DEVENS Reuse Plan

Prepared for

The Boards of Selectmen

- Town of Ayer
- Town of Harvard
- Town of Lancaster
- Shirley

The Massachusetts Government Land Bank

Prepared by

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INTRODUCTION

The Reuse Plan is a "blue print" for the conversion of the Fort Devens Military Reservation to civilian uses over the next 20 -40 years. It is a plan that reflects the varied interests of the host communities, the region, and state government, based on the principle that economic development and environmental protection are common interests. The Reuse Plan provides a bold vision for the future founded on the unique attributes of the Devens property and a confidence in the talents and work ethic of the people of this region. While Devens benefits from significant advantages, the constraints which challenge its successful development must also be considered. These include: the realities of the 1990's economy, both locally and globally; the need for extensive investment in infrastructure; significant environmental factors; a variety of administrative, regulatory and fiscal demands; and other market, site and operational constraints.



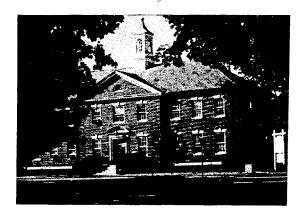
In January 1994, the Massachusetts General Court passed comprehensive and far reaching legislation, Chapter 498 of the Acts of 1993, (the "Act"), which established the legal parameters for the future governance of the Main and North Posts of Fort Devens over the next 40 years. This act created the Devens Regional Enterprise Zone ("Devens") and established a new public agency, the Devens Enterprise Commission, as the agency responsible for reviewing and approving all future uses. It also designates the Massachusetts Government Land Bank ("Land Bank") to be the exclusive public agency responsible for acquisition, control, maintenance, and redevelopment of Devens. The Act provides for \$200 million in bonding capacity to fund the redevelopment effort, which is geared to the creation of jobs and the protection of the towns from fiscal impacts that might occur if responsibility for the maintenance and redevelopment of Devens were returned immediately to the towns.

In order for the Devens Legislation to become effective and the \$200 million in bonding capacity to become available, the towns of Ayer, Harvard, and Shirley must approve this Reuse Plan and related Bylaws (the "Bylaws") by majority vote at special town meetings, referred to as the "Super Town Meeting" to be held simultaneously in each of these three towns no later than December 31, 1994. This report documents the Devens Reuse Plan (the "Reuse Plan") and the public process involved in its creation.

Under the Reuse Plan:

- ➤ Jobs in both the public and private sectors will be created to replace the 7,000 - 8,000 jobs lost directly as a result of the closure of Fort Devens.
- ➤ The potential worst case scenario the entire base with all its abandoned buildings and land becoming the fiscal burdens of the three towns will be avoided by the creation of the regional funding and management entity with state support.
- ➤ The strong transportation infrastructure (rail and regional highway), which served the military so well, will be used to attract immediate jobs in rail and trade-related industries.
- ➤ Long-term/high quality jobs will be fostered through an Innovation and Technology Center which will help technology businesses through a variety of business and training services to locate, grow and remain in Massachusetts.
- ➤ The great scenic and natural resources on Devens, such as the Nashua River Corridor, will be preserved through the designation of more than one third of the land to open space and recreation.

Background



In 1991, the Federal Base Realignment and Closure Commission (BRAC) recommended closing the North and Main Posts of the U.S. Army Military

Reservation at Fort Devens. With closure scheduled for July 1995, both local and state governments were galvanized into action to respond to this challenge. The four host communities, Ayer, Harvard, Lancaster, and Shirley formed the Joint Boards of Selectmen (JBOS) to represent the towns, and Governor Weld appointed the Land Bank as the lead state agency. Both parties recognized the need for an open public planning process to build on common goals and reach consensus on a Reuse Plan. This process, which drew heavily upon citizen input, was conducted by the professional staff of the Fort Devens Reuse Center established by the JBOS and Land Bank utilizing funds made available by the Federal government through its Office of Economic Adjustment (OEA) and by the Land Bank.

Goals and Objectives

In early 1993, the JBOS and Land Bank conducted an extensive process of public input to establish a series of goals and objectives to guide the planning process and subsequent reuse of the base. Culminating in the July, 1993 Community Workshop on Goals, the overall goal established for planning the reuse of Fort Devens was as follows:

The Devens reuse challenge demands a visionary planning effort grounded in environmental, social, and economic reality. It must be realistic, pragmatic, market-driven, flexible and future-oriented.

Goals

Individual goals for reuse included the following:

- ➤ Development must be sustainable, which means achieving a balance of economic, social, and environmental needs, while maintaining and enhancing the natural resource base.
- Provide a diversity of uses to avoid dependence on one type of use, and to provide employment opportunities for a range of skill and experience levels.
- Achieve success. Demonstrate the interdependence of economic development and environmental protection and the symbiosis of public and private uses.
- Balance local, regional, and state interests.

Objectives

General

- ➤ Foster uses which will create, at a minimum, the equivalent number of the jobs and value of economic activity at Devens in 1990.
- ➤ Take advantage of the skills and experience of the regional work force, and match the skills of the future work force with the needs of industries of the future.
- Foster a long-term mix of uses which will enhance the regional economy through future growth potential.
- ➤ Build on Devens' unique characteristics to complement the regional economy and expand the economic base.
- Exhibit and foster an attitude that supports reuse goals, successful redevelopment, and the provision of economic activities for individual and collective prosperity.

Cultural and Social

- ➤ Protect and enhance Devens' historic resources.
- ➤ Promote public awareness and enjoyment of the Devens environment.
- Protect and enhance the quality of life of the citizens in the host communities, the region, and the Commonwealth.
- Provide education, training and retraining tied to business, industry, and institutions on base and in the region.

Environmental

- ➤ Ensure an effective, expeditious, and efficient clean-up of hazardous materials, including Superfund areas, tied to the needs of the Reuse Plan.
- ➤ Protect and enhance Devens' ecological resources of all kinds, particularly the aquifer and the Nashua River system.
- Ensure that uses which may negatively impact the regional natural resources will be allowed only with appropriate technology and proper mitigation.
- ➤ Minimize the off-base impacts for development in areas such as water resources, air quality, viewsheds, traffic and noise, limiting the impacts to those necessary to achieve reuse goals and objectives.
- Foster businesses which enhance the environment through technology.



The Reuse Plan provides for the future use of Fort Devens to achieve the defined community and state goals and objectives. Adoption of the Reuse Plan will result in the following positive impacts:

Avoidance of Adverse Fiscal Impact on Towns

The Reuse Plan will help to reduce the negative fiscal impacts on the towns by putting the burden and responsibility on the state for provision of services and management of Devens. Early studies, currently being updated, have shown that in excess of \$50 million of capital funding would be required for maintenance and improvement of such facilities as the wastewater treatment plant, roadways and utilities systems. In addition, operating deficits of several million dollars annually are projected to support Devens until new businesses can create a viable tax base. Financing the capital improvements and providing additional municipal services are beyond the capacity of the host communities for at least the next ten years. Educational expenses, wastewater treatment plant improvements, water system improvements and recreation facilities for all three communities, are all examples of needs which will be addressed by the state in a cooperative manner.

Orderly Redevelopment

The Reuse Plan provides a mechanism for the orderly transition from military to civilian use. It will advance the goals of new employment and environmental protection. The extensive public planning process, which involved a broad spectrum

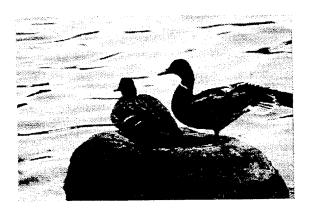
of citizens and state and local officials, has resulted in a plan that has benefits for everyone: economic development; provisions for environmental protection and open space; and preclusion of undesirable uses such as the second major airport. The Reuse Plan also affords an opportunity to guide federal decisions on land use for parcels slated to remain in government ownership, and to maximize the positive impacts on the communities.

The orderly development of Devens with the attendant financial and organizational supports provided by the Reuse Plan will, likewise, promote the orderly planning and fiscal management of the four host communities, particularly through the avoidance of the severe fiscal impacts likely to materialize without the approval of the Reuse Plan.

Accelerated Job Creation

The infusion of \$200 million of state money and resources will be used to prepare the site for development and to position and distinguish the site favorably in the very competitive real estate market. These state resources will be needed to develop the Innovation and Technology Center, provide infrastructure, and fund training programs and marketing efforts to attract technology-based companies and new jobs to Devens. Overall, it is expected that 7,000-8,000 jobs will be created at Devens through the implementation of the Reuse Plan.

Environmental Protection



The Reuse Plan offers a unique opportunity to protect and enhance the environmental resources in a coordinated approach for the entire 4,400 acres of the Main and North Posts. A fundamental element of the Plan is the approximately 1,300 acre open space network encompassing critical natural resources such as wetlands, floodplains, wildlife and plant habitat, and aquifers. Lands that provide logical connections as part of the open space and recreation system are also included. This open space and recreation system crosses town boundaries and allows for the sharing of recreation facilities by the communities. An impending Regional Recreation Management Plan will link together needs of the host communities with onsite facilities, and will identify feasible options for managing the programs and recreation facilities. Sensitive natural resources within the open space network will be mapped and preserved through various forms of land use restrictions. Requirements in the Bylaws that will protect water resources within Devens are based on the recommendations of the Water Resources Protection Plan.

AWater Resources Protection Plan has been developed for Devens. It is designed to protect and enhance critical water resources such as the Nashua

River and the aquifer that underlies portions of the site. Without a Reuse Plan and Bylaws containing a water resources protection element, it would be difficult to achieve as high a level of proactive protection and control. A community stormwater management system for some of the most sensitive aquifer areas of the site is included in the Water Resources Protection Plan. In addition, the Army's Superfund cleanup will be guided by the Reuse Plan, giving scheduling priority to certain sites which are likely to be developed sooner than others, so that the job creation objective can be achieved.

Strong Local Control of Development

The reuse planning process has provided the communities with the ability to determine the future of Devens, while leaving the cost of implementation to the state. The open, participatory planning process of monthly community workshops, task forces, and public outreach, has allowed tremendous public involvement in the preparation of the Plan. Based on detailed site information mapped for a variety of factors (habitat, wetlands, slopes, etc.), the public has not only selected the general land uses, but has also directly participated in more detailed master plan decisions about open space, recreation, roadways, infrastructure, environmental protection and quality of development. This level of input and control is unprecedented in local zoning controls, and the Reuse Plan has benefited from it. Once the Reuse Plan and related Bylaws are approved at the Super Town Meeting, substantial changes to the Reuse Plan and Bylaws cannot be made without further town meeting approval.

Highlights of the Reuse Plan

The focus of the Reuse Plan is to capitalize on the unique physical and infrastructure attributes of Fort Devens, to attract new businesses, to support existing industry clusters in the region, and to protect and enhance natural resources. These attributes include the availability of large, easily developable sites; access to utilities; excellent regional road and rail network; and a usable stock of existing buildings. The Reuse Plan is focused on using these resources to create economic development that will generate jobs.

The Devens Reuse Plan has three major themes which place the project in a long-term context and define a vision for the overall development. These themes are:

- ➤ Innovation and Technology Business
- ➤ Rail and Trade-Related Uses
- ➤ Open Space and Recreation Resource Protection and Enhancement

In addition to the preceding broad themes, the Devens Enterprise Zone will offer the following additional advantages:

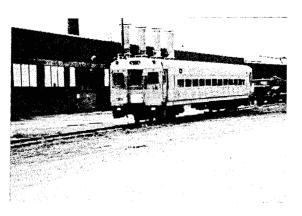
- ➤ Sites that are attractive to both employers and employees.
- ➤ A truly Unified Permitting Procedure which avoids common regulatory pitfalls of excessive review and fragmentation.

Innovation and Technology Business

This central economic theme of the Reuse Plan is based on Massachusetts' traditional strengths in development of new technologies through the academic and research base of greater Boston. The reuse goal is to encourage businesses that are growing and have new products, technologies or services to locate at Fort Devens. Large sites with utilities and good vehicular access have been designated for high-profile technology-related users with research and development, manufacturing, and office needs.

The Plan includes an Innovation and Technology Center, housed in the historic Vicksburg Square Quadrangle. This Center is intended to serve as a catalyst for new development on the large sites located elsewhere in the Devens Enterprise Zone. It will play this role both by providing start-up and incubator space and by fostering connections to academic and research institutions.

Rail and Trade-Related Uses



In order to capitalize on the site's unique rail, intermodal and highway attributes, and, on the current market demand for rail industrial, distribution, and trade uses, a large zone was designated for rail-related uses in the existing rail/industrial area. This zone is located in the northeast corner of the Main Post, adjacent to the Hill Rail Yard operated by Guilford Transportation. The area includes an intermodal facility which handles transfer of goods

and materials between rail and truck. The intermodal facility is linked directly to the Port of Boston, providing Massachusetts' only direct shipto-rail service. Development of the rail/industrial area will enhance trade-related and regional businesses in moving goods and materials to new markets and providing competitive rail service and lower shipping costs to businesses within the Commonwealth. The rail-related zone could also accommodate manufacturers who utilize "just-intime" delivery practices, which require that raw materials and products be handled via rail directly to and from the factory floor.

A key component of the rail-related use is an aquifer protection program to ensure that adequate safeguards and protective measures will be employed to protect the critical groundwater resource underlying the zone.

Open Space and Recreation



The development of the Reuse Plan began with the identification of the site's open space, recreation and critical natural environmental resources. These areas were incorporated into an "emerald necklace" of linked open spaces. This open space framework serves to protect and enhance environmental

resources; provides active and passive recreation and tourism opportunities; buffers development parcels from adjacent uses; provides attractive settings for new development; capitalizes on existing recreation facilities of the base; and provides connections to the regional open space network. Perhaps most importantly, the open space will preserve the great beauty of the Devens property and help distinguish Devens as a particularly attractive business location.

More than one third of the land area of Fort Devens will be devoted to open space and recreational use. While over 1,300 acres of the site are designated as a permanent open space network, more than another 1,500 acres will stand as open space within the developed portions of the site, created as a result of the land use density and coverage limitations within the Bylaws. Key elements of this open space framework include the expansion of the Oxbow National Wildlife Refuge along the Nashua River, the Mirror Lake area, the Robbins Pond area, the Willow Run stream corridor, the active recreation resources near Verbeck Gate, and some of the existing golf course. Portions of the existing golf course will be retained and reconfigured to provide for the continuation of golf at Devens.

Other Uses

In addition to the three major uses described above, the Reuse Plan incorporates a diversity of land uses on both large and small parcels. The Reuse Plan recognizes that there will be a continued federal agency presence at Devens for the foreseeable future, including the following likely uses: the Department of Defense Army Reserve Enclave and Training Site and Aviation Facility; the Federal Bureau of Prisons Medical Facility, reusing the existing Cutler Army Hospital; the U.S. Fish and

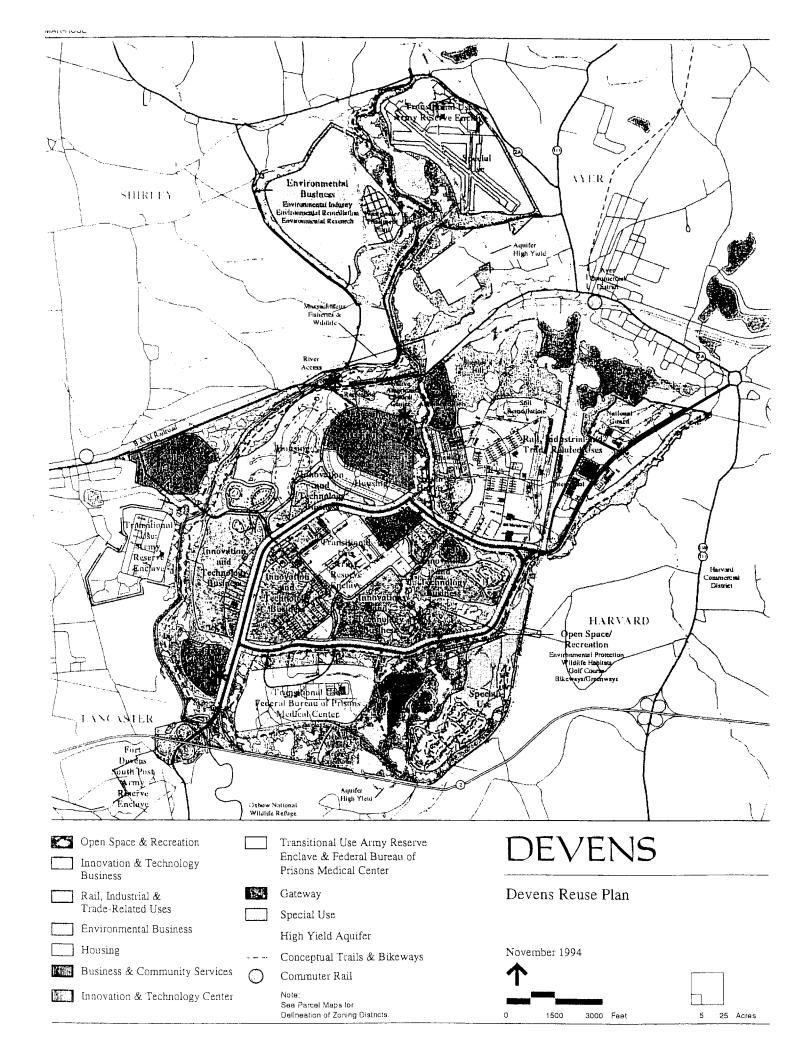
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Wildlife Service Oxbow National Wildlife Refuge Expansion; special needs housing for homeless families under the McKinney Act Organizations requests; and the Job Corps Training Center.

The Reuse Plan and Bylaws provide for underlying zoning in those areas where federal agencies will exercise continued jurisdiction.

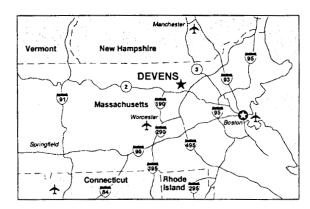
The Need for Approval

The Devens planning process has created a future-oriented and pragmatic program to achieve the appropriate balance of economic, social and environmental needs. Approval of the Reuse Plan and associated Bylaws will provide access to \$200 million of state investment to continue the economic development and environmental protection of 4,400 acres of land critical to the future of the host communities, while at the same time protecting the host communities from likely adverse economic consequences that would materialize without a coordinated Reuse Plan and its attendant organizational and financial resources.



OPPORTUNITIES AND CONSTRAINTS

Site Description



Fort Devens, situated in Middlesex and Worcester counties, is approximately 35 miles northwest of Boston and 20 miles northeast of Worcester. Fort Devens occupies approximately 9,310 acres of land over its Main, North, and South posts and is contained within the towns of Ayer, Harvard, Shirley, and Lancaster. This Reuse Plan pertains to the North and Main Posts, as the South Post is not contained in the closure area.

The Main and North Posts consist of approximately 4,400 acres within three towns: Ayer, Harvard, and Shirley. The largest segment of the acreage (approximately 2,700 acres) lies in Harvard, which also shares the longest continuous boundary with Fort Devens. There are approximately 1,000 acres in Ayer and approximately 700 acres in Shirley. The South Post lies entirely within the town of Lancaster.

Fort Devens was established by the United States
Congress and the Department of the Army in 1917
in a predominantly rural section of Worcester and
Middlesex counties. The Fort's siting was due
primarily to its location at a major hub of the rail

network in New England. Since its establishment, Fort Devens has undergone various transformations to serve the needs of the Army. In its 77 years of service, over 400 Army units have been stationed at Fort Devens. Four major demolition and/or construction periods have shaped the Fort's physical characteristics as they exist today.

Fort Devens has played a major role in the region's economy, with a 1990's peak daytime population of approximately 15,000. In the late 1980's and early 1990's, the Base supported military and civilian employment both on and off-base for an estimated 7,000 to 8,000 workers, until the closure action was initiated.

Surrounding Communities

Each of the host towns is a self-governing community with a small population (see below). The predominant land use in the towns is residential, and each provides its own public services, which vary from town to town. Commercial and industrial land uses in the region are concentrated along Route 2A and the east-west line of the Boston and Maine (B&M) Railroad. Much of the land in the four town region is undeveloped, wooded or open pasture, punctuated by streams and lakes. Agricultural uses occur in the region, particularly in Harvard where several commercial orchards exist.

Table 1: Population of Four Adjacent Towns

	Ayer	Harvard	Lancaster	Shirley	
Town	6,029	6,816	6,661	5,473	
Fort Deven	s 842	5,513	-	645	
Total	6,871	12,321	6,661	6,118	

Source: 1990 United States Census

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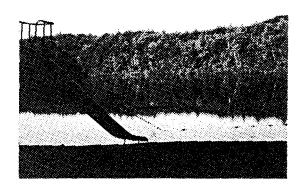
Soil Types

A range of soil types exist on the Main and North Post of Fort Devens, including glacial till, outwash deposits, and high silt content soils. The latter are generally found along the floodplains of the Nashua River, various wetlands and drainage ways. Areas of Fort Devens have unconsolidated glacial outwash deposits which are highly productive aquifers. Approximately 440 acres, 10% of the site, are underlain by a high yield aquifer. Another 1,370 acres, 30% of the site, are underlain by a medium yield aquifer. The groundwater from the aquifers is designated as a Class I potable water source and meets all Massachusetts Department of Environmental Quality (DEP) water quality standards, with the exception of sodium.

Water Resources

Other water resources include surface water, floodplains and wetlands. On the Main and North Posts, approximately 530 acres, 12% of the site, generally around the Nashua River and its tributaries, lie within the 100 year floodplain. The majority of the wetlands on the site are forested wetlands.

generally occurring along the stream and floodplain corridors. Other wetland resources include flooded oxbows, emergent wetlands, shrub wetlands and a small area of red spruce bog. There are approximately eight miles of river and streams, and 100 acres of open waters including Mirror Lake, Little Mirror Lake, and Robbins Pond.



Threatened and Endangered Species

A baseline study prepared by the U.S. Army Corps of Engineers has determined that there is no known occurrence of federally listed threatened or endangered plant species, and no known permanent occupations by federally listed threatened or endangered animal species. It has been determined that there are approximately 430 acres of potential habitat for rare and endangered flora and fauna, as defined under the Commonwealth of Massachusetts Endangered Species Act. The majority of the potential habitat occurs in areas that are currently protected by wetlands regulations, or are along stream corridors and the Nashua River floodplain.





Streams

Wetlands, Flora, Fauna and Floodplains

Slopes Greater Than 15%

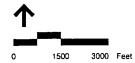
Aquifers - Medium Yield

Aquifers - High Yield

DEVENS

Environmental Constraints

November 1994





The Main Post represents the core of Fort Devens as an operating military installation and includes office, residential, industrial, storage, educational, cultural, and recreational facilities. The majority of the building area in terms of square footage occurs in residential buildings, with office and industrial facilities also occupying a significant proportion of building area.

A building reuse inventory determined that there are approximately 7.3 million square feet of area in approximately 3,400 buildings existing on the base. Of that amount, approximately 2.0 million square feet have been determined to have reuse potential. There are over 1,700 existing residential units comprised of a mix of types including single family, duplex and multi-family units.

The North Post is occupied by two major uses: a wastewater treatment facility and filtration beds; and Moore Army Airfield with its associated hangars and operational buildings. No residential uses occur on the North Post.

Archaeological and Historical Resources

Preliminary field testing for sensitive archaeological resources indicates that approximately 480 acres of the Main Post and 225 acres of the North Post are tentatively classified as moderate to high archeological sensitivity depending on results of more definitive investigation. Some of these sites may be eligible for inclusion on the National Register of Historic Places. Historic resources on the base include Vicksburg Square including the Roger's Field parade grounds. These are currently listed with the Massachusetts Register of Historic Places and were listed on the National Register of Historic Places in 1993.

Site Access

The site lies to the west of Interstate 495, and is accessed primarily by U.S. Route 2 which divides the Main Post from the South Post, Route 2A also provides access through the Town of Ayer to Fort Devens. Both Route 2 and Route 2A have interchanges at Interstate 495, which is a major north to south connector in central Massachusetts. The existing roadway system on Fort Devens includes 91 miles of paved roadways. Primary access to the surrounding communities include Shirley Gate to the northwest, Verbeck Gate to the north, Barnum Gate to the northeast, and Jackson Gate to the south which provides direct access to Route 2 via a grade separated interchange.

Fort Devens also has excellent access to rail facilities for both passenger and freight. Guilford Transportation has a large rail yard in the northeast corner of the base where an intermodal freight operation provides transfer between rail and truck modes. Commuter rail stations operated by the

MBTA are located in Ayer and Shirley providing public transportation east/west to Boston and Fitchburg.

Opportunities Presented by the Site

The Fort Devens site is large and accommodates both extensive development and areas of great natural beauty. Extensive research was done early in the planning process to understand the opportunities afforded by Devens. This research included mapping of natural resources, building resources, and economic conditions. A workshop was held to receive public input on Devens and its features. The site holds tremendous potential for reuse based on the special attributes described below:

Large, Easily Developed Sites

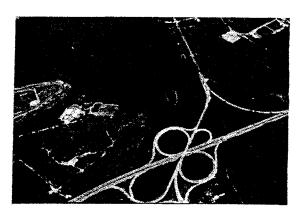
Real estate market research identified a shortage of available large (100 acres+), easily developable sites in the region that are served by public sewers and good transportation infrastructure. A number of large, open, relatively flat developable sites were identified on Devens. These sites are unique in their ability to accommodate large users or firms with these siting requirements.

Infrastructure and Utilities

All utilities necessary to support development exist on site -sanitary sewer, water supply, storm drainage, electrical power, natural gas, and telecommunications. These resources represent a significant value to the reuse planning process and are a valuable asset towards achieving implementation of the Reuse Plan. The Fort Devens systems have capacity to support substantial reuse having been

designed for a large on-site population. The Reuse Plan calls for the major elements of the utility systems to be preserved under a single authority, due to the impracticality, and in some cases, impossibility of separating systems into any operating segments, as they were designed to serve one entity.

Regional Access: Rail and Highway



Devens is well served by state and interstate highways including Route 2 (to which direct access is provided by the Jackson Road Interchange), Route I-495, Route I-90, and Route 2A. Multiple access points to and from the base currently exist. The existing roadway system within the Main Post is extensive (approximately 91 miles) and is generally well maintained.

Active rail lines provide both freight and passenger access to Fort Devens. The freight rail facilities (side trackage) on Fort Devens property is one of the site's greatest assets. The Reuse Plan reserves areas adjacent to the rail yard for rail-related uses. Passenger service is provided by the MBTA which has a commuter station for its Fitchburg service in Ayer and Shirley. Direct rail and rail intermodal service can bolster regional businesses and support expanding rail and trade-related businesses and initiatives.

Reuse Potential: Buildings and Facilities

A full inventory of the existing buildings and facilities on Fort Devens was conducted. Of the 7.3 million square feet currently existing, approximately 5.6 million square feet were determined to have some reuse potential. Based on further analysis, it was determined that there is over 2.0 million square feet of buildings and facilities with high suitability for reuse including 550,000 square feet of industrial buildings, 890,000 square feet of older, multi-level historic structures, and 875,000 square feet of special purpose facilities (i.e. educational, recreational, religious, etc.) The Reuse Plan provides for the reuse of historic structures in the Vicksburg Square area and allows for both the short-term (such as for incubator uses) and long-term use of these buildings as determined by market demand.

Water Resources

Due to the extent and quality of groundwater resources on the base, there is an ability to support large water users through the development of the aquifer. Estimates of the safe yield from the aquifer indicate that capacity exceeds five million gallons per day, which is two million gallons per day more than is required to support the full build-out of the Reuse Plan. An opportunity therefore exists to attract large water users to the site. In order to protect this valuable resource, development of areas over and contributing to the aquifer will be protected through a variety of measures as outlined in the Water Resources Protection provisions contained in the Bylaws. Specific measures in the Bylaws include performance standards, best management practices, monitoring and regulatory control.

High Quality Open Space and Recreational Facilities

Devens has a significant amount of high quality open space and recreational facilities, both indoor and outdoor. Outdoor recreational and open space assets include the Nashua River corridor and associated tributary streams, Robbins Pond, Mirror Lake and Little Mirror Lake. Indoor facilities on the base include gymnasiums, a pool, entertainment facilities and other sports facilities.

Many of the open space assets existing on base are further complemented and enhanced by the regional open space network which envelops the base. A major theme of the Plan is to integrate, enhance and strengthen this network. A key element towards achieving that goal is the anticipated expansion of the Oxbow Wildlife Refuge on the southern border of the site and along the Nashua River.

Labor Market

There are six Metropolitan Statistical Areas that define the regional economic context for Devens. Due to the enormous size of the population and job base that is accessible, Fort Devens is distinguished from many other closed military installations throughout the country. According to the 1990 U.S. Census, the population of the Devens communities has a higher labor force participation rate than the state and national average, higher educational attainment levels, an above average concentration in professional, administrative and technical occupations, and an above average employment concentration in manufacturing industries. These resources will play an important role in bringing new business to the base.

Regional Cost Structure

Economic analysis conducted for the Reuse Plan indicates a lower cost structure than the state as a whole for wages, land, construction and housing. Again, these attributes make Devens a competitive location for business.

Supporting Regional Industry Clusters

Analysis shows that there is regional growth in the fields of plastics, advanced materials, health care services, biotechnology, fiber optics, environmental technology, and other emerging technologies. Many of these industries are among the "critical industry clusters" identified in the statewide economic development strategy, Choosing to Compete: A Statewide Strategy for Job Creation and Economic Growth. Industry clusters are identified as existing geographic clusters of competitive industries within the state. Many of the central reuse themes, particularly the innovation and technology and rail-related themes, would support and be supported by the cluster industry concept.

Constraints Presented by the Site

Review of the physical, environmental and socioeconomic attributes of Devens has also revealed constraints to reuse which are addressed in the Reuse Plan. Public input was sought on constraints at a workshop held in 1993. Specific constraints to development have been addressed and strategies to overcome these constraints have been formulated, including the following:

Wastewater Treatment Capacity

The current wastewater treatment facility located on the North Post is constrained in that it does not currently meet State standards. The Reuse Plan calls for its replacement with a state-of-the-art plant utilizing recharge of treated effluent to groundwater consistent with sustainability goals as outlined in the Study of Wastewater Treatment Options at Fort Devens. Massachusetts, Whitman & Howard, Inc., April 1994.

The proposed plant will have sufficient capacity to allow extension of sewers into the surrounding communities of Shirley and Harvard where no wastewater collection service currently exists. The first module of the wastewater treatment system should be completed early in the reuse process in order to provide capacity in advance of user needs.

Superfund Issues

Devens is on the National Register List as a hazardous waste site which must be addressed under CERCLA, better known as the Superfund Program. There are several Superfund sites and environmental hazards from past Army operations on Devens. There are ongoing coordination and mitigation efforts with the Army Environmental Center, the U.S. Environmental Protection Agency, the Fort Devens Environmental Management Office, and the Massachusetts Department of Environmental Protection on remediation and clean-up efforts to promote reuse. An aggressive schedule for completion of Superfund related activities has been developed and is being implemented in order to facilitate disposal and reuse options. The Reuse Plan recognizes the timing constraints associated with the Superfund sites and seeks to expedite remediation in those areas most critical to reuse. such as the rail/industrial area.

In addition to the Superfund sites existing on Devens, there are a number of Areas Requiring Environmental Evaluation (AREE's) which have been identified. These AREE's typically include multiple locations and are a result of various Army activities over the years.

Building Demolition



Buildings with limited reuse potential will need to be demolished to prepare sites for new uses. The cost of removal of low quality buildings such as wood framed barracks represents a challenge to reuse. This issue is further complicated by the need to dispose of lead based paint and asbestos in some buildings. The Reuse Plan calls for an aggressive demolition program to clear property for reuse.

Aquifer Protection

Approximately 30% of Devens sits over either a medium or high yield aquifer. The need to protect and enhance this critical resource is considered a major goal in the reuse planning effort. The Water Resources Protection provisions in the Bylaws contain a variety of implementation, monitoring and development practice strategies that will provide for continued protection of this resource. Through the

public workshop process, agreement was reached on the reuse of industrially developed areas around the rail yard for intensive rail-related uses despite the location of this district over the aquifer. A special area-wide stormwater treatment and recharge system for the rail industrial area is an integral part of the plan providing a high level of protection for this area of the aquifer.

Archaeological Resources

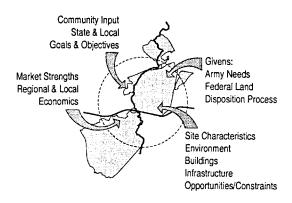
Approximately 480 acres of the Main Post and 225 acres of the North Post have been tentatively classified as moderate to high archaeological sensitivity depending upon further on-site investigation. The majority of the sites occur along the Nashua River and in other environmental resource areas not generally suited to intense development. However, in order to protect these potential resources, the Reuse Plan anticipates more definitive site-specific field investigations will be performed to determine potential significance and mitigation alternatives, if required.

Access Capacity

The capacity of highway and rail access both on and off-site was raised as a concern at public workshops. While it was generally recognized that Devens enjoys excellent highway and rail access, constraints were identified at specific locations. Some of the issues identified include poor geometric design characteristics, insufficient channelization, upgrading to meet local, state and federal standards, improvements in lane widths, site distances and curve radii, and access improvements, particularly the Jackson Gate interchange. The Reuse Plan includes specific on-site circulation recommendations and a transportation mitigation program to address these issues.

PLANNING PROCESS

Inputs to the Reuse Plan



Development of the Reuse Plan followed a traditional process beginning with extensive research of existing physical, environmental, and socioeconomic conditions. Information on physical condition was compiled using a Geographic Information System (GIS). Extensive "coverages" were made available by the Massachusetts Department of Environmental Protection (DEP) and the Massachusetts GIS office as a result of efforts by DEP to monitor the Army's site cleanup at Devens. As the reuse planning effort proceeded, new information made available was incorporated into the system, thus resulting in over seventy layers of refined and updated information available for mapping and data analysis. As a result of the continuous updating of information, the GIS developed for Fort Devens was an invaluable tool to the reuse planning effort and will continue to be a tremendous resource and interactive tool as implementation of the Reuse Plan moves forward.

The Reuse Plan was initially shaped by four basic inputs:

Site Characteristics

Careful mapping of site characteristics including wetlands, slopes, floodplain, vegetation, sensitive habitat, historical sites, buildings, etc. allowed the Reuse Plan to respect existing conditions on the property. Where possible, existing infrastructure such as major roadways are utilized and sensitive areas such as wetlands are protected.

Givens

Screening under the federal disposition process has resulted in siting of several federal uses on Devens including the Army Reserve Enclave, the Army Reserve Regional Training site, the reuse of Cutler Army Hospital and surrounding land for the Federal Bureau of Prisons Medical Center, and the U.S. Fish and Wildlife Service expansion of the Oxbow National Wildlife Refuge.

Economic and Real Estate Market Research

The basic reuse themes reflect research conducted on economic trends and the realities of the local real estate market. This research identified a regional shortage of large sites that are served by municipal sewer and water and have rail access. By capitalizing on a demand created by distribution and trade-related businesses, near-term employment can be created. Long-term employment and high quality jobs will result from the creation of an Innovation and Technology Center that will foster businesses which are among the critical industry clusters in Massachusetts. The unique characteristics of Devens will allow the retention of technology businesses when they enter full scale production.

Community Input

While the reuse planning team provided technical input and "drafted" the Reuse Plan, the Reuse Plan "belongs" to many citizens who contributed to its development through a variety of public forums. Public participation has been intense and continuous from the establishment of goals through the refinement of the plan during drafting of Bylaws.

Additional Technical Input

After the Preliminary Reuse Plan was completed in January 1994, several areas needing additional technical input were identified:

- ➤ Definitions of land uses (including decisions on housing and underlying zoning for federal uses)
- > Environmental protection and enhancement
- ➤ Quality of development rules
- ➤ Economic and fiscal underpinnings
- ➤ Legal framework for the Reuse Plan

Additional research was conducted on each of these issues through the spring and summer of 1994 resulting in refinements to the Reuse Plan.

Public Participation Program

The reuse planning process included an extensive public participation program including public workshops, task force meetings, local interest group meetings and coordination with local, state and federal officials. As such the Reuse Plan reflects the diverse interests of the state and local officials, citizens of the region and interest groups that participated in its development. A summary of that program and its components is found below.

Workshops

A total of twelve community workshops were held during the two-phase reuse planning process. These meetings were well attended and the number of participants ranged from 80 to 180 people. Citizens from the adjacent communities, members of the Joint Boards of Selectmen and the Joint Planning Boards, local, state and federal government officials, and consultants on the reuse planning team were among the participants. These workshops were designed to inform, collect new data, and refine existing data to further develop a preferred alternative for reuse. A list of the workshops, dates and topic matters is listed below:

➤ Phase I: Total of Seven Community Workshops
Phase I of the reuse planning effort focused on
developing goals for the planning effort and
consensus on a preferred alternative which
would be the subject of the Phase II planning
effort. Subject matter of the Phase I community
workshops were:

July 26, 1993 - Goals and Objectives

August 28, 1993 - Opportunities and Constraints
September 23, 1993 - Market/Economic Conditions

October 28, 1993 - Reuse Alternatives

November 18, 1993 - Draft Preferred Reuse Plan

December 16, 1993 - Refinement of Reuse Plan

January 20, 1994 - Final Community Presentation

Conceptual Reuse Plan

➤ Phase II: Total of Five Community Workshops
Phase II of the reuse planning effort focused on
developing Bylaws and refining a plan for the
preferred alternative identified in Phase I. Subject
matter for the Phase II Community Workshops
were:

April 28, 1994 - Land Use Decisions

May 26, 1994 - Environmental Protection and
Enhancement

June 23, 1994 - Quality of Development July 28, 1994 - Legal Framework August 25, 1994 - Economic, Fiscal and Market Strategy In addition to the monthly community workshops, a variety of smaller task forces were formed to address specific issues in a more in-depth review. The Planning Task Force, comprised of members of the four host community Planning Boards, generally met on a weekly basis from March to early August 1994, to review the issues pertaining to land use decisions and the development of the Bylaws. In addition to the Planning Task Force, the following task forces met frequently to discuss and review critical issues in detail: Transportation, Water Resources, Open Space and Recreation, Municipal Facilities, and Infrastructure.

In addition, the Ad Hoc Bylaw Committee met one to two times per week between September and November 1994 to reach resolution of all outstanding issues between the Joint Board of Selectmen and Joint Planning Board members, and the Massachusetts Government Land Bank.

Fort Devens Redevelopment Board

Governor William Weld appointed the Fort Devens Redevelopment Board to provide advice on Fort Devens issues critical to the north-central region of Massachusetts. The ten-member board was comprised of local government officials and regional representatives with expertise in industry, environment, finance, and transportation issues. The Redevelopment Board held five (5) public meetings to discuss and receive public input on Fort Devens reuse issues. Meeting dates were:

March 9, 1993 April 14, 1993 October 26, 1993 November 16, 1993 December 14, 1993 The Fort Devens Redevelopment Board summarized their year-long activities in a <u>Report to the Governor</u>, dated December 31, 1993.

Public Outreach

A full scale public outreach program was an integral part of the reuse planning effort. In order to gather existing data, develop new data, receive input and comment to better refine the Reuse Plan as it progressed, it was essential that a wide range of people be involved in the process. Outreach efforts were initiated in both the public and private sectors and were either undertaken by the reuse planning team or at the request of interested parties. The breadth of outreach ranged from meetings with interested individuals to large public hearings and Community Workshops. Some of the efforts included in the outreach program included:

- ➤ Interviews with key stakeholders
- ➤ Meetings with local business groups
- ➤ Meetings with local, state and federal officials to coordinate efforts, screening requests
- Meetings with on-base residents and military personnel
- Public Hearings sponsored by JBOS and/or Land Bank
- ➤ Town Meeting presentations
- ➤ Meetings with potential users
- ➤ Public information distribution newspaper articles and advertisements, mailings, flyers.

Public Hearings and Meetings

At the end of the eighteen month planning process, a total of five (5) public hearings on the Reuse Plan and Bylaws were conducted on the following dates:

- ➤ June 16, 1994, Devens Community Center
- ➤ August 25, 1994, Devens Community Center
- ➤ October 17, 1994, Ayer High School
- ➤ October 19, 1994, Harvard Elementary School
- ➤ October 25,1994, Shirley Elementary School
- ➤ November 17,1994, Fort Devens Community Center

Between July and November 1994, the Joint Boards of Selectmen met in a bi-weekly open session to discuss all critical Devens issues. In addition, the task forces continued to meet regularly throughout this period.

Fort Devens Charrette

The planning process, in its early stages, was further energized in April 1993 by the organization by the Boston Society of Architects and its counterparts in the landscape, planning and engineering professions, of a four day "charette" workshop on base. It represented a coming together of some 140 local citizens, public officials, businessmen, planning and design professionals, and students from all over the Commonwealth, all of whom contributed materially to this effort. Emerging from the charrette were such planning and design themes as sustainability, diversity of land uses, phasing of growth, innovative technology, and resource protection.

THE DEVENS REUSE PLAN

The Devens Reuse Plan provides a comprehensive framework and strategy to reuse the buildings, infrastructure, land and open space to produce jobs and environmental protection in the Devens Regional Enterprise Zone. The focus of the Reuse Plan is to capitalize on the unique attributes of Fort Devens to attract new businesses and to support existing industry clusters in the region. The scale of Devens and the magnitude of the challenge requires a long-term vision for the reuse, and a pragmatic, flexible Reuse Plan that can respond to the changes that may occur over the 20-40 year time frame to implement the Reuse Plan.

Patterns in the Reuse Plan

To accommodate the three Reuse Plan themes of innovation and technology; rail- and trade-related uses; and open space, recreation and environmental protection, a strong framework for the development was required. This framework was built upon detailed site and building analyses, and the strong community input received throughout the public participation and community workshop process. Patterns in the Reuse Plan emerged early in the planning process and were continually revisited and refined based on a wide range of inputs received. As the patterns evolved into mature land use strategies and protective measures, so did the overall vision for Devens continue to be strengthened. Major patterns identified and developed are discussed in the following sections.

Open Space

Primary in "building the Reuse Plan" is the open space network that includes critical natural environmental resources as well as other recreational

facilities and lands to provide a coordinated, systems approach to environmental protection, open space and recreation at Devens. Unlike typical development planning that considers open space to be that land leftover after all the development is located, the Devens Reuse Plan started with the definition of the open space and environmental network as the basis for the Plan. The critical natural features including wetlands, rivers, streams, open waters, habitat, vegetation, aquifers, and steep slopes were identified in the site analysis and designated for protection and enhancement by inclusion in the open space network, as recognized by the community in the workshop on opportunities and constraints. Recreation facilities and other lands were added throughout the reuse planning process.

More than one-third of the land area of Devens will be devoted to open space and recreational use. The central themes of the open space and recreation framework include:

- > protect and enhance environmental resources
- provide active and passive recreation and tourism industries
- ➤ buffer development parcels from adjacent uses
- > provide attractive settings for new development
- ➤ capitalize on existing recreation facilities of the base
- provide connections to the regional open space network
- develop a regional recreation plan with the host communities

Key elements of this open space framework include the expansion of the Oxbow National Wildlife Refuge, and protection of the Mirror Lake area, the Robbins Pond area, and the Willow Run Stream corridor. The recreation resources near Verbeck Gate and some of the existing golf course will be preserved in the open space network.

In recognition of the need to further refine and restrict the types of permitted uses within the Open Space and Recreation zoning district, as well as to identify and protect critical resources, the Land Bank, in consultation and with the advice of the Devens Enterprise Commission, will prepare a comprehensive Open Space Plan that will do the following:

- ➤ Establish a management plan for the Open Space and Recreation zoning district to be implemented by the Land Bank
- Recommend legal mechanisms to be utilized to permanently protect resource areas of particular environmental concern, which mechanisms may included, without limitation, restrictive covenants and restrictions.

The Open Space Plan will be completed by December 15, 1995, and will be prepared in accordance with the Department of Environmental Management's published "Guidelines for Operations and Land Stewardship Program (GOALS)", used in the State Park system.

The Land Bank shall submit the Open Space Plan to the Joint Boards of Selectmen (JBOS) of the towns of Ayer, Harvard and Shirley for review and approval, following a public hearing. Action must be taken within sixty (60) days of submissions. Following the approval of the Open Space Plan by the JBOS, by majority vote on a one vote per town basis, the Land Bank shall take necessary steps to implement legal mechanisms for the protection of sensitive environmental resources as recommended in the Open Space Plan and agreed upon by the Land Bank and the JBOS. During the preparation and approval of the Open Space Plan, the Land Bank will ensure that sensitive resource areas will be adequately protected and preserved.

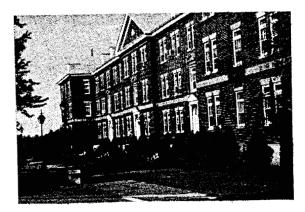
Access and Circulation

Another major factor in building the Reuse Plan is the roadway infrastructure network that is required to provide access for development to accommodate and support reuse development. Much of the existing on-site roadway network is preserved in the Reuse Plan. Modifications to be made to the network will reinforce logical north/south and east/ west connections through the base, protect the historic community core, and reinforce the use of the Route 2 Interchange to handle commuter and truck traffic.

The Core: Innovation and Technology

The Innovation and Technology theme is the boldest physical reuse pattern in the Plan. The physical and thematic core of the Devens Regional Enterprise Zone is centered on the Innovation and Technology Center (ITC) proposed to be located in historic Vicksburg Square with its campus-like atmosphere. This environment is expected to generate larger spin-off Innovation and Technology Businesses to be constructed on other locations on the site. Innovation and Technology Businesses are expected to exhibit one or a combination of the following qualities:

- > new or improved product or service
- ➤ growing
- ➤ educational/academic links
- > research and development component



The Innovation and Technology Business (ITB) zones have been designed to serve as a physical and developmental outgrowth of the Innovation and Technology Center (ITC). Physical siting of these businesses and industries are to be located in areas which surround the ITC that provide ample space and resources to further promote the healthy evolution of these uses.

Rail, Industrial and Trade-Related Uses

The Rail, Industrial, and Trade-Related zone provides for the best and most efficient use of the rail resources in the eastern portion of the site. Use of this area is programmed around the premise that rail-related uses are expected to exhibit one or a combination of the following characteristics:

- ➤ industries should be rail/transportation dependent
- preference should be given to manufacturers requiring rail as opposed to straight distribution businesses
- movement of goods and materials to new markets should be enhanced by encouraging trade-related businesses.

Use of this area is expected to be a major factor in the early development of the Devens Regional Enterprise Zone as the area is already well established as an industrial zone and has an active rail yard and intermodal (truck/rail) facility. Transportation resources, including a strong internal circulation network, strong regional transportation capabilities and the active rail lines, provide a significant incentive to further achieve near-term goals of job creation in trade-related industries. Development of this area is further expected to complement the physical and thematic evolution of the Innovation and Technology zones which physically surround this district.

Village Growth

The Village Growth concept creates the most direct of connections between the Devens Enterprise Zone and the abutting town areas of Shirley situated at and near the Devens Gate. The dual purpose is to provide business expansion opportunities for Shirley Village while at the same time offering a substantial retail opportunity for the Devens Enterprise Zone and the region at large. The underlying theme is to achieve those objectives with a scale, development pattern and mix of uses that are compatible with that of the existing Shirley Village.

The first Village Growth area allows a retail center to be established, complemented by free-standing retail businesses where individual occupants or tenants do not exceed 50,000 square feet of floor area within a retail center and small-scale office uses do not exceed 40,000 square feet of gross floor area.

The second Village Growth area provides a mix of harmonious small-scale office, light industrial and research & development uses. Scale and height for this area will be structured in order to maintain compatibility with abutting uses in Shirley and at Devens.

Environmental Business

The Environmental Business zone of the Reuse Plan is entirely located on the North Post near the wastewater treatment facility. Development of this district was based on the increasing sensitivity and awareness of environmental business and technologies to serve the needs of the region and society as a whole. Another key component for the development of this zone is to provide complementary services for the Innovation and Technology zones by providing businesses which can use the waste stream of on-site industries to create reusable materials or products. This furthers a major tenet of the Reuse Plan to encourage the cross-fertilization and support of innovative technologies. Businesses and industries in this area may range from traditional industrial recycling processes to development and application of new environmental remediation technologies.

Gateways

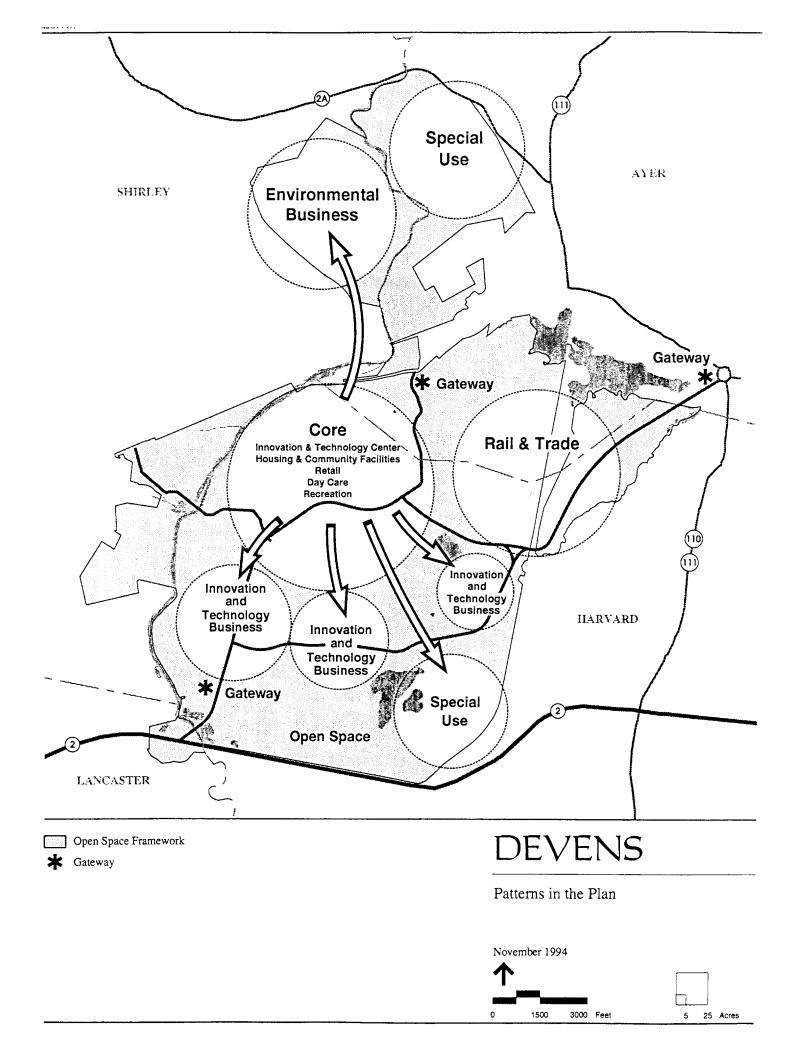
The Gateway concept evolved through the need to carefully and sensitively utilize those areas that serve as the natural points of arrival on Devens. Currently there are two areas now designated as Gateway zones on the Reuse Plan, Verbeck and Jackson Gates. Originally these sites were known as high profile user sites. It came to be recognized, however, that this description didn't adequately convey the essence of the collective vision for these

areas. As a result, the Gateway concept was developed that better defined the sensitive treatment required at these sites. The Gateway zones provide the major interface points with the surrounding region and are expected to be utilized in a manner that enhances the unique locational factors of the site while serving as distinct points of arrival for the Devens Regional Enterprise Zone.

Housing and Community Facilities

Concerns raised during the public workshop process made it clear that housing and community facilities play an important role in the comprehensive land use approach envisioned for Devens. These uses, while not the central themes of the Reuse Plan, are expected to serve important regional needs as well as providing balance in the use mix of Devens.

An inventory of the existing housing units currently on Devens reveals that there are approximately 1,700 units scattered around the site. A housing plan based on market research and public input was developed to best determine the role of housing in the Reuse Plan. Of the existing 1,700 units, it was determined that a maximum of 282 units of housing, primarily existing units, should be accommodated in the Reuse Plan based on a series of factors including regional needs, projected demand, projected land use of the Devens Regional Enterprise Zone, and potential negative fiscal impacts on the host communities and on the off-site housing market. The housing units that will be retained are located in areas that best promote and enhance a stable and diverse residential core. Some of the highest quality housing is currently located in and around the core area. Some of the units are in the historic district. Advantages to locating the housing in the core area include access to recreational and community



facilities, the strong open space network buffering the residential core, and access to the institutional campus. Only the best housing stock relative to location and compatibility with surrounding land uses was considered for reuse. The areas selected for residential use are already well established neighborhoods that will serve as a natural extension of land use patterns surrounding Devens and will avoid isolation of the residential core.

In order to accommodate the needs of a broad range of income groups, and to ensure the stability of the residential core, approximately twenty-five (25%) of the 282 units to be reused or constructed under the Reuse Plan will be reserved for low and moderate income individuals or families, and/or special needs populations. It is recognized that the success of the residential reuse is dependent on a balance between market rate and the affordable/ special needs populations.

A wide range of community facilities such as schools, meeting halls, libraries, etc. currently exist on Devens. It has been recognized that there is a strong need to retain the majority of these uses not only for the sake of the new users and residential population at Devens, but to serve the needs of the host communities and the region. As a result, many of these uses will be retained and additional uses will be encouraged to better complement and to serve the area needs. These uses should be encouraged in areas that best complement the spirit and intent of the Reuse Plan.

Business and Community Services

The area of Business and Community Services is located at the intersection of Dakota and

MacArthur Streets in the existing commercial core of Devens. It is expected to provide a smaller range of services which best serve the needs of the users in the abutting Innovation and Technology and Rail Industrial zones. Retail in the zones is not intended to compete with retail in downtown Ayer and therefore will be business-oriented and small scale.

Special Uses

There are two areas that have been designated as Special Use districts: Moore Army Airfield and the area known as Salerno Circle/Shiloh housing area. They have been designated for the purposes of setting forth special land use strategies that will be sensitive to their unique locational and site characteristics as well as providing for special development and site standards that respect abutting land uses. Initially, these areas were designated as Development Reserves which would have excluded them from development for an extended period of time. However, through the reuse planning effort it became apparent that it might be undesirable to hold these areas out of development. Furthermore, the communities wanted definition of how they would be used. Thus, the Special Use zones were established which incorporate many of the premises of the Development Reserve and contain some of the most intensive review and strict development guidelines of any of the other districts in the Reuse Plan.

Moore Airfield is unique within the Devens Regional Enterprise Zone, due to the existence of the aviation facilities. In addition, access to the site is limited. Salerno/Shiloh's uniqueness arises from its proximity to abutting rural residential areas.

The Devens Reuse Plan is essentially a comprehensive plan which embodies the reuse themes and patterns. When used in conjunction with the Bylaws, the Reuse Plan defines areas of Devens designated for specific types of use. The "spatial" definition of zoning districts (and overlay districts) will need to be more exactly defined at a later date when boundary information and detailed site survey is available. However, the area provided for each district as shown on the Devens Parcel Plans is intended to represent the limit of total area for that district (within the tolerances provided in the Bylaws). Open space is also considered a zoning district and, therefore, the area outlined in the plan and its basic linkages will be preserved as a part of the Reuse Plan.

Development of zoning, as implemented by the Bylaws, for the Reuse Plan evolved as a result of the clear definition of the patterns established through the reuse planning effort. Overlay districts for environmental protection are also defined for sensitive zones such as aquifer areas. All land in the

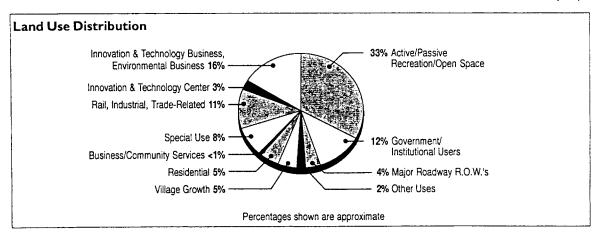
Devens Regional Enterprise Zone has been placed in one of the fifteen zoning designations developed through the comprehensive planning process, including those areas which will be used by federal agencies. A summary of the zoning districts is provided below. Goals, objectives and example uses for these zones are also provided. The permitted uses and specific requirements for each zone are contained in the Bylaws.

Open Space and Recreation

The Open Space and Recreation network is considered a primary and essential component of the Reuse Plan. The concept of this land use category is to preserve and enhance the natural beauty and sensitive natural resources of Devens and serve as a buffer and transition area for other uses. In addition, uses are expected to serve a wide range of passive and active recreational needs of the Devens Regional Enterprise Zone and the region as a whole.

Gateways I & II

The primary concept of this land use category is to provide a range of educational, cultural, institutional, and office uses that will serve as a distinct entryway



and point of arrival for Devens. The permitted uses in this zone will capitalize on the unique natural and locational attributes of the site and help define the dual vision of the Devens regional Enterprise Zone, for purposes of economic development and environmental protection.

The Gateway I site, also known as the Jackson Gateway, possesses a particular natural beauty that is to be enhanced and preserved by potential users. Additional siting and design criteria may be established by the Commission in the Regulations to ensure the future preservation of those attributes while encouraging uses that promote the Gateway theme.

In the Gateway II site, by creating a compatible scale and combination of built and open environment, the Verbeck area will feature the sense of arrival to the Devens Regional Enterprise Zone, and will respect the transition from the adjacent businesses, residential, and open space uses in Ayer. Additional siting and design criteria may be established by the Commission in the Regulations to ensure the future development of these attributes while encouraging uses that promote the Gateway theme.

Innovation and Technology Center

The primary concept of this land use category is to provide an urban center for the Devens Enterprise Zone, in which incubator ventures and a broad range of businesses are encouraged. Its combination of historic buildings and traditional open space provides an environment unique to the former base and allows for an intensity of both business and public uses that is singular to Devens. Development of design, siting, and retrofitting criteria should be flexible in order to accommodate a wide range of

users and their special needs, and any ancillary support services. A major theme is to encourage and promote the development of academic and educational support links for the entire Devens Regional Enterprise Zone.

Innovation and Technology Business

The primary concept of this land use category is to provide space to those industries and businesses that develop and require additional facilities within Devens or that relocate there. Permitted uses in this land use category exhibit and/or will be encouraged to exhibit one or more of the following qualities:

- ➤ Development or sale of an improved or new product or service.
- ➤ Expansion of a business.
- ➤ Education/Academic links.
- ➤ Research and Development orientation.
- ➤ Business connections or support services to other industries on Devens.

It is recognized that this land use category is intended to accommodate a wide variety of uses in a development pattern that is of relatively higher intensity that of other areas in the Devens Regional Enterprise Zone, particularly with regard to new construction activity. High standards for site planning will be encouraged to address significant site characteristics, including topography, existing vegetative cover and tree canopy, proximity to water and wetlands, and proximity to and sensitivity toward adjacent uses.

Residential I

The primary concept of this land use category is to foster the evolution of a residential neighborhood at Devens, intending to meet housing needs for residents of the towns in the Devens area. The reuse of the existing housing stock will be encouraged, as well as future development of additional housing types, provided that nothing contained herein shall prevent the demolition of housing stock as needed.

Additional siting, density, and design criteria may be established by the Commission in the Regulations to ensure:

- ➤ Compatibility with adjacent land uses.
- > Sensitivity to visual impacts.
- > Reuse of existing structures, where feasible.

Residential II

The primary concept of the Residential II land use category is to develop housing to serve the residential needs of Devens. This category will also allow space for professional office and service uses that will be accessory to the primary residential use or a home occupation. The reuse of the existing housing

stock and construction of new infill housing for residential and accessory office space will be encouraged in a manner that complements the historic Vicksburg Square. Development of a diverse and stable residential core, as well as small-scale professional office and service space, are considered compatible and vital components of this Reuse Plan and every effort will be made to ensure a sensitive and appropriate blend of these uses.

Additional siting, density, and design criteria may be established by the Commission in the Regulations to address the following concerns:

- ➤ Compatiblity with adjacent land uses.
- ➤ Visual impacts.
- ➤ Reuse of existing structures, including historical structures, where feasible.
- ➤ "Number of employee" and other restrictions for professional office and service uses.
- ➤ Parking needs evaluation and requirements.

Business and Community Services

The primary concept of this land use category is to provide a mix of small-scale commercial, retail, and service uses which complement and support the businesses in Devens and the personal needs of persons working in Devens.

Incubator Uses

Incubator uses are allowed in many of the districts and are designed to recognize and provide for the unique needs of emerging businesses and industries. The incubator theme is considered a significant component of the Reuse Plan as it provides incentives to fledgling technology businesses. Primary uses are expected to exhibit one or more of the

following qualities:

- ➤ Use of flexible, pre-existing space.
- ➤ Need for strong infrastructure support.
- ➤ Support for ITB and ITC uses.

Environmental Business

The concept of this land use category is to locate and site industries that contribute to or capitalize on the increasing sensitivity to and awareness of environmental remediation and recycling, and the development of products emanating from these activities. These businesses and industries may range from those that use traditional industrial recycling processes to businesses that apply new remediation technologies or businesses that manufacture pollution abatement equipment.

Special Use I: Salerno/Shiloh Special Use II: Moore Army Airfield

In Special Use I, the primary concept of this land use category is to attract business activities that will reflect the intent and spirit of the Innovation and Technology Zone without the more intrusive or larger scale industrial component.

The primary concept of the Special Use II areas is to allow a broad range of industrial, light industrial, office, and research and development uses. The compatibility of these uses with the possible retention of local air service at Moore Army Airfield will be encouraged. In acknowledgment of the possible retention of local aviation uses, events shall be allowed with special regulation. Uses supporting and complementing the adjacent Innovation and Technology and Environmental Business zones will also be encouraged. Buffers may be required between adjacent areas in Ayer along and near Route 2A.

In order to ensure sensitive and responsible use of the Special Use I area, due to their proximity to adjacent land use, the Commission will be required to consider the following use and siting criteria when reviewing development proposals:

- ➤ Impacts on adjacent uses.
- Degree of visibility from strategic viewing points on Prospect Hill in adjacent areas of Harvard.
- ➤ Aesthetic quality of site development.
- ➤ Buffering/Screening of development.
- ➤ Site lighting designed to minimize visibility from surrounding areas.
- Preservation of existing vegetation, where feasible.

Village Growth District I

The primary concept of this land use category is to provide commercial expansion and enhancement opporutnities for Shirley Village, while at the same time respecting the scale of the existing businesses and abutting neighborhoods. The intent is to accommodate a variety of retail, service, and office uses of small to medium size.

The Commission shall be required in its Regulations to establish design concepts which further the goal of creating a commercial center which respects village scale and layout. Said site design standards shall address issues of setback, location of parking, orientation of buildings to roadways, landscaping, site access and circulation, general compatibility of building massing with the existing village, and related considerations. At the same time, it is intended that design options remain flexible, so as to encourage high quality and creativity in site and building design.

3000 Feet

Additional siting and design criteria shall be established in the Regulations to address issues relating to:

- ➤ Buffer/Screening requirements.
- ➤ Visual compatibility with the Shirley Village environment.
- ➤ Height restrictions.
- ➤ Options for clustering of buildings and flexible design that enhance connections to the existing ShirleyVillage.

Village Growth District II

The primary concept of this land use category is to provide an area for small-scale development involving office, light industrial, research and development, and compatible cultural, conference, and institutional types of uses, in a manner that is harmonious and in scale with abutting areas of ShirleyVillage.

Additional siting requirements may be established by the Commission in order to be responsive and sensitive to adjacent uses. Any such additional requirements shall consider the following:

- ➤ Buffer requirements.
- ➤ Site-specific design requirements.
- ➤ Retention of existing active recreation uses within this category.

Water Resources Protection Zones

The Water Resources Protection zones comprise an overlay district over the entire Devens Regional Enterprise Zone. The purpose of these zones is to protect water quality of all surface and groundwater resources by measures outlined in the Bylaws.

Wetlands Protection

Wetlands protection in the Reuse Plan starts with the initial concept for open space which incorporates the most significant resources in a protective network. All but thirteen (13) acres of the on-site wetlands, according to the Draft Environmental Impact Statement (DEIS), are in the Open Space District. The Reuse Plan commits to the mapping of important resources as part of development of an Open Space Plan after Super Town Meeting. Once delineated, important wetlands and habitats will be protected through legal mechanisms.

All wetlands within the Devens Enterprise Zone are protected by the Devens Enterprise Commission, in its statutory role as Conservation Commission. The standards are delineated in the Massachusetts Wetland Protection Act, Chapter 131, and its implementing regulations, 310 Code of Massachusetts Regulations.

There has been significant comment from the public during reuse planning on the protection of buffer zones. While state regulations will allow the DEC to restrict or prohibit development in the 100 foot buffer zone around certain wetlands, the Bylaws provide even more control. The Bylaws adopt the Massachusetts Association of Conservation Commissions model bylaw language for buffer zones and then go beyond this standard by establishing restrictions on buffer zone activities as follows:

- ➤ No site alteration may occur within 25 feet of a resource edge.
- ➤ No building may be constructed within 50 feet.

Floodplain Protection Districts

The Bylaws set forth specific floodplain districts as delineated by the Flood Insurance Rate Maps.

Protective measures for these areas are provided.

Zone Districts Goals and Objectives

Open Space and Recreation

Goals and Objectives

- > Provide a strong open space network.
- ➤ Preserve and enhance the natural beauty and sensitive natural resources of Devens.
- ➤ Serve the wide range of active and passive recreational needs of the site and the region.
- Encourage tourism.
- > Serve as a transition zone for other uses.
- > To buffer and enhance other uses.

Example Uses

- ➤ Nature Center/River Corridor
- ➤ Bike & Equestrian Trails
- ➤ Linked Open Space

- ➤ Native American Cultural Center
- ➤ Golf Course
- ➤ Conference Center
- ➤ Museum Space
- ➤ Conservation Land/Critical Resource Areas
- ➤ Wildlife Refuge
- ➤ Active & Passive Recreational Facilities
- ➤ Camping

Gateway I: Jackson

Goals and Objectives

- Provide for a range of educational, institutional and office uses that will define a distinct entryway and point of arrival for Devens.
- ➤ Siting and design criteria that will encourage sensitive use of the unique natural and locational features of the site.
- Encourage uses that will help define and reflect the vision of the Devens Regional Enterprise Zone.
- ➤ Enhance and preserve the natural beauty of the area.

Example Uses

- ➤ Small-Scale Office
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses

Gateway II: Verbeck

Goals and Objectives

- Provide for a range of institutional and educational uses.
- ➤ Permitted uses to further reflect and define the area as a distinct entryway and point of arrival.
- ➤ Encourage uses that help define and reflect the vision of the Devens Regional Enterprise Zone.
- Additional siting and design criteria that will guide future development to reflect the Gateway

Innovation and Technology Center

Goals and Objectives

- ➤ Create an environment that nurtures start-up
- ➤ Enhance and preserve the natural beauty of the area.

Example Uses

- ➤ Small-Scale Office
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses

Gateway II: Verbeck

Goals and Objectives

- ➤ Provide for a range of institutional and educational uses.
- ➤ Permitted uses to further reflect and define the area as a distinct entryway and point of arrival.
- ➤ Encourage uses that help define and reflect the vision of the Devens Regional Enterprise Zone.
- ➤ Additional siting and design criteria that will guide future development to reflect the Gateway concept.
- ➤ Uses to reflect the transition from the adjacent land uses.

Example Uses

- ➤ Small-Scale Office
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses
- ➤ Ancillary Group Residences

Innovation and Technology Center

Goals and Objectives

➤ Create an environment that nurtures start-up ventures and commercial application of new technologies and production processes.

- ➤ Generate future potential users for existing sites/ buildings at Devens.
- Provide a central point to deliver training and educational programs to government, industry, and individual clients.
- ➤ Consider adaptive reuse of Vicksburg Square as an academic research & development campus and worker training center.
- ➤ Flexible design, siting and retrofitting criteria to be established that will accommodate a wide range of users and their special needs including ancillary support services.
- ➤ Encourage and promote development of academic and educational support links for the entire site.
- ➤ Allow flexibility in location of Innovation and Technology Center.

Example Uses

- ➤ Full and Small-Scale Office Uses
- ➤ Incubator Businesses
- ➤ Light Industry
- > Research & Development
- ➤ Conference Facilities
- Cultural and Exhibit Space
- ➤ Academic and Institutional Uses

Innovation and Technology Business

(Includes Army Reserve Enclave, Transitional Use Area and Federal Bureau of Prisons Site)

Goals and Objectives

- ➤ Provide space to those industries and businesses that develop and require on-site expansion.
- ➤ Provide space to accommodate industries and businesses that want to relocate to Devens or have large or difficult siting requirements.
- ➤ Encourage uses that exhibit one or more of the following qualities: development or sale of a new product or service, expanding business, educational/academic links, research and development

Example Uses

- ➤ Full and Small-Scale Office Uses
- ➤ Incubator Businesses
- ➤ Light Industry
- ➤ Industry
- > Research and Development
- ➤ Health Care
- ➤ Academic and Institutional Uses

Rail, Industrial, and Trade-Related

Goals and Objectives

- ➤ Provide sites to businesses that utilize or rely in whole or in part upon rail transportation or intermodal links.
- ➤ Other uses should support and enhance railrelated uses.
- ➤ Attract new manufacturing industries not currently represented in the region due to a shortage of large available sites with rail access.
- > Promote rail-based export shipments.
- ➤ Rail-related uses are expected to exhibit one or more of the following qualities: a degree of reliance on access to the existing rail infrastructure, multi-modal links to transport goods and services, or support trade-related business in moving goods and materials to new markets.

Example Uses

- ➤ Environmental Uses with Rail or Distribution Links
- ➤ Light Industry
- ➤ Industry
- ➤ Research & Development with Rail or Distribution Links
- ➤ Academic and Institutional Uses
- ➤ Incubator Uses

Residential I

Goals and Objectives

- ➤ Provide for a range of housing needs for a variety of populations and to meet the needs of surrounding communities.
- ➤ Encourage the reuse of existing housing stock and compatible new housing types.
- ➤ Promote the evolution of a neighborhood at Devens.
- ➤ Encourage reuse of existing structures including historic structures where feasible.
- ➤ Design and siting criteria to be established which will encourage compatibility with adjacent uses and discourage negative visual impacts.
- Avoid negative impacts on off-site housing market.

Example Uses

- ➤ Single Family
- ➤ Two Family
- ➤ Multi-Family
- ➤ Elderly/Congregate Housing
- ➤ Active and Passive Recreational Uses
- ➤ Nursing Home Facilities

Residential II

Goals and Objectives

- ➤ Residential uses set forth in the Residential I zone apply.
- ➤ Design and reuse criteria as set forth in Residential I.
- ➤ Design and retrofitting criteria for reuse and new infill construction to be sensitive to and complimentary to historicVicksburg Square.
- Small professional office space to be allowed as an accessory use; employee restrictions and additional parking requirements will apply.

Example Uses

➤ Residential Uses as noted above

- ➤ Open Space
- ➤ Active and Passive Recreational Uses
- ➤ Accessory Use: Professional Office Space with employee limitations.

Business/Community Services

Goals and Objectives

- Provide for a mix of small-scale commercial, retail, educational and institutional uses and services.
- ➤ Uses are expected to serve the needs of the users of Devens.
- ➤ Encourage provision of services that support regional commercial base.

Example Uses

- > Free-Standing Retail Businesses
- ➤ Convenience Retail Uses
- ➤ Small-Scale Office Uses
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses
- ➤ Lodging

Village Growth District I

Goals and Objectives

- Provide commercial expansion and enhancement opportunities for Shirley Village, while at the same time respecting the scale of the existing businesses and abutting neighborhoods.
- ➤ Accommodate a variety of retail, service, and office uses of small to medium size.
- ➤ Siting and design criteria to be established for the purposes of encouraging design options that remain flexible, so as to encourage high quality and creativity in the site and building design.

Example Uses

➤ Retail Center

- ➤ Free-Standing Retail Businesses
- ➤ Convenience Retail Uses
- ➤ Small-Scale Office Uses
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses
- ➤ Lodging

Village Growth District II

Goals and Objectives

- ➤ Provide for a compatible mix of small-scale uses in a low intensity district that respects the scale of the adjacent Shirley Village neighborhood and the Village Growth District I.
- ➤ Offer long-term economic expansion possibilities beyond those created by the Village Growth District I.
- ➤ Establish siting and design criteria that promote the preceding overall goal, by designating criteria such as buffering and screening requirements, visual impacts and height restrictions.

Example Uses

- ➤ Small-Scale Office Uses
- ➤ Light Industrial
- > Research and Development
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Academic and Institutional Uses
- ➤ Lodging

Environmental Business

Goals and Objectives

- ➤ Locate and site industries that contribute to and capitalize on environmental businesses and emerging technologies.
- ➤ Uses may range from businesses that use traditional industrial recycling processes to those industries using new remediation technologies.
- ➤ Uses which support other environmental,

innovation and technology-related businesses that promote the concept of sustainability.

Example Uses

- ➤ Environmental and Emerging Technologies and Processes
- ➤ Light Industry with Environmental Component
- ➤ Research and Development with Environmental Component
- ➤ Incubator Businesses

Special Use I

Goals and Objectives

- ➤ Attract and site businesses that reflect the spirit and intent of the Innovation and Technology zones without the industrial component.
- ➤ Light assembly or manufacturing of innovative or high-technology products will be allowed.
- ➤ Due to sensitive adjacent uses, additional siting and design criteria are required including: impacts on adjacent uses; visual impacts; aesthetic quality of site development; impacts on surrounding view corridors; buffering and screening; site lighting; and preservation of existing vegetation where feasible.

Example Uses

- ➤ Full and Small-Scale Office
- ➤ Research and Development
- ➤ Cultural and Exhibit Space
- ➤ Conference Facilities
- ➤ Health Care
- ➤ Incubator Businesses
- ➤ Academic and Institutional Uses

Special Use II

(Includes Army Reserve Aviation Facility, Transitional Use Area, Moore Airfield)

Goals and Objectives

- ➤ Attract and site businesses that reflect the spirit and intent of the Innovation and Technology zones and the Environmental Business zone.
- ➤ Encourage uses that utilize the unique attributes of Moore Army Airfield, including aviation uses and interim event-type uses.
- ➤ Encourage uses that support Innovation and Technology and Environmental Business.

Example Uses

- ➤ Aviation-Related Uses
- ➤ Full and Small-Scale Office
- ➤ Industry
- ➤ Light Industry
- Environmental Uses
- ➤ Incubator Businesses
- ➤ Academic and Institutional Uses

Federal Property Transfers/U.S. Army

A major factor shaping the Reuse Plan is the land to be retained by the Army and the other federal uses. The U.S Army Reserve enclave, the U.S. Fish and Wildlife Service Oxbow Wildlife Refuge expansion, the Federal Bureau of Prisons Medical Facility and the U.S. Department of Labor Job Corps training center will all occupy sites that need to be integrated into the overall Reuse Plan for Devens. These federal uses are briefly discussed below.

Department of Defense Requests

The Department of Defense has retained several

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parcels for continued use by the military after the anticipated closure in 1995. While these requests are currently being changed and refined, several areas appear most likely to be retained by the military. These include the entire South Post and the following portions of the Main and North posts.

Army Reserve Enclave

The Army Reserve Enclave, located in the center of the Main Post on approximately 182 acres, provides facilities support to the Army Reserve organization at Fort Devens. The enclave will also contain facilities for the active Army component remaining on Fort Devens to support the reserve training activities.

Army Reserve Regional Training Site

The Army Reserve Regional Training Site, containing the "Earmuff" building on approximately 132 acres on the west side of the Nashua River, will be used to provide technical training support and certification for area maintenance, medical and intelligence reserve units. This facility will consolidate these activities, currently scattered throughout the post.

Army Reserve Aviation Facility

In addition, the Army Reserve Aviation Facility on approximately 84 acres might be retained on the North Post to support the Army Reserve units. This includes the existing hangars and heliport facilities used by reservists.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service has requested control over two areas on the Main Post at Fort Devens. The first is located north of Route 2 and south of the Cutler Army Hospital area

and contains upland forest and wetlands. The acquisition of this property would connect to the Oxbow National Wildlife Refuge on the south side of Route 2 and extend the boundaries of the refuge. The other area requested by the Fish and Wildlife Service are the floodplain, wetlands, and other natural areas along the Nashua River.

Federal Bureau of Prisons

The Federal Bureau of Prisons examined Fort
Devens as a potential location for a federal prison
and medical facility. After considering several sites
on the base, the Bureau selected a site in the
southern portion of the Main Post that contains
portions of the existing golf course, the Cutler
Army Hospital, and the steep ravines to the east of
Mirror Lake. The site is approximately 245 acres.

McKinney Act Organizations

This issue remains in a state of flux. Under federal McKinney Act screening, at least five (5) homeless housing organizations have filed Letters of Interest or formal applications with the Department of Health and Human Services, for a substantial portion of the existing Base housing. A recent amendment to the McKinney Act increases the involvement of the local redevelopment authority in the decision-making process, which could have a significant effect on these impending requests.

It is the intent of the Reuse Plan to provide a stable and diverse residential community, with market rate, moderate and low income, and special needs populations all represented in the residential area. It is recognized that the success of the residential reuse is dependent on a balance between market rate and the affordable/special needs populations.

The Reuse Plan calls for a maximum of 282 residential units, approximately twenty five percent (25%) of which will be reserved for low and moderate income individuals or families, or special needs populations.

Job Corps Center

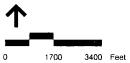
The Department of Labor has requested approximately 25 acres for a job training center for approximately 340 resident students. The proposed Job Corps Center will be located in the area of the Verbeck Housing area. The Verbeck housing will be demolished to accommodate the new job training facility.



DEVENS

Illustrative Plan

August 1994





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INFRASTRUCTURE

During the 1980's Fort Devens functioned much like a small city with a daytime population exceeding 15,000 people. This level of activity required an infrastructure system similar to that of a small city including water supply, sanitary sewerage, stormwater drainage, electric power, natural gas, and telecommunications. The systems on the Fort are generally in good condition and will support substantial reuse. The Reuse Plan calls for the utilization of the existing systems to the maximum extent possible with some changes and improvements phased over time to keep pace with demands generated by reuse. The creation of the Devens Regional Enterprise Zone which crosses traditional town boundaries allows the systems to be kept as a single system under one jurisdiction.

Major improvements will be needed to bring existing systems up to standards necessary to support modern day technology-based company requirements. For instance, the existing wastewater treatment plant will have to replaced in the early phases in order to be in compliance with current standards. Consistent with the overall goals for the Reuse Plan, all infrastructure solutions must be accomplished in an environmentally sound manner balancing the need for economic development with the need for environmental protection.

Wastewater

The Reuse Plan calls for the construction of a state-of-the-art Wastewater Treatment Facility (WWTF) on the North Post at the location of the existing facility which will remain in use on an interim basis, as outlined in the <u>Study of Wastewater Treatment</u>
Options at Fort Devens, Massachusetts, Whitman &

Howard, Inc. April 1994. It is anticipated that the new facility will use an anoxic/aerobic activated sludge biological treatment process to handle average daily flow at full development of approximately 3 million gallons per day (mgd). It is further anticipated that it will incorporate appropriate environmental practices including recharge of treated waters to the ground, thereby replacing a large percentage of the waters drawn from the aguifer upstream. Beneficial reuses of the residual solids removed through the treatment process will be sought including stabilization to create valuable soil conditioners and conversion to fertilizer. The WWTF will be built in a modular fashion beginning with the construction of two modules with a combined capacity of 2 mgd. Initial construction is estimated to cost \$14-18 million depending upon design. The WWTF is located on land zoned for environmental business. It is hoped that innovative treatment technologies can use the WWTF as a source of waste materials for research and development consistent with sustainability goals.

Conveyance systems on-site (sewers and pumping facilities) will need little improvement initially but may have to be modified as specific users are identified and flows can be predicted. The proximity of sewers on Devens to unsewered areas of Shirley and Harvard presents an opportunity to address local needs for sewage disposal. The Reuse Plan allows the extension of a sanitary sewer to the Downtown area of Shirley where failing septic systems are a problem. The cost of extending sewer to Shirley is approximately \$5 million. A sewer could also be extended to the Route 110/111 Corridor in Harvard to serve existing and future commercial development. The cost of this improvement is also estimated at \$5 million. If it is determined that either of these extensions are desirable. a financing and operational plan should be developed.

Water Supply

Portions of the Devens Regional Enterprise Zone are underlain by water bearing sands and gravels. The water resource represented by this aquifer is a significant asset to reuse, capable of delivering a safe yield through the four existing groundwater wells on Devens of approximately 5 million gallons per day (mgd). This supply is in excess of the expected demand at full development in 20-40 years of 3 mgd. A study conducted for the Reuse Plan indicates that the total water resource is actually much greater than the safe yield of existing wells, however, the Reuse Plan does not anticipate the need to develop new sources for withdrawal beyond 5 mgd, as outlined in the report entitled <u>Water Resources</u>

<u>Protection Plan</u>, Vanasse Hangen Brustlin, Inc., 1994.

While strong water supply is an attraction for certain industries, the Reuse Plan recognizes the importance and the sensitivity of this resource for the surrounding towns and provides for its protection. A Water Resource Protection Plan has been developed for the Devens Regional Enterprise Zone with the stated goal of providing an appropriate level of protection for all water resources on Devens including both surface and groundwater. The Bylaws, which implement recommendations contained in the Plan, divide the site into four zones with varying levels of protection. Specific rules are provided for activities in each zone ranging from general requirements for stormwater drainage to specific requirements for storage of hazardous materials. The Rail/Industrial area, which includes land over areas of the aquifer, will have additional features to protect groundwater including a community stormwater management system which will be phased-in to meet anticipated flows from reuse.

Transportation

On-Site Transportation Systems

The Main and North Posts of Fort Devens have significant transportation assets that help make this location valuable for reuse. The existing roadway system consisting of 91 miles of paved road will support substantial new development. These roadways provide convenient access to Ayer and Shirley and to Route 2 through a grade-separated interchange. The property has direct access to regional rail lines operated by Guilford Transportation (B&M), which operates a rail yard near Barnum Road. Commuter Rail Stations located in Ayer and Shirley provide regional access for commuters a short distance from the site.

Many transportation issues were raised by the public during the reuse planning workshops and by the transportation task force which have helped to shape the Reuse Plan. These include:

- ➤ The need for a north-south link through the property to provide convenient access to downtown Ayer for shopping opportunities and to provide through movements for vehicles seeking to access Route 2.
- ➤ The need to accommodate east-west traffic between the Barnum Road area and the Shirley gate providing access to Shirley residents.
- ➤ The need to emphasize access to the site for commuter and truck trips through the Route 2 interchange, to reduce traffic impacts on host communities.
- ➤ The need to take advantage of rail assets on the property to encourage redevelopment and nearterm employment.
- ➤ The need for an integrated pedestrian/bicycle and open space network with links throughout the site.

- ➤ The need to review options for MacPherson Road which would improve its viability to serve North Post uses and to provide a bypass around downtown Ayer.
- ➤ The need to upgrade commuter rail services to reduce single occupant vehicle trips to the site.
- ➤ The desires expressed by workshop participants resulted in the adoption of existing gates as the primary access points to the base in the Reuse Plan. Substantial opposition was noted in the workshops to any new vehicular access to areas of Harvard to the east because of potential traffic impacts on existing residential neighborhoods. The Reuse Plan does not contemplate reopening any of these access points.

To implement the Fort Devens Reuse Plan, a hierarchical street system is provided. The existing two-lane roads on Fort Devens are expected to have adequate capacity to accommodate increased peak hour vehicle trips for some time. With full realization of the Reuse Plan, Jackson Road and Patton Road will need to be widened to four lanes to handle peak traffic volumes. This additional roadway capacity is not expected to be needed until significant development occurs at Fort Devens. In the short-term, less significant improvements to the major Fort Devens roads would enhance the development plan.

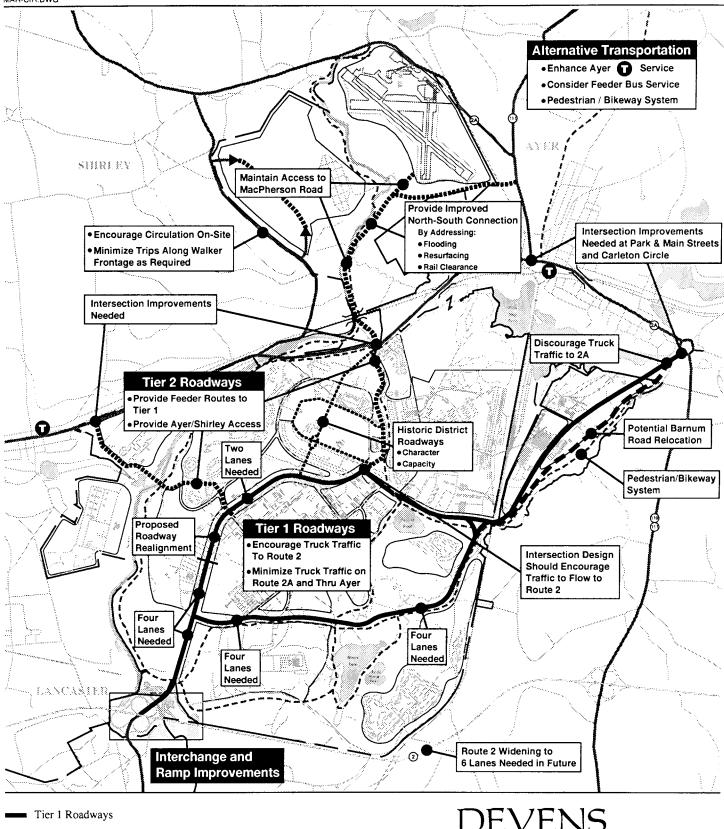
First, it is recommended that Patton Road be realigned in several locations to smooth curves and round corners at intersecting roadways. Increasing the vertical clearance at the railroad underpass (now 13 feet, 6 inches) and channelization and/or signalization improvements at the Patton Road/ Dakota Street intersection should also be considered. These improvements will facilitate access to Route 2 from the major rail/industrial districts on either side of the B&M's Hill Yard. Such access, especially for trucks, will reduce impacts on local

communities, when compared to using Barnum Road to the Ayer Rotary.

A second series of improvements is recommended to create a continuous north-south corridor through Fort Devens without penetration of the Vicksburg Square historic area. This is necessary to maintain a convenient connection from the base to downtown Ayer to encourage shopper traffic and to address potential cut-through traffic seeking access to Route 2. Jackson Road will be realigned to meet Sherman Avenue at its intersection with Givry Street. Sherman Avenue will be realigned to meet MacArthur Avenue in the vicinity of Pine Street. This latter project will require a portion of land in the northwest corner of the proposed Army Reserve enclave. A third series of improvements may be necessary for movements on the east/west corridor including potential realignment of Barnum Road to consolidate rail and trade-related parcels. Sufficient right-of-way will be provided to allow a later decision about the design of priority movements at the intersection of Mac Arthur and Dakota Streets.

On and near the North Post, north-south access alternatives to Routes 2A/III, involving upgrading MacPherson Road or other strategies, must be examined from an engineering design perspective. MacPherson Road is constrained by seasonal flooding and low height bridge clearance. A commitment has been made to a detailed engineering study of the MacPherson Road corridor.

In a larger transportation context, traffic problems at key intersections within the Town of Ayer, including Park and Main Streets, and Carleton Circle, are being studied in a MEPA Environmental Impact Report. Transportation Demand Management measures covering Devens can also help



Tier 2 Roadways

Historic District Roadways

Pedestrian/Bikeway System

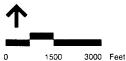
Bridge

Commuter Rail

DEVENS

On-Site Internal Circulation Issues

November 1994





mitigate traffic impact, by reducing individual automobile trips.

As reuse of the base progresses, the minor roadways will have to be reviewed for capacity and safety. Individual roadways will require improvements such as signage, pavement markings, and guard rails to meet current municipal and state standards.

Truck Traffic

Several measures will be considered to reduce potential truck impacts on local roadways and to downtown Ayer and Route 110/111 in Harvard. These include encouraging truck traffic to use Route 2 by providing easy access through improvements to Barnum and Patton Roads. Primary truck routes on-site will be Jackson Road, Patton Road, Barnum Road, and the Sherman MacArthur Corridor. Signage and geometry along these routes will orient truck traffic to Route 2 and away from Carleton Circle thereby reducing potential impacts. Appropriate geometry will be provided at the Dakota Street/MacArthur Street intersection to allow a convenient movement by trucks to the south. Monitoring will be performed to assess impacts of these trucks on local streets. Additional measures such as truck restrictions at Barnum Gate will be considered if truck impacts on local streets require further mitigation. All new users with significant truck use at Devens will be required to file truck routing plans and permits may be issued stipulating truck routes.

Transportation Demand Management

The Devens Reuse Plan incorporates several transportation initiatives to reduce vehicle trips and utilize alternative modes of transportation consistent with environmental goals for the project.

These include:

- Promotion of the use of commuter rail for employee access to the site including consideration of on-site shuttle service to Ayer Station.
- Creation of extensive pedestrian and bicycle routes through the open space network and along major roadway corridors.
- ➤ Use of the existing rail access to promote railand trade-related industries.
- ➤ Use of on-site truck restrictions to avoid off-site truck impacts, where feasible and appropriate.
- ➤ Pursuit of innovative transportation technology at Devens as a research and testing site. Pilot projects for innovative rail technology and people movers might be developed as part of the on-site system.

Further potential measures for reducing automobile traffic to Devens include:

- ➤ Establishment of a Transportation Management Association, which is commonly employed as the mechanism for coordination and supporting demand reduction efforts in a TDM program.
- ➤ Promotion of ride-sharing through various initiatives.
- ➤ Development of a parking management plan, and priority high occupancy vehicle (HOV) spaces.
- ➤ Development of park and ride facilities.
- ➤ Establishment of HOV lanes.
- ➤ Promotion of flexible work hours.

Off-Site Transportation Issues

Various off-site transportation issues have been identified as a result of build-out analyses of projected land uses in the Draft Environmental Impact Statement (DEIR). Study locations were identified through various public forums and by regional transportation network analyses. Trip generation, trip distribution, and intersection analyses were conducted to assess the traffic impacts of the Reuse Plan. Mitigation has been identified for both on- and

off-site transportation impacts. Four major off-site intersections that have been identified as requiring specific mitigation measures to negate the projected impacts include:

Route 2/Jackson Gate

Traffic at the Jackson Road/Route 2 interchange will increase as a result of the reuse of Fort Devens because of the greater commuter orientation of the Reuse Plan. With fewer people living at Fort Devens, the number of short distance trips from residential areas on the base to schools, shopping and recreation areas in downtown Ayer and other adjacent communities will decrease. For these reasons, the Verbeck Gate (MacArthur Road and West Main Street in Ayer) will be displaced by the Jackson Road interchange as the primary access to Fort Devens.

The Jackson Road interchange with Route 2 offers the future users of Fort Devens substantial capacity for growth despite its somewhat "tight" geometry compared to more modern interstate interchanges. The major constraint to traffic flow is a lack of lanes for acceleration and deceleration which causes friction between main line Route 2 travelers and vehicles attempting to enter and exit. In the shortterm, minor improvements should be made to the interchange to address this problem and to remove some of the conflicting movements and short weave sections that currently exist. In the long run, substantial improvements to the interchange, including widening of the Jackson Road bridge, may be needed to accommodate reuse traffic. It appears to be more cost-effective to improve the existing interchange than to create a new interchange to the east.

Significant existing traffic volumes on Route 2 (about 3,000 vehicles in the afternoon peak hour in the peak direction) represent about 75 percent of the capacity on the current two westbound lanes. These conditions will be exacerbated when traffic anticipated in the Reuse Plan reaches levels in excess of those associated with the former military use and is added to the total volume. Similar capacity problems are associated with the eastbound traffic on Route 2 as it exits to Fort Devens in the morning peak period. It is anticipated that, with normal expected traffic growth, capacity thresholds will be reached at a relatively early stage of Reuse Plan implementation, raising the need for an additional through lane on Route 2 west of Jackson Gate for eastbound traffic during the AM peak hour and westbound traffic during PM peak hour. As background traffic growth and elements of the Reuse Plan begin to contribute to overall volumes, additional lanes may be needed east of Jackson Gate.

Barnum Gate/Carleton Rotary

Improvements to the rotary will be required as early stages of the Reuse Plan build-out are approached. Current plans call for the elimination of the rotary and the construction of two signalized intersections to handle vehicle movements at this location.

Park/West Main Street

Improvements to this intersection in downtown Ayer should be performed as the Reuse Plan is implemented. Signalization and widening (for exclusive turning lanes on all approaches) would improve traffic flow. Use of MacPherson Road will provide significant relief to this intersection, if flooding and bridge clearance problems can be

resolved. Use of MacPherson Road should be encouraged, subject to more detailed review of engineering and environmental alternatives analysis.

Route 2A-I 10/I-495

Signalization and widening at the interchange ramps will be necessary as growth occurs and the Reuse Plan is implemented.

Storm Drainage

Fort Devens has three principal drainage areas. The westerly half of the site drains to the Nashua River which runs through the site from south to north. The southeasterly quadrant including Mirror Lake drains to Cold Spring Brook which flows parallel to Barnum Road in a northeasterly direction. Finally, the northeasterly quadrant flows to Willow Brook originating at Robbins Pond and running northerly. These major water courses are carried in open channels with culverts generally located at roadway crossings. Flooding is evident along Willow Brook and efforts will be made to improve stormwater management in this area. Other on-site storm drainage consists of street and area drains associated primarily with roadways and parking lots.

The Reuse Plan calls for substantial improvements in stormwater management through individual site redevelopment and through phased improvement of existing drainage facilities as on-site roadways are upgraded. The Bylaws require new developments to provide stormwater facilities which control peak rates of runoff, encourage recharge and improve overall quality. Since there are no measures taken currently to control water quality, much improvement is anticipated. Impervious surfaces on Devens are expected increase from 20 percent at present to

24 percent at full development of the Reuse Plan. Despite this modest increase, total runoff volume and peak rates of runoff will be reduced through recharge and stormwater detention. Drainage facilities on the major corridors will be upgraded to provide for interception of spills, increasing the protection of groundwater quality.

Private Utilities

Electric Service

The base electrical system is operated entirely by the Army with power delivered at wholesale rates directly from high voltage lines of the New England Power Company. The 66 thousand volt lines enter the base near the Verbeck Gate, at Substation No. I. An Army-owned 66 thousand volt line is continued along the westerly edge of the base to a more recent Lake George Street Substation and then to Substation No. 2 on Patton Road. The majority of primary distribution is a 4.16 kv from Substations Nos. I and 2. Distribution from the newer LakeGeorge Street Substation is at 13.8 kv to dual feeders. The Reuse Plan anticipates distribution to new industries from the Lake George Street Substation, which is underutilized.

Natural Gas

Natural gas is supplied to Fort Devens by Boston Gas Company via an eight-inch, 60 psi transmission line connector entering along Barnum Road. Distribution to the base is a high pressure system (30 psi) from a regulator and master meter station at Patton Road/Saratoga Street. Individual buildings are generally not metered. As the Base is transferred to private ownership, gas distribution

foreach use will have to metered. Extension of gas service to the North Post will be considered

Telecommunications

Telephone service is from NYNEX. Cables and equipment are owned and serviced by NYNEX. Underground conduits and duct banks were installed by the Army. Poles are owned and maintained by the Army.

The main telephone exchange is an AT&T "Dimension 2000" analog type unit located in Building P-2. A similar telephone exchange system, connected by tie lines is located in the Cutler Hospital Building. Fiber optic cables were extended to the base by NYNEX in anticipation of the Army's transfer of the information Service Command to Fort Devens. When the cancellation of this move was announced, the fiber optic service was terminated at Verbeck Gate. The Army will extend fiber optic cable onto the base and install a new ISDN switch at Building P-2. This new switch will substantially enhance the base to high tech users which require high level communications.

OPERATION AND MANAGEMENT STRUCTURE

The Legislation

In order to promote the expeditious and orderly conversion and redevelopment of Fort Devens for non-military uses, the General Court approved and the Governor signed into law, Chapter 498 of the Acts of 1993 (the "Act").

The Act creates the Devens Regional Enterprise Zone and establishes the legal parameters for the governance of Devens. Devens includes that portion of Fort Devens, the Main Post and the North Post, which the Army intends to relinquish control over and certain land adjacent to Devens owned by the B&M Railroad and the Commonwealth. Since Devens includes land within the three towns of Ayer, Harvard, and Shirley, the Act provides that the redevelopment, maintenance, and control of the site will be done on a regional basis.

The Act authorizes the Land Bank to be the exclusive public agency responsible for the acquisition, control, maintenance, and redevelopment of Devens.

The Act also establishes a new public agency, the Devens Enterprise Commission, to be the agency responsible for the permitting of all proposed projects that will take place during the redevelopment of Devens. The Commission is to be comprised of twelve commissioners, six of whom are to be nominated by the selectmen of the three towns. The remaining six commissioners are to be appointed by the Governor, at least three of whom must reside in the Devens region.

The Act establishes the procedures by which the town meetings of Ayer, Harvard and Shirley will consider and vote on the approval of a Reuse Plan

and Bylaws for Devens. The Reuse Plan and Bylaws have been developed jointly by the Joint Boards of Selectmen for the three towns and Land Bank. The Act also provides that any substantial revision to the approved Reuse Plan and Bylaws must be approved by the three town meetings before becoming effective.

In anticipation of the tremendous costs involved in the acquisition, maintenance, and redevelopment of Devens, the Act authorizes the Land Bank to borrow up to \$200 million for the purposes of carrying out the purposes of the Act subject to the prior approval of the General Court. If the Reuse Plan and Bylaws are not accepted by all three towns by December 31, 1994, the Act provides that the Land Bank may, at is option, abandon its involvement with the Devens project.

Finally, the Act provides various incentives to stimulate interest from private businesses to locate their operations at Devens, including the designation of Devens as a state Economic Target and Opportunity Area and a provision authorizing application for designation of Devens as a Federal Enterprise Zone and a Federal Foreign Trade Zone.

Massachusetts Government Land Bank

The Act provides the Land Bank with broad powers necessary to maintain, operate, administer, manage, and oversee the redevelopment of Devens, including the powers customarily exercised by municipalities relating to the construction and maintenance of public works and utilities, and the maintenance of public safety, and the collection of taxes and fees. The Land Bank may use its ability to contract for services to operate and maintain Devens, which may

result in the Land Bank's contracting with one or more of the towns to furnish various services relating to public safety and public works.

Devens Enterprise Commission Role

The Commission is responsible for ensuring that the redevelopment of Devens proceeds in accordance with the Reuse Plan and Bylaws. For the purposes of implementing the Reuse Plan and Bylaws, the Commission will develop detailed regulations which shall be designed to ensure that redevelopment and activities at Devens will be carried out in a controlled and careful manner, fully consistent with the purposes and intent of the Reuse Plan and Bylaws.

Unified Permitting Procedure

One of the most unique, attractive, and far-reaching provisions of the Act involves the designation of the Commission as the singular agency responsible for reviewing and issuing the many permits and approvals that will be required for a project to proceed at Devens. The Bylaws take advantage of this unprecedented opportunity for streamlining and ensuring consistency throughout the project review and permitting stage of a proposed project by establishing a unified permitting procedure. Prospective developers and users will file a single comprehensive development permit application that will address the many areas of land-use controls administered by the Commission, including the review of issues relating to zoning, subdivisions, wetlands, historic districts, public health issues, and the issuance of

building permits.

The unified permitting procedure streamlines the state and local permitting procedures and provides for differing levels of review of a project depending upon the scope, degree of complexity, and potential impact on the environment of each proposed project.

Phased Development

Due to large tracts of developable land that will be available for development at Devens, it is appropriate to incorporate a plan for phased development (the "Phasing Plan"). Implementation of the Phasing Plan will ensure that development will proceed in an orderly fashion, responsive to market demands, infrastructure requirements, environmental cleanup, demolition and cost considerations. It is also recognized that the Phasing Plan should allow utilization of open space and recreational facilities and the maintenance and improvement of infrastructure throughout Devens.

In order to achieve these various objectives, the Phasing Plan establishes three phases for the development at Devens, which are delineated in detail on the Phased Development Plan. In accordance with the parameters outlined below, the development during Phase I shall proceed in the zoning districts delineated on the Phasing Plan as Phase I; development during Phase II shall proceed in the zoning districts delineated as Phase II on the Phasing Plan; and development during Phase III shall proceed in the zoning districts delineated on the Phasing Plan as Phase III.

A substantial portion of Devens is included in Phase I. The major areas included in Phase I are as follows:

- > All of the open space and recreation district.
- ➤ The wastewater treatment plant.
- ➤ Innovation and Technology Business sites in the vicinity of Jackson Road and Robbins Pond.
- ➤ The Rail, Industrial and Trade-Related District.
- ➤ The Business/Community Services District.
- ➤ The Residential Districts.
- ➤ A portion of the Environmental Business District.
- ➤ The Gateway I District.
- ➤ A portion of the Innovation and Technology Center.
- ➤ The Gateway II District including the Job Corps Training Center.
- ➤ A portion of the Village Growth District in Shirley.

Phase II development expands upon the activity in Phase I. The major areas included in Phase II include:

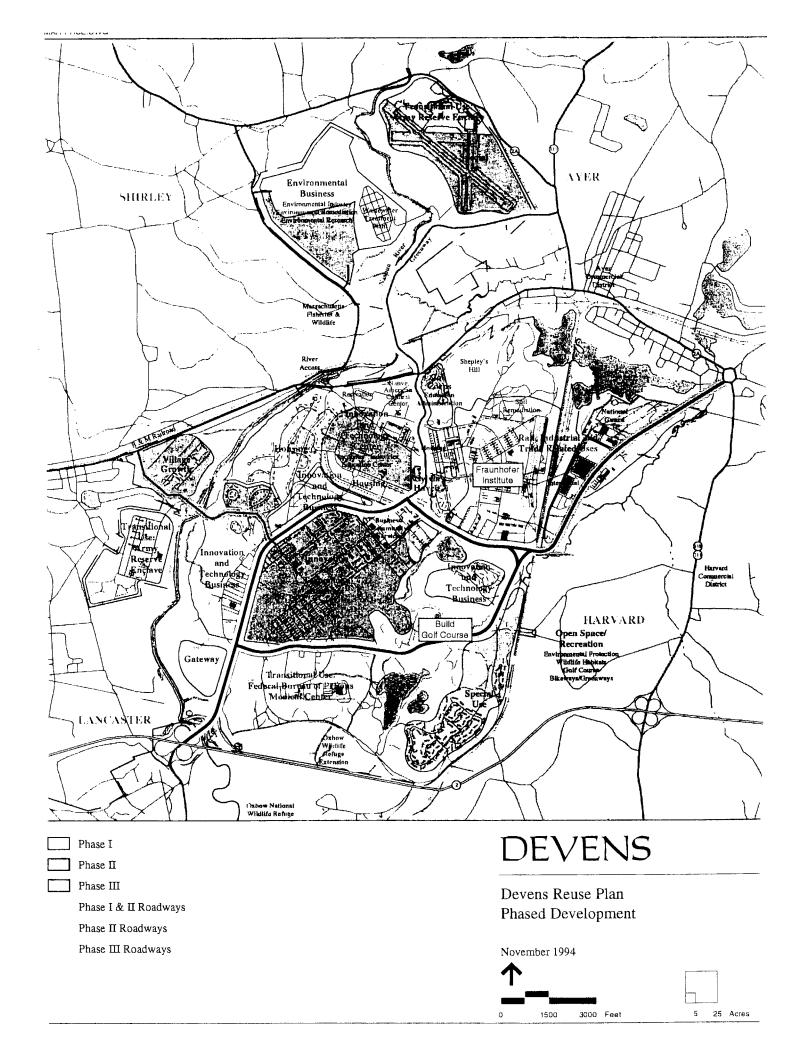
- ➤ The Innovation and Technology Business District located east of Jackson Road in the central portion of the site.
- ➤ The remainder of the Environmental Business District in Shirley.
- ➤ The Special Use II District including the former Moore Army Airfield. Upon completion of a pending market analysis, this area may be shifted forward into Phase I.
- ➤ Additional Village Growth District in Shirley.

Phase III is the last phased development program. Phase III includes:

- ➤ The Special Use I District, formerly known as the Salerno/Shiloh site.
- ➤ The Army Reserve Enclave lands occupied in the Moore Army Airfield area and the "Earmuff" area.
- ➤ The National Guard Site.

The Phasing Plan must be flexible and capable of being adjusted based upon actual market conditions. Therefore, the phasing delineated on the Phasing Plans for Phases I, II and III shall also be subject to the following conditions:

- ➤ Due to the uncertain future of military activity at Devens, the Army Reserve Enclave areas and the National Guard property have been included in the last two phases of development. In the event that these parcels become available for development earlier than their specified phase, these parcels are immediately included in the current phase of development.
- ➤ The reuse potential of the Moore Army Airfield including the Special Use II District and the Reserve Enclave, is currently being studied in greater detail. Upon identification of near-term viable market uses, the Land Bank may submit written notification to the Joint Boards of Selectmen (JBOS) of the conclusions of the study, including a copy thereof, and include this district in Phase I.
- ➤ If the Land Bank receives bonafide letter(s) of intent by a public or private entity to utilize or develop a parcel of land that exceeds the land area that is available for such development during the current phase, the Land Bank may, after supplying notice to the JBOS as provided above, proceed to accept the commitment and proceed to implement the development proposal.
- ➤ Upon the sale, lease, development, or receipt of bonafide letter(s) of intent to use more than fifty (50%) of the total land area within a particular district in a current phase of development, all of the remaining land in that district in the designated subsequent phase of development, shall be accelerated into the current phase of development. The Land Bank shall provide written notice to the JBOS of such action. The notice shall include certification of letter(s) of intent having



been received, and plans delineating land areas developed or committed.

- ➤ The Special Use I District, known as the Salerno/ Shiloh area, is currently included in Phase III. Upon sale, lease, development or receipt of bonafide letter(s) of intent to use more than fifty percent (50%) of the total acreage in the Phase II Innovation and Technology District(s), (excluding federal and state lands, and open space), Phase III will commence, and these lands will be eligible for reuse and development.
- ➤ If the Land Bank receives bonafied letter(s) of intent from a public or private entity to develop or utilize a parcel in a zoning district which is not yet available for use under the Phasing Plan, the Land Bank may submit a written request to the JBOS for approval to utilize or develop the parcel. That request shall include certification that a letter of intent has been received and a plan is available showing the proposed development. The JBOS shall act on such request within fifteen (15) days of receipt thereof. If the JBOS acts favorably on the Land Bank request, the parcel is thereby included in the current phase of development. Such action shall not be considered to result in the opening of the entire zoning district where that parcel is located for utilization or development during the current phase.

It is important to note that all activities related to open space and recreation, utilities provision and maintenance of streets and other infrastructure throughout Devens are allowed in Phase I. Furthermore, the preservation, maintenance and reuse of existing buildings, structures and facilities throughout Devens, in accordance with the Reuse Plan and Bylaws, are also allowed in Phase I and therefore are not subject to any other phased development provisions.

CONCLUSION

Fort Devens is analogous to a small city that is slowly being abandoned. When the military withdrawal is complete, responsibility must be assumed for the maintenance of existing facilities. The "small city" must eventually generate revenue so it is not a perpetual drain on local or state governments. Special new administrative and legal mechanisms need to be established on a regional basis, because Devens lies in several host communities. New fiscal strategies need to underlie this process, to avoid inequitable burdens.

To institute an effort of this complexity, a Reuse Plan is needed, accompanied by rules and regulations which will establish the necessary land use control structure. The significant "up front" capital investment requirements have to be identified and funded. A public entity armed with sufficient authority and powers required to fund and execute the Reuse Plan needs to be involved, and a regional mechanism for regulating the development needs to be created. Environmental and site constraints need to be considered and addressed. Local concerns need to be institutionalized within a binding Reuse Plan.

The present Reuse Plan, the proposed Bylaws, and the numerous parallel planning efforts, collectively provide the strong foundation for the successful conversion of Fort Devens from military to civilian use. The site does possess significant advantages which will be of value in this reuse process. At the same time, a realistic assessment must be made of the numerous hurdles to be cleared.

With pragmatism, we must confront the market difficulties of the overbuilt market of the 1980's, regional, local, and global competition, and the tightened financing resources available to support private and public initiatives. Site considerations to be overcome include the somewhat rural location,

obsolete military infrastructure, limited highway capacity, Superfund site clean-up and extensive building demolition. Finally, the regulatory environment calls for a unified approach to permitting, to streamline the current fragmented land use and environmental controls under the authority of the local, state, and federal agencies.

It is with the approval of the Reuse Plan and Bylaws, and the continued support of the host communities and the Commonwealth, that the \$200 million of needed capital investment will be available to produce jobs, and environmental protection, and planned development at Devens.