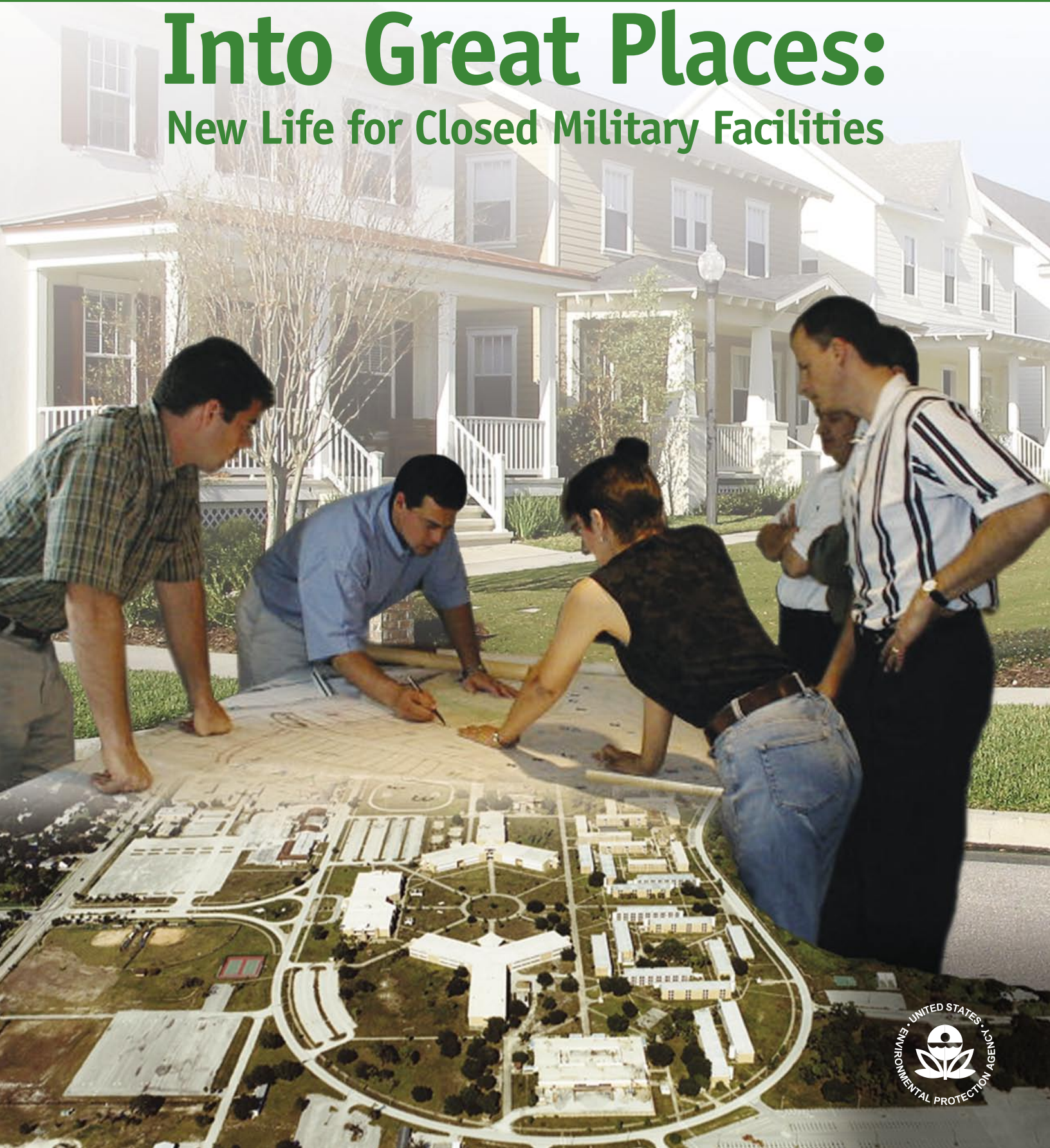




# Turning Bases

# Into Great Places:

## New Life for Closed Military Facilities



## Acknowledgements

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**For additional copies of this report, please send an e-mail to [smartgrowth@epa.gov](mailto:smartgrowth@epa.gov). For an electronic version, please visit [www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth).**

## About the EPA offices that produced this report:

### Development, Community, and Environment Division (DCED)

DCED works with communities, states, and the development industry to help them reach more environmentally friendly development alternatives, while improving economic conditions and quality of life. DCED provides information, education, and technical assistance. **For more information about EPA's smart growth program, see [www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth).**

### EPA Region 1: Smart Growth Program

EPA Region 1 works with communities, agencies, and organizations in the New England states to encourage environmentally sound development practices. **For more information about the New England Office of EPA, see [www.epa.gov/region01](http://www.epa.gov/region01).**

### Federal Facilities Restoration and Reuse Office (FFRRO)

To overcome the difficulties posed by environmental contamination at federal facilities, FFRRO (and its counterpart offices in the EPA regions) works with the U.S. Department of Defense, U.S. Department of Energy, and other federal entities to develop creative, cost-effective solutions to environmental problems at their facilities. By focusing on partnering and public involvement, FFRRO accomplishes its mission of facilitating faster, more effective, and less costly cleanup and reuse of federal facilities. EPA, since the inception of FFRRO in 1994, has been an active partner in the Defense Department's Base Realignment and Closure program. **For more information, see [www.epa.gov/fedfac](http://www.epa.gov/fedfac).**

### Land Revitalization Office

The Land Revitalization Office works with EPA programs, other government agencies, and external partners to promote and develop land revitalization measures, tools, information, and training. The land revitalization vision is to restore the nation's contaminated land resources and enable communities to safely return these properties to beneficial economic, ecological, and societal uses. **For more information, see [www.epa.gov/landrevitalization/](http://www.epa.gov/landrevitalization/).**

***Cover Photo: Citizens helped develop the plan that turned the former Orlando Naval Training Station into the new neighborhood of Baldwin Park.***



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# IIIIII Introduction

Having a military base close or reduce operations can be traumatic for its host community. The future is uncertain—residents worry about losing jobs and declining property values, local business owners fear a devastating impact, and people are concerned about environmental contamination on the base. The challenges may seem daunting, but many communities have transformed former bases into valuable assets. Indeed, many of these redevelopments have become showplaces for the entire region—boosting the economy, creating jobs, providing homes, and protecting the environment.



Planning for redevelopment at the former Lowry Air Force Base.

## What if your base is partially closing?

Many of the practices discussed in this guidebook will be useful to communities near military installations that are reducing operations and partially closing (“realigning”) under the federal Base Realignment and Closure (BRAC) process. In cases where only a portion of the base is closing, communities can apply these practices to the part of the property that will be made available to them. In this guidebook, the term “closed military base” also applies to partially closed facilities.

A completely or partially closed base may offer a community a large parcel of land for redevelopment—and the enticing potential for a new and enduring neighborhood that brings jobs, residents, visitors, and tax revenue. By accommodating growth on previously used land, the property allows the community to add new businesses and residents without having to build on undeveloped land elsewhere in the area.

Many of the most successful military-base redevelopment projects share several important traits. First, local leaders began planning for redevelopment early, in some cases even before they were certain that the base would close, and they planned with an eye toward long-term benefits instead of short-term gains. They listened to the community’s desires, needs, and ideas and kept the public involved throughout the redevelopment process. They considered how best to balance the area’s need for jobs, homes, and public amenities like parks and natural lands. They used the base’s location, infrastructure, historic buildings, and environmentally sensitive lands to the best advantage. They emphasized good design to create neighborhoods that would feel welcoming, fit in with the surrounding community, be easy to get around in, and become a place people would be proud to call home. Communities around the nation have used these strategies to plan for growth, maintain and improve their quality of life, and protect public health and the environment. These approaches often are called “smart growth.” This publication will describe smart growth principles and practices in more detail later on.



A new neighborhood planned for the former Myrtle Beach Air Force Base.

Several military base reuse projects have explicitly used smart growth techniques to plan redevelopment. The former Lowry Air Force Base outside of Denver is now a flourishing community that preserves its military history and honors its heritage as a training center with several educational institutions. It also has homes, shops, offices, and parks, all of which are welcome additions to the surrounding neighborhoods. Orlando's former Naval Training Center has become Baldwin Park, an award-winning neighborhood that truly feels like a community, with new, much-needed homes, ecologically important habitat, shopping, and offices—all just 2 miles from downtown Orlando. The transformation of the former Naval Training Center into Liberty Station reopened the San Diego Bay waterfront to the public for the first time in more than 80 years, and it preserved beautiful historic buildings while adding new houses, offices, stores, and arts facilities. This guidebook describes the smart growth techniques used in these and other successful base redevelopments to help communities with newly closed or partially closed bases chart a vibrant, new future.

## How can this guidebook help your community?

Many other documents describe the steps that a community should take to develop and implement a reuse plan for a closing military base. A list of those resources appears in the appendix. This guidebook, by contrast, provides information on smart growth principles that communities can use to develop a vision of how a redeveloped base can enhance their neighborhoods, economy, and environment. It offers ideas for communities to weave this vision into the redevelopment process to create a reuse plan that is fair and economically successful, provides people with choices, and enjoys broad public support.





## Local governments, community members, and others can use the guidebook to pursue base reuse that:

- Creates vibrant neighborhoods;
- Brings amenities to residents and the surrounding neighborhoods;
- Provides a balanced mix of jobs and housing;
- Capitalizes on historic, cultural, and natural assets;
- Protects environmental resources; and
- Is embraced by the community.

One of the key goals of base redevelopment is to replace the jobs lost when the base closes. The smart growth practices described in this guidebook create places with lasting economic value:

- Places that attract businesses and skilled workers because they offer amenities, transportation options, convenience, and character.
- Places that have walkable neighborhoods where residents and visitors can live, work, shop, eat, and socialize.
- Places where children can walk to school and older residents can more easily access stores and services.
- Places that make the most of their natural assets, support their cultural resources, and honor their local history.

Communities that preserve and market their unique and distinctive aspects distinguish themselves from surrounding areas and become more economically competitive. In the 2005 *Emerging Trends in Real Estate*® report, real estate experts concluded that “revived districts that can offer a strong sense of place

experience increased market demand. These visionary projects can change the fortunes of neighborhoods and entire cities.”<sup>i</sup> Many redeveloped bases have preserved their character and sense of place and reaped the economic benefits. The historic brick buildings of the Watertown Arsenal just outside Boston lure businesses. The natural areas, unmatched views, and historic buildings of the Presidio in San Francisco attracted filmmaker George Lucas to move his multimedia company there, building a new \$350 million complex, paying \$5.6 million in annual rent, and bringing with him 1,500 well-paid employees, many of whom will now live and spend money in the area.

The practices described in this guidebook also can save communities money by placing jobs, homes, and services closer together. Studies have shown that it costs less to provide sewer, water, and transportation infrastructure; transport school children; and deliver emergency services in better planned, more compact areas.<sup>ii</sup>

These strategies are good for the environment and public health too. With destinations closer together in a walkable neighborhood, people can choose whether to walk, bike, take transit, or drive. Having these options means less air pollution from cars and trucks, as well as less traffic on the roads. In addition, compact, well-planned development results in less paved area per capita because it has smaller-scale parking lots and roads. Because runoff from paved surfaces is a major source of water pollution, reducing the amount of paved area per capita helps protect water quality.



The Presidio's dramatic location and historic buildings make it attractive to residents and businesses.



The Glen, formerly Glenview Naval Air Station in Illinois, brings housing, shopping, and entertainment within walking distance of residents.

## Steps to success

Base redevelopment presents a unique opportunity for communities. As other base reuse publications emphasize, leadership and early action in developing a reuse plan are essential. Every community facing a base closure or realignment has to consider its individual circumstances, values, and needs. Local economic and market conditions, the extent of environmental contamination, the future owner(s) of the property, and the amount of land available to the community will influence the pace, type, and viability of redevelopment. To manage the reuse of the former installation, communities must understand the federal government's process for determining how to "dispose" of a closed military property. The community also must understand the local demand for office space, housing, retail, and other forms of commercial development, as well as for recreation and green space. Armed with this information, the community can start planning for a new future. Communities that have successfully redeveloped former bases into thriving neighborhoods have found that the steps described below were critical to their success.

## How should communities prepare for life after closure?

The Association of Defense Communities (ADC) suggests that communities facing a base closure follow these steps:

**"Create a plan that works:** A community's first task is to create a plan and this must happen as quickly as possible. The plan should be a realistic vision guided by market forces and environmental conditions. Information improves planning. From environmental conditions to infrastructure assets—communities need to get all available information from the Department of Defense (DoD).

**Know the process:** Base redevelopment is a complex process involving a myriad of state and federal agencies and regulations. Knowledge will be an important asset to ensure the community's voice is heard.

**Speak with one voice:** Communities must reach consensus about the future of a closed base in a timely manner. While attaining consensus among community members can be burdensome, the impact of neglecting this step can be huge.

**Learn from experience:** Impacted communities are not alone. Hundreds have struggled with base closure following past rounds and their experiences will provide new communities with an important source of knowledge.

**Remember, base closure is a community issue:** Base closure is more than a real estate transaction; it is about people, their jobs, and a way of life—it is a true community issue. Planning for life after closure must be a community-driven process."



The historic brick buildings of Watertown Arsenal outside of Boston, Massachusetts.



## Forming a Local Redevelopment Authority (LRA)

Jurisdictions affected by the Base Realignment and Closure (BRAC) decisions will need to establish a Local Redevelopment Authority (LRA) for all installations where property ownership will be transferred. The Department of Defense (DoD) Office of Economic Adjustment (OEA) works with community leaders to structure an LRA and will recognize the LRA on behalf of the federal government. The LRA is responsible for creating a redevelopment plan for the base or directing implementation of the plan. The OEA administers programs that help LRAs develop a base reuse plan, and other federal agencies, including the Departments of Labor and Commerce and member agencies of the President's Economic Adjustment Committee, offer resources to support economic recovery. (See *Resources* appendix for more information.)

The LRA is made up of members of the community affected by the base closure and reuse and should represent the widest possible range of interests. The *Resources* appendix of this guidebook lists some documents that provide advice on how to form an LRA, including guidance on size and composition. These publications also describe experience gained by LRAs in previous base closures, which will be useful to communities as they consider the LRA structure that will best meet their needs. Once formed, the LRA should work with other local leaders to involve the community in the redevelopment planning process, keep the public informed about progress, ask what the community wants and needs, solicit ideas for the redevelopment, and give feedback about those ideas. The more open and collaborative the planning process is, the more likely it is that the plan will gain the public support it needs to succeed.

The LRA also must work with DoD to transition the base from military ownership to private or local government control. The property screening process gives the federal government an opportunity to use the land. If the land is declared surplus, federal, tribal, state, and local governments can request that the land be used for public benefit, such as parks, schools, or housing for the homeless.

The more open and collaborative the planning process is, the more likely it is that the plan will gain the public support it needs to succeed.

### Federal property screening, surplus land determination, and disposal process

Before a BRAC installation is determined to have surplus federal land or facilities, the appropriate military department (Army, Navy, Air Force, or other DoD component) notifies other federal agencies and military services regarding the availability of the property. Thus, all or part of the property may be transferred within the federal government. The redevelopment plan should recognize and provide for these federal agencies' needs (as identified before the surplus property determination). Once federal property is determined to be surplus, the LRA solicits and considers the needs of state and local entities, including public- and private-sector interests, such as affected tribal and other governments, recreation and conservation interests, development consortia, education and health care institutions, and providers of homeless services. A successful reuse plan also must take into account compatibility of uses. More information on the screening and disposal process for federal property is available in the OEA publication *Responding to Change: Communities & BRAC* (see *Resources* appendix).





The historic buildings at the former Naval Training Center in San Diego are being restored and reused.

Sometimes closed bases languish for years, their buildings falling into disrepair as developers or local governments squabble over reuse plans. The city of San Diego found one innovative idea for keeping the buildings in use. The Navy closed its Naval Training Center on San Diego Bay incrementally over 4 years. During that time, the city leased base buildings from the Navy and then subleased them to other entities. This arrangement kept the buildings occupied and in good repair until the city officially took over the property. Other bases awaiting redevelopment, including South Weymouth Naval Air Station, have used similar leasing arrangements. Communities will need to review current regulations and work with DoD to determine where and under what circumstances leasing arrangements are possible.

## Getting everyone on board

As with any development project, the key to success is building broad public support for the plan. People will support a plan that represents a clear, shared vision for the future, is fair, and benefits the community as a whole. The LRA's great challenge will be to constructively harness the interest and enthusiasm of the various constituencies affected by the base redevelopment. The community's efforts will be most effective if they

speak with one voice. The LRA must delicately balance the need to get input and develop consensus with the need to keep the project moving forward.

Education is fundamental to winning public support. Citizens must understand the possibilities and the limitations of the base redevelopment process. The LRA and the community can learn from other closed military bases that have been successfully redeveloped into vibrant, sought-after neighborhoods. These transformations can show local residents how the base can become a neighborhood. Peer exchanges can provide essential information about how other LRAs successfully transformed their bases—especially important details about financing, governance, and lessons learned. In addition, outside experts in the fields of urban design and planning can help the community visualize the possibilities on the site.

Cultivating community interest and support in the project is critical to success. From the earliest stages of gathering data on existing conditions, the public can play a role in providing information and comments. As the work shifts into planning for the future of the base, the LRA can work with community members to develop a vision for the site. Through a visioning exercise, the LRA can gain a sense of the community's goals and aspirations for the redevelopment. To carry out this exercise, the LRA may want to consider bringing in one of the many firms that specialize in visioning processes.

As the plan develops, community input is critical. At the Orlando Naval Training Center, the commission creating the redevelopment plan held more than 170 public meetings over 2 years. At Lowry Air Force Base, the LRA brought the community together for thousands of hours of meetings to develop the reuse plan. In some cases, the public may vote on the reuse plan or adopt zoning to implement it, making early and ongoing public involvement even more important.

The goals of the public outreach are to motivate people to participate and to give everyone interested in the redevelopment a chance to get involved. Outreach techniques that work in one community may not work in



others, but some techniques are generally more likely to succeed. A public notice in the newspaper, for example, may satisfy legal requirements for informing the public, but it rarely generates the enthusiasm necessary to motivate someone to invest his or her time and energy in helping develop a great plan. Person-to-person contact, on the other hand, usually works well. Cultivating a core group of people who are interested in the project from the beginning and who are influential in their neighborhoods and community helps the LRA enlist a broad array of people in developing the plan.

Partnerships with state and regional government officials can help the LRA secure grants, loans, and financial incentives and navigate state and federal regulatory processes. These officials can also help by sharing information about the activities of other LRAs in the state.

## Taking stock of assets and challenges

A successful redevelopment plan based on smart growth principles depends on a realistic assessment of local assets and challenges. This assessment will be the foundation for the plan that the LRA will develop with the public's help. It also can identify limitations on potential redevelopment. The community should start by determining what is special about local neighborhoods and the region and what people see as their community's identity. The assessment should also include what the community needs and wants. From there, the community can consider what the base has to offer, such as its unique history, structures, natural resources, open spaces, and cultural assets, and what community needs it can help meet. If any DoD activities remain on or near the base, the community must consider how compatible the redevelopment will be with those activities. To help develop this understanding of present conditions and a vision for the future, the community might consider some detailed questions, such as those suggested below. The LRA may consider commissioning economic, environmental, transportation, and other necessary studies to help answer these and other questions.

### *Is there any environmental contamination on the base? If so, what are the contaminants, and where are they?*

Many military facilities have contaminated areas on or near the property because of DoD's former missions and activities at the base. Under federal law,<sup>iii</sup> DoD is responsible for cleaning up the property to a level that is protective of human health and the environment. In many cases, DoD already has investigated and cleaned the contamination or is in the process of doing so.

Through discussions with DoD and federal or state environmental regulators, the LRA should learn which locations on the base contain (or may contain) environmental contamination, as well as locations where environmental cleanup actions already are complete. Different uses may require different levels of cleanup. Where cleanup activities are underway or complete, reuse plans should consider how site protectiveness will be maintained. The LRA must seek out information about the location and extent of any contamination before it begins developing the reuse plan with the community.

## Where might contamination be found on a base?

Possible locations of environmental contamination on an installation include in the groundwater; in the soil; under buildings; within buildings (e.g., lead-based paint, asbestos); under water towers and outdoor operational, storage, and maintenance facilities; in closed landfills; in training or maneuvering areas; on munitions and small-arms ranges; in the wastewater; or in ponds, lakes, or streams. LRAs also should learn about the history of the base to help uncover other areas with possible environmental contamination.



**256 buildings, 200 miles of underground utilities, and 25 miles of road were demolished and recycled for the development of Baldwin Park.**

Knowing the type and location of contaminants will greatly benefit the LRA in formulating base redevelopment options and making future land use determinations that appropriately take contamination and cleanup options into consideration. Many installations have a Restoration Advisory Board (RAB) comprised of representatives from the community, the military installation, local government, and regulatory agencies. The RAB members provide input to the installation about its cleanup program, activities, and decisions. If an RAB exists at the base, the LRA and RAB members should communicate regularly to ensure that the base reuse plan and the cleanup strategy schedules are in accord. Additionally, the LRA should discuss past, ongoing, and planned cleanup efforts with DoD and the environmental regulators to ensure that the base cleanup and reuse planning/redevelopment timelines are coordinated and synchronized, if possible. This coordination can be more efficient, saving the community time and money.

Special caution should be taken when planning new uses at installations where military munitions were once produced, stored, or utilized, as residual risks from unexploded ordnance and munitions constituents likely remain at the site. Ensuring that these areas are delineated and appropriately reused is essential. Another critical aspect to managing contamination is

knowing the responsibilities of each party—DoD, the LRA, the new property owner(s), and others as appropriate—regarding adherence to and ongoing maintenance for land use controls.

DoD and federal and state environmental regulators examine various factors—such as risks to human health and the environment, the current use of the property, the anticipated future land uses of the property, past cleanup activities, remediation feasibility, estimated costs, and time to complete—when addressing cleanup of environmental contamination at a base. The LRA also should examine these factors when considering redevelopment options. Successful reuse will hinge on the LRA's ability to stay informed about all issues regarding environmental contamination and to understand fully how to manage reuse planning and construction in concert with long-term protection of human health and the environment. Striving to create a base reuse plan that aligns future land uses with environmental cleanup and site conditions is in everyone's best interest.

## Environmental insurance

**Commercially available financial products, such as environmental insurance, may help manage uncertainties that underlie redevelopment of contaminated properties. Environmental insurance policies can be tailored to cover potential legal, financial, and environmental risks that may be associated with redeveloping a former DoD property. LRAs may explore how insurance or other financial products can assist with reuse challenges resulting from site conditions.**



***What type of development (commercial, industrial, residential, or a mix of these uses) best capitalizes on the base's location, existing structures, and infrastructure?***

With long-term economic success as a goal, communities should consider market forecasts as well as current conditions when developing a reuse plan. A mix of uses may provide the most overall benefits for the community. Commercial development and even light industry can coexist with residential development and open space in a well-planned development. The base and the local area's unique assets and needs can help determine suitable uses. A base may be ripe for marketing to a specific sector or niche depending on regional economic conditions. For example, the region may be a center for pioneering research and need a site for product manufacturing. Many bases can provide the large sites that some manufacturers, research facilities, or other businesses often have trouble finding. A reuse plan with zoning that allows these uses as part of a well-designed, mixed-use development can be very attractive to businesses seeking to build such facilities. No matter what the reuse plan contains, the community may need to adopt new zoning, ordinances, and regulations to implement it.

***Can the base connect to a surrounding neighborhood? Can a redeveloped base become a town center?***

Bases that are surrounded by residential and commercial development will be easier to redevelop with a mix of those uses. For example, Baldwin Park, a former Naval Training Center, is in urban Orlando, Florida. It connected easily to the surrounding neighborhoods, providing much-needed parks for the entire area, while the existing community around it offered a ready supply of customers for Baldwin Park's retail businesses. For some towns, the base is already emotionally or physically the heart of the community, and redevelopment simply reinforces that role by making it a town center. If a base is farther from an existing community, the reuse plan should consider how the redevelopment will connect to the rest of the community.

The community can consider what the base has to offer and what community needs it can help meet.

## **Early transfer of BRAC properties**

The LRA also should learn about the early transfer process if the community is interested in accepting base property from DoD before cleanup is finished. Under the early transfer provisions in federal law, a community gains title to the property through a transfer from DoD prior to the completion of cleanup activities.<sup>iv</sup> An additional consideration is whether DoD or the property recipient will continue cleanup activities until complete. If the property recipient agrees to conduct the cleanup on behalf of DoD, DoD still ultimately retains responsibility to ensure that cleanup is accomplished properly and in a timely manner. Certain uses on the property may be restricted until site cleanup actions are complete and concurred on by the appropriate environmental regulatory agency. Additionally, the governor of the state must grant his or her concurrence before any BRAC property may be transferred early. EPA needs to concur on an early transfer if the base is listed on the Superfund National Priorities List. To find out if an installation is listed on EPA's Superfund National Priorities List, please see [www.epa.gov/fedfac/ff/index.htm](http://www.epa.gov/fedfac/ff/index.htm).





The Presidio's architecture spans centuries, making it a unique destination.

### *What are the base's unique historic and natural assets? What other community amenities already exist at the site?*

Historic buildings or other treasured features on the base can serve as focal points for redevelopment and connect the new development with the rich history of the facility. Perhaps the most prominent example is the Presidio in San Francisco. The Presidio served as a military base since the Spanish built it in 1776 until it was closed in 1994. The site has buildings from two centuries of military construction. It also has extensive natural lands, parks, and waterfront access. The Presidio's rich history makes it a tourist attraction as well as a unique place for businesses to locate and people to live.

## Building on history

Taking advantage of its medical history, the former Fitzsimons Army Medical Center in Aurora, Colorado, is redeveloping into a world-class health sciences campus and biotechnology research park. The University of Colorado's Health Sciences Center, with its attendant hospitals, specialty medical institutes, and laboratories, has led the way, bringing a projected 19,000 jobs to the site by 2010. At completion, the site will have a town center with retail and 400 to 600 homes, as well as a police station and hotel. For more information, see [www.colobio.com/index.html](http://www.colobio.com/index.html).



Fitzsimons is home to a world-class health sciences campus with hospitals, housing, research facilities, and amenities.



## Updating historic buildings

After 200 years as a cannon and armament manufacturing facility, the former Watertown Arsenal in Massachusetts closed in 1995. It is now an office and manufacturing center, with a mix of restaurants, retail, childcare centers, sports facilities, and pedestrian and bicycling trails. The historic brick buildings that house the new development create a unique and appealing setting. The renovation preserved the structures' architectural integrity while modernizing every building, including rewiring them with fiber-optic cables so all tenants could have internet access.



Modern updates to historic buildings make office space in Watertown Arsenal enticing.

Some bases occupy very desirable land: a waterfront, the center of a growing neighborhood, or property surrounded by parks. Many of the former installations were communities unto themselves, so they often already have golf courses, playing fields, swimming pools, bowling alleys, recreational facilities, and other amenities. The community may decide to restore these facilities during redevelopment or build new ones. The LRA also should consider where it makes sense to continue using facilities like hospitals and schools for appropriate similar civic uses.



Natural assets create amenities for the entire region surrounding the former Pease Air Force Base.

## Protecting wildlife habitat

Closed in 1991, New Hampshire's former Pease Air Force Base sits on the shore of Great Bay, which supports the largest concentration of wintering black ducks and bald eagles in the state. The local community recognized the habitat value of the lands bordering the bay early in the reuse planning. In 1992, 1,054 acres of the 4,365-acre site were transferred to the U.S. Fish and Wildlife Service to create the Great Bay National Wildlife Refuge, now enjoyed by about 60,000 visitors every year. Establishing the refuge was an important catalyst for a larger habitat protection effort in New Hampshire's Seacoast area that has led to the protection of more than 7,000 acres of marshes and uplands. The remainder of the former base was redeveloped into Pease International Tradeport, which consists of an international airport and an industrial park with 75 tenants employing nearly 2,000 workers.

## Natural assets as an economic advantage

Lawrence, Indiana, took advantage of Fort Benjamin Harrison's proximity to rolling hills and woods. Soon after the reuse plan was approved, the state applied for a public benefit transfer for 1,700 acres. Fort Harrison State Park became the first urban state park in Indiana. Lynn Boese, then executive director of the Fort Harrison Reuse Authority, noted that "We could not have predicted how important it would be to the redevelopment of Fort Harrison.... Businesses like to locate nearby, and people desire to live near the park. It has become one of our best marketing tools."<sup>v</sup>

Many bases have large, undisturbed natural areas that can continue to provide great habitat for fish and wildlife and recreational space for people. In other cases, some tracts are best left undeveloped because of contamination that makes them unsuitable or unsafe for human use. The community should be able to get information from the base and from federal and state agencies on natural resources such as wetlands, streams, flood plains, and fish and wildlife habitat. A conservation easement or conservation conveyance can preserve some or all of these lands in perpetuity if the community desires. The LRA can consult with a



The Presidio provides much-needed housing.



This historic building on the former Fort Benjamin Harrison has been converted into the Kendall Inn, a 28-room boutique hotel.

land trust and DoD to pursue this option. Siting new development to protect important natural resources will make it easier to get the necessary development permits from local, state, or federal agencies.

***Are there enough places for people to live in the region? Are there housing choices (that is, different sizes, styles, price ranges) so that a variety of people can live there?***

Fearing higher costs for schools and services, a local government's initial reaction often is to shun residential development. Many communities turn to retail development to help prop up their tax base, but retail will not survive without customers. Retail development needs residential development—not only for a customer base but as a source of workers too.

In many parts of the country, regardless of their income, people are having trouble finding homes that they can afford in a convenient, safe location. Base redevelopment can help fill that gap by providing homes for the various community members who need them, including young people just starting out, singles, empty nesters, families, and active retirees. These homes can house people vital to a community's health and safety, such as nurses, firefighters, police officers, and teachers, who are often priced out of the communities they serve.

The Presidio, for example, occupying a prime location in one of the nation's most expensive housing markets, has a Public Safety Housing Program that reserves up to 40 units for full-time, Presidio-based firefighters and U.S. Park Police officers. Participants pay 30 percent of their gross



Cameron Station has lots of housing options—townhomes, apartments, and single-family houses, with ample parks for neighbors to enjoy.

income for rent. All full-time employees of organizations located in the Presidio get preference for housing, no matter what their income. Rent for workers making less than area median income is 30 percent of their gross income.<sup>vi</sup>

## Housing in a hot market

Once home to the Army and the Defense Logistics Agency, Cameron Station is now a residential development in Alexandria, Virginia. The Army sold 101 acres to a private developer and transferred 63 acres to the county parks department. The surrounding area is rich with employment but short on housing. The project has more than 2,000 homes, including townhouses, condominiums, and single-family homes. Residents can walk or take a community shuttle to reach many of their daily needs. In addition to the park, Cameron Station has a small commercial area with a daycare facility, corner market, coffee shop, dentist, florist, and salon. The development also has a new elementary school—the first new school constructed in the city of Alexandria in 30 years. Its location and design have made Cameron Station a very desirable neighborhood in the hot Washington, DC-area real estate market.

## Balancing commercial and residential growth

During the development process, LRAs should consider how to balance the rates of residential and commercial development. Some bases, such as the South Weymouth Naval Air Station, choose to phase in homes and commercial development together. Phasing gives nearby communities time to adjust to and absorb the impacts of the redevelopment. It allows infrastructure improvements to keep pace with growing demands, and it can respond to changing market conditions.

In South Weymouth, the LRA and the communities surrounding the former base required the development to be built in three phases over a period of approximately 14 years. Each phase has a maximum amount of residential development that *can* be built and a minimum amount of commercial development that *must* be built before the developer can proceed to the next phase. For example, in Phase I, the developer can build up to 1,000 homes and must build at least 300,000 square feet of commercial development before starting Phase II. The recreational amenities are similarly phased in. See [www.ssttdc.com](http://www.ssttdc.com) for more information.

### *How well is the base served by transportation? Can additional transportation be easily extended there if necessary?*

Neighbors of redevelopment projects often are concerned about increased traffic, but locating homes, offices, recreational amenities, and shopping closer together gives people choices in how they get around and can reduce the extra traffic that new development will bring. Reuse plans should examine how well the





**The former control tower was converted into a bookstore at Glenview Naval Air Station.**

base is served by roads, as well as by public transit (such as buses, rail lines, or shuttles) and bicycle and pedestrian routes. On the former South Weymouth Naval Air Station, for example, the proposed development will be close to a commuter rail system that runs to and from downtown Boston.

Street design is important, not only for automobile traffic, but also for pedestrians and bicyclists. Narrower, tree-lined streets with attractive sidewalks make pedestrians feel safer and are more interesting and comfortable to walk along. A grid network of streets distributes traffic more evenly throughout a development instead of concentrating it on a few heavily traveled arterial roads. For example, removing the fence that had surrounded Baldwin Park when it was a military facility created more than 30 new entrances and actually relieved rather than increased traffic in nearby neighborhoods because drivers had more options.

### ***Is there existing infrastructure on the base (e.g., sewer, water), or is there sufficient capacity nearby?***

Access to sewer, water, roads, and other infrastructure is key to attracting high-quality, compact development. If the existing infrastructure cannot support redevelopment, the LRA must find funding to rehabilitate sewer and water systems, roads, and other services. Many communities have had to rebuild the existing infrastructure on a base. This overhaul is expensive,

and some communities have offered developers incentives to balance the added expense. The city of San Diego gave Liberty Station's developer a ground lease on almost 200 acres of land to compensate for the cost of demolishing and replacing the base's infrastructure. The Glen, the mixed-use redevelopment of the former Glenview Naval Air Station in Illinois, covered its infrastructure replacement costs with revenues from land sales and property taxes. Many base redevelopments, including Liberty Station and Baldwin Park, recycled the demolished material into new roads and other infrastructure, saving money and conserving resources.



**The proposed development around the commuter rail station at South Weymouth.**

## **Creating a redevelopment plan for the base**

The LRA is responsible for developing a reuse plan for the property. Depending on its staff's size and expertise, the LRA may need to hire consultants to help draft the plan. If the LRA or local government is going to acquire any of the property, they may want to hire a developer early on to work with them as they draft the plan. Regardless of who the LRA hires to help, the reuse plan must be economically feasible. A pretty plan isn't enough—it must respond to the market.

## Lessons learned at Fort Devens in Massachusetts

Jeffrey Simon, former director of Fort Devens during its redevelopment, recently summarized the reuse planning process:

### *"Here is what we did right:*

- We had strong leadership starting with [former Governor William F.] Weld and [former] Lieutenant Governor Paul Cellucci.
- We provided lots of forums for the public to vent.
- No one spent time trying to reverse the [closure] decision.
- We approached this as an opportunity to define the future.
- We created the Devens Enterprise Commission, a new form of municipal government that recognized that the only chance for economic recovery lay in recognizing the limitations and overcoming them.
- The state worked closely with the towns in a partnership unique in Massachusetts.

### *Here is what we did wrong:*

- Out of fear of the impact on municipal budgets we brushed aside nearly all of the strongest market and quickest path to economic recovery—residential development.
- We took too long getting this property back in productive use.
- We allowed a federal prison on the property, which compromised the quality of other development. <sup>vii</sup>

## Involving the public

Using the vision for base reuse and other available information, the LRA and the community can begin drafting the plan for redevelopment. As the Association of Defense Communities notes, "[the] LRA Base Reuse Plan offers the best opportunity to shape the future use of a closed base."<sup>viii</sup> To take full advantage of that opportunity, the LRA must describe an effective strategy for replacing jobs and demonstrate vigorous public engagement throughout plan preparation.

One of the most important steps the LRA can take is to ensure strong public involvement in developing the reuse plan. Broad community support is critical to a successful redevelopment. Successful base reuse projects all have included extensive, ongoing public involvement.

Many tools are available to help the LRA and local governments educate the public about the benefits of a compact and well-designed redevelopment, solicit community input on the design, and clearly envision the kind of development the community wants. A visual preference survey, for example, shows images of different development types and asks the participants to rank them by preference. Software tools compare different redevelopment options based on the amenities each provides, the traffic each generates, the water each consumes, and the proximity of households to parks and transit. Public participation workshops, including design charrettes, are very effective and help develop a plan that is economically feasible and that the community supports. For more information on these and other tools, see the *Resources* appendix.



Residents of the surrounding towns participate in developing the plan for South Weymouth.

## Engaging the community through a design charrette

Design charrettes can be very effective in creating a plan with broad support. Charrettes are intense workshops, usually lasting about a week, in which a design team meets several times with the public and individual stakeholder groups to get their ideas for the development plan. The team sketches out plans based on this input and, in a series of feedback loops, shows them to the public, then refines the plans based on the public's comments. The result is a plan that community members are more likely to view as fair, because they have had several chances to comment on it. Charrettes require skilled professionals to lead them and a great deal of up-front preparation, and they can be expensive. Most communities feel, however, that the cost is worth it. Ultimately, many developers find that they spend less time and money on a charrette than they would if they had to fight public opposition later in the process.

At Fort Ord in Monterey, California, the redevelopment plan for the East Garrison portion of the site was initiated by a week-long design charrette in November 2001. A team of nationally recognized experts led participants in crafting principles to guide the development and sketching images of what that development could look like. The developer said of the process, "While considerably more planning, analysis and implementation lies ahead, the East Garrison charrette process will long be remembered as the defining moment that helped put aside differences and created common goals and understandings."<sup>ix</sup> For more information about Fort Ord, see [www.eastgarrison.com](http://www.eastgarrison.com).

## Incorporating good development practices

When growth comes, communities must balance the impacts of the new development while preserving and enhancing the best aspects of their neighborhoods and regions. Growth brings investment, along with new residents and new workers who need transportation options, homes, stores, services, and other amenities. The communities that have used that investment to their advantage—giving residents new amenities, more housing and transportation choices, and more convenience—typically employ a similar set of techniques. These techniques, often referred to as smart growth, have been distilled into ten principles reflecting the experiences of successful communities around the nation. Smart growth practices help ensure that development improves the economy, community, public health, and the environment.



Participants use drawings, maps, and building-shaped blocks to envision the future layout of Baldwin Park.





Several homes in Baldwin Park are grouped along a shared front yard, creating easy opportunities to mingle with neighbors.

## For more information on smart growth techniques

EPA's smart growth program has many resources to help communities grow and develop while protecting environmental resources. See [www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth) for more information. EPA is also a partner in the Smart Growth Network, a coalition of environmental groups, historic preservation organizations, professional organizations, developers, real estate interests, and federal, state, and local government entities. The network's Web site, [www.smartgrowth.org](http://www.smartgrowth.org), features hundreds of resources, including news articles, research reports, Web sites, tools, and case studies, to help communities learn about development practices that protect the environment and public health, benefit the economy, and create lively, safe, and attractive communities. Some specific publications that may be useful are:

### Getting to Smart Growth: 100 Policies for Implementation

([www.smartgrowth.org/pdf/gettosg.pdf](http://www.smartgrowth.org/pdf/gettosg.pdf) [2.7 MB PDF]): This publication is a road map for states and communities that have recognized the need for more efficient and environmentally sound development, but are unsure about how to achieve it.

### Getting to Smart Growth II: 100 More Policies for Implementation ([www.epa.gov/smartgrowth/getting\\_to\\_sg2.htm](http://www.epa.gov/smartgrowth/getting_to_sg2.htm)):


The second volume offers more concrete techniques to improve development and growth in communities.

### Protecting Water Resources with Smart Growth ([www.epa.gov/smartgrowth/pdf/waterresources\\_with\\_sg.pdf](http://www.epa.gov/smartgrowth/pdf/waterresources_with_sg.pdf) [1.4 MB PDF]):

This publication features 75 policies that communities can implement to protect water resources while they grow.

### Creating Great Neighborhoods: Density in Your Community ([www.epa.gov/smartgrowth/density.htm](http://www.epa.gov/smartgrowth/density.htm)):

This publication highlights nine community-led efforts to create vibrant neighborhoods through density and introduces design principles to ensure that density becomes a community asset.



**Mix land uses:** Putting jobs, homes, shops, and recreation near each other gives people options for getting around. They can walk, bike, drive, or take public transit. The traditional neighborhoods and small towns that many people cherish have this mix of uses. Locating homes near offices and shops also means that people will be walking on the streets at different times of the day, making the community livelier and safer.

**Use land efficiently:** Communities can save money and resources by building compact neighborhoods where it makes sense. In denser areas, communities spend less on new infrastructure, consumers spend less on water, and emergency services can respond more quickly. Compact neighborhoods can offer more transportation choices by putting destinations close enough for people to walk. Balancing different levels of density lets communities provide residents with choices—offering urban living to some residents while preserving suburban living for others.

**Create a range of safe, convenient, and affordable housing opportunities and choices:** Providing high-quality homes for people of all income levels and at all stages of life is an integral component in any smart growth strategy. The type and location of homes affect commuting patterns, energy and water use, and access to transportation, community services, and education. Communities can give their residents more choices by encouraging different types of housing in existing neighborhoods and in new development.

**Create walkable neighborhoods:** Mixing uses and placing them close together makes it easier for people to walk to school, work, shopping, and fun. Communities also can encourage walking by creating more pleasant sidewalks and safer streets. Walkable neighborhoods give people options for getting around and also offer them an easy way to incorporate physical activity into their daily routines.

**Foster distinctive, attractive communities with a strong sense of place:** New development should respect the unique culture, history, and geography of a community. People are proud of a community that has a distinct character. Such places attract tourists, new businesses, and new residents.

**Preserve natural lands, farmland, and critical environmental areas:** Protecting the natural environment means cleaner air and water, healthy habitat for fish and wildlife, and beautiful vistas and recreational lands. Many communities also want to preserve working lands, like farms and ranches that are fiscally self-sustaining and are a critical part of their economy, history, and culture.



**The Glen's interesting mix of retail attracts visitors and residents alike.**

### **Strengthen and direct development toward existing communities:**

Reusing existing infrastructure, schools, and public services helps make the best use of taxpayer dollars. Building in existing communities also protects undeveloped land.

### **Provide a variety of transportation options:**

Making it easy for people to walk, bike, or take transit can reduce traffic congestion and air pollution. People who cannot or choose not to drive, including children, seniors, and disabled persons, have more freedom when they can get around easily without depending on someone to drive them.

### **Make development decisions predictable, fair, and cost effective:**

One of the best ways to get private-sector support for a community's vision is to create certainty and predictability in where and how the community will develop.

### **Encourage community and stakeholder collaboration in development decisions:**

Give everyone with a stake in the community a seat at the table. Development decisions should be open and fair, with public involvement to ensure that the community's needs are met.

## **Making the development attractive to businesses**

The former Fort Devens in Massachusetts has become a national leader in sustainable economic development. Now run by the Devens Enterprise Commission in cooperation with MassDevelopment, the former base is a thriving jobs center that has attracted 75 firms that employ more than 3,000 people. One reason for the redevelopment's success is its one-stop permitting program. The commission acts on all applications to locate on the former base in less than 75 days, with many completed in only 45 days. No other facility in the region can match this approval speed, making Devens very attractive to businesses.

Incorporating many or all of these principles will help ensure a plan that is fair, is likely to succeed economically, and enjoys broad public support. Perhaps most important for base redevelopment is making development decisions that are fair and inclusive. The public will support the plan if the citizens feel like their concerns have been heard and addressed, and the business community will support the plan if the decisions are predictable and economically viable. The LRA should be confident enough in its process that, if the plan goes to a public vote, it can be reasonably sure that the plan will be approved.





The proposed town center for South Weymouth will put jobs, homes, and shops near each other so people can walk to their destinations.

## Compact design wins approval

At the former South Weymouth Naval Air Station in Massachusetts, the surrounding communities of Weymouth, Rockland, and Abington voted to adopt a reuse plan that protects about 70 percent of the 1,400-acre property's natural lands and mixes development uses on the remaining 30 percent. The plan calls for nearly 3,000 homes and up to 2 million square feet of commercial and industrial development. Using a software tool called Smart Growth INDEX,<sup>x</sup> EPA helped the communities compare the likely environmental impacts of the proposed reuse plan with earlier versions that had focused largely on just one type of development. The proposed plan is more compact, mixes uses, and preserves more open space. It gives the area more transportation options by making better use of the commuter rail system and making walking easier and more attractive. Mostly because of the compact design, the blend of uses, and the preserved natural lands, the development will produce much less stormwater runoff than the earlier plans would have.

## Creating a business plan

In concert with the land use planning, the LRA needs to conduct financial analyses and develop a business plan. The LRA must estimate the costs of developing the property, including infrastructure investments and operating costs, and assess expected revenue sources. An ADC publication, *The Community Base Reuse Planning*

*Process: A Layman's Guide*, notes that "[r]edevlopment of these typically large-scale, complex facilities is costly, often requiring large investments in basic infrastructure along with a professional organization capable of managing the process over several years."<sup>xi</sup> This publication and others listed in the *Resources* appendix provide information on financial planning for redevelopment.



The Lawrence Government Center at the former Fort Benjamin Harrison was built under the architectural guidelines.

## Implementing the Plan

The LRA may choose to implement the plan itself or hire a developer to implement it. The decision on whether and when to hire a developer will depend in part on whether the LRA receives the property, and whether the LRA or local government has the financial resources and expertise to develop the former base. Some communities, like Lowry, replace their planning LRA with an implementing LRA. The local government's redevelopment agency could act as the implementing LRA if its members have the authority to oversee local redevelopment. Regardless of who implements the plan, the following steps will help make it successful.

## Developing design guidelines and zoning consistent with the vision

Too often there is a gap between an attractive plan and the development that ensues. The LRA should insist on superior design and ensure that it is implemented. Development that is designed well from the beginning has lasting economic benefits for communities, and it will improve property values in surrounding areas as well as on the former base. Building-design guidelines, architectural standards, street-design standards, and zoning that adhere to the vision will ensure that the community-supported plan is built as intended.

## Architectural guidelines preserve character

Fort Benjamin Harrison was the heart of Lawrence, Indiana. Many of its buildings were built between 1906 and 1910, and others date from the 1930s and 1940s. The Fort Harrison Reuse Authority (FHRA) recognized these structures as an important asset for the area's character and a draw for new employers and residents. To ensure that additional development on the base would be compatible with the existing buildings, FHRA designated historic districts and established architectural and development standards. The standards require that new construction reflect the style and materials of the older buildings. According to FHRA, this has created a near-seamless transition between the new construction and the historic buildings. Since the base closed, the property has added more than 1,000 homes and more than 100 businesses, creating 1,500 jobs.<sup>xii</sup> See [www.fhra.org/architecture.htm](http://www.fhra.org/architecture.htm).



## Keeping in touch with the community

Neighborhood participation was critical in developing the Lowry reuse plan, and that involvement did not stop once construction began. A 21-member community advisory committee counsels the LRA on implementation matters and any updates that have to be made to the plan to reflect changing market conditions. Other committees, for design review, affordable housing, and environmental cleanup, meet regularly. The LRA keeps residents and businesses informed through a monthly newsletter called *Re: Developments*, as well as maintaining *LowryLink.com*, a Web site with calendars for events and public meetings. Residents have organized Lowry Neighbors, a grassroots neighborhood association. The LRA supports the Lowry Employers Action Network, which brings together Lowry businesses to build skills, network, and socialize.

## Investing in infrastructure improvements

On many bases, the existing infrastructure, such as roads, utilities, sewer, and water, may be antiquated and inadequate for the planned development. The LRA should develop an infrastructure plan that will support the reuse plan. This plan should address how the improvements will be financed. It may be difficult to market the site until some of these investments are made. At Lowry, the LRA invested heavily in the infrastructure to give the first home builders the security they needed to understand and embrace the development vision. In addition, the LRA did not launch a sales effort for the commercial district until it had demolished the runways and obsolete buildings, installed infrastructure, and landscaped the grounds. This upfront investment was essential to make the site attractive to private investors.

## Keeping the public involved

As important as public involvement is in developing the reuse plan, it is equally important in seeing the plan through. Citizens keep the LRA and local government accountable and on track with the vision. Keeping the public engaged throughout implementation also will minimize the risk of last-minute challenges that could prove costly and time-consuming for the developer and/or the LRA. Although sustaining public interest and enthusiasm for such a long time can be demanding, many base reuse projects have done so successfully. Newsletters, Web sites, and public meetings can share information with the public. The LRA must also periodically give people opportunities to comment on the plan's progress—information sharing cannot be a one-way street. Once construction is underway, public tours of the project give citizens a chance to see their vision becoming a reality. This sense of ownership is a powerful motivator to keep people engaged.

A sense of ownership  
is a powerful motivator  
to keep people  
engaged.



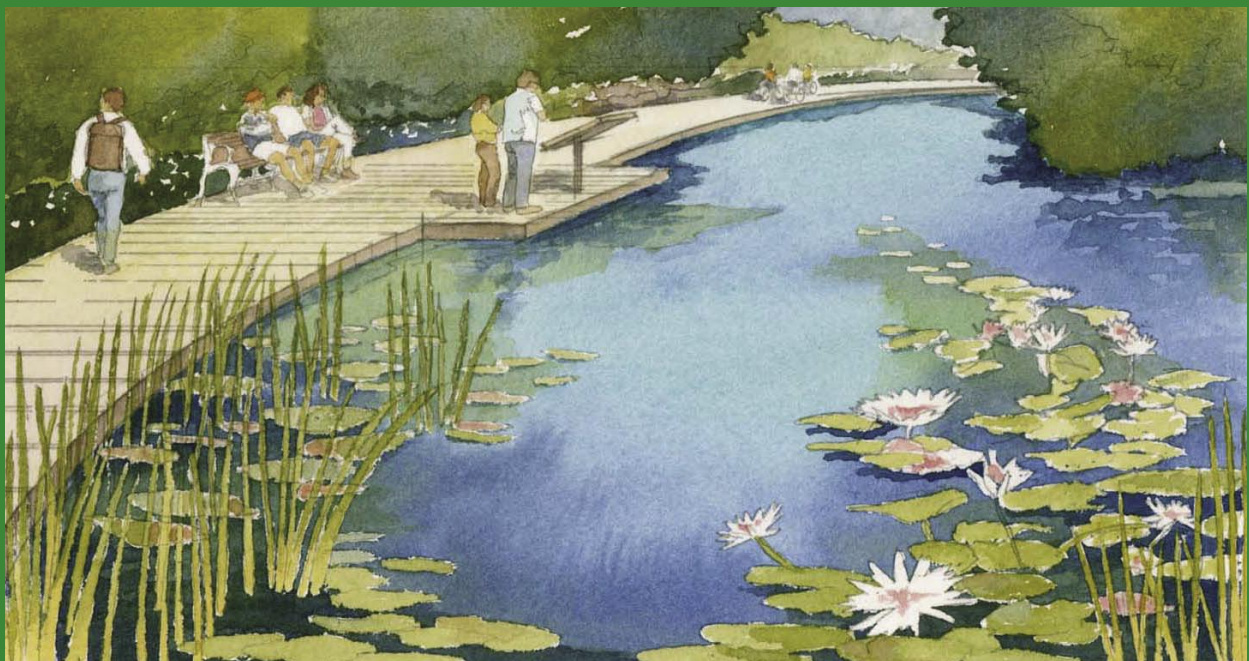
# Conclusion

We can learn a lot from communities that faced base closures in previous BRAC rounds:

- **The steps in this guidebook can help create redevelopment that may be better for the community economically and environmentally than when the base was active.** But getting to this point takes time.
- **Taking stock of assets and challenges is important.** A reuse plan that is well thought out and based on solid information is fundamental to success.
- **Getting everyone on board is critical.** Investing time and energy upfront in substantive public education and involvement leads to broad-based support later.
- **Good development practices are essential.** A reuse plan based on smart growth practices results in development that is good for the economy, the environment, public health, and the community.
- **Help is available.** Many agencies and organizations, some specializing in base reuse and some specializing in smart growth practices, have resources and even funding to help LRAs develop and implement their plans.

Learning that the military base that provides jobs and revenue to the community is about to close can be frightening. But it doesn't have to be devastating. In fact, as many redeveloped bases have shown, base closure can open up new opportunities. It can provide jobs and homes to people who need them, create parks and recreational resources for the entire region, and become a truly distinctive legacy for the community. The history and resources of the base remain after the military leaves; now those treasures belong to the whole community.

We hope that this guidebook helps your community make the most of this unsought but unique opportunity.









## Baldwin Park (formerly Naval Training Center) Orlando, Florida

The U.S. Navy announced the closing of its Orlando Naval Training Center (NTC) in 1993, and the base officially closed 3 years later. Although the community initially felt a sense of loss, the demand for developable land within Orlando meant that opportunities abounded for redevelopment. Today, the former base is Baldwin Park, an award-winning development only a few miles from downtown Orlando.

When the Navy announced that the base would close, the city of Orlando immediately formed a base reuse commission to create a redevelopment plan. The commission, made up of 150 central Florida business and government leaders, held 174 public meetings over the next 2 years to get the public's ideas and feedback on proposed plans. When the commission finished its plan in 1995, the city created a seven-member NTC Advisory Board to implement it and held more than 100 public meetings to select the developer and refine the plan. Among the tools at these public meetings were visual preference surveys that showed attendees different building and community design options, and then asked them to rate each one. The vision that came from these meetings was "the overwhelming desire to link the property with surrounding neighborhoods, provide public access to lakes, form a network of green throughout the project, create a vibrant main street, and disperse automobile traffic through a gridded street network."<sup>xiii</sup>

The city received the base from the federal government and transferred it to a private developer, chosen through a competition, who renamed the parcel Baldwin Park. The developer paid \$7.6 million for 1,093 acres: 90 acres went to the federal and state governments for government offices and 468 acres were protected wetlands, lakes, and land set aside for parks, leaving 535 developable acres for more than 4,000 homes, 1 million square feet of offices and stores, a new elementary school, a new middle school, a church, and three community centers. The developer also paid \$1.7 million to cover additional cleanup costs. The city offered the developer a loan and a line of credit to help with demolition, environmental remediation, and construction, and a \$13.5 million impact-fee credit based on what the Navy had spent on the base's infrastructure.<sup>xiv</sup> As the planning and building proceed, the city holds monthly public meetings in cooperation with the developer, and the Navy monitors environmental conditions at the site.

"Baldwin Park is an ideal location to build a new practice and not have to drive 45 minutes from my home everyday. I look forward to serving the people in my own community and establishing long-term relationships with them—not only as patients, but as neighbors and friends, too."

**Dr. William Dunn, a dentist who lives in Baldwin Park and plans to open a new practice there<sup>xv</sup>**



The Baldwin Park Development Company set aside 468 acres as protected wetlands, lakes, and park land.



||||| "The planning and partnerships which have brought us to this day will carry us through to the day when we can celebrate youngsters riding their bicycles on community sidewalks, families picnicking in one of the community's parks and grandparents watching their grandchildren thrive in a true neighborhood."

Orlando Mayor Glenda Hood, at an event celebrating the start of construction at Baldwin Park, June 5, 2001<sup>xix</sup>



Baldwin Park includes a variety of housing types.

The developer reconnected the former base to the surrounding neighborhoods by taking down the fence that had surrounded the property and extending the neighborhood streets through Baldwin Park. To re-create the look and feel of traditional neighborhoods, Baldwin Park includes narrow, tree-lined streets with wide sidewalks; homes designed in the architectural style of pre-1940s central Florida, with front porches and garages in the rear; and a blend of uses close together so people can walk from their homes or offices to parks, restaurants, shops, school, or church. The development has more than 15 different housing styles, ranging from rental apartments to townhouses and high-end custom houses. It features more than 50 miles of walking trails and sidewalks.

The developer had to almost completely rebuild the base's infrastructure, dismantling 200 miles of underground utilities and 25 miles of roads and demolishing all but 5 of the 261 existing structures. The developer recycled as much of this material as possible to build new roads and other projects, such as stormwater filtration systems and parkland.

Audubon of Florida worked with the developer to help create viable ecosystems in Baldwin Park by restoring natural features that had been displaced when the base was built 50 years earlier. The developer also preserved the base's mature trees as much as possible and planted 4,000 new street trees.

The city anticipates that when Baldwin Park is completely built and occupied sometime in 2006, the development will house 8,000 residents, support 6,000 permanent jobs, and generate more than \$1.5 billion in property tax value, more than \$30 million in annual property tax revenue, and more than \$180 million in payroll.<sup>xvi</sup> The development began spurring investment in surrounding neighborhoods even before most of its residents had moved in; nearby, two shopping centers are being redeveloped and a medical building is under construction.<sup>xvii</sup> As David Pace, managing director of the development company, points out, other benefits to the surrounding community include "the addition of hundreds of acres of parks the public gets to use, grocery stores they don't have to go out on Highway 50 for anymore, and property appreciation."<sup>xviii</sup>

The city notes that “Baldwin Park is what the citizens of Orlando ask for: quality homes; a mixture of uses with businesses, schools, residences, and recreation contained within one community; job creation and tax generation.”<sup>xx</sup> The development has won national recognition with awards such as EPA’s National Award for Smart Growth Achievement (2005), Urban Land Institute’s Award of Excellence (2004), the National Arbor Day Foundation’s “National Building with Trees Award of Excellence” (2004), and the Council for Sustainable Florida’s “Sustainable Florida Best Practices Award” (2004). The developer won the Distinguished Corporation Award from Audubon of Florida, and one of the architects won a Palladio Award for his design of one of the development’s recreation centers.

**Web site:** [www.baldwinparkfl.com](http://www.baldwinparkfl.com).

**For details on the city’s process, see** [www.cityoforlando.net/planning/ntc/ntcclos.htm](http://www.cityoforlando.net/planning/ntc/ntcclos.htm).

**Year base closed: 1996**  
**Year construction started: 2001**  
**Year first homes were occupied: 2003**  
**Year of completion: 2008 (projected)**  
**Acreage: 1,093 (535 developable)**  
**Number of homes: 4,100 (projected)**  
**Commercial and retail space: 1 million square feet**  
**Residents: 8,000 (projected)**  
**Jobs: 6,000 (projected)**  
**Total property value: \$1.5 billion (projected)**  
**Annual tax revenue: \$30 million (projected)**



Neighborhood shops and services are convenient for Baldwin Park residents.



Attractive office space is a critical part of the Baldwin Park project.





PHYSICAL DRILL UNDER ARMS  
U. S. NAVAL TRAINING STATION - SAN DIEGO, CALIF.





## Liberty Station (formerly Naval Training Center) San Diego, California

The Naval Training Center (NTC) trained members of the U.S. Navy and U.S. Naval Reserve for 70 years. Almost 550 acres in size, NTC included 624 buildings, many in the Mission Revival style, with nearly 3 million square feet of space. Using many of these historic buildings and the base's prime location on San Diego Bay, the city has turned the training center into a beautiful redevelopment, restoring waterfront access to the public for the first time in 80 years, creating new parks, and establishing creative arts facilities.

After the 1993 BRAC round slated NTC for closure, the Navy closed the facility incrementally. As the NTC closed, the city and the Navy reached an agreement in 1995 that gave the city interim use of 67 acres of the site (the agreement was later expanded). The city subleased buildings to nonprofit organizations, city departments, and small businesses. This interim leasing allowed the city to keep the buildings and landscape areas in good shape while the Navy decreased its funding.<sup>xxi</sup> The Navy officially closed NTC in 1997 and transferred the NTC to the city of San Diego through a no-cost economic development conveyance.

Liberty Station, the name for the redeveloped NTC, encompasses 361 acres and several distinct districts. On the north shore of San Diego Bay, just a few minutes from downtown and the airport, the community will have 125 acres of parks and open space, including a waterfront path that leads all the way to downtown; a nine-hole golf course (constructed in 1925 and considered a national historic resource); shopping villages and restaurants; a 28-acre civic, arts, and cultural district called NTC Promenade; two hotels; a seven-building office district; 349 homes in 3 neighborhoods; and a 22-acre educational campus including seven schools. Because of the way the military buildings were clustered, Liberty Station has separate districts for homes, offices, shops, and cultural activities rather than blending these uses together. As the development is only about 1 mile from end to end, and all of the facilities are connected by landscaped walkways, walking from one district to another is easy. About 94 acres will be new construction, and another 95 acres will make up the historic district, which includes more than 50 historic structures to be preserved, as well as the USS *Recruit*, a landlocked ship built in 1949 and used in training for many years.<sup>xxii</sup>

After the base closing was announced, the city held hundreds of community meetings, design charrettes, and public workshops. Thousands of people, not only neighbors but also retired Navy officers who still lived nearby, participated in the process. The public had not had access to this section of the waterfront since the base opened in 1923, and regaining access was one of the main de-

"We've worked for more than a decade now to transform the former Naval Training Center into a resource all San Diegans can use, while reflecting the rich maritime history our city enjoys. We're one step closer to the vision of NTC, ultimately as a destination for residents and visitors alike; a place surrounded by green, bordered by water and centered on history."

**Hank Cunningham, assistant executive director of the San Diego Redevelopment Agency<sup>xxiii</sup>**



**A landscaped promenade creates a pleasant walking environment for residents.**

sires expressed in the meetings. This public process resulted in a comprehensive plan for Liberty Station that emphasized public use, a pedestrian-oriented environment, and a vibrant mix of uses that would replace the jobs lost when the base closed. A residents' group called Save Our NTC has kept a watch on the development process. Contentious issues have included objections to the height of some proposed buildings and concerns that the public space is being developed more slowly than the offices and housing.



New housing built in the traditional architectural style of the area.

Without the money to redevelop the base on its own, the city held a competition and awarded the redevelopment to a private developer, with the San Diego Redevelopment Agency as a partner. Redevelopment is estimated to cost \$850 million over the first 15 years, and most of the money will come from private financing. As an incentive, the city gave the developer 81 acres to develop and sell for homes and offices. The developer holds a 66-year ground lease, owned by the city, on the remainder of the property to develop and lease for commercial uses.

The development is expected to create 8,000 permanent jobs. Room tax from the two hotels is expected to generate \$4.8 million annually. Tax revenue from the developed property could bring in \$2.4 million a year, including \$750,000 annually for low- and moderate-income housing.<sup>xxiv</sup> The developer is obligated to build \$125

million worth of infrastructure improvements, including sewer, water, electric, cable, phone and storm-drain system improvements, new parking areas, and new road and traffic improvements to internal and surrounding streets. Road improvements include new curbed medians, renovated sidewalks, bike lanes,



Liberty Station occupies a prime location near downtown San Diego.

and extensive landscaped paths. Demolition of obsolete infrastructure created about 300,000 tons of crushed concrete and 200,000 tons of pulverized asphalt, almost all of which is reused for fill and road base.

In the initial offering, Liberty Station home prices ranged from about the mid-\$400,000s to the high \$800,000s. More than 1,500 families entered a lottery for a chance to purchase the first homes. The development was more than 50 percent sold out within 8 months and completely sold out by March 2004. The townhouses and detached homes are a blend of architectural styles that represent the base's history and reflect the style of nearby neighborhoods. Homes feature off-street, alley-access garages shielded from the street; include porches and balconies to foster a sense of community; and use green building materials. As noted earlier, to meet San Diego's requirement of 15 percent affordable housing, the redevelopment agency will set aside tax revenue to provide housing elsewhere in the city to people of low and moderate incomes.

The developer proclaimed that Liberty Station would be a model of smart growth and noted how well it fits with San Diego's "City of Villages" plan.<sup>xv</sup> The company saw this project as an excellent opportunity for infill development. Although increased traffic is possible from suburban residents coming to work at Liberty Station, the developer hopes to keep the amount of traffic in and out of the community down by giving residents everything they need—a place to live, work, shop, and eat—within the development.

**Web sites:** [www.sandiego.gov/ntc](http://www.sandiego.gov/ntc) and [www.libertystation.com](http://www.libertystation.com).



Preserving the unique architecture on the former base.

**Year base closed: 1997**

**Year construction started: 2001**

**Year first homes were occupied: 2003**

**Acreage: 361**

**Number of homes: 349 homes**

**Commercial and retail space: 680,000 square feet**

**Jobs: 8,000 (projected)**

**Annual tax revenue: \$7.2 million (projected)**







## Lowry (formerly Lowry Air Force Base) Denver, Colorado

In 1991, after 54 years of operation, the 1,866-acre Lowry Air Force Base found itself on the BRAC closure list. A member of the Lowry Redevelopment Authority characterized the unique challenge: “Most real estate developments don’t start out with 1,000 vacant buildings, 28 miles of obsolete streets, three runways, and a 12-mile-long chain-link fence. Not to mention environmental issues and no money.”<sup>xxvi</sup> But that was the starting point for the redevelopment of this base, just 15 minutes from downtown Denver.

Realizing that 7,000 jobs and \$295 million in annual spending were leaving the area, the mayors of Denver and Aurora, the two communities with jurisdiction over Lowry, forged an unprecedented alliance to charge ahead with redevelopment. As soon as closure was finalized, the mayors established the Lowry Economic Recovery Project (LERP), a 40-member advisory committee charged with reuse planning.

Between 1991 and 1993, LERP embarked on an intensive 18-month planning process. Representatives from the community served on committees focused on transportation, housing, and economic development issues. There was no shortage of community participation during the thousands of hours of public meetings. Many nearby residents from the historic neighborhoods surrounding the base had never been behind the fence and on the base. They were eager to see redevelopment that would add character, amenities, and value to the existing neighborhoods.

At the same time, LERP ensured that its congressional delegation was able to intervene on its behalf with any federal property issues. LERP was able to raise money by hiring a property management group to lease 800 homes on the base. In the longer term, this funding served as collateral for larger infrastructure loans.

When the Air Force officially closed its operations in September 1994, LERP already had completed the reuse plan. According to the LRA, Lowry was the first base ever to have a reuse plan in place before it closed. Many have attributed the successful redevelopment to this early planning. The plan called for 4,500 homes, 2 million square feet of commercial space, schools, and 800 acres of parks and recreational amenities. In particular, the plan called for development guided by several principles:

- To blend with the surrounding neighborhoods and build upon their strengths;

“I chose to live in Lowry because it allowed me to live in a community that has retail and recreational services within walking distance of residential.”

Ken Gordon, Colorado State Senator<sup>xxvii</sup>



The conditions at Lowry Air Force Base before redevelopment.

||||| “Our employees have several lunch options at the Town Center. In addition, if our employees want to get outside and exercise during lunch or after work, they’ve got countless options. This move has been good for our company and for employee morale.”

Jeff Tetrick, employee advocate, Pinnacol Assurance, a 535-employee company<sup>xxx</sup>



Trails connect homes to parks, libraries, and other amenities.

- To reflect a diversity of home styles and price points;
- To be pedestrian friendly; and
- To provide easy access to parks, schools, and businesses.

By 1994, LERP dissolved, and the Lowry Redevelopment Authority (LRA) was formed to implement the plan. The LRA was set up so that it could issue revenue bonds to fund infrastructure improvements, which was one of the first steps to encourage investors to look at the property. Redevelopment progressed in stages, with the LRA beginning residential construction in areas without environmental contamination. To ensure high-quality construction and design, Lowry established architectural design guidelines reflecting Denver’s urban architecture. The Southwest Neighborhood, with 650 single-family homes and townhouses, opened with great fanfare at a 1998 “Parade of Homes” event. As the LRA Deputy Director Montgomery Force noted, “This event, like no other, launched Lowry as a desirable place to live.”<sup>xxviii</sup>

The employment, educational, commercial, and other residential projects quickly followed suit. Building on its legacy in education as an Air Force training center, Lowry currently is home to three early childhood centers, five primary schools, a private high school, and two adult learning institutions.

The reuse plan sought to diversify commercial properties by constructing small and large office spaces and reusing historic structures. Employers range from financial services to medical office firms. By 2003, Lowry had 89 employers and 5,947 employees on site.<sup>xxix</sup> Lowry has been able to sell itself to employers because of the amenities within walking distance (restaurants, parks, and retail) and the proximity of the site to employee housing and schools. The town center is the retail showcase for Lowry. It has more than 40 shops, including a full-service grocery store, and is designed so that employees and residents can walk to it. Several apartment properties are adjacent to the center, helping to create a lively atmosphere.

Lowry retained many of the distinctive and historic features from the base. For example, two of the massive hangars were preserved and now serve as the Wings Over the Rockies Air and Space Museum. Many of the officers’ quarters have been redeveloped as high-end housing, while the enormous, 1,000-man barracks building has become apartments for a senior living facility. The original steam plant has been redeveloped into the Power House Lofts and, on the parade grounds, loft homes have been constructed on Officers’ Row.

During the reuse planning, Lowry promised residents a wide spectrum of housing choices. Currently, the site has approximately 3,000 homes and apartments ranging in price from \$115,000 to \$2 million. To ensure that



homes would be available to moderate- and low-income residents, the LRA created the Lowry Community Land Trust (LCLT) to manage the sale of up to 300 affordably priced homes. LCLT owns the land, while the homeowner owns the home. Thus, the homeowner builds equity in the house, but LCLT's land ownership keeps the resale price lower so that the house remains affordable in the future. Despite these efforts, Lowry has struggled with implementing the homeless housing provisions required under federal BRAC law. Following a lawsuit brought by homeless-assistance providers in 1999, the LRA built two mixed-income apartment buildings that will house the homeless, along with providing market-rate and affordably priced units.

Sidewalks line every street in Lowry, and a trail system connects residents and visitors to parks, the town center, and the popular neighborhood library. Lowry also provides residents with real-time transit information and bike parking and storage to encourage alternatives to automobile travel.

Lowry's redevelopment has been a success for its residents, for the cities of Aurora and Denver, and for the region as a whole. Between 2003 and 2005, home values at Lowry increased an average of 9.42 percent, outperforming Denver's median increase of 2.7 percent.<sup>xxxix</sup> Lowry employees have created a net economic benefit to the city and county of Denver of \$1.4 billion, including wages, retail sales, and purchases. Lowry residents have generated \$188 million to the city and county of Denver through spending and sales and property taxes. The LRA estimates that between 1994 and 2003, the entire redevelopment created a \$4 billion gross economic impact and created a tax base where there was none previously. Extensive community involvement, thoughtful attention to design principles, and neighborhoods with lasting amenities have ensured Lowry's success.

**Web site:** [www.lowry.org](http://www.lowry.org).

**Year base closed: 1994**

**Year construction started: 1996**

**Year first homes were occupied: 1998**

**Year of completion: 2009**

**Acreage: 1,866 (800 acres of open space)**

**Number of homes: 4,500 (projected)**

**Commercial and retail space: 3.8 million square feet**

**Residents: 10,000 (projected)**

**Jobs: 7,000 (projected)**

**Total economic benefit (1994–2003): \$4 billion**

"The renovated buildings, recycled runways, and other elements anchor residents to Lowry's heritage, while we build a new legacy for the future. The Lowry Redevelopment Authority and other entities have worked hard to preserve the sense of place that Lowry has always possessed."

**Amy Ford, neighborhood leader<sup>xxxix</sup>**



Lowry is just a short distance from downtown Denver.







# Appendix: Resources

## Base closure

### Federal agencies

U.S. Department of Commerce, Economic Development Administration ([www.eda.gov/Research/DefenseConversion.xml](http://www.eda.gov/Research/DefenseConversion.xml)): Information and federal resources to assist communities with BRAC-related defense conversions.

U.S. Department of Defense: Information on Base Realignment and Closure (BRAC) for 2005 ([www.defenselink.mil/brac](http://www.defenselink.mil/brac)). For information on prior BRAC rounds, see [www.defenselink.mil/brac/priorbracs.html](http://www.defenselink.mil/brac/priorbracs.html).

Office of Economic Adjustment ([www.oea.gov](http://www.oea.gov)): Manages and directs the Defense Economic Adjustment Program and coordinates the involvement of other federal agencies to provide resources for communities affected by DoD program changes. Publications on website include:

- *Responding to Change: Communities & BRAC*. Available at [www.oea.gov/oeaweb.nsf/LIBbyTitle?readform](http://www.oea.gov/oeaweb.nsf/LIBbyTitle?readform).
- *California Military Base Reuse*. Department of Toxic Substances Control, CAL EPA. Available at [www.oea.gov/OEAWeb.nsf/DB074580440F72938525701500417E70/\\$File/eac.pdf](http://www.oea.gov/OEAWeb.nsf/DB074580440F72938525701500417E70/$File/eac.pdf)
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- *Economics of BRAC Sites*. June 2005.

- *Early Transfer Authority: A Guide to Using ETA to Dispose of Surplus Property*. October 2005.

President's Economic Adjustment Committee (EAC): Committee of 22 federal agencies that support BRAC-related activities through technical assistance and financial resources for affected communities. OEA coordinates resources available via the EAC. A description of the EAC is available at [www.oea.gov/OEAWeb.nsf/7B2D6546FA4B85256E83004488F2/\\$File/eac.pdf](http://www.oea.gov/OEAWeb.nsf/7B2D6546FA4B85256E83004488F2/$File/eac.pdf).

U.S. Department of Labor, Employment and Training Administration ([www.doleta.gov/BRAC](http://www.doleta.gov/BRAC) and [www.brac-coach.org](http://www.brac-coach.org)): Tools and services for BRAC-affected workers and communities.

U.S. Environmental Protection Agency, Federal Facilities Restoration & Reuse Office ([www.epa.gov/fedfac](http://www.epa.gov/fedfac)): Information on environmental contamination, cleanup, and reuse for military installations being addressed by EPA.

### Organizations

Association of Defense Communities (formerly National Association of Installation Developers) ([www.naid.org](http://www.naid.org)): Resources for active and closed military base communities. Publications include:

- *The Community Base Reuse Planning Process: A Layman's Guide*. National Association of Installation Developers. NAIDinfo series. February 2004. Available at [www.defensecommunities.org/ResourceCenter/Base\\_Reuse.pdf](http://www.defensecommunities.org/ResourceCenter/Base_Reuse.pdf).

- Dawson, Yvonne. *Organizing Your Planning Effort: The First Steps in Installation Redevelopment*. National Association of Installation Developers. Infobrief. May 2005. Available at [www.defensecommunities.org/Planning\\_LRA.pdf](http://www.defensecommunities.org/Planning_LRA.pdf).

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- NAID and ECS, Inc. *Environmental Insurance and BRAC Communities: Building a Successful Partnership*. 2001. Available at [www.defensecommunities.org/ResourceCenter/Environmental\\_Insurance.pdf](http://www.defensecommunities.org/ResourceCenter/Environmental_Insurance.pdf).

International City/County Management Association ([www.icma.org](http://www.icma.org)): Services and resources, including technical and peer assistance, for local governments. Publications include:

- McMillen, Jacen, and Daniel Pickett. *ICMA Base Reuse Handbook: A Navigational Guide for Local Governments, Second Edition*. International City/County Management Association. 2002.
- Smart Growth Issue Summary: Military Encroachment and Base Reuse. March 2005. Available at [www.icma.org/upload/library/2005-05/{27100F1D-6291-411F-8883-089488C11AD3}.pdf](http://www.icma.org/upload/library/2005-05/{27100F1D-6291-411F-8883-089488C11AD3}.pdf).
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National Governors Association ([www.nga.org](http://www.nga.org)): Resources aimed at state-level officials. Publications include:

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## General information about growth and development patterns

### Organizations

U.S. Environmental Protection Agency ([www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth)): Offers research, publications, tools, a policy database, and other resources. Particularly useful are *Getting to Smart Growth*, Volumes I and II, with 100 policies in each volume to help communities improve the quality of their development. Also available is *Protecting Water Resources with Smart Growth*, a book of 75 policies to protect water quality while continuing to grow. See EPA's brownfields site ([www.epa.gov/swerosps/bf/index.html](http://www.epa.gov/swerosps/bf/index.html)) for information about redeveloping contaminated sites.

Smart Growth Online ([www.smartgrowth.org](http://www.smartgrowth.org)): A service of the Smart Growth Network, a coalition of more than 35 organizations, including environmental groups, historic preservation organizations, professional organizations, developers, real estate interests, and local and state government entities, that work together to encourage development that benefits the economy, community, public health, and the environment.

Affordable Housing Design Advisor ([www.designadvisor.org](http://www.designadvisor.org)): Demonstrates that moderately priced homes can look just like market-priced ones. It has examples and practical advice.

U.S. Green Building Council, in partnership with the Congress for the New Urbanism and the Natural Resources Defense Council, is developing a LEED (Leadership in Energy and Environmental Design) standard for Neighborhood Developments (LEED-ND). Currently in the preliminary draft stage, this rating system details the design, site plan, and other components that qualify a project as smart growth. The certification program is expected to launch in 2007. Available in draft at [www.usgbc.org/DisplayPage.aspx?CMSPageID=148](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148).

### Publications

The Smart Growth Shareware CD-ROM (Smart Growth America, 2004) compiles a wide range of smart growth resources, including publications, articles, fact sheets, and Web links to more than 100 resources. It is available at [www.smartgrowthamerica.org](http://www.smartgrowthamerica.org).

Smart Growth Network and National Neighborhood Coalition. "Affordable Housing and Smart Growth: Making the Connection." 2001. Available at [www.epa.gov/smartgrowth/pdf/epa\\_ah\\_sg.pdf](http://www.epa.gov/smartgrowth/pdf/epa_ah_sg.pdf).

## Visioning resources

### Organizations

The Tampa Bay Regional Planning Council assists cities and towns with community visions. Its Web site contains several completed community visions. See [www.tbrpc.org/livable/cvt.htm](http://www.tbrpc.org/livable/cvt.htm).

The Charlottesville, VA, area developed a vision for the city and three surrounding counties. The Thomas Jefferson Planning District Commission Web site describes the process and outcomes. See [www.tjpd.org/community/epi.asp](http://www.tjpd.org/community/epi.asp).

### Publications

The Center for Rural Pennsylvania. *Planning for the Future: A Handbook on Community Visioning*. Second Edition. 2000. Available at [www.ruralpa.org/visioning.pdf](http://www.ruralpa.org/visioning.pdf).

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## Community involvement tools

### Organizations

The National Charrette Institute ([www.charretteinstitute.org](http://www.charretteinstitute.org)) offers training in organizing charrettes and other public-engagement processes.

PlaceMatters.com ([www.placematters.com](http://www.placematters.com)) offers tools, techniques, and case studies to help communities undertake vision-centered place-based planning, civic engagement, and community design and decision making.

U.S. EPA offers resources for concerned citizens ([www.epa.gov/epahome/Citizen.html](http://www.epa.gov/epahome/Citizen.html)), including information on environmental issues and tools to help people become involved and make a difference in their communities.

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