A		N/A	Private sector	×	x		Sites to be identified by Town of West Springfield
										-		
	AREA REDEVELOPMENT											
	1. West Springfield Trade Center								X			True of Mont On the final and and the burning of
	Land Acquisition					\$	2,398,250.00	Town-Initiated Incentives				Town of West Springfield assessed value only
	Infrastructure					\$	470,000.00	Town-initiated incentives				Estimated cost per West Springfield Trade Center - Alt.
	Demolition and Relocation					\$	712,400.00	I own-initiated incentives				Estimated cost per West Springfield Trade Center - Alt.
												Estimated cost per West Springfield Trade Center - Alt
						\$	8.300.640.00					Springfield on 5/25/04; includes environmental remedia
							-,					
	2. Western Avenue/ Bliss Street Parcels									x		
	Land Acquisition		N/A	AC	10.84	\$	1,410,000.00	Private sector incentives '				Town of West Springfield assessed value only
	Infrastructure					\$	1,000,000.00	Private sector incentives				Preliminary estimate of infrastructure costs
												Preliminary cost estimate based on approximate buildin
	Demolition and Relocation					¢	221 750 00	Private costor incontives				Deconstruction prepared by VHB on 5/25/04
						Ф Ф	2 721 750.00	Private sector incentives				
						Þ	2,731,750.00					
	3. Southern Industrial District										x	
	Land Acquisition		N/A	AC	33.11	\$	5,420,900.00	Private sector incentives				Town of West Springfield assessed value only
	Infrastructure					\$	2,100,000.00	Private sector incentives				Preliminary estimate of infrastructure costs
									1			Preliminary cost estimate based on approximate buildin
	Demolition and Delecation						0.000.004.00	Drivete egeter in continue				average estimated cost/st to demolish Trade Center pe
	Demolition and Relocation					\$	2,868,934.00	Private sector incentives				Deconstruction prepared by VHB of 5/25/04
						\$	10,389,834.00					
						-				-	-	
	Notes:								$\parallel$		-	
	1 Cost estimates for monitoring are based on private vendor data collection. However, the PV	PC has	a traffic prograr	m that collects tra	affic data at	t the r	request of local co	ommunities.				
	2 All sign costs are estimated based on MUTCD size recommendations and MassHighway ave	erage bi	d prices for mat	terials only and c	does not inc	lude i	installation.					
	13 Lane stripe quantity based on 5-miles of a two-lane roadway being restriped. Arrows, legend	ls, etc ba	ased on an estir	mated average o	of 1,500SF p	per st	tudy area intersec	tion.		-	-	
	14 Kall yard improvement cost estimates provided by Hatch Mott MacDonald, Inc. 5 Potential State grants that could be used to pay for elements of the Neighborhood Procession	ion Proc	iram include Die	strict Improveme	nt Financin	a Fur	nds Community P	 )evelopment Funds, Community F		0000	ent /	 Action Grants, Public Works Economic Development Fund
	6 Town of West Springfield initiated incentives are expected to include environmental clean-up	), selecte	ed demolition s	ite improvement	ts, access in	mprov	/ements. marketin	a programs, and business retention	on ef	forts		
	7 Einancial incentives available to Commonwealth communities include the Municipal Tax Aba	tement	Program, Brown	nfields Tax Cred	lit Program	and t	the Economic Dev	velopment Incentive Program (FD	IP).			1

### Table 7-1 Improvement Cost Matrix

osal of 2,500 lf of existing fencing; excludes labor costs
ors , wiring, and conduit; excludes cost of conduit installation uctor THHN 312 AWG, and control and video composite cable
ns, conduit, and #8 cable; excludes installation cost of poles and
itch unit, battery pack, slab on grade foundation, and lockable y pack, foundation, and fiberglass enclosure
ing signs in second language
inches of gravel; excludes excavation costs
2 - Selective Deconstruction prepared by VHB on 5/25/04
2 - Selective Deconstruction prepared by VHB on 5/25/04
2 - Selective Deconstruction prepared by VHB for Town of West tion, site preparation, and building construction costs.
g area to be demolished. Demolition cost/sf adapted from r West Springfield Trade Center - Alt. 2 - Selective
g area to be demolished. Demolition cost/sf adapted from r West Springfield Trade Center - Alt. 2 - Selective
Is, and the Mass ReLeaf Community Tree Planting Funds.



## **Implementation Strategy**

### Introduction

This section distills the recommendations of the Merrick-Memorial Neighborhood Redevelopment Plan into an implementation strategy including short, medium, and long term action items, potential funding sources, and marketing and disposition strategies. The Implementation Strategy was produced by Basile Bauman Prost Associates and VHB, Inc.

Phasing and Prioritization

Merrick-Memorial		Phas	ing (in y	(ears)	
Redevelopment	0	5	10	15	20
Infrastructure Enhancements			(	ongoing	
West Springfield Trade Center					
Western Venue / Bliss Street					
Southern Industrial Area					

Given the assumptions of the three Merrick-Memorial Neighborhood redevelopment plans, it is possible to implement them consecutively in response to market demand.

Implementation of the No Intervention/Infrastructure Enhancements plan (0 – 5 years) should be the first priority of the Merrick-Memorial Neighborhood Redevelopment Plan. To meet the immediate needs of area residents and in preparation for a projected increase in economic activity, elements of the neighborhood preservation program including access enhancements, buffering of incompatible uses, reconciliation of land uses, code enforcement, and street beautification should be initiated early and maintained. Additional ongoing activities should include business retention efforts, selective infill, building rehabilitation, and



streetscape and pedestrian enhancements. In addition to enhancing access, safety, and residential quality of life, the publicly funded investments including CSX Rail Yard improvements, access improvements, and neighborhood preservation can be expected to help leverage private investment in the future.

Concurrent with No Intervention/Infrastructure Enhancements or shortly thereafter, the initiation of the Focus: Flex-Space/Industrial Mix plan can be expected to begin with the reuse of the West Springfield Trade Center in the short to medium term (0 – 10 years). As a pilot of the U.S. Environmental Protection Agency's (EPA) Brownfields Economic Redevelopment Initiative, the Trade Center has been targeted by the Town of West Springfield for reuse through brownfields assessment and cleanup, land-use and traffic changes, and economic development strategies. With modest levels of public intervention, market findings suggest that the site has significant potential for private flex-space and/or research and development (R&D) reuse. Since there is little support for a warehouse distribution facility at the site, the Trade Center is not expected to be developed according to the Industrial Redevelopment Plan and will not directly engage the CSX Rail Yard.

In the medium to long term planning periods (5 – 10 years), the Western/Bliss site should be targeted for redevelopment. Assuming the Trade Center is reused as flex / R&D space, the Western/Bliss site should be in better position to take advantage of and interface with the implementation of the No Intervention/Infrastructure Enhancements Plan. Better access, signage, and rationalized truck routes should allow the site to be redeveloped as an enhanced warehouse distribution center. Potential services include on-site refrigeration, third-party logistics, and/or other value-added operations.

Development of the Southern Industrial District should be considered a longer-term prospect (10+ years). Large-scale build-to-suit users can be expected to locate at existing or green field sites in the Western Massachusetts region. Without a significant level of public intervention, the area is not financially feasible as a private sector endeavor. As the market evolves and the Infrastructure Enhancements Plan is fully implemented, the potential for significant redevelopment will increase at the site. Until then, the public sector should actively begin to set the stage for industrial activity by completing access improvements.

### Funding Sources

In addition to investing in strategic infrastructure enhancements, the public sector should consider designing an incentives package for the Merrick-Memorial Neighborhood's opportunity sites. Potential users and the development community in general are much more likely to be attracted to the sites if the public sector is willing to share risk and display its commitment to the area. Sources of funding and development incentives are listed below:



### 2004 Transportation Bond Bill

A significant portion of potential funding for the Merrick-Memorial Neighborhood Redevelopment is expected to come from outside sources. There is growing federal and state support for the growth and maintenance of the nation's intermodal transportation network and infrastructure.

When Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and its successor the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) in 1998, it recognized the inherent values gained from an intermodal transportation system that can leverage the unique characteristics and advantages of each mode. With ISTEA, Congress stated:

It is the policy of the United States to develop a National Intermodal Transportation System that is economically efficient and environmentally sound, provides the foundation for the Nation to compete in the global economy, and will move people and goods in an energy efficient manner.

Massachusetts Governor Mitt Romney's "Fix it First" transportation policy unveiled early in 2003 supports the federal emphasis on efficiency. In short, the Commonwealth will give priority to the repair of existing roads and bridges before undertaking the construction of new ones. Thus, the future expansion of capacity in the transportation sector to meet economic growth needs will most likely result from the better use of existing transportation assets (e.g. the CSX Rail Yard), with greater emphasis on intermodal connections that maximize the particular advantages of each transportation mode.

In line with this policy, Governor Romney filed a \$1.2 billion Transportation Bond Bill in February of 2004. This legislation would make substantial changes to the Commonwealth's transportation agencies and operations, as well as authorize funding for a number of initiatives and programs. Submitted to the Legislature as House Bill 4507, the Transportation Bond Bill, entitled *An Act Modernizing the Transportation System of the Commonwealth,* was approved on August 10, 2004 as Chapter 291 of the Acts of 2004. Highlights of the Bond Bill include:

- Expanding the state's present commitment to spend \$400 million a year through 2005 to \$450 million a year from 2006 to 2012 on road and bridge projects other than the Central Artery Project, during the years for which the Central Artery Project is receiving federal reimbursements;
- □ Funding for the following:
  - > \$400 million to the Statewide Road & Bridge Program
  - \$450 million to the 'Chapter 90' local road assistance program to municipalities for the construction and reconstruction of town and county ways;
  - \$582 million (approx.) to non-federally funded assisted roadway projects;



- \$30 million to a Transit Oriented Development (TOD) program promoting residential and commercial development by commuter rail stations;
- \$59 million to the Executive Office of Transportation and Construction (or EOTC) for rail improvements and the protection of freight rail properties;
- \$27.4 million to EOTC for the planning, engineering, design, and construction of regional intermodal transportation centers;
- \$25 million to EOTC for Regional Transit Authorities' capital needs, including rolling stock, Intelligent Transportation Systems, facilities, and appurtenances;
- \$25 million to EOTC for the design and construction of roads and other transportation-related projects deemed necessary for economic development;
- \$7.5 million to the MA Highway Department for purchases of necessary durable equipment, including highway maintenance fleet equipment;
- **\$8 million** to EOTC for implementing the Mobility Assistance Program;
- \$3 million to the MA Highway Department for Intelligent Transportation Systems;
- \$3.6 million to the State Road Assistance Program (or STRAP) to assist communities of 3,500 residents or less; and
- \$3 million to the MA Highway Department for safety and security equipment such as barriers, cameras, and fencing.

Because of its relationship to the CSX Rail Yard, a significant portion of the No Intervention/Infrastructure Enhancements Plan should be eligible for a share of the \$59 million for rail improvements and the protection of freight rail properties. Most notably, proposed rail and access improvements including the Union Street Bridge reconstruction and the new Route 5 access road should qualify for the earmarked funds. Enhancing rail capacity at the West Springfield CSX Rail Yard will decrease truck traffic in the Commonwealth, thereby protecting investments in roads and bridges as well as reducing congestion and vehicle emissions.

In addition to supporting municipalities seeking to improve rail freight facilities in their communities, the authorization also proposes to help assist private freight carriers such as CSX increase their freight capacity by joining with them financially (e.g. partial investments in wholesale trade and/or flex-space) on important economic development projects. The Pioneer Valley Planning Commission and the Town of West Springfield should sustain a dialogue with CSX to help leverage these joint development opportunities with the Commonwealth.

### District Improvement Financing (DIF)

Beginning in the fall of 2004, cities and towns in Massachusetts will have access to a new development tool designed to help them revitalize blighted districts and finance infrastructure improvements. Nationally known as Tax Increment Financing (TIF),



the Commonwealth's newly instituted District Improvement Financing (DIF) mechanism will permit a local jurisdiction to borrow funds for infrastructure improvements (e.g. master planning, parking facilities, streetscape improvements) linked to the revitalization of a predefined district. The bonds are financed by the future real estate tax increases or increments for the designated district.

### Town of West Springfield

At the West Springfield Trade Center site, Town-initiated incentives are expected to include environmental clean-up, selected demolition, site improvements, access improvements, marketing programs, and business retention efforts.

### Statewide Private Sector Incentives

Financial incentives available to Commonwealth communities include the Municipal Tax Abatement Program, Brownfields Tax Credit Program, and the Economic Development Incentive Program.

### Municipal Tax Abatement Program

The Municipal Tax Abatement Program allows municipalities such as West Springfield to negotiate back taxes, including interest, with developers undertaking brownfields projects. A municipality must adopt a by-law before negotiating agreements with developers.

### Brownfields Tax Credit Program

The Brownfields Tax Credit Program provides a tax credit of up to 50% after a cleanup is completed, and 25% for a cleanup that uses an Activity and Use Limitation (AUL). The party and the project must be located in an EDA.

## Economic Development Incentive Program (EDIP)

The Economic Development Incentive Program (EDIP), administered by the Massachusetts Office of Business Development (MOBD), offers tax and other incentives to attract new businesses in targeted areas. The program aims to stimulate economic growth by offering incentives to businesses that expand, relocate, or build new facilities. The following benefits are available under this program:

- □ 5% Investment Tax Credit
- □ 10% Abandoned Building Tax Deduction
- Local real estate tax incentives such as Tax Increment Financing (TIF) or Special Tax Assessment (STA).



Both the Brownfields Tax Credit Program and EDIP require that sites be located in one of the Commonwealth's 40 designated Economic Target Areas (ETAs) to be eligible for their incentives. The Town of West Springfield is not currently part of an ETA. According to MOBD, it could become eligible for these incentives by joining the Springfield ETA. An agency representative recommended West Springfield should consider opening negotiations with the City of Springfield in order to become part of the ETA.

### Additional Federal and State Brownfield Redevelopment Programs

### Brownfield Economic Development Initiative (BEDI)

- □ A HUD grant designed to assist cities with the redevelopment of abandoned, idled and underused industrial and commercial facilities where expansion and redevelopment is burdened by real or potential environmental contamination.
- Primarily targeted for use of sites in economic development projects and the increase of economic opportunities for low- and moderate-income persons or as part of the creation/retention of businesses, jobs and increases in the local tax base.
- □ Not intended for use solely for site acquisition and/or remediation, where there is no immediately planned redevelopment.
- □ Must be used in conjunction with a new Section 108-guaranteed loan commitment.
- □ There is a cap of \$2,000,000 per BEDI award.

## Brownfields Redevelopment Fund (BRF)

- MassDevelopment provides loans for site assessment and cleanup to public and private sector parties.
- □ Site assessment funding up to \$50,000; remediation funding up to \$500,000. Funding for up to \$2,000,000 if the project is designated as a "Priority Project."
- □ Project must be located in an Economic Development Area.

### US Environmental Protection Agency (EPA) Funding

- □ Offers funding to public entities for assessing and cleaning up brownfield sites; administered by the New England Regional Office of the EPA.
- □ Targeted Site Assessment Grant provides up to \$50,000 for site assessments on abandoned or town-owned sites.
- Brownfields Assessment Demonstration Pilot Program provides up to \$200,000 for site assessment.



- Brownfields Cleanup Revolving Loan Fund Program provides up to \$1,000,000 for clean up.
- □ Brownfields Cleanup Grant Program provides up to \$200,000 for cleanup.

### Brownfield Redevelopment Access to Capital (BRAC)

- □ Backs private sector loans with state subsidized volume discounted environmental insurance.
- □ Protects the lender in the case of defaults on the loan by the borrower.
- □ Protects the borrower against unanticipated costs that arise during cleanup.
- □ State will subsidize the premium on insurance up to 25%.
- □ Administered by MassBusiness and Massachusetts DED.

### **Economic Development and Housing**

### MassDevelopment

- Provides financial and technical assistance for real estate and business projects that generate economic benefits for local communities and the state as a whole.
- Development services to cities and town bring complex real estate development projects to fruition, and advance projects that support job creation and community development. Services include project management, contract negotiation, site planning and environmental assessment oversight, market feasibility, marketing services, site assemblage management, and permitting/approvals process management.
- Loans and guarantees include financial and technical assistance, including real estate loans, equipment loans, export financing, Brownfields Redevelopment Fund, Emerging Technology Fund, term working capital, and turnaround management assistance.
- □ Predevelopment assistance for early stage economic development projects, with funding ranging from \$5,000 to \$25,000, with matching funds from applicants.

### Massachusetts Community Capital Fund (MCCF)

- Offers businesses, located within eligible municipalities, flexible debt financing; targets businesses which create/retain jobs for low- and moderate-income residents.
- Municipality applies to DHCD for MCCF grants on behalf of a local business; loans may be used for the purchase of equipment, acquisition of real estate, new construction and rehabilitation, working capital and refinancing projects.
- □ Loans range from a minimum of \$100,000 to a maximum of \$500,000; MCCF can fund a maximum of one-third of the total project cost.

### **Ready Resource Fund**

- □ A component of CDBG that provides funding for projects that create/retain jobs, improve the local/regional tax base, or otherwise enhance the quality of life in a community; supports a wide range of economic development activities.
- □ Can be used to help small businesses and micro-enterprises to implement programs that promote growth, assist an array of public facilities, infrastructure and public facility projects in support of economic development.
- Grant amounts range from \$400,000 to \$500,000; planning grants are a maximum of \$50,000.
- □ Application forms are submitted by the municipality to DHCD.

### Priority Development Fund (PDF)

- MassHousing will make available \$3 million in planning assistance through the Priority Development Fund (PDF) to communities seeking to increase housing production, especially mixed-income rental housing.
- □ The Department of Housing and Community Development ("DHCD") will administer these funds on behalf of MassHousing. Funds will be allocated on a first-come, first-served basis and may be substantially committed within twelve to eighteen months from June 2004.
- Priority will be given to applications that address or encourage new housing production within city or town centers, on brownfields or underutilized commercial or institutional land, or as part of a transit-oriented development opportunity. Priority will also be given to the adaptive re-use of existing structures not currently used for housing purposes.
- □ All applications must be consistent with the Commonwealth's principles of sustainable development.

## Community Development Fund (CDF)

- □ Two levels based on local need indicators; must meet criteria of benefit to lowand moderate-income individuals, remove slum and blight, or address critical community need.
- Grants can be used to undertake a wide range of projects or activities, based upon a comprehensive and creative approach to local community development needs.
- □ Minimum grant sized is \$100,000, maximum is \$700,000; may be \$750,000 for one infrastructure project.
- □ Applications may be accepted by DHCD from an individual community or as part of a regional application.



### Community Development Action Grant (CDAG)

- Provides public infrastructure support in those instances where private investment would not occur with out assistance; goal is to stimulate economic development activities that will attract and leverage private investment, create/retain long-term employment and revitalize distressed areas.
- CDAG can be used for projects that involve the installation, improvement, construction, alteration, enlargement, repair/rehabilitation, remodeling and/or reconstruction of publicly-owned or managed properties. Other projects include the building, repair/rehabilitation of facades, streets, roads, sidewalks, utilities, demolition, and relocation assistance.
- □ The community must be housing certified under EO418 to be eligible.
- □ Project must undergo a preliminary Project Analysis by DHCD for the community to be invited to submit an application. The Analysis must prove that the project is located in a decadent, substandard and blighted area; it is of significant public interest and benefit to private entities is indirect; it will have a significant economic benefit for the city/town; government subsidy and private enterprise would not be able to make the project available for redevelopment; the grant is the minimum amount necessary to get the project off the ground; and, firm commitments of other resources (public and private) render the project financially sound.
- Grant amounts of up to \$1,000,000 per municipality.

### **Public Works Economic** Development (PWED)

- □ Funds the design and construction of roads and other transportation related projects deemed necessary for economic development.
- Projects should retain, establish or revitalize industrial or commercial facilities, create/retain long-term employment opportunities, have a positive impact on local tax base, leverage a high ration of private investment, and strengthen the partnership between public and private sectors.
- □ Must include a municipal plan or strategy which seeks to attain a positive economic influence on a specific area through public and private incentives.
- □ Requested amount may not exceed \$1,000,000 unless the project demonstrates significant regional benefits, as determined by the Secretary of Transportation.
- Must include documentation of past, current and proposed private sector investments within the area affected by the proposed project.

### Urban Revitalization Development Grant (URDG)

Available to municipalities to fund implementation of Urban Renewal Plans approved by DHCD.



- □ The Urban Renewal Program provides tools for communities to redevelop deteriorated and blighted areas designated as urban renewal areas for residential, recreational, educational, business, commercial or industrial purposes. The Urban Renewal Plan must be approved by DHCD, based upon a project area meeting specific criteria, including a lack of private reinvestment without public subsidy, the project will enhance/promote private reinvestment, the financing is sound, and the area is substandard or blighted.
- Eligible costs include land acquisition, relocation, site preparation, environmental cleanup, public improvements, administration, consultants, debt service and contingency fees.
- Municipalities must demonstrate that all of the funds necessary to implement the Urban Renewal Plan are available, either through appropriation, bonding or certification of the availability of other funds (or some combination equal to 100% of the net project costs). The Commonwealth will then reimburse the community in 20 equal annual payments of up to 50% of the net project costs.

### **Miscellaneous Programs**

### Massachusetts Preservation Project Fund

- □ A state-funded 50% reimbursable matching grant program for preservation of properties, landscapes and sites listed in the State Register of Historic Places.
- □ Applicants must be a municipality or non-profit organization.
- Pre-development projects include requests to conduct studies necessary to enable future development, such as feasibility studies involving the preparation of plans and specifications, structures reports, and certain archaeological investigations.
- Development projects include requests for construction activities including stabilization, protection, rehabilitation and restoration. Grants can be used to cover costs of material and labor to ensure the preservation, safety and accessibility of historic cultural resources.
- □ Acquisition projects involve requests to acquire State Register-listed properties that are imminently threatened with inappropriate alteration or destruction.
- □ Predevelopment grants can range from \$5,000 to \$30,000; development or acquisition projects may range from \$7,500 to \$100,000.

## Mass ReLeaf Community Tree Planting

- A fund within the Conservation Trust of the DCR designed to foster partnerships between business, government and non-profit groups for the planting and care of public trees.
- Provides matching grants to communities to purchase trees for public planting projects that enhance community quality of life; improve urban ecosystems and enhance air and water quality, brownfield sites, and community parks; promote



sustainable urban forests; and, strengthen community involvement and partnerships.

- Special consideration is given to projects which enhance roadways, gateways and other transportation corridors, and that improve air quality and contribute to carbon offset.
- A matching grant program, with grants only covering the costs of trees, with a maximum of \$200 per tree. The standard category is for projects up to \$5,000; projects can range up to \$25,000 for urban communities with lower income neighborhoods, communities of diverse populations, communities that have a prevalence of industrial sites and brownfields, and communities that lack adequate green space.

### National Trust for Historic Preservation Community Partners

- Assists preservation organizations, local governments and community development corporations in revitalizing historic properties, central business districts and urban neighborhoods.
- National Trust Loan Funds are loans and lines of credit to preservation projects that stimulate revitalization in older residential and/or commercial areas.
- Inner-City Ventures Fund offers loans to non-profit organizations and public agencies to support historic preservation projects that stimulate economic development in low- and moderate-income neighborhoods.
- □ National Preservation Loan Fund offers loans to assist with the acquisition and/or rehabilitation of a broad array of historic resources.
- Bank of America Historic Tax Credit Fund invests in projects eligible for the federal and state historic rehabilitation tax credit. It is also able to offer new markets tax credit enhancement on qualifying projects. The Fund targets historic tax credit projects that qualify for \$750,000 to \$5,000,000 in historic tax credit equity.
- New Markets Tax Credit Initiative brings a new source of capital to qualifying businesses in low-income communities. The initiative is focused on combining allocations of the National Trust Community Investment Corporation with the New Market Tax Credit on qualifying investments projects to bring enhancements to small businesses within designated Main Street areas.

### Marketing and Disposition Strategies

Underutilization of the Merrick-Memorial Neighborhood's opportunity areas indicates that they should be the targets of an aggressive marketing campaign. Awareness of opportunity area investments and assets should be significantly expanded within the development community and among commercial brokers as redevelopment plans unfold. In particular, the Infrastructure Enhancements plan should be strategically phased and publicized to attract and facilitate private sector



investment chronologically at the Trade Center, Western Avenue / Bliss Street, and the Southern Industrial Area opportunity areas.

Public and private entities are increasingly using advanced communication techniques to market redevelopment opportunities. By so doing, public and private property owners are extending the reach and enhancing the visibility of their marketing campaigns. Perhaps most importantly, they are creating sources of "onestop shopping" for these sites. That is, rather than having to contact multiple state and local agencies, investors can access a singular website to collect basic information.

The Merrick-Memorial Neighborhood has a number of existing and future redevelopment opportunities. None of these opportunities, however, are readily described or made accessible on the Internet. Whether the Commonwealth of Massachusetts, the Western Massachusetts Economic Development Council, PVPC, or the Town of West Springfield itself spearheads a more user-friendly redevelopment database, the marketing of opportunity areas in a web-based environment could greatly enhance their levels of exposure and attractiveness.

A worldwide nonprofit consulting firm, RTI International, for example, devised an online source for listing or locating properties for redevelopment, <u>www.smartsites.org</u>. Smart Sites helps businesses and developers find properties that meet their needs while supporting smart growth and the sustainable development of U.S. communities. For those interested in smart growth, redevelopment, and sustainability, the innovative website possesses many advantages over conventional property locating tools. In particular, Smart Sites:

- □ Analyzes and highlights the smart growth potential of each site
- □ Provides information about the environmental status of each site
- □ Provides information about redevelopment incentives available for each site
- Provides a forum for economic development professionals, realtors, and other property sellers to market their idle or underutilized properties
- Provides a searchable database of these properties for developers and other potential buyers
- Encourages smart growth and sustainability of communities by promoting the reuse of previously developed sites

In Connecticut, the State has partnered with ten of the state's utility and telecommunications companies to develop and fund a nonprofit corporation called CERC. CERC specializes in economic development and marketing for local, regional, state, and utility economic development entities. CERC has developed a web-based tool called SiteFinder (www.CERC.com) which provides extensive information on commercial and industrial development sites throughout the state.

CERC SiteFinder is the most comprehensive web-based, searchable database of available commercial and industrial properties in Connecticut. With more than 2,500 listings encompassing over 13,000 acres and 115,000,000 square feet of space, the



SiteFinder contains profiles of each site and facility, including location, lease and sale information, highway access, and other data. SiteFinder is connected online to nearly 120 commercial brokerage firms, representing hundreds of brokers in the state. In addition to the SiteFinder, CERC also offers a variety of research services designed to meet the needs of economic development organizations, nonprofit organizations, and businesses.

In working with CSX to identify opportunities for future growth of the West Springfield Rail Yard, PVPC used the CERC SiteFinder to locate commercially and industrially zoned land and buildings with rail access. PVPC also worked with the Western Massachusetts EDC to identify locations in Massachusetts.