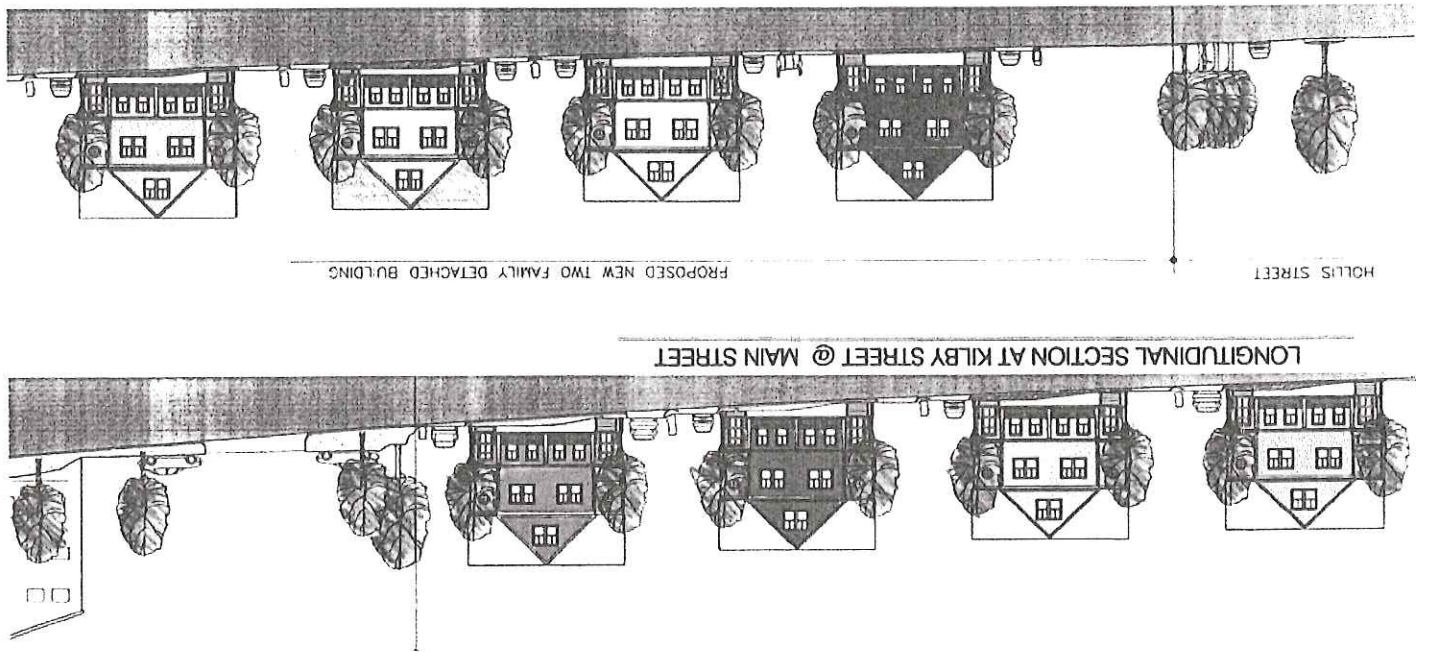


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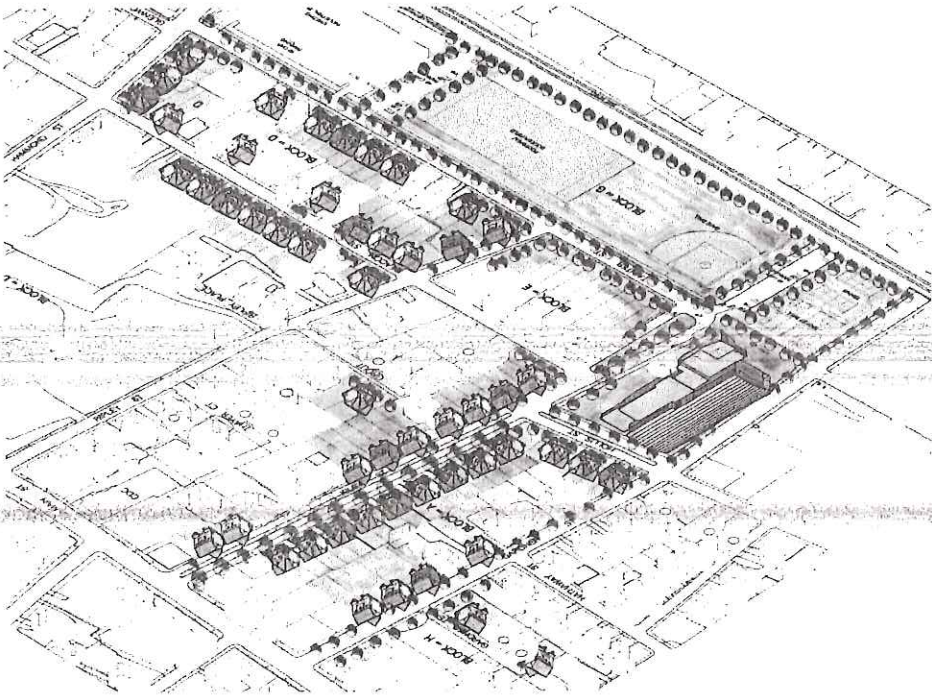
48 Moody Street

Adams School Reuse Committee

Hammond Street Master Plan Worcester, MA

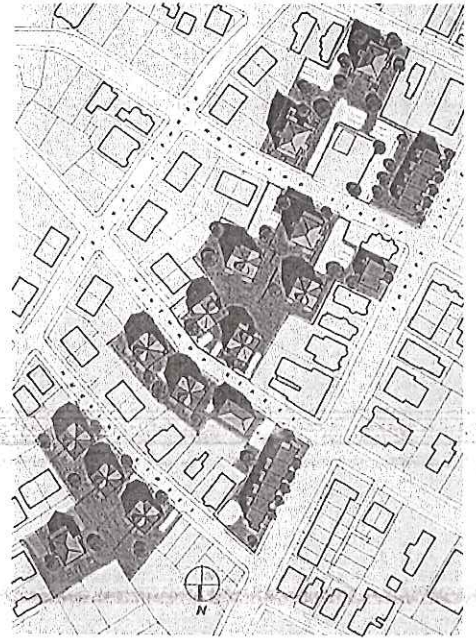


LONGITUDINAL SECTION AT KILBY STREET @ TWO FAMILY DETACHED BUILDING

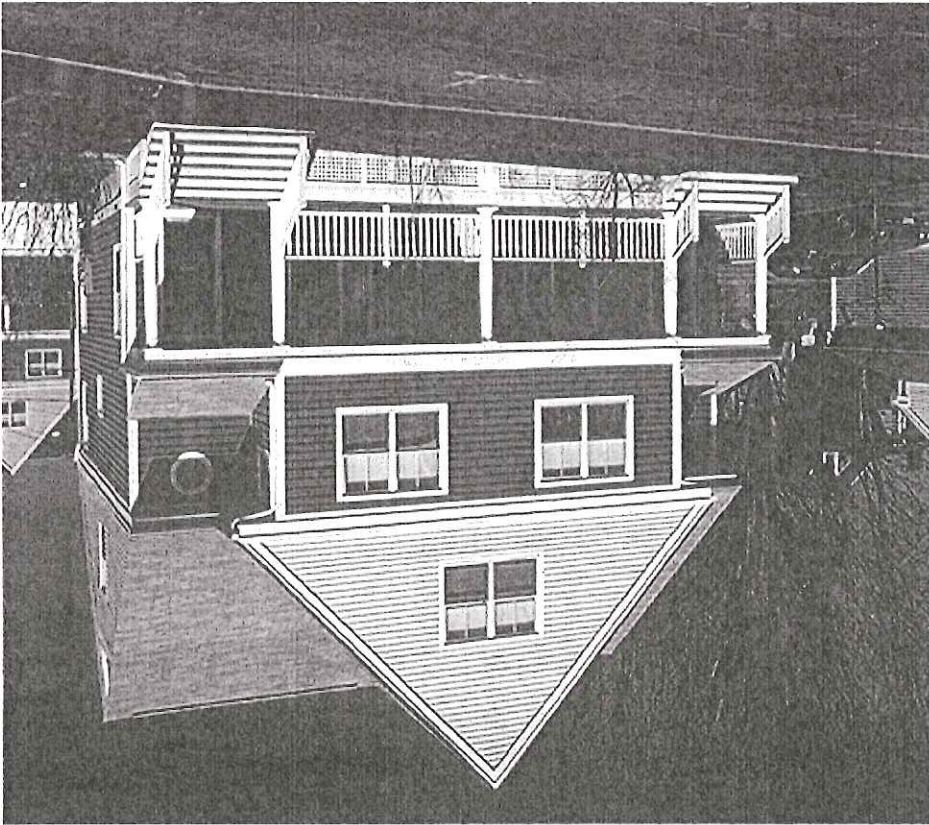
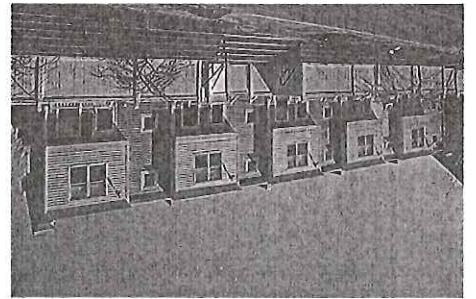


This project involves the development of an inner city neighborhood in Worcester, MA. It features the integration of diverse activities in a mixed-use development scenario that includes affordable housing, athletic facilities for a private university, and a boys and girls club. The Main South CDC will develop 100 units of affordable rental housing on empty residential parcels. Clark University will build a field house and athletic fields on a six acre site formerly occupied by industrial buildings that are to be demolished; and the Boys and Girls Club of Worcester will build a 40,000 SF recreation facility that shares athletic fields with Clark. The project has budget of \$32M and requires the existing street network to be reconfigured, changes in zoning and environmental mitigation before construction can begin. Funding for the development will tap on a combination of private and public sources.

Client: Main South CDC
 Complete: 2001
 Project Cost: \$32 million



The contiguous parcels of land located off Blue Hill Avenue were wasteland and dumping ground. After years of urban decay and abandonment, this development of 41 units, undertaken by a non-profit organization, commences to reclaim this old neighborhood. New townhouses line the edge of Blue Hill Avenue, creating a continuous urban wall. The side streets contain two-family and three-family detached buildings. All buildings have individual front entrances, front porches, rear decks, private parking spaces, and individual backyards. A 1500 sq. ft. community building, located on one of the inner streets serves for a wide variety of activities.



The scale of the buildings has been kept to that of the neighborhood, and their architectural expression draws on the many details that make up the buildings of the area. Color is used in many different combinations to add liveliness and individuality to the ensemble, while the details, such as porches, columns and bright white trim provide continuity throughout this community.

Client: Nuestra Comunidad

Development Complete: 1994

Project Cost: \$4.6 million

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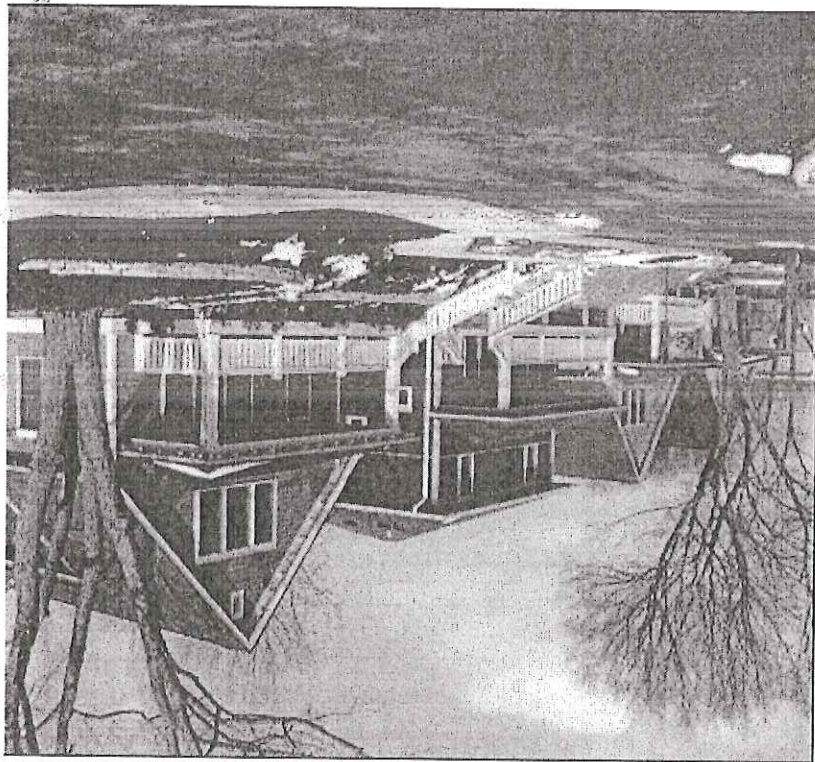
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AWARDS

South Dunn Street houses

Submitted by jfretts on Thu, 2007-02-01 23:55

Tags for this image: block | bloomington | house | indiana | infill



Bloomington, Indiana: Recently completed houses on South Dunn Street, an urban infill project by Neighborhood Solutions (Matt Press). Homes designed by Kirkwood Design Studio.

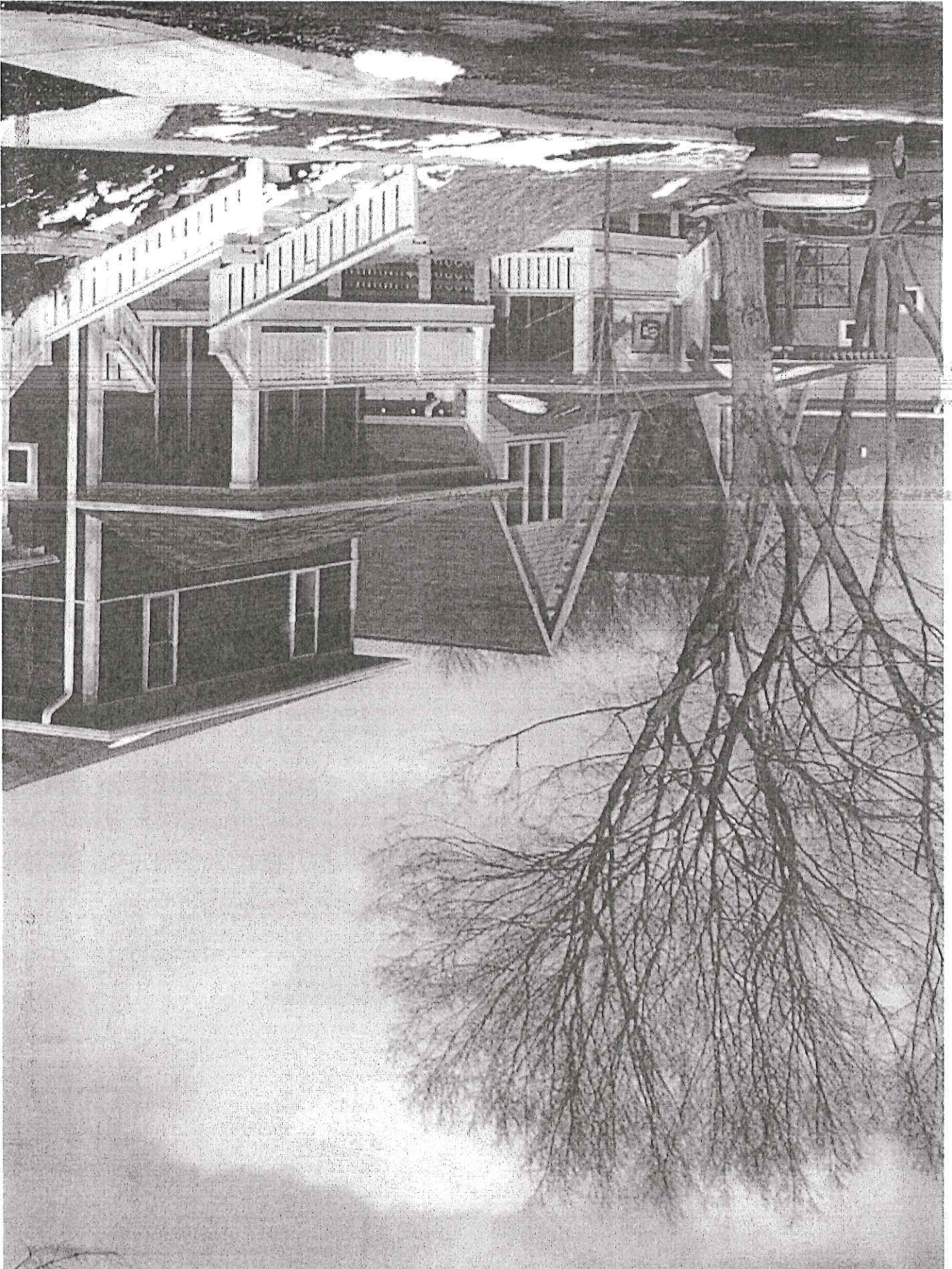
Credits: Photo: Jeremy Fretts

Contact: jeremy@humandesign.com

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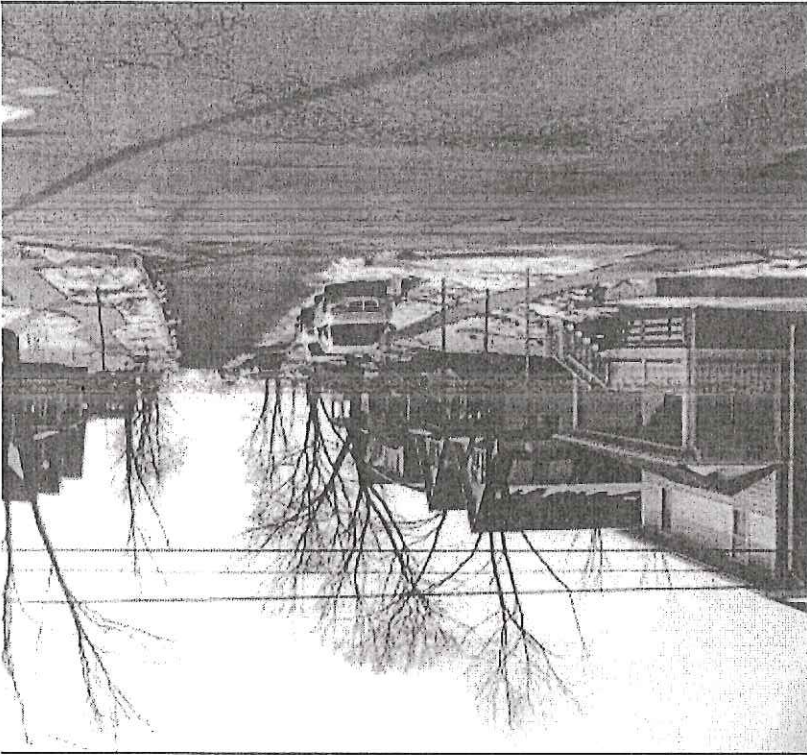
South_Dunn_Street

Submitted by jfretts on Fri, 2007-02-02 00:02. Tags for this image: block | bungalow | house | indiana | infill | street

Bloomington, Indiana: South Dunn Street is a two-block urban infill project in Bloomington, Indiana. Pictured here are the new street and first homes. Developer: Neighborhood Solutions (Matt Press).
[http://www.neighborhoodsolutions.info/Homes designed by Kirkwood Design Studio. The project was published in the Winter 2006 issue of American Bungalow magazine.](http://www.neighborhoodsolutions.info/Homes%20designed%20by%20Kirkwood%20Design%20Studio.%20The%20project%20was%20published%20in%20the%20Winter%202006%20issue%20of%20American%20Bungalow%20magazine.)

Credits: Photo: Jeremy Fretts

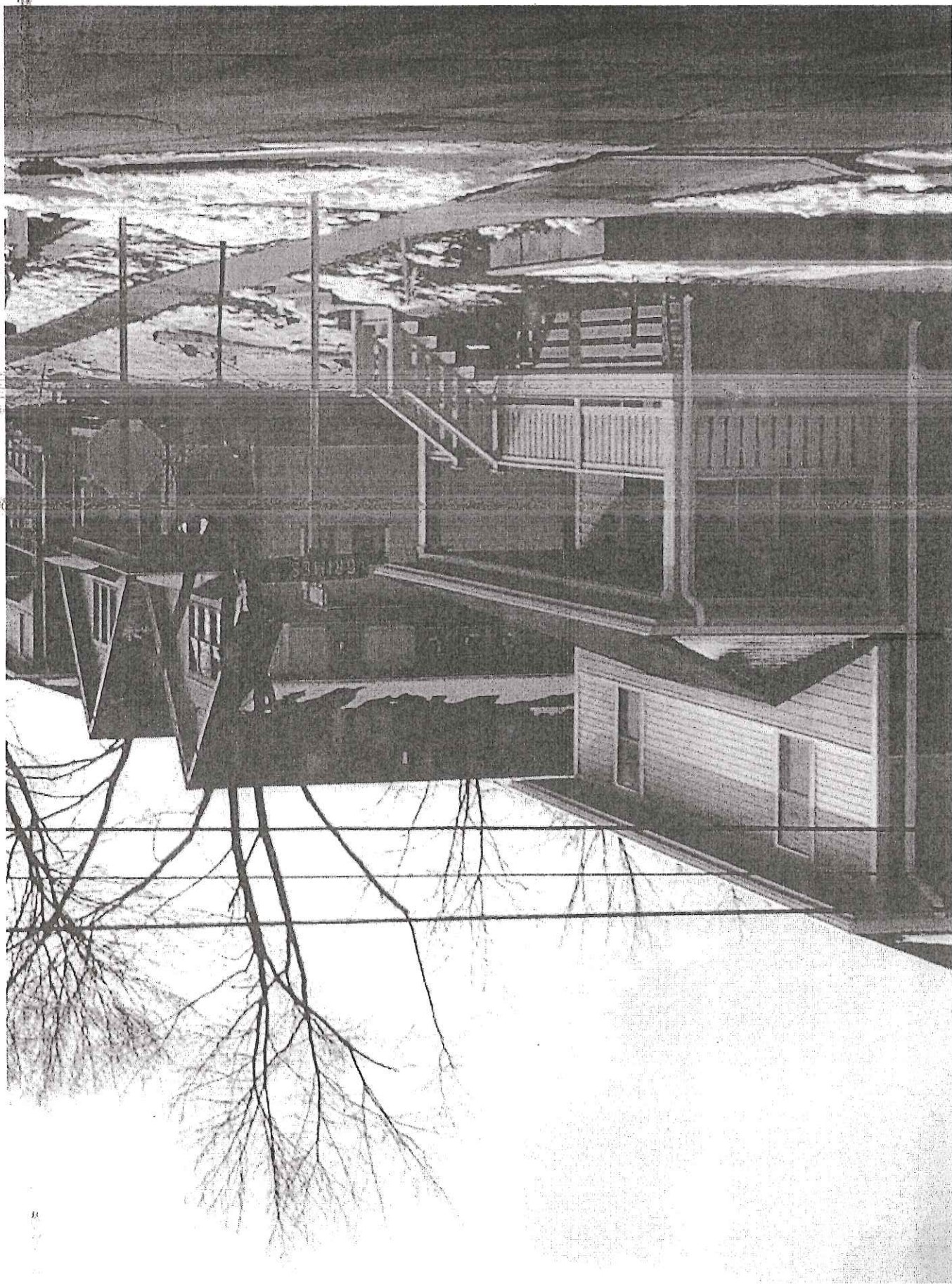
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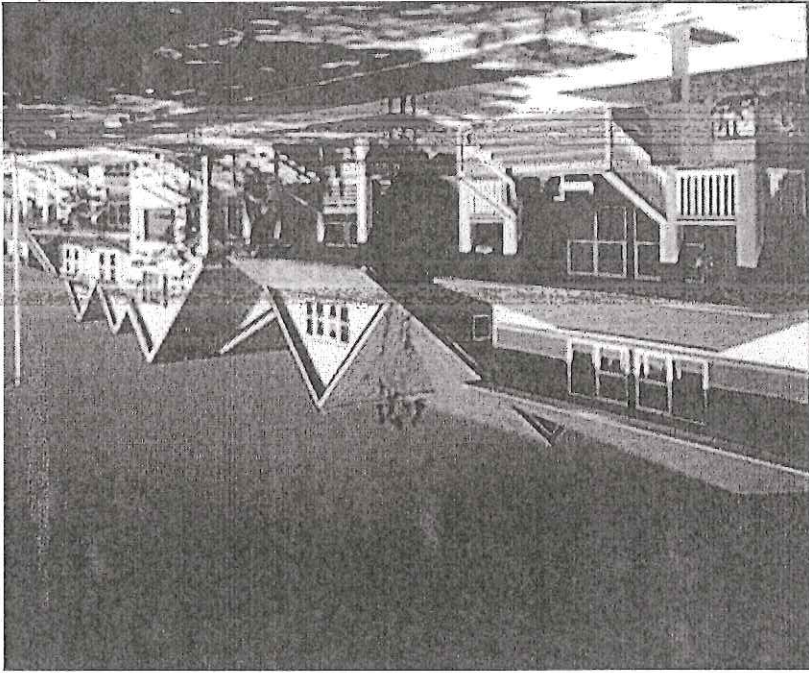
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Submitted by Jonzirke on Tue, 2006-12-05 17:07. Tags for this image: Mixed-income | public housing development | Redevelopment

Holly Park Redevelopment - Phase I

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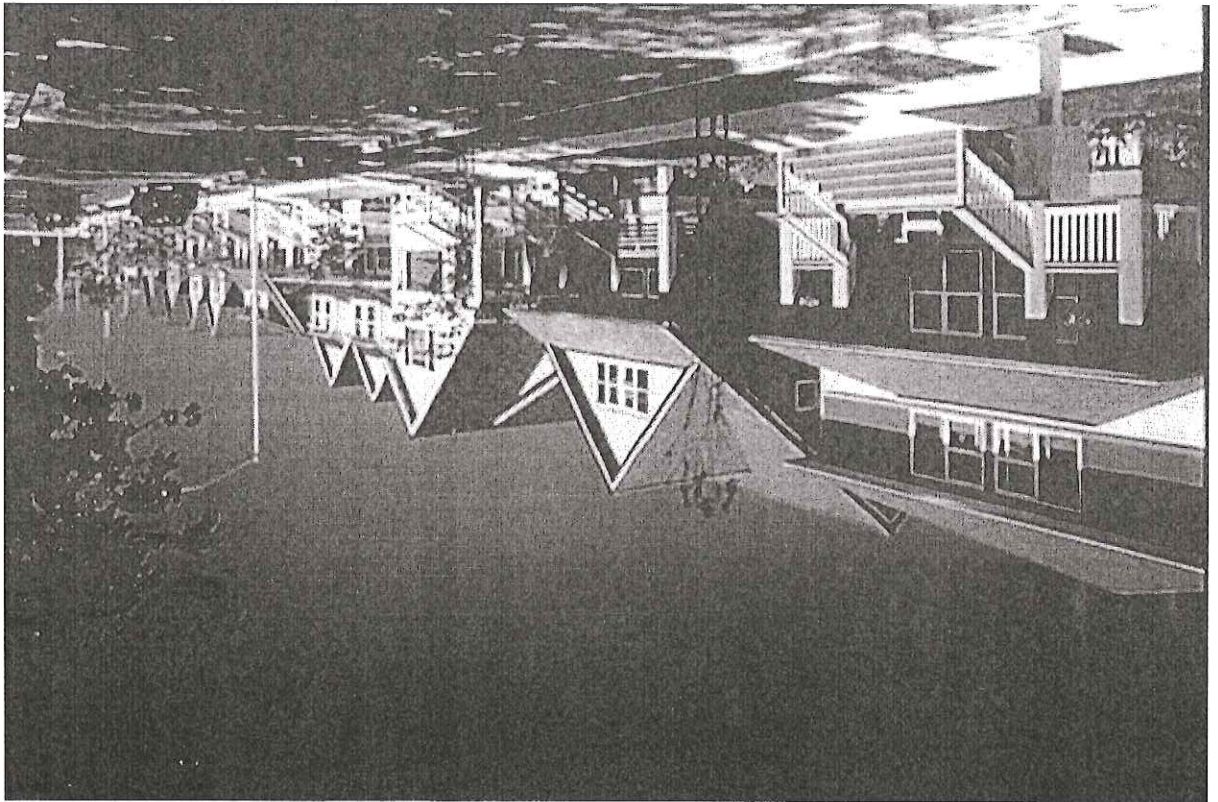
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The New Urbanism:

An alternative to modern, automobile-oriented planning and development

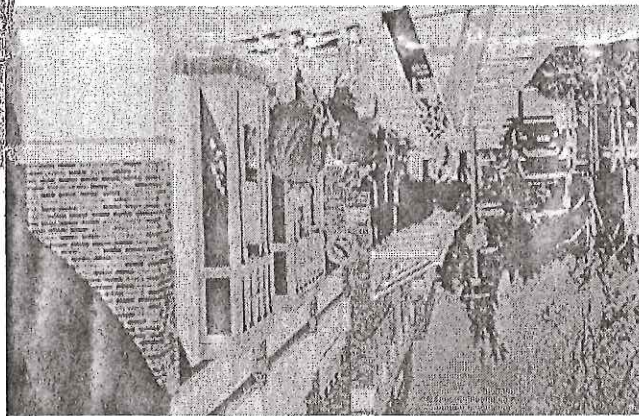
ROBERT STEUTVILLE

Through the first quarter of the last century, the United States was developed in the form of compact, mixed-use neighborhoods. The pattern began to change with the emergence of modern architecture and zoning and ascension of the automobile. After World War II, a new system of development was implemented nationwide, replacing neighborhoods with a rigorous separation of uses that has become known as conventional suburban development (CSD), or sprawl. The majority of US citizens now live in suburban communities built in the last 50 years.

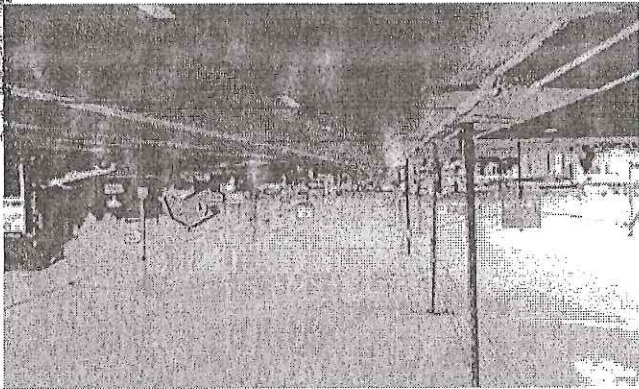
Although CSD has been popular, it carries a significant price. Lacking a town center or large areas of countryside even as population grows relatively slowly. Automobile use per capita has soared, because a motor vehicle is required for the great majority of household and commuter trips.

Those who cannot drive are significantly restricted in their mobility. The working poor living in suburbia spend a large portion of their incomes on cars. Meanwhile, the American landscape where most people live and work is dominated by strip malls, auto-oriented civic and commercial buildings, and subdivisions without much individuality or character.

The New Urbanism is a reaction to sprawl. A growing movement of architects, planners, and developers, the New Urbanism is based on principles of planning and architecture that work together to create human-scale, walkable communities. New urbanists take a wide variety of approaches — some work exclusively on infill projects, others focus on transit-oriented development, still others are attempting to transform the suburbs, and many are working in all of these categories. The New Urbanism includes traditional architects and those with modernist sensibilities. All, however, believe in the power and ability of traditional neighborhoods to restore functional, sustainable communities. The trend had its roots in the work of maverick architects and planners in the 1970s and 1980s who coalesced into a unified group in the 1990s. From modest beginnings, the trend is beginning to have a substantial impact. More than 600 new towns,



The new urbanist Redmond Town Center contrasts with the typical strip commercial development of suburbia, below.



villages, and neighborhoods are planned or under construction in the US, using principles of the New Urbanism. Additionally, hundreds of small-scale new urban infill projects are restoring the urban fabric of cities and towns by reestablishing walkable streets and blocks.

On the regional scale, the New Urbanism is having a growing influence on how and where metropolitan regions choose to grow. At least 14 large-scale planning initiatives are based on the principles of linking transportation and land-use policies and using the neighborhood as the fundamental building block of a region.

In Maryland and several other states, new urbanist principles are an integral part of smart growth legislation.

Moreover, the New Urbanism is beginning to have widespread impact on conventional development. Just as Starbucks raised the quality of coffee in competing restaurants and cafes, mainstream developers are adopting new urban design elements such as garages in the rear of houses, neighborhood greens and mixed-use town centers. Projects that adopt some principles of New Urbanism but remain largely conventional in design are known as hybrids.

The New Urbanism trend goes by other names, including neotraditional design, transit-oriented development, and traditional neighborhood development. Borrowing from urban design concepts throughout history, the New Urbanism does not merely replicate old communities. New houses within neighborhoods, for example, must provide modern living spaces and amenities that consumers demand (and that competing suburban tract homes offer). Stores and businesses must have sufficient parking, modern floor plans, and connections to automobile and pedestrian traffic, and/or transit systems.

With proper design, large office, light industrial, and even "big box" retail buildings can be situated in a walkable new urbanist neighborhood. Parking lots, the most prominent feature of conventional commercial districts, are accommodated to the side and the rear of new urban businesses. The size of lots are reduced through shared parking, on-street parking, and shifts to other modes of transportation.

Another difference between the old and the New Urbanism is the street grid. Historic cities and towns in the US employ a grid that is relentlessly

regular. New urbanists generally use a "modified" grid, with "T" intersections and street deflections to calm traffic and increase visual interest.

That blending of old and new is the basis of the adjective neotraditional, a term that carries a lot of baggage, especially with modernists, who see it as an architectural "style." However, it is more of an urban design approach that borrows from the past while adapting to the present and future. The very fact that new urbanists must meet the demands of the marketplace keeps them grounded in reality. Successful New Urbanism performs a difficult balancing act by maintaining the integrity of a walkable, human-scale neighborhood while offering modern residential and commercial "product" to compete with CSD. New urbanists who cannot compete with conventional development or find a niche that is poorly served by the real estate industry are doomed to failure.

The difficulty of that balancing act is one reason why many developers choose to build hybrids. Instead of adopting all of the principles of the New Urbanism. Some new urbanists think that hybrids pose a serious threat to the movement, because they usually borrow the label and language of the New Urbanism. Other new urbanists believe that hybrids represent a positive step forward from CSD.

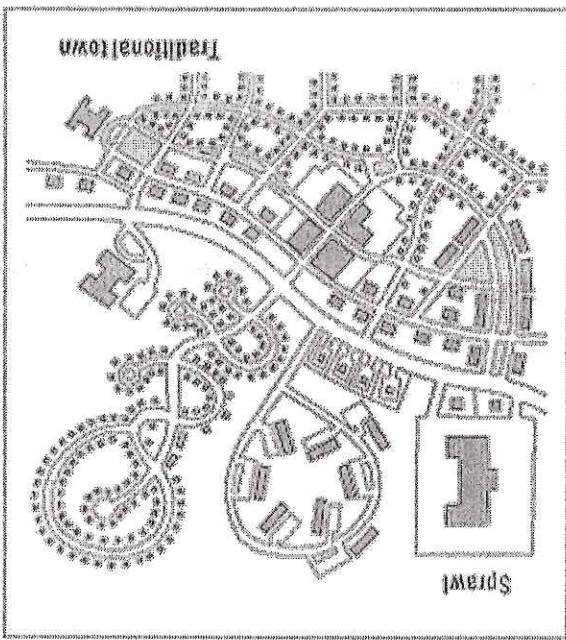
Principles of the New Urbanism

The heart of the New Urbanism is in the design of neighborhoods, which can be defined by 13 elements, according to town planners Andres Duany and Elizabeth Plater-Zyberk, two of the founders of the Congress for the New Urbanism. An authentic neighborhood contains most of these elements:

- 1) The neighborhood has a discernible center. This is often a square or a green and sometimes a busy or memorable street corner. A transit stop would be located at this center.
- 2) Most of the dwellings are within a five-minute walk of the center, an average of roughly 2,000 feet.
- 3) There are a variety of dwelling types — usually houses, rowhouses and apartments — so that younger and older people, singles and families, the poor and the wealthy may find places to live.
- 4) At the edge of the neighborhood, there are to shops and offices of sufficiently varied types to

Sprawl and traditional neighborhoods consist of identical parts, configured differently.

Diagram by Duany Plater-Zyberk & Company



supply the weekly needs of a household.

5) A small ancillary building is permitted within the backyard of each house. It may be used as a rental unit or place to work (e.g., office or craft workshop).

6) An elementary school is close enough so that most children can walk from their home.

7) There are small playgrounds accessible to every dwelling -- not more than a tenth of a mile away.

8) Streets within the neighborhood form a connected network, which disperses traffic by providing a variety of pedestrian and vehicular routes to any destination.

9) The streets are relatively narrow and shaded by rows of trees. This slows traffic, creating an environment suitable for pedestrians and bicycles.

10) Buildings in the neighborhood center are placed close to the street, creating a well-defined outdoor room.

11) Parking lots and garage doors rarely front the street. Parking is relegated to the rear of buildings, usually accessed by alleys.

12) Certain prominent sites at the termination of street vistas or in the neighborhood center are reserved for civic buildings. These provide sites for community meetings, education, and religious or cultural activities.

13) The neighborhood is organized to be self-governing. A formal association debates and decides matters of maintenance, security, and physical change. Taxation is the responsibility of the larger community.

New urbanist prototypes

Seaside, Florida, the first new urbanist town, began development in 1981 on 80 acres of Panhandle coastline. Seaside appeared on the cover of the Atlantic Monthly in 1988 when only a few streets were completed, and it since became internationally famous for its architecture and the quality of its streets and public spaces. Seaside proved that developments that function like traditional towns could be built in the postmodern era. Lots began selling for \$15,000 in the early 1980s and, slightly over a decade later, lots prices

had escalated to about \$200,000. Today, some lots sell for close to a million dollars, and houses sometimes top \$3 million. The town is now a tourist mecca.

Seaside's influence has less to do with its economic success than a certain magic. Many developers have visited Seaside and gone away determined to build something similar.

Since Seaside gained recognition, other new urban towns and neighborhoods have been designed and are substantially built — including Halle Village Center in Gainesville, Florida; Harbor Town in Memphis, Tennessee; Kentlands in Gathersburg, Maryland; Addison Circle in Addison, Texas; Orca Station in Hillsboro, Oregon; Mashpee Commons in Mashpee, Massachusetts; and Celebration in Orlando, Florida.

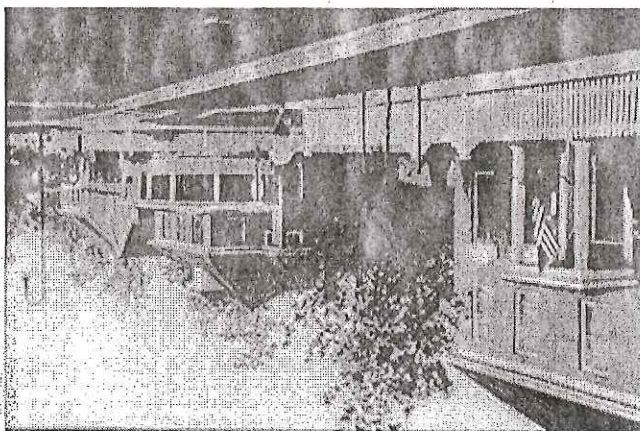
Designers are also using the principles of the New Urbanism to build major new projects in cities and towns. In the mid-1990s, the US Department of Housing and Urban Development (HUD) adopted the principles of the New Urbanism in its

multibillion dollar program to rebuild public housing projects nationwide. New urbanists have planned and developed hundreds of projects in infill locations. Most were driven by the private sector, but many, including HUD projects, used public money. New urbanist projects built in historic cities and towns includes Crawford Square in Pittsburgh, City Place in West Palm Beach, Highlands Garden Village in Denver, Park DuValle in Louisville, and Beerline B in Milwaukee.

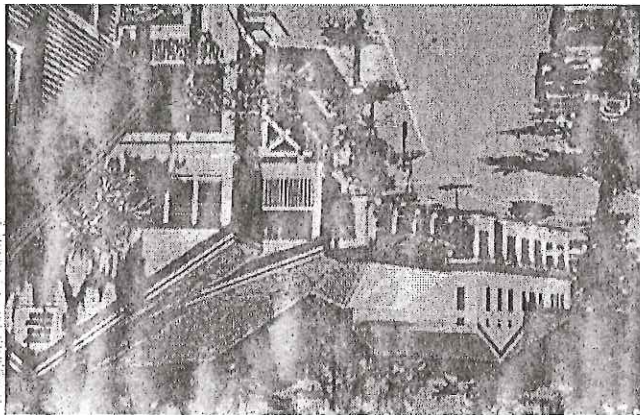
Meanwhile, leaders in this design trend came together in 1993 to form the Congress for the New Urbanism (CNU), based in Chicago. The founders are Andres Duany, Elizabeth Plater-Zyberk, Peter Calthorpe, Daniel Solomon, Stefanos Polyzoides, and Elizabeth Moule, all practicing architects and town planners. CNU has since grown to more than 2,000 members and is now the leading international organization promoting new urbanist design principles.

Disney builds a town

In June of 1996, Disney unveiled its 5,000-acre town of Celebration, near Orlando, Florida, and it has since eclipsed Seaside as the best-known new urbanist community. In some respects, the New Urbanism and Disney have been uncomfortable bedfellows. While using designers



Kentlands in Gathersburg, Maryland, above, and Halle Village Center in Gainesville, Florida, combine modern homes and businesses with compact, walkable, streets and public spaces.



and principles closely associated with the New Urbanism, Disney has shunned the label, preferring to call Celebration simply a "town." Meanwhile, the movement may have benefited from all of Celebration's publicity — but not without a price. Disney has come under attack for what some perceive as heavy-handed rules and management. For those who would attack the New Urbanism as insipid nostalgia, Disney is a fat target.

The fact remains that Celebration's urban design is generally of high quality and by most accounts former residents very well. Ray Chharamonte, a former resident of Celebration who has since moved to a different new urban community, had this to say after his family moved to Disney's town: "The entire focus of our lives has changed. Instead of doing everything some place other than close to home, we now can eat, do errands, celebrate special occasions and just hang out near our own home. The changes are most dramatic for our children, who now have a freedom they never had in our old neighborhood."

In the 1991 book *Edge City*, author Joel Garreau wrote that Americans have not built "a single old-style downtown from raw dirt in 75 years." Celebration was the first real estate project to break that trend, opening its downtown in October, 1996 (Seaside's downtown was still mostly unbuilt at the time). Since then, scores of new urban projects have followed suit with their own downtowns and mixed-use districts.

But the new urbanists still have plenty of work to do. They must continue to design and build retail centers to compete with CSD nationwide. They must capture a broad portion of the residential market. New urbanist developers must get better at making their neighborhoods affordable. New urbanists also must prove, over time, that their ideas are superior for both revitalizing old cities and towns and building new communities. If they can accomplish these goals — and many projects now offer hope that they can — the New Urbanism is poised to become the dominant real estate and planning trend of the 21st century.

Robert Steuterville is editor and publisher of New Urban News. This article was updated July 8, 2004.



Examples of Smart Growth in Massachusetts

The Office for Commonwealth Development encourages more concentrated development through financial incentives and technical assistance, but private developers and many cities and towns in Massachusetts already see compact, transit-oriented growth on underutilized "infill" land as the wave of the future.

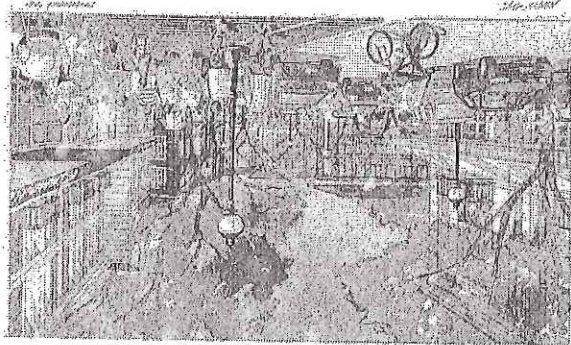
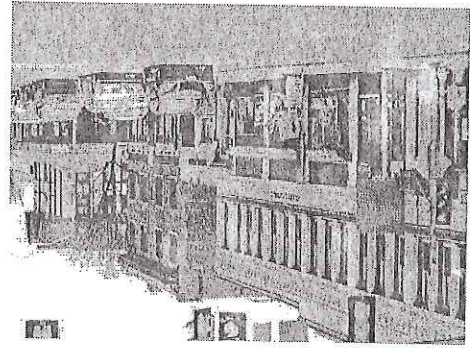
Smart growth projects and initiatives across the state, from zoning reform to mixed-use, urban-village style development, include:

Abington-Rockland-Weymouth (South Weymouth Naval Air Station). The national development company LNR Property Corp. is set to build 2,855 townhouses, condominiums and apartments, all on lots less than 5,000 square feet, and 2 million square feet of commercial and retail space to create a new urban village on the 1,400-acre South

Weymouth Naval Air Station. The redevelopment of the closed air base with concentrated, mixed-use, transit-oriented development is a showcase project for the US Environmental Protection Agency, the largest New Urbanist-style project in New England, and one of the premiere smart growth initiatives in the country, comparable to the redevelopment of the closed Stapleton airport in Denver, which is similarly being filled in with homes and stores and offices. The new development will have the look of a traditional New England village, thanks to the San Francisco design firm SMWM, along with Viteg Kohl and Dover Associates. The project includes at least 500 homes that will be clustered alongside the Old Colony line commuter rail stop (South Weymouth, Trotter Road), plus a series of playing fields and an environmentally friendly golf course.

Amesbury. The Lower Milliard area is the focus of a sweeping redevelopment plan that includes the relocation of a public works facility, a transportation center, reduced parking requirements, senior center, residential and commercial development, a new park with historic museums, and expansion of the Powow Riverwalk into the downtown.

Attleboro. The city of 42,000 on the Massachusetts-Rhode Island border is revitalizing its downtown, host to a commuter rail station, a hospital, a branch of Bristol Community College and an impressive stock of older manufacturing buildings. The effort began in 2003, including plans for an inter-modal transportation center and streetscape improvements, and continues with up to 1,000 potential new homes in vacant downtown buildings. Attleboro used state smart growth funding to do a master plan and designed a District Improvement Financing (DIF) proposal to secure funding for improvements. Next steps include moving a public works facility to free up

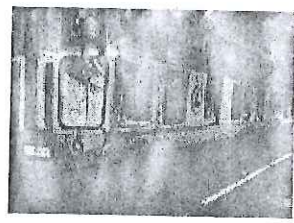




Office for Commonwealth Development

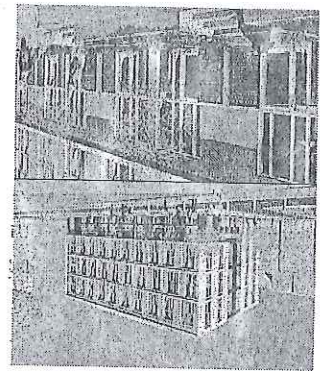
land for housing and mixed-use development near the train station and daylighting the Ten Mile River. Barnstable. The revitalization of downtown Hyannis has drawn much attention, as Barnstable rezoned the area to promote multiple uses along and around Main Street, and designed enhancements to wastewater, roadway and sidewalk infrastructure to support the reinvention of this thriving town center.

Boston. Infill, industrial land reclamation and transit-oriented development is charging ahead from the South Boston Waterfront to Bulfinch Triangle, near TD Banknorth Garden. In Jamaica Plain, 430 homes and 170,000 square feet of recreational, cultural, institutional, retail and office space is envisioned at the Jackson Square, on the Orange Line, joining other TOD projects include Bartlett Yard near Dudley Square in Roxbury, Mattapan, and stations along the Fairmount Line in Dorchester.



Brockton. The City of Champions is host to a minor league baseball team in a stadium that is a popular destination, and in the downtown area, a new courthouse, state-supported park, and an improved inter-modal center have added vitality. One of the large mills on the east side of the commuter rail station has been converted to condominiums. The city is currently studying redevelopment of other mill buildings for housing within walking distance of commuter rail, and is investigating a 40R district at the train station.

Cambridge. Cambridge is home to a number of smart growth practices, ranging from an inclusionary zoning policy to innovative street design and bicycle lanes, but the major urban "infill" mixed-use development on the way for the city is North Point -- 2,700 homes, 10 acres of new parks that will double as a stormwater management area, 2.2 million square feet of laboratory and office space, and 150,000 square feet of retail, on 45 acres of rail yards between McGrath-O'Brien Highway and I-93 just north of the Charles River. A new Lechmere station on the property will set the stage for the Green Line extension through Somerville; there will be bike repair and storage facilities for the Minuteman Path, envisioned to come in through the Alewife area and Somerville.



Carver. This Southeastern Massachusetts town used a smart growth technical assistance grant to complete a comprehensive zoning update, including establishing a by-right cluster subdivision provision, an update of the section on conservation subdivision and the townhouse bylaw, a revision of setback requirements and an expansion of the village district. The town also adopted a new bylaw on accessory apartments, a key ingredient in producing affordable housing.

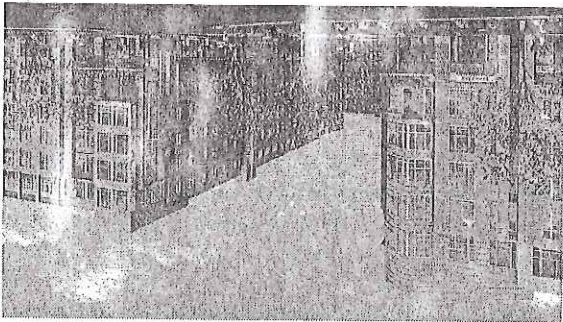
Easthampton. Honored with a Governor's Smart Growth Award, Easthampton is another older mill community using a strategic planning effort to revitalize its center. The first step was to legalize a mix of uses in its mills, and to design and install streetscape and park improvements at Lower Mill Pond. Easthampton has also sought to protect its farming areas outside of the downtown, most recently by adopting a Transfer of Development Rights bylaw -- a technique spelled out in the Smart Growth Toolkit.



Haverhill. This Merrimac River valley city once known for its shoe manufacturing is considering establishment of a Chapter 40R district for its downtown, where the national developer Forest City is set to rehabilitate an old mill building, steps from the commuter rail station. The city is coming up with a creative parking strategy to balance the needs of commuters, residents and visitors in its traditional urban street grid featuring retail and restaurants.

Lynn. Residential development adjacent to the commuter rail station has been popular, reflecting the demand for more affordable homes and shorter commutes. In 2003, Lynn eliminated parking requirements for existing structures in their central business district. City officials say that move has helped smooth the way for 200 new homes in the last two years, and the 70 homes set to become available in 2006. The lifting of rigid parking requirements can make it much easier to re-use, rehabilitate and preserve older buildings. Lynn is also working on ways to improve its waterfront.

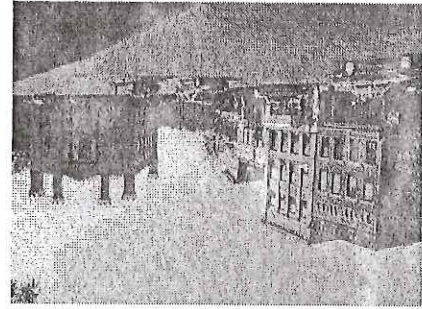
Medford. National Development's Station Landing, which includes 292 apartments over 25 retail stores, plus 165,000 square feet of office space, and an additional 12-story building with 127 condominiums and a three-story fitness center, is taking shape on the banks of the Mystic River at Medford's Wellington Circle Orange Line station. Medford also hired Sasaki & Associates to write a master plan for revitalizing Medford Square.



Newbury/Newburyport. A 20-acre site near the commuter rail station was the focus of a study for a transfer of development rights program, to steer development plans for environmentally sensitive open space areas in both communities to this pedestrian-oriented area around the station. Total residential development could include up to 600 homes, steps from the train station. The community is also considering a 40R district.

Newton. The Garden City has convened a citizen-based task force to foster the redevelopment and enhancement of Newton Centre – a classic example of transit-oriented development (Newton Centre, Green Line), but currently lacking housing in the commercial district. The Newton Centre Renaissance Task Force has been charged by Mayor David Cohen to identify the potential for redevelopment and improvement of Newton Centre and to develop appropriate zoning improvement and financing alternatives. Newton is also home to a major new transit-oriented development project, Arbor Point at Woodland Station, also on the Green Line.

Northampton. The highest scoring community in the Commonwealth Capital program, Northampton passed the Community Preservation Act last November, and has for years worked to change its zoning to create a consistent, traditional, vibrant downtown, with a mix of commercial, residential, entertainment, civic space and arts-related activities. Northampton is also in the process of redeveloping its former state hospital site into a mixed-use village center.

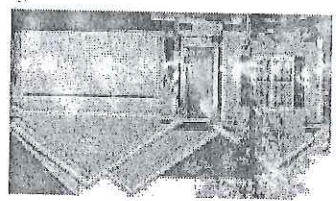




Office for Commonwealth Development

Pittsfield. One of five cities in the country to receive a special grant for revitalization by the American Institute of Architects, Pittsfield is investigating downtown zoning that would dovetail with a 40R district, and is in the midst of cleanup and redevelopment of General Electric property. The city has developed low-impact development and new stormwater management regulations, and just completed a Downtown Streetscape Plan with a set of design recommendations to make the downtown more attractive and pedestrian friendly. The long-closed historic Colonial Theatre is being rehabilitated into a performance arts center.

Plymouth. Home to the Pinehills, which used low-impact development practices, Plymouth passed the Community Preservation Act, a transfer of development rights bylaw, and is weighing a 40R district at the former Cordage ropemaking factory site at the North Plymouth waterfront, where developers have proposed a massive rehabilitation for 700 new homes, accessible to commuter rail.



Revere. Mayor Thomas Ambrosino is leading an effort with the Office for Commonwealth Development, MBTA and the Department of Conservation and Recreation to transform a series of parking lots adjacent to the Wonderland Blue Line station into 1 million square feet of mixed-use development, steps from Revere Beach. Developers are expected to respond to a request for proposals this spring, with the goal of a groundbreaking by 2007. The new homes and a possible hotel would be 10 minutes to Logan Airport and 15 minutes to downtown Boston.

Somerville. Somerville is host to a collection of smart growth initiatives. At Assembly Square, Maryland-based Federal Realty is set to redevelop old railroad yards and vacant lots adjacent to the shopping center and on the banks of the Mystic River, with a possible future Orange Line station a centerpiece for compact, mixed-use development, including homes, retail and office space. Just to the west, the proposed Green Line extension from Lechmere to Medford Hills, including a spur to Union Square, was designed in tandem with plans for development clustered at all the future stations. The Brickbottom area, an industrial district just north of Lechmere, is the site of millions of square feet of new development.

Westwood. Town officials are working with Cabot, Cabot & Forbes and New England Development in the planned transformation of the 135-acre University Avenue office and industrial park, at the Route 128 commuter rail and Amtrak station, into a mixed-use development with 1,000 planned homes, 1.2 million square feet of retail, 2 million square feet of office, laboratory and R & D space, and 400 hotel rooms. Westwood changed the zoning for the area and integrated affordable housing and water-supply protections into the planning effort. The retail area is based on a walkable, urban-village design similar to Mashpee Commons on Cape Cod or City Place in West Palm Beach, Fla.

Worcester. The next stage of revitalization for Worcester's downtown, after the remodeling of historic Union Station, is underway. CitySquare by Berkeley Investments calls for 900 homes, 407,000 square feet of retail and nearly 1 million square feet of medical and office space, on 20 acres adjacent to the station. The centerpiece is a District Improvement Financing plan that will allow for the replacement of a single-use shopping mall and dramatic public improvements to the area. The 55-acre Gateway Park

Smart Growth around Massachusetts

includes 745,000 square feet of mixed-use space and residential development on a cleaned-up Brownfields site.

Office for Commonwealth Development





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DEVELOPMENT

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SUCCESSFUL INFILL DEVELOPMENT

STRATEGIES FOR

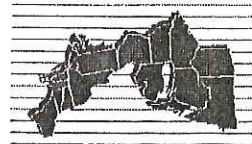
CONGRESS FOR THE NEW URBANISM

NORTHEAST-MIDWEST INSTITUTE

NORTHEAST-MIDWEST INSTITUTE

The Northeast-Midwest Institute is a Washington-based, private, nonprofit, and nonpartisan research organization dedicated to economic vitality and environmental quality for Northeast and Midwest states. It fulfills its mission by conducting research and analysis, developing and advancing innovative policy, providing evaluation of key federal programs, and highlighting sound economic and environmental technologies and practices. The Institute is unique among policy centers because of its work with the bipartisan Northeast-Midwest Congressional and Senate Coalitions and several task forces, such as the Senate Smart Growth Task Force and the House Sustainable Development Caucus.

Since organizing the first national conference on brownfield cleanup and reuse in Chicago in June 1991, the Institute has published numerous reports on brownfield redevelopment and urban revitalization. The Institute's smart growth program, initiated in 1998, addresses the dual challenges of redeveloping the urban core and improving the built and natural environment in metropolitan regions. The program is preparing reports on the relationship between federal air and water quality regulations and efforts to encourage more compact infill development.



THE CONGRESS FOR THE NEW URBANISM

The Congress for the New Urbanism (CNU) is a San Francisco-based nonprofit organization that was founded in 1993. It works with architects, developers, planners, and others involved in the creation of cities and towns, teaching them how to implement the principles of the New Urbanism. These principles include coherent regional planning, walkable neighborhoods, and attractive, accommodating civic spaces. CNU has over 2,000 members throughout the United States and around the world. It sponsors annual conferences, known as Congresses, for the sharing and discussion of best practices in New Urbanism. CNU is widely recognized as one of the most visionary and effective groups in the growing livable communities movement.

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This book was produced through a collaboration of the Northeast-Midwest Institute and the Congress for the New Urbanism with funding from the U.S. Environmental Protection Agency. It will help citizens and public officials take stock of their assets and envision ways to promote the type of successful infill development that creates healthy communities.

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Much of the information in this publication was derived from the Successful Infill Development Workshop held in San Francisco on April 30 and May 1, 1999. The following experts presented case studies and offered additional information. The sponsors and authors of this workbook gratefully acknowledge their assistance.

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CONTENTS

3	1	INTRODUCTION
4	2	Getting started
7	2	Why Infill?
11	3	WHAT IS SUCCESSFUL INFILL DEVELOPMENT?
14	3	Case Study: Downtown Baltimore, Maryland
17	4	PLANNING FOR INFILL: CHALLENGES AND SOLUTIONS
18	4	Give your community an "infill check-up"
22	5	Addressing objections to infill development
25	5	DESIGN STRATEGIES FOR SUCCESSFUL INFILL
27		Design principles for infill
28		Design for safety
30		Design for parking
33		Design for density
35		Fitting a larger building into a neighborhood
36		Case study: Weber Block, Detroit, Michigan
39	6	THE ROLE OF HOUSING IN A SUCCESSFUL INFILL STRATEGY
40		The delicate issue of density
42		Balanced incomes
43		Overcoming obstacles to mixed-use with housing
44		Case study: Swan's Market, Oakland, California
47	7	TRANSPORTATION AND SUCCESSFUL INFILL
49		TOD controversies
50		Case study: The Crossings, Mountain View, California
53	8	TAKING ACTION
53		Build community consensus and involvement
66		Identify important infill sites and zone them to encourage successful infill
67		Make infill sites appealing by improving infrastructure and amenities
69		Make infill appealing to lenders, investors, and developers
70		Market infill sites aggressively
71		Create design guidelines for infill
72		Case study: Boulder, Colorado
75	9	CONSIDERING BROWNFIELD REDEVELOPMENT
83	10	EXPLORING FINANCING OPTIONS
89	11	CONCLUSION
90		APPENDIX: CASE STUDIES
90		Chicago, Illinois
97		Dallas, Texas
107		Denver, Colorado
113		Manchester, Vermont
118		Orange County, California
123		Portland, Oregon
128		GLOSSARY
130		READING LIST

- provide housing (both affordable and market rate) near job centers and transit;
 - increase the property-tax base;
 - preserve open space at the edge of regions;
 - provide new residents to support shopping districts and services;
 - capitalize on community assets such as parks, infrastructure, and transit; and
 - create new community assets such as child-care centers, arts districts, and shopping areas.
- Successful infill development can offer these rewards for communities:

Once considered eyesores, such sites are becoming prized as catalysts that improve solid communities and revitalize those facing problems. Successful infill, for example, addresses traffic issues by creating communities where people live closer to work and school, and where biking, walking, and transit can substitute for auto travel.

A major solution to these problems is infill development—the creative recycling of vacant or underutilized lands within cities and suburbs. Every city, town, and suburb has these types of properties. They range from the single vacant lot to surface parking lots to empty shopping malls.

Communities are finally discovering an alternative to conventional development patterns that cause suburban sprawl, destroy open lands, siphon vitality from existing communities, and create gridlocked lifestyles.

INTRODUCTION

Successful infill expresses not what a community will settle for but what it really wants. To be considered successful, it must be financially viable while demonstrating excellent design.

Excellent design refers not to the architectural design of a single building but to the quality of place created by a fabric of well-designed buildings and public spaces. Each element of public and private spaces, from awnings and windows, to benches and sidewalks, to roads and transit stations, needs to be carefully crafted. Excellent design creates places that are safe and attractive, that give people a variety of transportation options, and that encourage private investment and development.

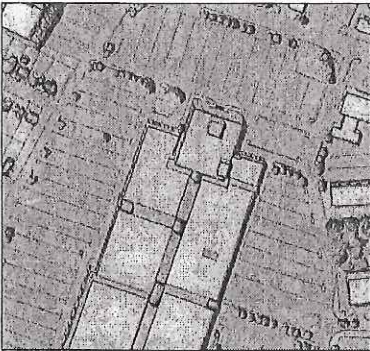
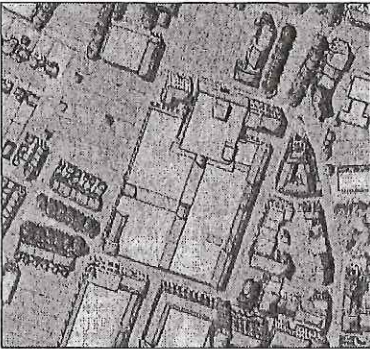
This book will help communities define and plan for successful infill development. Recommended strategies include:

- Build a common vision and create a plan.
- Take action to implement the plan.
- Encourage mixed-use infill development that includes housing.
- Demand quality design.
- Address transportation issues at the community level.

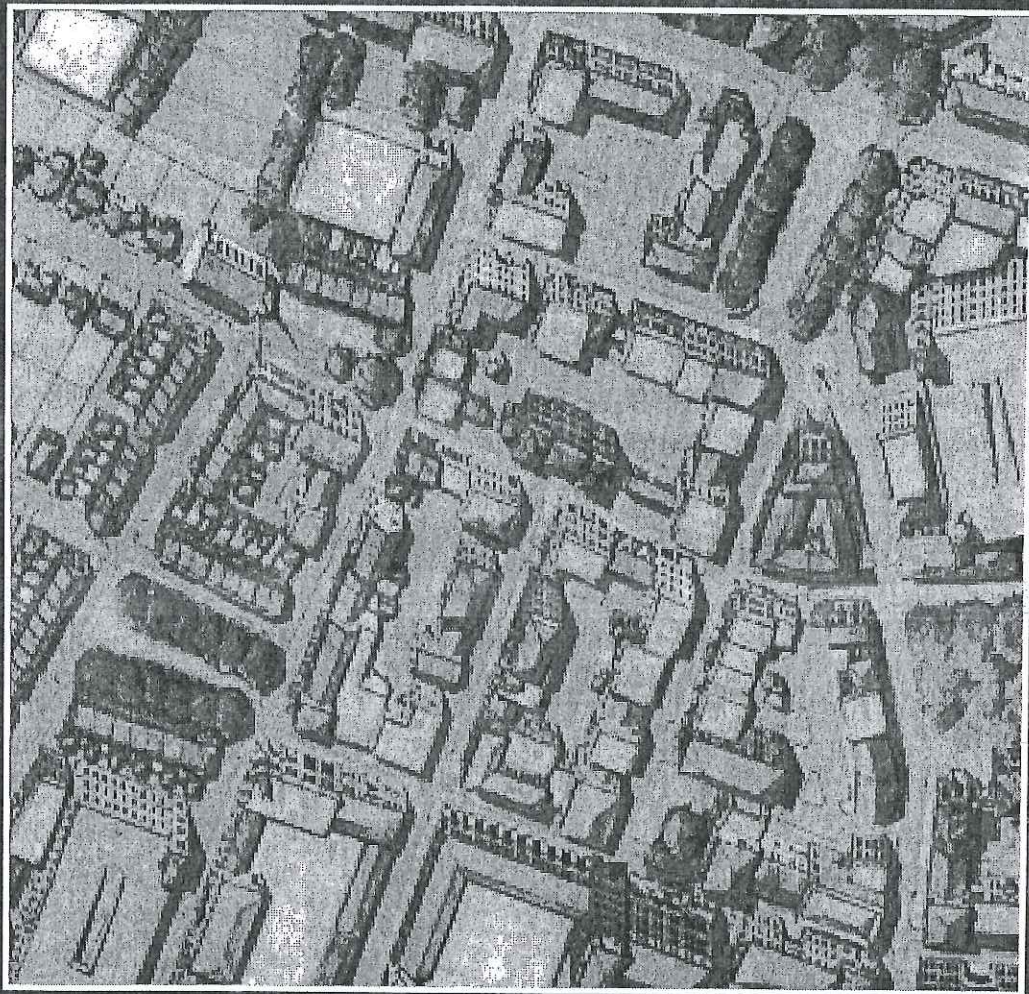
This book also outlines obstacles and provides case studies of communities that have demonstrated successful strategies.

Getting started

This book is designed to help citizens, politicians, planning departments, other public officials, business districts, property owners, and neighborhoods plan, design, approve, and fund successful infill development. It is organized to provide realistic information on the obstacles to successful infill. For example, proposals to create infill sometimes generate neighborhood concerns about increased traffic congestion and parking difficulties. Infill may be more difficult to finance than conventional real-estate development. This book provides strategies and case studies that will help overcome these barriers.



Redevelopment of Eastgate Mall in Chattanooga, Tennessee. In 1997 the mall was nearly empty. Within nine months, a town square replaced the parking lot, and the mall was turned inside-out toward the street. The mall is now 90 percent leased. The image above shows continued development over time.



W H Y I N F I L L ?

Many cities and older communities have been on the rebound. Cities such as Denver and New York are even seeing increases in population and jobs for the first time in decades. Smaller communities such as Bay City, Michigan, and Lafayette, Indiana, are also doing well economically and feature newly bustling neighborhoods, downtowns, and cultural districts.

Suburbs like Bethesda, Maryland, are remaking themselves based upon models that are more urban than suburban. They are embracing well-designed dense developments connected by pedestrian-oriented streets. They are redeveloping vacant and underused properties to create walkable retail districts and neighborhoods, often built around transit. Single projects blend housing, retail, entertainment, civic, and office functions – “mixed-use” in the best sense.

As a result, these cities, towns, and metropolitan areas are evolving into healthy communities featuring strong, resilient economies and stronger social connections within neighborhoods. They enjoy more green and open spaces and depend less upon automobiles and asphalt. Whether you call it New Urbanism, sustainable development, or smart growth, this is human-scaled development that preserves land and fosters balanced communities.

Neighborhood shopping areas such as Milwaukee’s Brady Street and 14th Street in Washington, D.C., are being revitalized. Cities like Atlanta and Dallas that have only seen suburban housing development for decades are now attracting new housing to their downtowns. In suburban areas of Boca Raton, Florida, and Chattanooga,

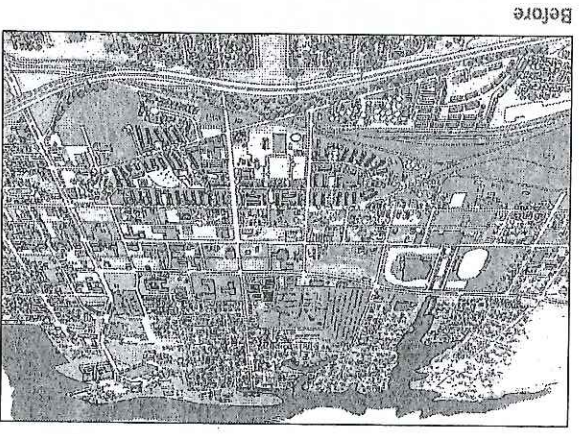
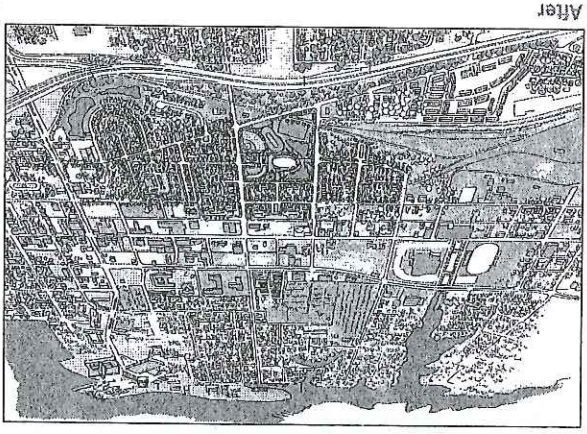
Tennessee, closed or dying shopping malls have been razed and replaced with mixed-use, walkable, and transit-oriented communities.

Within many metropolitan areas, housing starts are up. Crime is dropping. Battered school and parks systems are improving. The tax base to pay for services is growing. After decades of gloomy forecasts about the death of cities, towns, and inner suburbs, renewal finally seems real in more than a handful of places.

Other cities, towns, and suburbs must feel like wallflowers at the dance. Their lined with houses connects neighborhood churches, schools, recreation areas, and adjacent historic neighborhoods. This declining economic vitality and an eroding tax base. These communities appear to be locked into a cycle of decay. But they can learn from communities of all types and sizes that have improved dramatically by attracting successful infill development. Some examples:

Detroit, once the nation's fourth-largest city, has lost more than half its population since 1950. In 1994, Mayor Dennis Archer convened a 34-member Detroit Land Use Task Force. Given a scant four-month deadline, the Task Force produced wide-ranging recommendations that tied Detroit's economic outlook to improved parks and neighborhoods. Now General Motors has moved 8,000 office workers downtown into buildings that had sat vacant. Land values have risen for the first time in memory. New market-rate housing is selling or leasing quickly.

In Portsmouth, Virginia, a 45-acre public housing project is being transformed into Westbury, a mixed-income neighborhood with traditional houses, parks, and open spaces. While replacing poor-quality housing, Westbury revives Portsmouth's traditional street grid. This will allow residents to enjoy short, safe, and pleasant walks to downtown, services, a new high school, and a grocery store.



In Portsmouth, Virginia, a new system of parks and streets lined with houses connects neighborhood churches, schools, recreation areas, and adjacent historic neighborhoods. This neighborhood will replace barracks-like public housing.

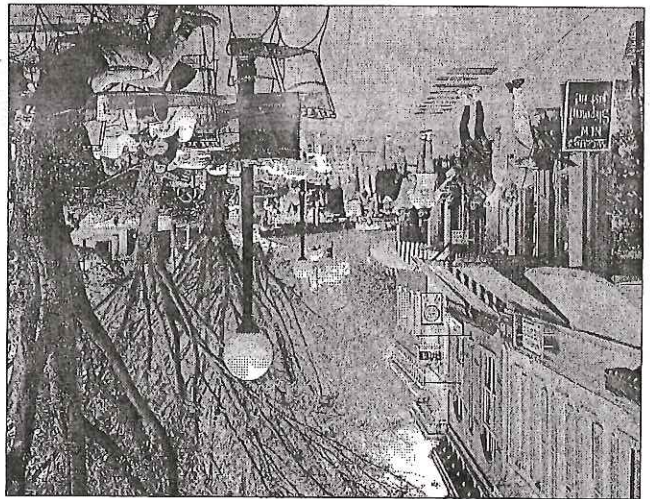
The 2000 census showed that the vast majority of households are not traditional nuclear families. Yet the preponderance of housing developments provide nothing but single-family houses. It's as though all automakers only built mini-vans.

Communities with vision are planning neighborhoods that mix apartments and townhomes with single-family homes. This houses a diverse population, including all kinds of families, single people, retirees, and people of different incomes. Market studies show growing demand and strong sales for in-town housing, live-work units, and other alternatives to the single-family house.

Over the next two decades, huge numbers of Baby Boom children, the so-called Echo Boom, will complete college and establish their households. These households are expected to make their housing choices based upon infill locations, near jobs, transit, and entertainment.

In the next 10 years alone, infill development is expected to generate major population increases downtown. A 1998 survey conducted by the Brookings Institution Center on Urban and Metropolitan Policy and the Fannie Mae Foundation projected increases ranging from 31 percent to 303 percent in our 21 largest cities. Most cities now view housing infill as an opportunity to add vacant or underused land to the tax rolls while creating customers for downtown restaurants, shops, and entertainment districts.

Do people shopping for new homes really demand the suburban norm? Not always. In 1997, *Builder* magazine published a survey of 516 new-home shoppers. While one-third said they preferred life in suburbia, nearly two-thirds objected to the extra driving suburbia typically requires. Some 84 percent desired proximity to a town center with shops, cafes, and small parks.



In Mountain View, California, a closed shopping mall was razed to make room for The Crossings, a transit-linked, walkable, mixed-use community that provides scarce middle-class housing in Silicon Valley.

Distressed communities, perhaps overwhelmed by pressing social needs, are sitting on reserves of assets they may not recognize. These assets include underused historic buildings and parks; natural features like waterfronts; a strong employment base provided by hospitals and universities; the availability of large tracts of inexpensive land; and access to transit.

Such resources become catalysts for successful infill development. All new development, however, isn't high-quality infill. Poorly conceived or expedient development can actually harm a community's long-term goals. This book explains the difference between expedient development and successful infill development, and charts a course, with case studies, to help communities create successful infill.

Successful infill looks, feels, and functions differently from development that is single use, low density, and dominated by automobiles and highways. It creates neighborhoods and districts that embrace a mix of uses and incomes, where a wide variety of citizens live, work, and play. It serves pedestrians and cyclists as well as autos. Cars and parking are accommodated, but gigantic parking lots and roads do not dominate the landscape. Narrow streets are lined by porches, shop windows, wide sidewalks, street lights, and shade trees. Blocks are laid out on a easy-to-walk and navigable scale rather than disorienting "superblocks" or curving cul-de-sacs.

- new development on vacant lots within urbanized areas;
- redevelopment of underused buildings and sites; and
- the rehabilitation of historic buildings for new uses.

Successful infill often includes:

Successful infill development refers to the planning, design, and construction of homes, stores, workplaces, and other facilities that make existing cities and towns more livable. It describes the reuse of property and buildings in a way that makes economic sense for property owners, local government, and the regional economy. Successful infill development channels economic growth into existing urban and suburban communities and conserves natural resources at the periphery of the metropolis.

WHAT IS SUCCESSFUL INFILL DEVELOPMENT?

In short, successful infill is based on the scale of the pedestrian. Sidewalks, greenways, and transit systems link housing to schools, services, parks, and places of employment. Neighborhood design provides the setting for friendly interaction and public safety. The private automobile becomes an option, not a necessity. Children, the elderly, and others without cars can move about independently to conduct their daily activities.

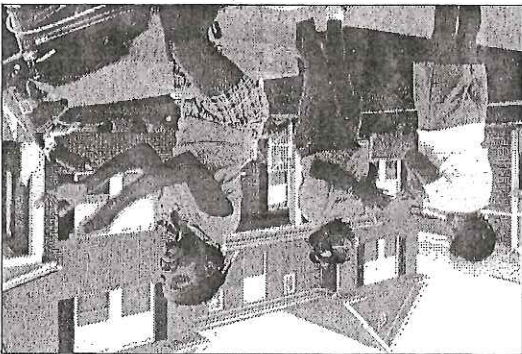
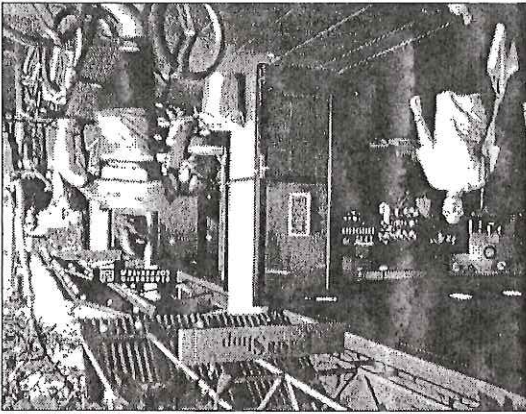
By design, successful infill creates safer neighborhoods, business districts, and shopping areas. Safety is not always a matter of strong police presence and floodlighting. The design elements that make a community pleasant to live in and to look at are also the elements that enhance public safety. These include:

- well-maintained parks and public spaces that impart a sense of order and ownership;
- narrow roads that calm traffic and allow drivers to monitor the activity of the street;
- mixed uses that promote lively streets and minimize the opportunity for crime;
- windows, balconies, and porches that face the street, allowing residents to watch over their communities; and
- streets that encourage walking and biking, bringing people outside and placing "eyes on the street."

What about *unsuccessful* infill? This occurs when mu-

nicipalities, perhaps desperate to boost tax revenues, accept any development proposal. "Every community needs to examine a developer's portfolio to see what they might do with a particular parcel," says Rick Williams, an architect with Van Meter Williams Pollack. "You can have a great site and great components and still get bad development." As *Emerging Trends in Real Estate 1999* (by Lend Lease Investments and PricewaterhouseCoopers) states: "Suburbs struggle because they have let developers run amok, oblivious to traffic growth, sewer system capacity, or even recreational needs . . . In many areas you need a car to get anywhere to do anything—from

"Refurbishing infill retail districts will create more value than slapping up another supermarket strip on the way to exurbia."
—*Emerging Trends in Real Estate 1999*



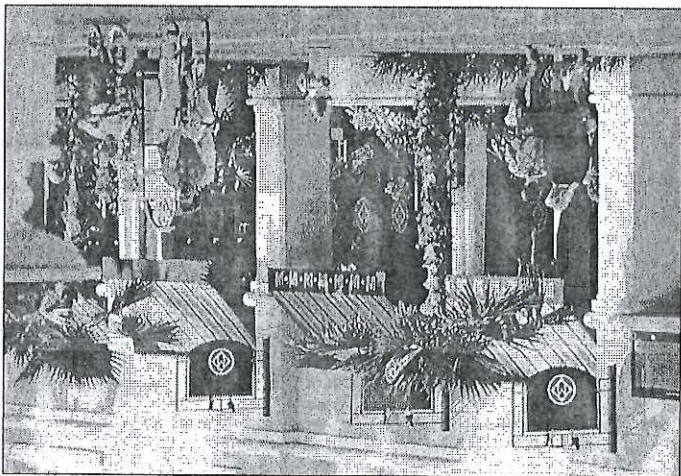
Pedestrians need stimulation and are

put off by dead spaces like parking

lots. Retail that functions like

buildings on the street contributes to

a lively streetscape.



buying a quart of milk to jogging.”

Unsuccessful infill may come in the form of big-box development. Big-box stores provide jobs, services, and an increased tax base, but suffer from a limited shelf life. They often stay open for just a few years before they are squeezed out by a bigger box down the road. They face increasing competition from on-line shopping. Big box stores usually are surrounded by parking and only accessible by auto. They discourage walking and cycling when open and leave a physical and economic eyesore when they close.

Successful infill, on the other hand, does not rely on a single store, ballpark, or office building to improve a community. Rather, it weaves a fabric of land uses that support each other—residences within a short walk from (or even above) neighborhood-serving shops, with access to transit, and nearby jobs and open space.

THE BIG BOX: In recent years, “big box” retailers discovered urban neighborhoods and older suburbs. They were attracted by the emergence of new housing in urban environments that has brought new purchasing power to these areas.

In addition, retailers finally have recognized that urban density creates buying power that belies neighborhood demographics. For example, four inner-city families, each earning \$20,000 and living on one-quarter acre lots, possess as much disposable income per acre as one suburban family living on one acre and earning \$80,000.

A big box store that moves into an existing community is still infill development. Whether it is successful infill development depends on how it is integrated into its environment. Denver’s 16th Street Transit Mall contains both successful and unsuccessful examples. In the first category, the one-mile downtown mall supports a chain hotel and chain stores for pharmaceuticals, clothing, and office supplies within sensitively rehabilitated historic buildings.

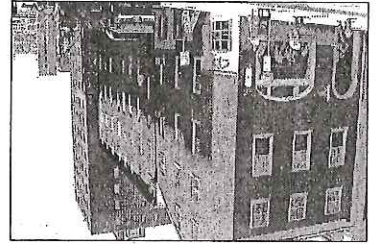
The pamphlet *Better Models for Chain Drugstores* (National Trust for Historic Preservation, 1999) explains how communities have integrated big box stores into historic streetscapes. Negotiating with big box retailers also can mitigate negative design and planning effects. In Chicago, the Walgreens drugstore chain agreed to alter its standard store design in favor of one that would complement traditional neighborhoods.

By 1999, some 414 housing units were constructed or underway. These include the conversions of an 1878 warehouse, a 1903 hotel, and a closed department store. Another apartment building was constructed on air rights above a city-owned parking garage and provides stunning views of the Camden Yards baseball stadium. Com-

streetscape improvements. contributing \$10 million toward a partnership with property owners to pay for district already quality for federal historic preservation tax credits. The city also is deferring or reducing property taxes for such conversions. Most buildings in the million annually to convert downtown commercial buildings to housing. The city is are now in place. For example, state-sponsored, short-term financing provides \$2 million annually to convert downtown commercial buildings to housing. The city is

The Partnership recommended the creation of redevelopment incentives that for existing downtown housing. Maryland made it an appealing place to live. This was borne out by long waiting lists that Howard Street's proximity to Inner Harbor attractions and to the University of Partnership launched the Downtown Housing Initiative. A marketing study revealed

In 1997, a group called the Downtown left with a dismaying inventory of empty buildings. new kept closing, Howard Street and environs were downtown shopping district. Still, stores old and revitalize Howard Street, the city's traditional For nearly a generation, Baltimore had sought to



D O W N T O W N B A L T I M O R E

Baltimore, Maryland

C A S E S T U D Y

INTERNAL STRATEGIES

SUCCESSFUL INITIAL DEVELOPMENT

pleted projects are leasing and selling quickly—many to out-of-towners

who have never lived in Baltimore before.

The Gallery Tower project epitomizes the success of this strategy.

Converted from a long-vacant public housing project, Gallery Tower

created 144 new market-rate apartments that were leased within four

months. All but one new tenant moved into downtown from outside

Baltimore. With an average household income of \$45,000, this new popu-

lation has added significantly to Baltimore's income-tax base.

City officials hope that the new residential neighborhood will gen-

erate its own bustling retail district. So far, only a few small convenience

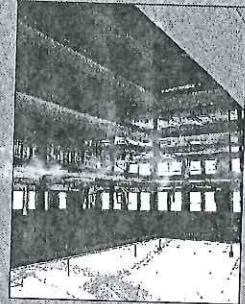
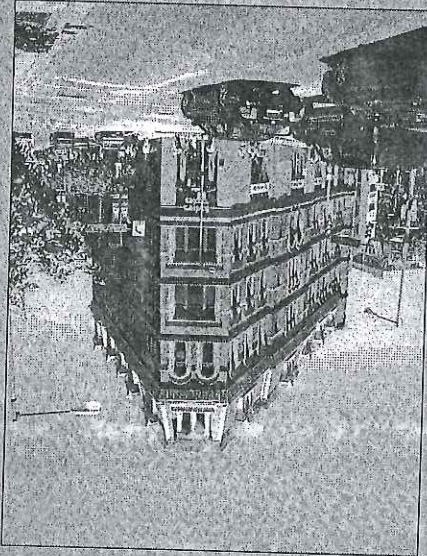
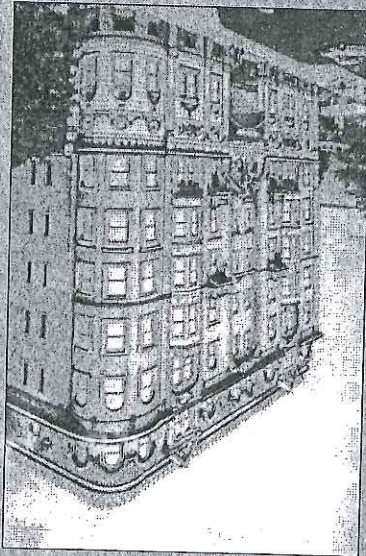
businesses have opened. Moreover, the city needs to address concerns

that the neighborhood will exacerbate the downtown parking crunch

for businesses. As a start, officials plan to study the parking needs of

downtown residences to see how many own cars and need parking in

their building.



Baltimore lost one third of its population
from 1970 to 1990 and suffered from
sales. Now the city has embarked on a
plan to rebuild from the downtown
core inward.

competitive offices, hotels and retail

PLANNING FOR INFILL: CHALLENGES AND SOLUTIONS

Creating successful infill is more challenging than conventional development. For example, infill projects tend to be more complex because they are smaller and often combine a greater mix of land uses than large-scale, sprawling developments. Yet they take just as much money and time to plan, design, and get approved. Many developers lack experience in mixed-use development. Banks may be reluctant to lend money to finance mixed-use projects.

Another challenge to successful infill is neighborhood opposition. Community concerns can improve proposals, but sometimes they result in compromises that "kill" projects or make them less successful. In stable or growing communities, developers face apprehension about traffic, parking, gentrification, and loss of privacy. In communities with a weak economy, blight, or crime, the main obstacle to successful infill is the perception of a poor market for new homes, stores, or offices.

With persistence, these concerns can be addressed and resolved. Communities that desire infill development should lay groundwork carefully before planning a specific infill project. It is vital to evaluate (without becoming daunted) the community's political climate, transportation efficiency, planning processes, and market realities.

GIVE YOUR COMMUNITY AN "INFILL CHECKUP"

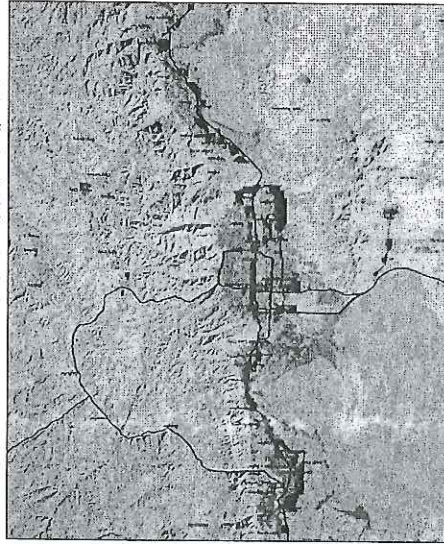
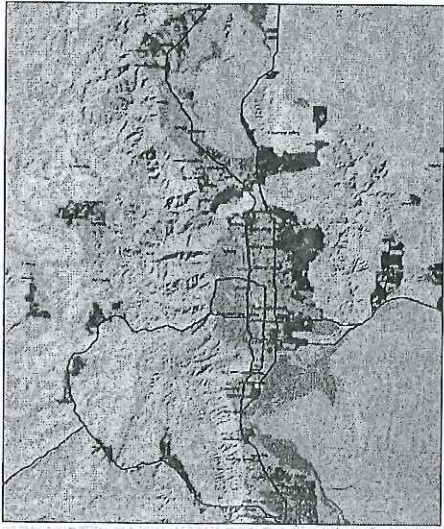
BY ASSESSING THESE AREAS:

- Is your community ready to accept infill?
- Does the plan include infill in its long-term vision?
- Does the community have a transit system or are plans in place?
- Is your community prepared to invest financially in infill?
- Does zoning support, encourage, allow, or prohibit mixed-use?
- Are design guidelines or project prototypes in place?

Is your community ready to accept infill?

Are residents of your community likely to protest new zoning, mixed-use development, or increased density? Are they nervous about the potential for increased traffic or competition for parking? Is the community ready to move forward on a shared vision for the future? If not, be prepared to conduct an extensive public process to build consensus.

A planning process can be led by government or by a nonprofit organization. In 1998, the Salt Lake City region launched the "Envision Utah" plan (*right*). Sponsored by the nonprofit Coalition for Utah's Future, this study examined four growth scenarios, from almost completely automobile dependent to nearly 90 percent of growth focused on infill development. Citizens learned that auto-oriented growth alone would increase urbanized land by 409 square miles in 50 years. Compact growth would add only 85 square miles while creating walkable neighborhoods served by transit. Based on a survey of citizen preferences (600,000 questionnaires were mailed and 18,000 returned), Envision Utah built consensus to pursue infill strategies that will accommodate projected growth while limiting newly urbanized land to 125 square miles. This is a significant achievement in a region that traditionally has favored low-density growth.



In 1998, the Salt Lake City region launched the "Envision Utah" plan. This study examined growth scenarios, from almost completely automobile dependent (top) to nearly 90 percent of growth focused in compact, walkable, transit-oriented communities (bottom). Citizens learned that auto-oriented growth alone would increase urbanized land by 409 square miles in 50 years. Compact growth would add only 85 square miles.

Does the comprehensive plan include infill in its long-term vision?

Many communities have not updated their comprehensive plans since the 1950s, when most regions were encouraging low-density, auto-oriented growth. A contemporary comprehensive plan recognizes a region's unique natural and built features. It enables flexible zoning to allow for mixed-use districts. It reorganizes a municipality into mixed-use neighborhoods, the building blocks of livable regions.

In the 1980s, Denver's economy was devastated by the energy bust.

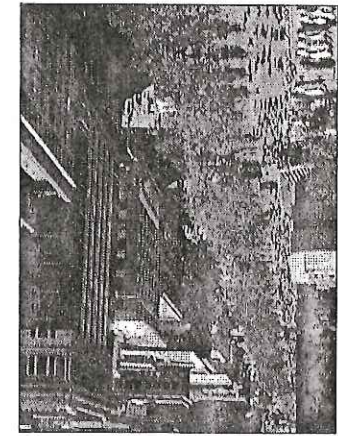
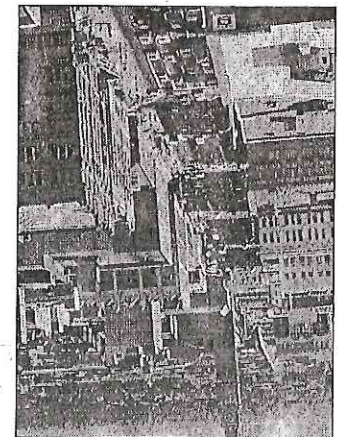
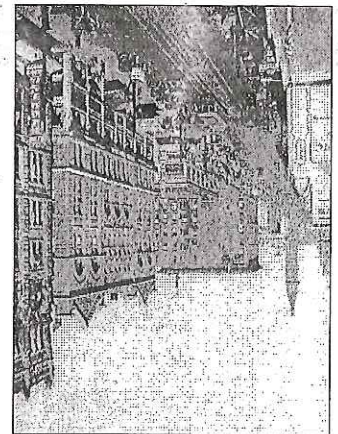
Mayor Federico Pena turned this crisis into an opportunity. He hired 11 new planners and told them to "imagine a great city." A 1986 Downtown Area Plan made 16 recommendations to consolidate downtown as the region's cultural, economic, and civic center. From rezoning of Lower Downtown to construction of light rail, all 16 recommendations have since been achieved. The resulting Comprehensive Plan of 1989 led to many improvements of the 1990s, including a crucial focus on air quality and proposed renovations to downtown, neighborhoods, and parks. Now that the city is booming again, the foresight of the 1980s has set the stage for such successful infill projects as loft redevelopment and the recycling of abandoned hospital and military sites as new communities.

Does the community have a transit system or are plans in place?

Community opposition can be galvanized by potential traffic congestion and parking shortages. Proponents of infill must be ready to proffer creative strategies to address these issues. Public officials should consider strategies such as new parking ordinances, adopting traffic mitigation measures, creating bike lanes, and updating mass-transit routes and service.

Strategies to "share" parking among complementary uses also work. In June 1999, Norfolk, Virginia, launched a new trolley route called the "Downtown Electric." The Downtown Electric connects major attractions such as parks, employment centers, a college campus, and the waterfront.

Running every six minutes, the 1.9-mile line was carefully planned to be within a three-minute walk of 19,600 parking spaces—85 percent of all downtown parking. The Downtown Electric promotes downtown businesses



16th Street Transit Mall, Denver

and activities while encouraging visitors to "park once" and then use transit to meet all their needs. If successful, the strategy will keep traffic and parking demand in check while accommodating downtown visitors.

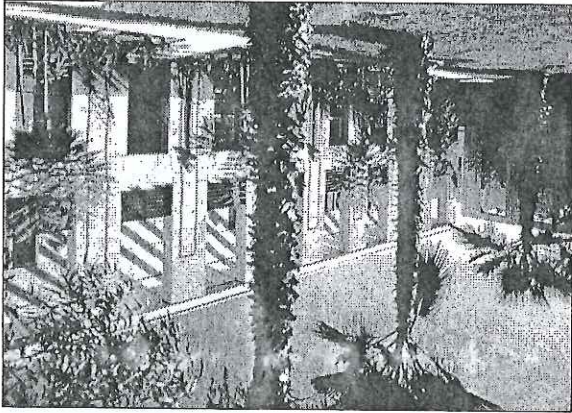
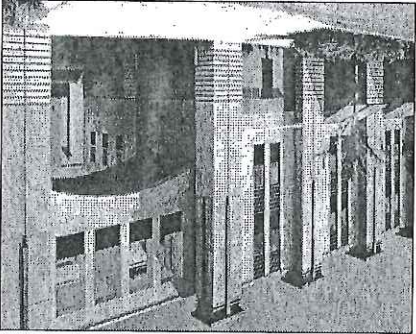
Is your community prepared to invest financially in infill?

Infill may not work financially for private developers, especially in areas that have not experienced new investment for some time. When land costs or costs-per-unit are too high, or potential rents or sale prices are too low, developers need financial assistance to make infill succeed.

Consider subsidies, tax breaks, density bonuses, and infrastructure improvements. These investments create a market so infill pays its own way in the future. Atlanta's investment in infrastructure improvements for the 1996 Olympics, including construction of a new 21-acre park, helped generate development of nearly 2,700 downtown apartments.

Financial incentives do not have to come from a community's coffers. Federal tax credits for affordable housing or for the rehabilitation of historic buildings are just two types of tax incentives available. Communities may stimulate infill by directing existing capital budgets to build sidewalks, improve streetscapes, or renovate parks in target areas. Use tax-increment financing or property-tax abatement as incentives for developers to provide successful infill.

Or use all of the above. At Vermont Village Plaza (right), a 36-unit affordable housing/mixed-use infill project in South-Central Los Angeles, financial incentives took many forms. After the 1992 riots, First Interstate, a Los Angeles-based bank, underwrote the project in the hopes of spurring broader revitalization. First Interstate contributed \$3 million of the initial construction costs. The City of Los Angeles kicked in another \$5 million. About one-third of the units sold for market rate. The city subsidized the rest by backing second mortgages that allowed down payments as low as 3 percent.



Vermont Village Plaza, a 36-unit affordable housing/mixed-use infill project in South-Central Los Angeles

In 1990, Uptown Dallas (*left*), a 100-acre area next to downtown, was a wasteland. Once an African-American neighborhood also known as the State-Thomas District, the land had been largely cleared for speculative development in the 1970s. The development never materialized, and State-Thomas languished. In 1989, the city of Dallas, traditionally opposed to creating incentives for development, formed its first Tax Increment Finance (TIF) district for State-Thomas. Over 13 years, the TIF will provide \$20.1 million of public funds for new drainage systems, lamp posts, sidewalks, and other improvements. This will be paid back to the city by projected tax revenues generated by new development. The city added \$2 million in seed money and enforced strict design guidelines within the district.

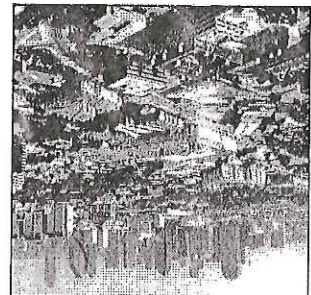
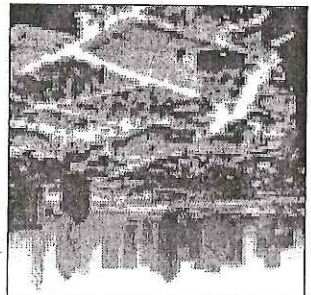
Numerous high-quality and extremely successful infill developments have ensued in Uptown. On the vacant lands, developers have constructed six housing developments containing more than 1,100 apartments, for an investment of \$60 million in private funds. The \$8 million of public funds spent so far has generated more than seven times as much private investment.

Thanks to the excellent design of the streets, public spaces, and buildings, the Uptown District is a delightful in-town neighborhood within a three-mile radius of 260,000 jobs. Residents can walk to downtown jobs and transit or commute shorter distances to nearby jobs. "If you build a product that meets people's needs," says developer Robert Shaw, "why would they drive 20 miles to work when they can find it close to their job?"

Does zoning support, encourage, allow, or prohibit mixed-use?

Most zoning ordinances restrict mixed use. For example, they prohibit shops and businesses from being built within walking distance of houses. Or they require "setbacks" that place buildings behind large parking lots and away from the street. Zoning regulations are typically designed to prevent disasters rather than to encourage excellent design. They tell developers what communities don't want rather than present a positive model for development.

"In general, most zoning codes are proscriptive," architect Elizabeth Plater-Zyberk says in James Howard Kunstler's *The Geography of Nowhere* (Simon & Schuster, 1994). "They just try to prevent bad things from happening, without



In 1990, Uptown Dallas, a 100-acre area next to downtown, was a wasteland. Thanks to the excellent design of the streets, public spaces, and buildings, the Uptown District is a delightful in-town neighborhood within a three-mile radius of 260,000 jobs.

ADDRESSING OBJECTIONS TO INFILL DEVELOPMENT

When infill development is proposed, common concerns emerge. These can be expressed by public officials or neighbors of the proposed project. The facts about successful infill development can often allay these objections. Here are typical questions that arise with possible responses.



Won't new development overstress existing services?

The need to expand public services, such as police, fire, utilities, and sanitation, is often based on the physical size of the area served. For example, the need to expand police and fire services is spurred by the need to reduce response times. Conventional development increases response times by creating demands for services in distant areas. Because it is located within existing service areas, infill development often does not require significant upgrades in services or infrastructure, though new service personnel may be required.

The prime market for successful infill is empty-nesters and single-person households—the types of people who don't need as many city services and schools, but desire a low-maintenance home close to shopping, services, and cultural events. People who live in successful infill projects can enhance the local economy by patronizing local shops and the tax base by paying property taxes and sales taxes.

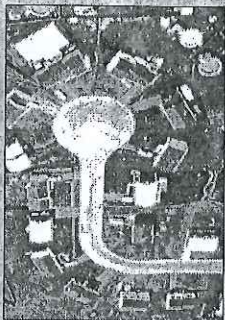
Infill developments that attract families may increase demand for school services. However, because of population declines in the last 50 years, most city school systems possess excess capacity. Taxes generated by new residents can fund the rehabilitation of older schools while building new constituencies for neighborhood schools.

Unlike infill, conventional development in new growth areas creates enormous demands for new roads, schools, sanitation, sewer, and safety services. The New Jersey State Development Plan compares the costs of sprawl vs. infill to accommodate a projected population increase of 520,000 over 20 years. The sprawl scenario generated an additional \$1.3 billion in infrastructure costs.

Developers don't know how to build mixed-use infill, and banks won't invest in it.

This cliché may have been true 10 years ago. Although this problem has not disappeared, many more banks and developers have now profited from infill. As a result, they are more comfortable with this form of development. Developers are becoming adept at working in teams and partnerships that combine specialties in constructing housing, retail, and institutional properties.

Formerly suburban developers such as Post Properties and Federal Realty Trust have tapped infill's potential while all but halting projects in greenfield areas. Lenders such as the Bank of America have made strong commitments to financing infill projects. Investors, guided by such market forecasts as the Lend Lease-Price Waterhouse Coopers' *Emerging Trends* reports, are turning away from new suburban developments.



Unlike traditional infill

development (bottom)

creates enormous

demands for new roads,

sanitation, sewer, and

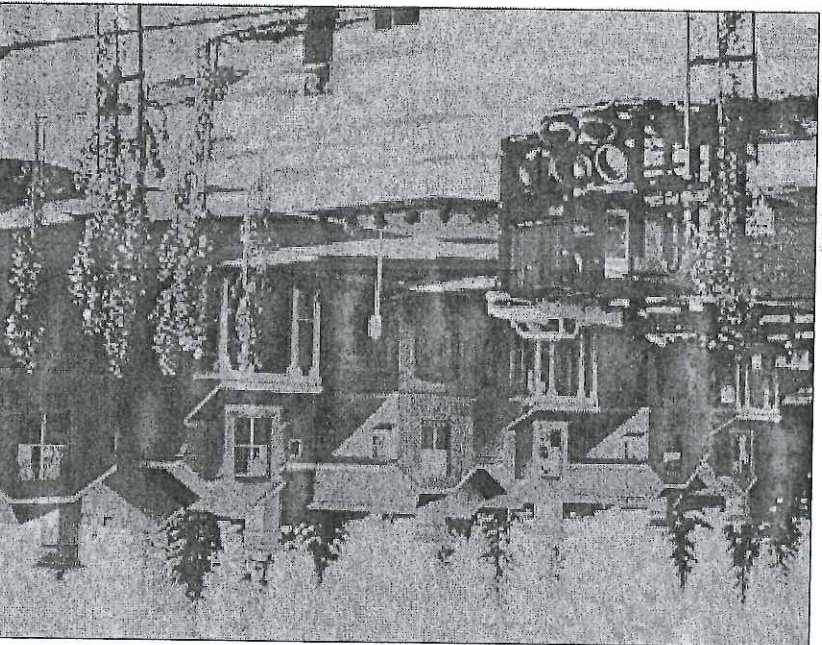
safety services.

DESIGN STRATEGIES FOR SUCCESSFUL INFILL

Excellent design is the key to successful infill. This does not narrowly refer to the architectural design of building facades, but to what is sometimes called "city-design," or the orchestration of all elements that make a successful urban place, including:

- parks and public landscapes;
- transportation systems;
- urban design, or the way streets, sidewalks, buildings, and open space relate to each other;
- streets and sidewalks;
- signs and street furniture;
- building mass and scale; and
- building elements like facades, doorways, storefronts, porches, and balconies.

In *Designing the City*, Adele Fleet Bacow calls this "the design of the public environment. Almost everyone can have a voice in this design process, from children to developers to financial institutions to public officials." In some financially strapped communities, officials and developers may consider "design" a fill. But good design is essential for successful infill. Design is not merely the aesthetics of buildings; it is also part of a strategy to promote mobility, livability, and economic health.

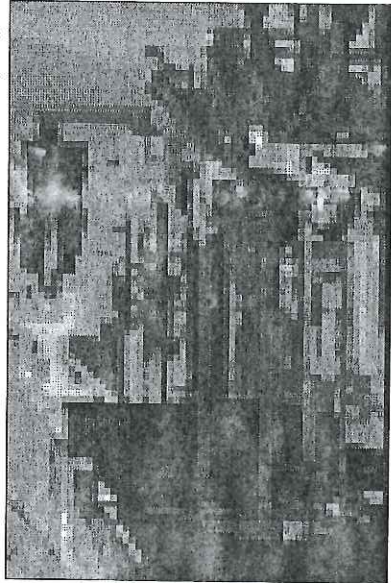
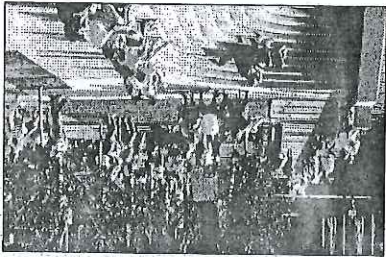


“Excellent design is not the same as elaborate or expensive design,” says Eleanor White of the Massachusetts Housing Finance Agency. “Some excellent design may in fact compensate for smaller square footage and less expensive materials. A poorly designed project cuts the chance of success and increases the risk. It is also very expensive to go back and correct design problems later.”

As White’s comments infer, good design does not always equate to fancy or expensive. For example, experts on Main Street retail conclude that while a successful Main Street must be carefully designed, the details should remain very simple.

For years, towns and cities tried to revive Main Streets by adding special paving, elaborate gardens, and fountains. It turns out that more successful designs include simpler details that provide comfort for pedestrians without detracting attention from storefronts. Examples include wide sidewalks and shade trees. Good design also relies upon good management and maintenance, a key element of successful Main Street programs and publicly owned facilities.

Successful design includes simple details that provide places for people to gather and comfort for pedestrians, including wide sidewalks and shade trees. Good design also relies upon good management and maintenance, a key element of successful Main Street programs.



DESIGN PRINCIPLES FOR INFILL

The Congress for the New Urbanism has created 14 *Principles for Inner City Neighborhood Design*. Many are relevant to successful infill projects everywhere:

- 1 **Citizen and community involvement:** Engage residents, neighbors, civic leaders, politicians, bureaucrats, developers, and local institutions throughout the process of designing change for neighborhoods.
- 2 **Economic opportunity:** The design of neighborhood development should accommodate management techniques and scales of construction that can be contracted to local and minority businesses.
- 3 **Diversity:** Provide a broad range of housing types and price levels to bring people of diverse ages, races, and incomes into daily interaction—strengthening the personal and civic bonds essential to an authentic community.
- 4 **Neighborhoods:** Neighborhoods are compact, pedestrian-friendly, and mixed use with many activities of daily life available within walking distance. New development should help repair existing neighborhoods or create new ones and should not take the form of an isolated “project.”
- 5 **Infill development:** Reclaim and repair blighted and abandoned areas within existing neighborhoods by using infill development strategically to conserve economic investment and social fabric.
- 6 **Mixed-use:** Promote the creation of mixed-use neighborhoods that support the functions of daily life: employment, recreation, retail, and civic and educational institutions.
- 7 **Citywide and regional connections:** Neighborhoods should be connected to regional patterns of transportation and land use, to open space, and to natural systems.
- 8 **Streets:** The primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use. Neighborhoods should have an interconnected network of streets and public open space.
- 9 **Public open space:** The interconnected network of streets and public open space should provide opportunities for recreation and appropriate settings for civic buildings.
- 10 **Safety and civic engagement:** The relationship of buildings and streets should enable neighbors to create a safe and stable neighborhood by providing “eyes on the street” and should encourage interaction and community identity. Provide a clear definition of public and private realm through block and street design that responds to local traditions.
- 11 **Dwelling as mirror of self:** Recognize the dwelling as the basic element of a neighborhood and as the key to self-esteem and community pride. This includes the clear definition of outdoor space for each dwelling.
- 12 **Accessibility:** Buildings should be designed to be accessible and visitable while respecting the traditional urban fabric.
- 13 **Local architectural character:** The image and character of new development should respond to the best traditions of residential and mixed-use architecture in the area.
- 14 **Design codes:** The economic health and harmonious evolution of neighborhoods can be improved through graphic urban design codes that serve as predictable guides for change.

DESIGN FOR SAFETY

"Design, once considered only a minor factor in security concerns, is now known to be an essential component of urban safety. Community safety and security requires a partnership among designers, community leaders, residents, and community-based police." —Ray Gindroz, *Charter of the New Urbanism*

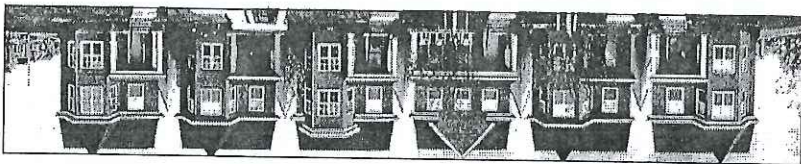
Police presence and good street lighting are two factors that make public spaces and private homes safe and spur demand for housing in existing neighborhoods.

Just as important are the design of streets, parks, and plazas that can provide what is called "natural surveillance," or the

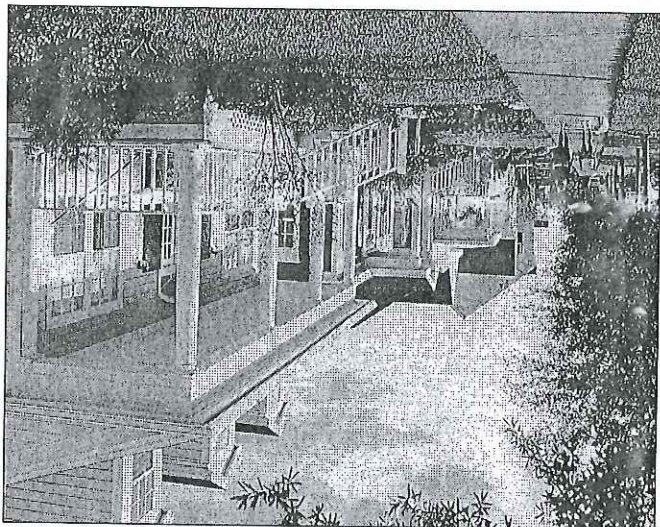
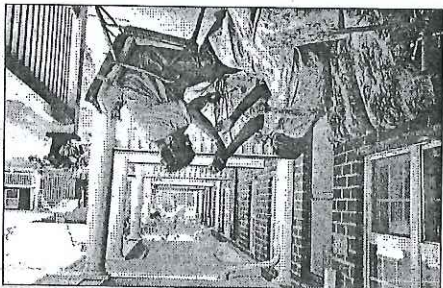
ability of people to oversee and police their own neighborhoods.

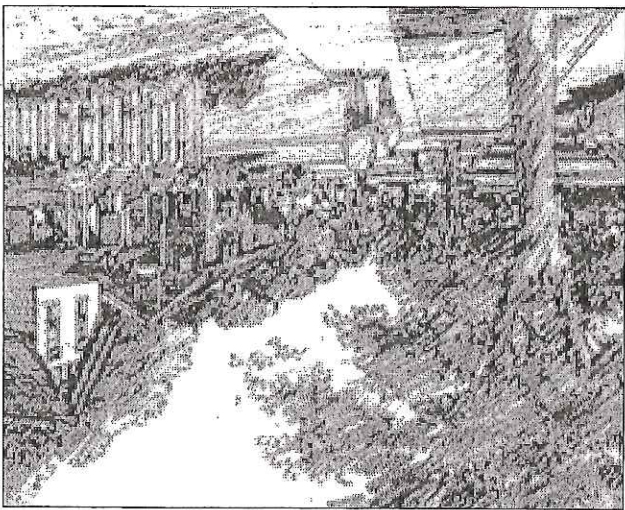
"A combination of sound planning, urban design, street design, and building design is necessary to create such environments," writes architect Victor Dover in *Charter of the New Urbanism* (McGraw-Hill, 1999). "Buildings that face public spaces must include windows, doors, and other outward signs of human occupancy, such as porches and balconies. The would-be miscreant immediately knows this is a watched-over place When natural surveillance is in effect, neighbors feel empowered to protect their communities and demand responsible behavior."

Public spaces must also be designed to be open, accessible, and visible from buildings and from the streets. "If people feel lost or trapped within a public space, unable to see or find a



Buildings that face public spaces must include windows, doors, and other outward signs of human occupancy, such as porches and balconies. When natural surveillance is in effect, neighbors feel empowered to protect their communities and demand responsible behavior.





quick way out, they will avoid it," says architect Ray Gindroz in *Charter of the New Urbanism*.

Safety must also be designed into the private elements of infill projects. In Emeryville, California, neighborhood fear about crime spurred controversy over a proposal to redevelop an 8,000-square-foot lot. A public housing project had been torn down to eliminate a breeding ground for crime. Neighbors had defeated five proposals to rebuild public housing on the site. Working with architects Van Meter Williams Pollack, the Housing Authority of Alameda County eventually won over neighbors by reprogramming the site for six homes for families with special needs because of disabilities. The new site plan replaced the project's passageways between buildings with courtyards. "The old passageways provided escape routes for criminals," says Tim Van Meter. "We redesigned it so there's only one way in and one way out rather than through blocks. You can't change human behavior but you can influence it."

QUALITIES THAT CREATE SAFE SPACES

1. **Human presence:** People in a public space must feel the presence of other people in the buildings surrounding the space. The sense that we are not alone and are being observed helps us behave properly and feel safe. Windows are symbols of that presence, whether people are behind them or not. Mixed-use buildings promote 24-hour presence.
2. **Congentiality:** The dimensions and scale of the space should encourage comfortable interactions between people.
3. **Humane protection:** Mechanical devices such as cameras and gates should be invisible. Where possible, police presence should be personal, on foot or bicycle, so police officers interact with others.
4. **Visibility, light, and openness:** Open views that enable us to see other people and to be seen—by people driving by, as well as by others in the space—provide natural supervision. Lighting should ensure nighttime visibility.
5. **Order:** Coherent landscapes, streetscapes, and signs in both the public rights-of-way and bordering properties make a clear statement that a space is well-managed and safe.
6. **Connections:** Spaces must be perceived as part of an interconnected network of streets and public open space, so we feel we have access to others who make the space safe.
7. **Legibility:** The clarity with which each space connects to the rest of the city helps us understand the form of the city, keeps us from feeling lost, and assures us that we are in control of our relationship with the city spaces and the people in them.—Ray Gindroz, *Charter of the New Urbanism*.

DESIGN FOR PARKING

"By reducing the amount of parking required, you can save up to \$15,000 per space, which you can spend elsewhere in the project. But you need to document that those spaces won't be needed, or can be shared by different uses." —Henry Markus

Parking is the Achilles heel of infill. On one hand, neighbors may be nervous about the potential of losing parking spaces to new development. On the other hand, the development that supplies an abundance of parking—or simply meets minimum parking requirements—may generate excessive traffic or fall prey to excessive paving.

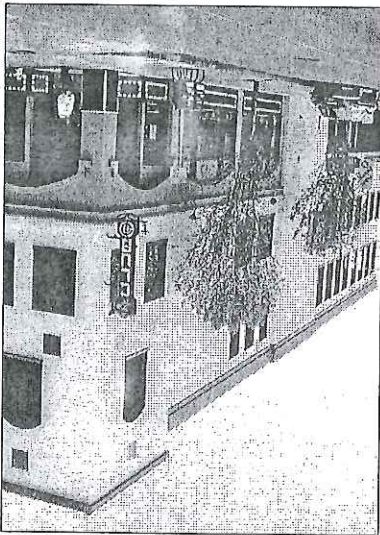
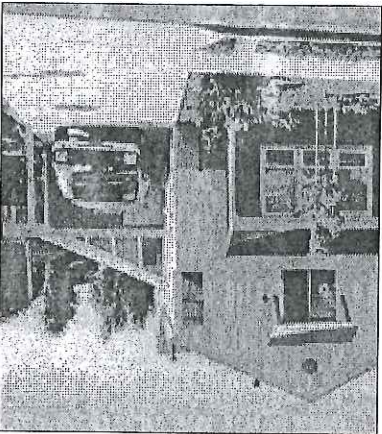
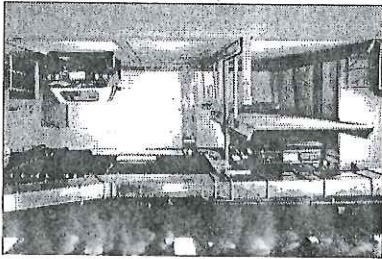
In Berkeley, Panoramix Interests addressed this issue by importing the Klaus Triple-Stacked Parking System from Germany. The system (*bottom right*) allows three cars to be stacked on hydraulic lifts in the square footage of one parking space. The system costs about \$12,000 for a deck that holds three cars. Panoramix charges residents \$40 a month to rent one space.

At two California projects, Vermont Village Plaza in Los Angeles and Fulton Grove Townhouses in San Francisco, Solomon ETC created mid-block parking with a feature called the "drive-in walk." Here an attractively paved driveway doubles as the path to the residential front doors. Facades carefully match neighborhood buildings.

In Vermont Village Plaza, Solomon ETC met the city's requirements of two parking spaces per unit by creating a drive-through garage. For households with two cars, the cars are parked in the courtyard accessed by this garage. For households with only one car, this courtyard becomes a private, secluded open space.

In Oakland, Piedmont Commons includes garages (*middle right*) designed to convert into a home office or living space for residents who don't need extra parking. During the design process, architects Van Meter Williams Pollack asked neighbors to support setback exemptions. This allowed the buildings to be pushed out toward the perimeter of the block, creating more space for parking in the center while reducing the project's

Parking solutions achieve the goals of successful infill without causing a parking crunch.



size by only one unit. The parking courtyard and access drive received special pavers, which make them feel like public open space rather than a parking lot.

Piedmont Commons achieves the goals of successful infill without reducing the required amount of parking. At the same time, the parking area is made into attractive public space. It is also flexible space that converts to other uses if a resident doesn't own two cars.

In Denver, Trillium Corporation is redeveloping 51 acres of vacant railyards into The Commons, a new neighborhood for as many as 5,000 residents, along with offices, shops, and entertainment venues. Located next to the Lower Downtown Historic District, The Commons will take advantage of regional buses, a bus transit-mall, light-rail, and bike trails that come right to its door.

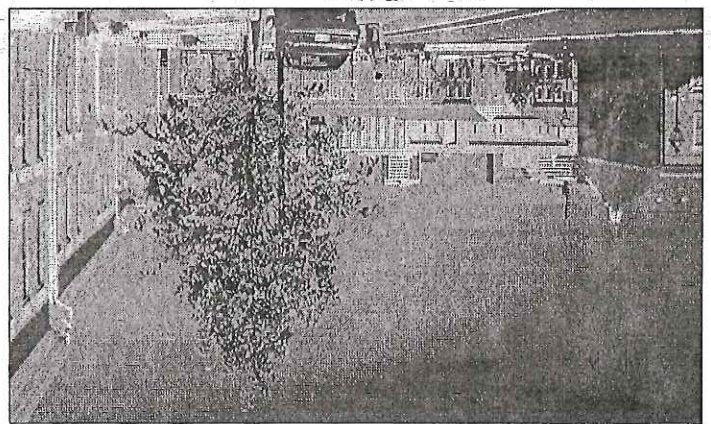
The Commons will include \$9 million worth of shady, walkable streetscapes that extend Denver's grid system through the site. As a result, residents will be able to walk a short distance to downtown jobs as well as cultural and entertainment attractions.

No one will walk by a parking lot, as The Commons' 8,000 parking spaces are in parking garages located at the project's edges. The parking garages, underground utilities, parks, and streetscapes are being funded through a special tax district called a Metropolitan Improvement District (MID). Property taxes paid through the MID will be used to retire bonds sold to fund the infrastructure improvements.

The availability of transit reduces the demand for parking. Because of its access to Bay Area Rapid Transit (BART), and because some low-income residents won't own cars, Swan's Market in Oakland includes only 82 parking spaces for its 92 apartments and condos. Most new residential developments in Oakland are required to provide at least one space per residence. Swan's Market anticipates that even with a lower-than-usual parking ratio, many residents will not need the parking and will sublease their spaces for extra income.

In many cases, the traditional street grid with on-street parking replaces the need for expensive surface parking lots or garages. Every car stored on the street

On-street parking calms traffic because motorists must be alert for opening doors and cars entering the roadway.



decreases the demand for land-wasting parking lots. One way to maximize on-street parking is to carefully limit curb cuts for driveways that subtract from the parking supply.

Other benefits can ensue from on-street parking. Parked cars buffer pedestrians from moving cars. On-street parking calms traffic because motorists must be alert for opening doors and cars entering the roadway. Parking spaces located on streets near storefront entrances attract customers.

In the mid-1980s, the City of Pasadena, California, was seeking to revitalize its 20-block Old Pasadena historic district. As the historic buildings began to fill up with new uses, the city began receiving applications for demolition permits. The business owners weren't anti-historic-preservation by nature. But they needed to raze adjacent buildings to build surface lots to meet city parking requirements. Soon Pasadena realized that its own parking requirements would ultimately destroy the district.

Pasadena came up with two responses. The first was to build two public garages within the historic district. Then the city introduced a system called a zoning credit parking contract. For \$50 to \$200 per space, businesses can purchase parking credits that fulfill parking requirements through spaces in the public garages.

Since the introduction of the parking credit program, the historic district has boomed. More than 100 historic buildings have been rehabilitated. Retail sales and property values have soared. By saving the buildings, Pasadena saved the area's integrity, which proved to be the key to its economic revival.

STRATEGIES FOR PARKING

- Reduce parking requirements for infill sites in mixed-use or transit-oriented areas.
- Don't place surface parking lots in front of buildings. Locate parking in courtyards, behind buildings, or in parking garages.
- Design public parking garages as mixed-used buildings with storefronts that match neighboring commercial buildings.
- Allow local business to fulfill their parking requirements by purchasing credits for garage spaces.
- Strategically place parking to serve residents and businesses throughout a district.
- In mixed-use neighborhoods, devise pedestrian networks so visitors park once and access a day's worth of activities.
- For housing infill, design surface parking more like a park, courtyard, or plaza that doubles as public space.
- Develop a strategy for public safety in parking areas, such as police officers, security guards patrolling on bicycles, or attended parking.
- Encourage local businesses and institutions to share parking spaces—for example, municipal office or the public library parking lot could also be used by local restaurants and entertainment venues in the evening.

In Washington, D.C., the Townhomes on Capitol Hill replaced 5.3 acres of abandoned public housing with 154 new mixed-income homes, a community building, and new public streets. Affordable and market-rate homes are designed to the

Portner's Landing is a successful infill development located in an upscale historic neighborhood in Alexandria, Virginia. To make the idea of 45 residences per acre palatable to neighbors, architects Torti Gallas and Partners/CHK included design details that complemented the red-brick fabric of the historic district. The project recycled a historic brewery building with a one-story addition. Adjacent new rowhouses were "stacked" to create two units in one building that "reads" as a single-family house. Details were varied so the rowhouses feature different facades. Even the alley was carefully designed with a handsome gate, brick pavers, and nicely detailed garage entries.

Density supports key elements of healthy communities such as transit, neighborhood retail, and open-space conservation. For example, density of at least 10 homes per acre is a prerequisite for effective transit systems. Most people will not walk more than one-quarter mile to catch a train or bus, so housing should be clustered near transit connections. To maximize walking and bicycling as transportation choices, housing density should increase in districts within one-quarter-mile of transit, shopping, or employment centers. But to work—and to promote density to nervous communities—density must be extremely well designed.

Density is another volatile issue. Many citizens associate the term with slums, overcrowding, ugly buildings, and increased crime. However, there is no evidence that density itself creates a poor environment. From Parisian residential boulevards to the streets of San Francisco, some of the world's most celebrated urban environments are dense. Yet they are considered beautiful and lively, not threatening and oppressive. Extremely dense cities in Asia have negligible crime rates compared to those of U.S. cities, where population densities actually dropped from 1960 to 1990. "We need to create what I call 'elegant' density and to praise the benefits of density," says Will Fleissig of Continuum Partners. "We do a poor job of explaining both the upside and the impacts of density."

—Samuel Johnson

"Men, thinly scattered, make a shift, but a bad shift. . . . It is concentration that produces convenience."

DESIGN FOR DENSITY

same standard, which carefully avoids the monolithic appearance of the previous project. Variety is assured through 35 facade designs, 30 window configurations, and 22 types of bricks, all based upon historical precedent on Capitol Hill. Mirroring its surroundings, density approaches 30 dwelling units per acre. In California, Solomon ETC has designed low-rise multi-family buildings with densities reaching 44 units per acre. In these courtyard buildings, each apartment receives both private open space and a parking space. The parking courtyards feature special paving and trees. Cars drive through an entry "portal" that feels watched-over and secure. This makes for a graceful accommodation of cars," says Solomon's Anne Torney. Upper-floor apartments have full balconies.

Another San Francisco project by Solomon, Beideman Place Townhouses, achieves 55 units per acre and a 1:1 parking ratio by placing cottages behind three-story townhouses. In *San Francisco: A Guide to Recent Architecture*, Peter Lloyd praised "[a]n architectural style that is easily melded into the street and the successful melding of the communal and the private."

Communities should encourage density through "density bonuses" that allow developers who proffer community benefits to add 15 percent of the floor area of a multifamily project. By offering inexpensive ground-floor rental space to a popular local bookstore, Panoramic Interests won a two-story density bonus for an infill apartment project in downtown Berkeley. To trigger density bonuses, Panoramic Interests also includes affordable housing and roof decks in its infill projects.

Panoramic Interests has discovered that density makes economic sense, and it supports ground-floor retail and community services. Just five years ago, downtown Berkeley had a one-third vacancy rate of first-floor retail. New housing is reviving the market for retail along University Avenue and other boulevards.

BRINGING IN THE SHOPS

Retail is the hardest portion of mixed use to finance, build, and support. Yet the convenient services provided by shops are essential to make a community walkable. People need destinations, not just walkable streets. In addition, convenient retail districts attract new residents to infill housing projects.

"Pedestrian districts can't work unless you have a mix of uses," says Henry Markus. "You can't scatter retail about, because you need critical mass at the center. People won't leave their cars behind for just housing infill, but with services they can walk or bike to, they will."

Some creative strategies to sustain retail in mixed-use neighborhoods:

- Invest in improved streetscapes, sidewalks, transit, crosswalks, lighting, and parking structures that attract people to shopping districts.
- Recruit successful businesses seeking to expand to a visible location with high pedestrian traffic.
- Subsidize shops by offering reduced rents or taxes for an initial period.
- Include other uses that attract people and support retail—a branch post office, day-care center, children's museum, or farmers market.
- Concentrate or retain public buildings that attract people—such as post offices and libraries—within walkable retail businesses.

FITTING A LARGER BUILDING INTO A NEIGHBORHOOD

Neighbors object to the mere idea of density because they have seen too

many poorly designed larger buildings. Some are too tall and block treasured views and sunlight. Others are low but contain barge-like mass that overwhelms the neighborhood. When served by a single entrance and long, double-loaded corridors, large, monolithic buildings feel imposing and unsafe. "You can't build a rabbit warren," says Patrick Kennedy of Panoramic Interests. "You need exterior entrances."

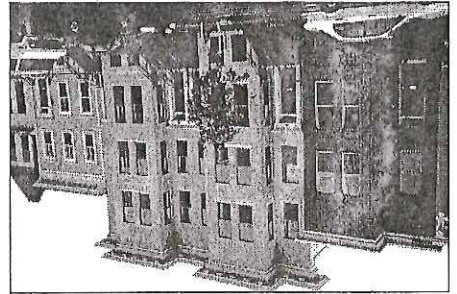
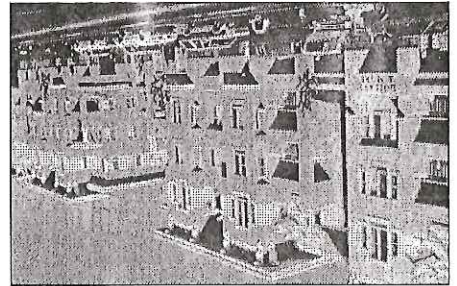
Architect Tim Van Meter avoids the downside of density by

dividing large buildings into smaller, friendlier components. Within a low-rise urban neighborhood, he is designing a dense condominium project—60 residences per acre. Rather than creating a single large building, Van Meter plans 13 connected buildings with varied massing, detailing, and window treatments. The buildings have separate entrances rather than one entrance. Colors and materials vary as well. Landscape elements such as large street trees break up the apartment size and scale of a building.

"It's a rich palette of forms and materials," says Van Meter. "The project really 'reads' as 13 individual buildings. The detailing interrupts the eye from reading the building as a single large, bulky object." When Van Meter shows people models of this project, they guess that the density ranges from 24 units to 45 units to the acre—much less than the true density.

While customizing the design sounds expensive, it actually saves money in some areas and creates additional value in others. For example, Van Meter's design eliminates the need to build, paint, or maintain hallways, which typically consume square footage. Compared to a blocky building, the design offers 3.5 times as many corner units, which sell for a 20 percent premium. In addition, the design creates excellent cross ventilation, which saves \$1,800 per residence on the cost of installing air conditioning.

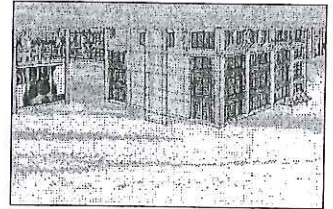
Affordable and market-rate homes should be designed to the same standard and reflect the character of the surrounding neighborhood.



While customizing the design sounds expensive, it actually saves money and creates additional value in others. The Townhomes on Capitol Hill, Washington, DC demonstrates this principle effectively.

The neighborhood's strengths, however, included some solid existing buildings that could be redeveloped, and the presence of institutions, such as the Detroit Medical Center, Wayne State University, and Orchestra Hall, that needed housing for employees. Another plus was the increasing interest (reflecting a national trend) among a portion of the Detroit metropolitan area's 5 million people to live closer to jobs in the inner city. With improved security, the neighborhood had great potential value. Since 1996, Mark Nickita, Kevin Borsay, and Dorian Moore of Archive DS, an architecture and urban design firm in Detroit, have designed six infill projects that redefine Midtown's urban streetscape and reestablish the street grid that was lost over the years. Using the principles of New Urbanism, Archive DS designed the We-

Few cities have dealt with the level of physical and economic devastation that marks Detroit's inner-city neighborhoods. Whole blocks of single-family and apartment houses are abandoned. Vacant weed-choked lots suggest rural pockets in the middle of a once-thriving city. One of the worst areas, formerly known as the Cass corridor and now called Midtown, has been called "the most dysfunctional neighborhood in America." By 1990, a square mile of Midtown had lost 24 percent of its population compared to the previous decade (4,709 in 1980 to 3,574 in 1990). A quarter of its housing lay vacant. It was plagued by drugs, prostitution, and physical decay.



DEFENSIVE DESIGN

THE WEBER BLOCK'S

Detroit, Michigan

CASE STUDY

INFILL STRATEGIES

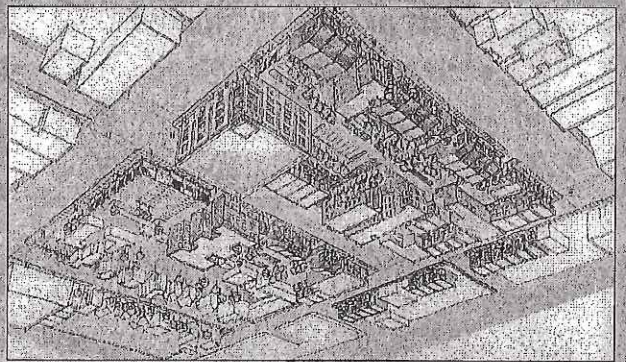
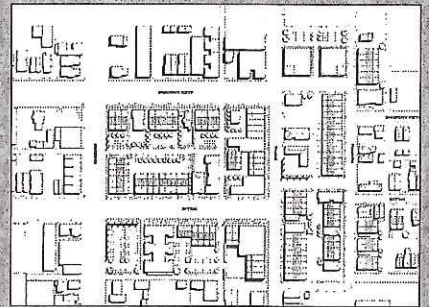
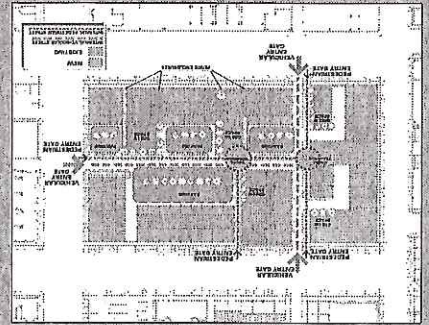
Ways at ground zero, doing whatever
possible in the event of a public
subsidy, we're trying to rework the
code." — MARK NICKLA

ber Block, an \$8 million mixed-use project that fea-
tures what Nickita calls "hardened block" security.
The hardened block makes the project secure by
protecting the interior of the block for use solely by
residents. But unlike gated communities, the hard-
ened block includes sidewalk entrances for each
building. A pedestrian-friendly internal street creates
open space where residents meet and socialize.

Where vacant lots remain, the streetfront is maintained by
suspending metal advertising panels that hide parking. The park-
ing walls help complete the defensible design, create a livelier
temporary streetscape, earn revenue, and can be knocked down
later to permit construction of new buildings.

The hardened block demonstrates that security does not
require a gated compound. As a measure of their successes, Mid-
town projects are commanding prices that had been unheard of
several years ago in Detroit. For example, two-bedroom apart-
ments are renting for \$1,200 a month and condo sales exceed
\$140 per square foot.

Developed by Midtown Development Group, the Weber Block restores the
grid over six city blocks. It includes 60 rowhouses, 30 live-work lofts, 50
apartments, and 13,000 square feet of retail space. Starting with new infill
townhouses and the renovation of a historic apartment building on the
perimeter, the project will also add new residential and commercial lofts,
rowhouse lofts, and outbuildings such as gatehouses, alley houses, and
market-rate rentals to fill in the gaps.



schools, infrastructure, and safety. It creates resident stakeholders who will insist on improvements to public revitalizing a community. Diverse housing attracts employers who rely on a varied Mixed-use development with mixed-income housing advances the goal of truly hours, a key element of crime prevention and public safety.

On the other hand, communities that include housing development as part of their strategies have attracted new residents who provide stability. Blending housing with other uses creates neighborhoods and districts where people are present at all sprawl at the edge of communities.

Jobs for the unemployed or improved sagging school districts, reduced crime, or halted life for the average citizen. The billions of dollars invested have often not created new cultural centers, and major-league sports facilities — without improving the quality of areas have attracted large-scale developments — shopping and entertainment complexes. Housing is the cornerstone of a sustainable local economy. Numerous depressed interest and pride.

Home ownership added to distressed neighborhoods helps build community located within walking and biking distance of public transit gives commuting people dark and provides a ready-made market for retail or commercial ventures. Housing Well-designed and properly located housing brings employment districts to life after In a healthy community, housing should be a major element of infill development.

THE ROLE OF HOUSING IN A SUCCESSFUL INFILL STRATEGY

New housing also increases the tax base by providing customers for local retail and by attracting new businesses to locate within a community. In the late 20th century, a number of cities grew by attracting new housing and residents as well as commercial and civic development. As a result, they combined the nation's healthiest urban economies with the highest ratings for quality of life. These included Charlotte, Columbus, Denver, Portland, and San Francisco.

New housing in existing communities can meet increas-

ing demand for living closer to work. "As more Atlantans become fed up with traffic snarls, they are demanding new housing that is close to work," John Glover of Post Properties told the *Atlanta Business Chronicle* (May 10, 1999). Added the *Chronicle*, "One of the key strategies for Post and many other Atlanta home builders is their adoption of 'infill' programs."

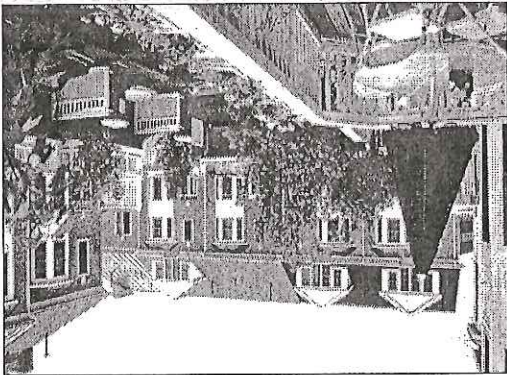
THE DELICATE ISSUE OF DENSITY

"Families who could easily afford to buy a single-family house with a big yard are instead choosing to live in the city and are buying homes with small lots. The brisk sales of multifamily housing demonstrate that people will pay a lot of money for higher density if it is well designed and part of a successful neighborhood."

—*The Debate Over Density*

Density is a complex, misunderstood, and even frightening issue. It is also essential to successful infill. Density is often considered synonymous with rising crime and overcrowding. This book presents another view, arguing for the benefits of increased density, and proposing tested means to make livable, dense neighborhoods. Successful infill housing needs to be dense enough to make transit viable and to support walkable retail districts. Studies indicate that mass transit works in neighborhoods where density exceeds 10 residences per acre. Higher densities create the sense of a strong residential neighborhood rather than scattered, isolated houses. A critical mass of residents supports commercial and retail infill.

Emerging Trends in Real Estate forecasts that young adults living in cities today will move to the suburbs when they marry and have children. But the suburban environments they will seek will provide the types of mixed-use, pedestrian-oriented environments that are the cornerstone of successful urban infill.



Sites zoned for dense housing can attract greater interest from developers, who may see the potential for increased profit. National corporate housing developers generally seek sites where they can develop at least 300 units over time to create for-sale residential neighborhoods and communities. Special efforts should be made to ensure that the design of large housing projects is not monolithic, but broken into discrete, identifiable, and well-defined buildings.

In other cases, less is more. The redevelopment of infill neighborhoods may lead to lower density. In 1993, Lafayette Courts, a high-rise public housing project in Baltimore, was redeveloped as Pleasant View Gardens (*left*) under the federal HOPE VI program. Under designs by architects Torti Gallas and Partners/CHK, the bleak high rises and superblocks were imploded and replaced by rowhouses (each with its own yard), streets, and blocks based upon the scale of traditional Baltimore neighborhoods.

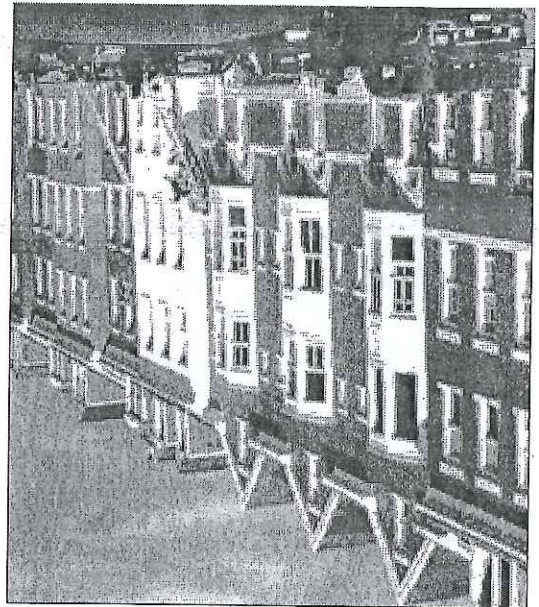
"The towers seemed out of place in a city overwhelmingly composed of rowhouses," says Cheryl A. O'Neill of Torti Gallas and Partners/CHK. During this transformation, the 807 public-housing apartments, many of them deteriorated and vacant, were replaced with 38 mixed-income rowhouses, townhouses, and senior units in a mid-rise building plus several new public buildings.

By combining low-rise and mid-rise buildings with high-quality public spaces such as squares, parks, and tree-lined streets, Pleasant View Gardens also created a positive public image for its density of 15 homes per acre.

Neighbors often object to proposed increases in density. Yet when projects are well-designed, neighbors will often favor greater density. They need to be shown how attractive density can be. This message is best conveyed through readable graphics, models, or organized tours of other successful infill projects.

"Density is specific to place," says Robert Freedman of Urban Design Associates (UDA). "You should respect what the community is used to. In Portsmouth, that means Westbury relates to the density of the surrounding neighborhood, about six to eight dwelling units per acre."

Special efforts should be made to ensure that the design of large housing projects is not monolithic, but broken into discrete and well-defined buildings.



BALANCED INCOMES

Affordable housing is in short supply throughout the nation. Despite a strong economy in the late 1990s, more than 5 million Americans spent more than half their income on housing—the highest level since the Depression. Home ownership for young people was at a two-decade low. The lack of affordable housing within existing communities causes sprawl beyond the metropolitan area because that is the only place inexpensive land is available for building. Affordable housing is not always low-income or subsidized public housing. Increasingly, it means housing for the young adults and middle-class people who are priced out of the communities where they work. This factor can also impel such community members as teachers, police officers, and fire fighters to seek housing elsewhere. The community loses potentially valuable participants in its civic life while generating sprawl outside its boundaries.

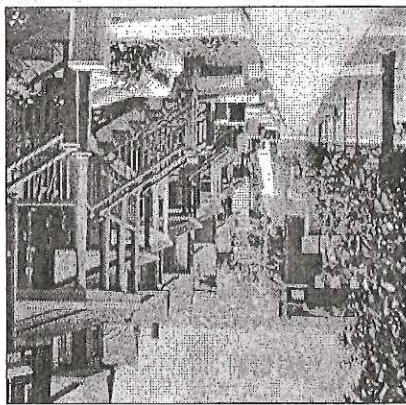
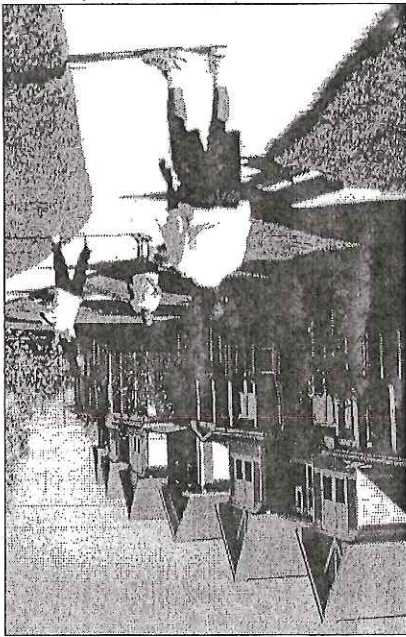
Communities can safeguard or expand their supplies of affordable housing in numerous ways. They can enact inclusionary zoning that permits the development of housing that suits different family sizes and income. They can subsidize the construction of affordable homes or orchestrate such incentives as loan guarantees or second mortgages.

Every infill project does not need to include affordable housing. Yet all infill should be evaluated for the potential to include such housing. Citizens need to understand that affordable housing and subsidized low-income housing are not synonymous.

In other communities, providing affordable housing is not the issue. Older cities and municipalities—Detroit is an example—already offer the cheapest housing in the metropolitan region. What they lack is middle-class and higher-end housing for people who will start businesses, support improved services, and increase the tax base. In low-income neighborhoods, infill provides market-rate and middle-income housing that is missing from the social and economic fabric.

Balance is the key. Too often the public housing of the 1960s

Communities can safeguard or expand their supplies of affordable housing by enacting inclusionary zoning ordinances that permit the development of housing accommodating different family sizes and incomes.



created instant ghettos by concentrating the poorest of the poor in one place. Middle-class enclaves of two-income families become ghost towns by day—breeding such problems as break-ins and crime among youth. Balanced neighborhoods include a variety of housing and prices. They can be safer places, more sociable, and less isolated for the very young and old. As a bonus, they often support their own retail, entertainment, and service districts.

OVERCOMING OBSTACLES TO MIXED-USE WITH HOUSING

Mixed-use development is illegal in many municipalities. Outmoded zoning requires rigorous separation of housing, retail, offices, and institutions. These regulations make it impossible to locate an apartment above a shop or to blend a duplex or small apartment building into a neighborhood of single-family houses. Furthermore, banks may be unfamiliar with the economics of mixed-use projects. Developers may be specialists in building offices, housing, or retail, but not all three in one place.

To overcome these obstacles, communities can begin by revising their zoning codes. In some cases, these revisions target mixed-use, pedestrian-oriented zoning for portions of the municipality, such as obsolete railyards or industrial areas, which makes rezoning less threatening within established residential neighborhoods. Communities that have succeeded in rezoning include Seattle, San Diego, and Fort Collins, Colorado. On a slightly different tack, Orlando, Florida, adopted an "alternative" code that allows, but does not require, developers to pursue walkable, mixed-use projects.



To overcome these obstacles, communities can begin by revising their zoning codes. In some cases, these revisions target mixed-use, pedestrian-oriented zoning for portions of the municipality.

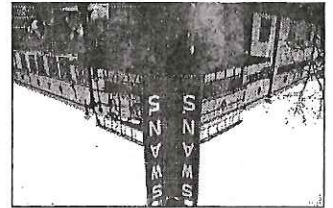
homes are owner-occupied, the project made low-income affordable housing a priority. Located in an area with a 37.2 percent poverty rate, where only 4.4 percent of residents own their homes, the project is designed to provide a mix of housing types, including single-family homes, townhomes, and multi-family units. The project also includes a courtyard with art exhibits, music, and performance space.

The second floor includes 39 residences. Most are one- and two-bedroom apartments. The second floor also includes a courtyard with art exhibits, music, and performance space. The project also includes a courtyard with art exhibits, music, and performance space.

The project features an L-shaped courtyard for art exhibits, music, and performance space. The ground-floor anchor is the 14,000-square-foot historic Housewives Market. It is an enclosed market with 11 independent merchants, including a butcher, a baker, a florist, and fish and produce stalls.

The project features an L-shaped courtyard for art exhibits, music, and performance space. The ground-floor anchor is the 14,000-square-foot historic Housewives Market. It is an enclosed market with 11 independent merchants, including a butcher, a baker, a florist, and fish and produce stalls. The project also includes a courtyard with art exhibits, music, and performance space.

Swan's Market, built in 1917, housed an Italian market until decay and suburban flight closed it in 1983. A community-wide effort, led by the nonprofit East Bay Asian Local Development Corporation (EBALDC), has transformed the 75,000-square-foot market into 135,000 square feet of housing, retail, office, and art space spanning a city block. housing with retail and other uses to create a 24-hour downtown. The project also preserves an important building in Old Oakland.



Swan's Market, a mixed-use urban infill project including affordable housing, has been called "the crown jewel of Oakland's revitalization." Located within blocks of several public transit options, the \$17 million project is part of the city's strategy to combine housing with retail and other uses to create a 24-hour downtown. The project also preserves an important building in Old Oakland.

OAKLAND, CALIFORNIA

SWAN'S MARKET

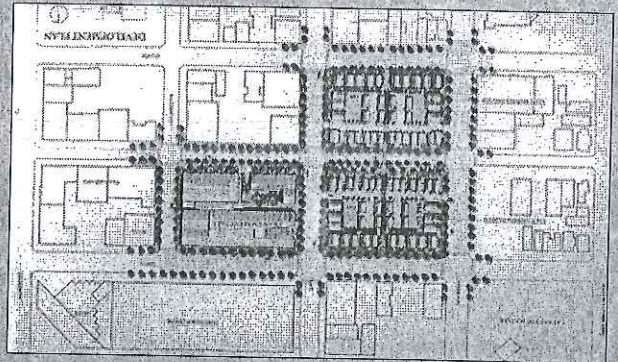
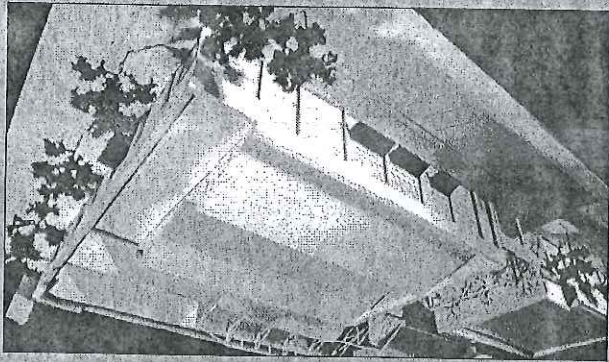
CASE STUDY

INFILL STRATEGIES

SUCCESSFUL INTER-DEVELOPMENT

SWAN'S MARKET, DULLES, VA. HOUSING DEVELOPMENT

PHOTOGRAPHY AND ARCHITECTURE BY JAMES H. HARRIS



ty, Swan's Market includes 18 new subsidized homes—14 for low-income families, and four for people with AIDS. Twenty market-rate condominiums were developed as cohousing. The project also provides art gallery spaces and a live-work studio.

As with many mixed-use and government-funded projects, the financing for Swan's Market was complicated. The \$3.4 million rental housing was underwritten by loans from the city, county, state, and federal governments, as well as private donations. The U.S. Economic Development Agency funded the courtyard, sidewalks, and historic street lamps.

Because of policy issues and funding arrangements, the subsidized housing and market-rate units are placed in separate buildings. Local banks granting loans required that rental units be separated from condos. The \$4.5 million cost of the condos was financed by a commercial bank construction loan, the cohousing investors, and a city construction loan. The \$6 million commercial building cost benefitted from tax credits, a private loan, redevelopment agency funds, and a federal grant.

Not only does the project provide new housing in Oakland's downtown core, it also creates job opportunities for low-income residents from surrounding neighborhoods. EBALDC has developed a neighborhood job program to make it easier for the businesses at Swan's to hire from the community. The program includes job referrals, customized training, and subsidized work experience for welfare recipients.

TRANSPORTATION AND SUCCESSFUL INFILL

Successful infill builds upon the footings of mixed uses, density, walkable streets, and transit. Many urban areas already possess decent bus and transit systems (53 percent of Americans live within two miles of some form of public transit). Successful infill projects will increase ridership on existing systems.

In places close to public transit stations, communities should plan for transit-oriented development (TOD). "In mixed-use, transit-oriented development, the total contribution of transit, walk/bike, and internalized trips reduce automobile trips by up to one-third," says Henry Markus of the King County Department of Transportation in Seattle. Residents of mixed-use, transit-oriented suburbs may drive half as many miles as residents of nearby single-use suburbs that lack transit.

To achieve strong ridership, transit systems need central areas of commercial density connected to residential areas of varying density. But how much density? In *Public Transportation and Land Use Policy* (Indiana University Press, 1977), Boris S. Pushkarev and Jeffrey M. Zupan define an empiric system for assessing the connection between density and transit. They conclude, for example, that a residential neighborhood with four homes to the acre can support an hourly bus. Bump it to seven homes per acre and the neighborhood can support a bus on the half hour. Pushkarev and Zupan make similar assessments for every level of transit, from light-rail to subway lines. Then the authors calculate how much retail and office space is needed at

the other end of the ride. A tabloid newspaper summarized their findings with the headline, "For Mass Transit Need Mass." Expensive transit systems alone will not create livable communities. Streets won't come alive unless they are designed for the pedestrian first. Successful infill works even without direct transit when it includes a short, pleasant walk to other neighborhoods and services.

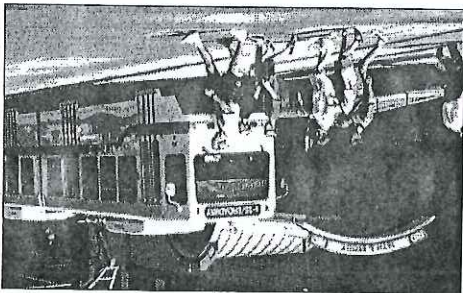
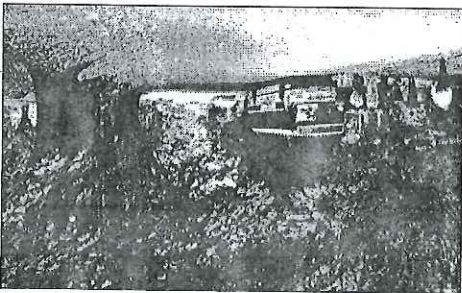
"Too often transit lines are located in areas that are not transit-supportive because they have too little density, no pedestrian quality, and little opportunity for redevelopment," writes Peter Calthorpe in *The Next American Metropolis* (Princeton Architectural Press, 1993). "Lines through existing suburbs often make this mistake and are dominated by a park-and-ride auto access strategy. The alternative is to balance these conditions with alignments that run through New Growth Areas designed for higher densities, mixed-use, and walkability." Communities designed for pedestrians make it possible to meet many of life's needs, from business to services to shopping to schooling, within a safe, pleasant walk through neighborhoods. Walkable environments make transit stations and stops accessible by foot, which greatly increases the prospect that people will use transit.

The Westbury development in Portsmouth, Virginia, is being marketed based on the short walking distances to a community center, churches, a new high school, a grocery store, and downtown shopping. Westbury will benefit from good local bus service and from a nearby Tidewater Regional Transit ferry service to job centers in Norfolk.

Children and the elderly live more independently when schools, stores, and services are within walking distance. Less driving means less noise and air pollution, as well as less demand for roads and parking. Automobile travel is the reality, and cars must be accommodated, but not at the expense the health of the environment and the community.

- Plan transit-oriented development in tandem with transit expansion, not as an afterthought.
- Consolidate existing transit (public buses, private buses, private shuttles, special transit, school buses) within one system.
- Study bus routes and schedules to make them more efficient and useful.
- Improve the comfort and aesthetics of transit stations and stops.
- Investigate new technologies.
- Ask the public what they want; then redesign routes or schedules to accommodate expressed needs.

INEXPENSIVE WAYS TO IMPROVE PUBLIC TRANSIT



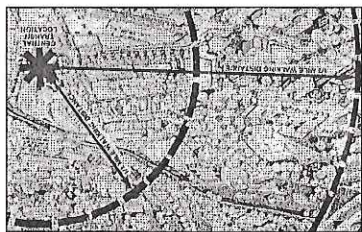
ridership—and the development site remains fallow, feasible—not would it generate sufficient transit smaller-scale development was not economically much smaller-scale development. Unfortunately, the undetermined by community members who argued for mixed-use development around a BART station was In El Cerrito, California, an effort to build a dense or transit-oriented projects in the area.

developers are likely to beware of affordable housing community objections were so rancorous that other may be the last of its kind in Castro Valley. The Pyrrhic victory. Although the project was built, it affordable housing next to a BART station yielded a In Castro Valley, California, a proposal to build of those proposals.

stations. Community opposition has stymied many high-density commercial development around California's Bay Area was originally planned for generate controversy. The BART system in Proposals for transit-oriented development can

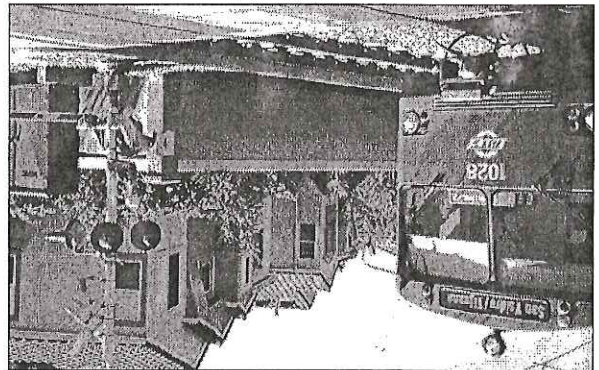
TOD CONTROVERSIES

development that supports ridership. by parking lots and freeways rather than compatible walk up to half a mile. Too many transit stops are engulfed rail transit is available and the route is pleasant, they'll People will walk a quarter-mile to catch a bus, but when



- Infill can build ridership for transit, while effective transit supports successful infill. Henry Markus recommends these strategies for nurturing this symbiotic relationship.
- Make sure the transit agency supports TOD and will invest in structured or shared parking, joint development, and marketing of TOD sites.
- Identify TOD sites and zone them for higher density or purchase them for an infill project.
- Create pedestrian-friendly environments around transit stations. The most effective stations are surrounded by walkable streets. People who can walk a short distance to transit are more likely to use transit. Why? Once people are in their cars, they are more likely to drive to their destination rather than to a transit station.
- Create development regulations that describe what you want rather than regulating against what you don't want.
- Recognize that public subsidies and incentives are effective.

STRATEGIES FOR INFILL NEAR TRANSIT



back to make creative use of leftover scraps of land.”

only two options as the region grows: spread ever further outward or double commented journalist John King in *The San Francisco Chronicle*. “For there are

“With luck [The Crossings] will spawn imitations across the Bay Area,”

be affordable by Silicon Valley standards.

station even opened. Housing is all market rate, although the density allows it to block. The entire project was built, sold out, and occupied shortly before the train

ers. A large supermarket and school are located a safe and easy stroll down the apartments, some built on “podiums” above a 200-car garage for rail commuters include single-family bungalows, smaller cottages, townhouses, and condominium

A diversity of housing types helps make The Crossings successful. Homes

band stand, and tot lots form the spine of the neighborhood.

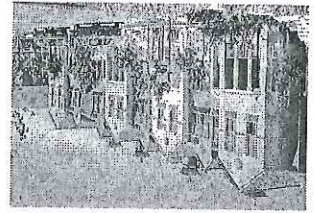
recalls quiet, traditional California towns. Walkable streets, two small parks, a 20 units per acre—enough density to support transit, but within a setting that Caltrain commuter station, The Crossings provides

View, California. Located next to a newly relocated

on the site of a failed shopping mall in Mountain

a new 17-acre transit-oriented neighborhood built

Designed by Calthorpe Associates, The Crossings is

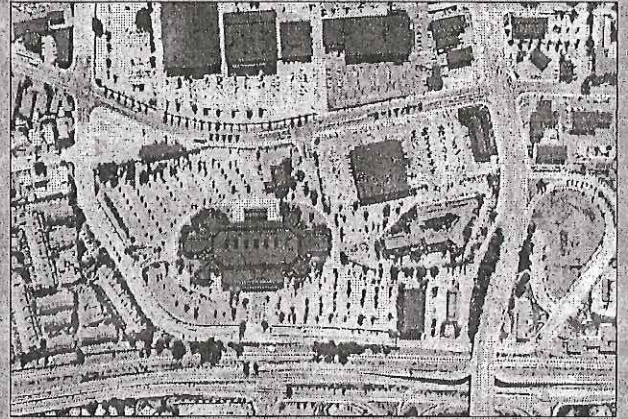
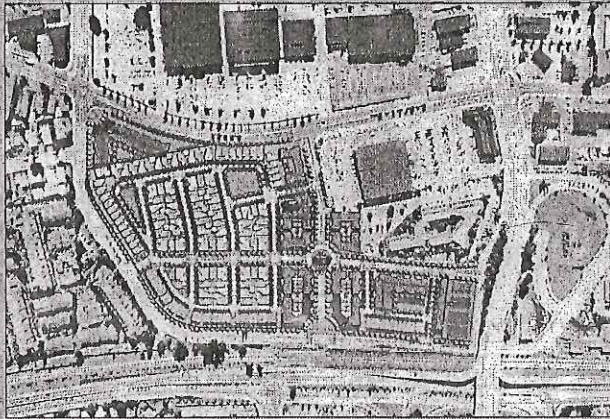
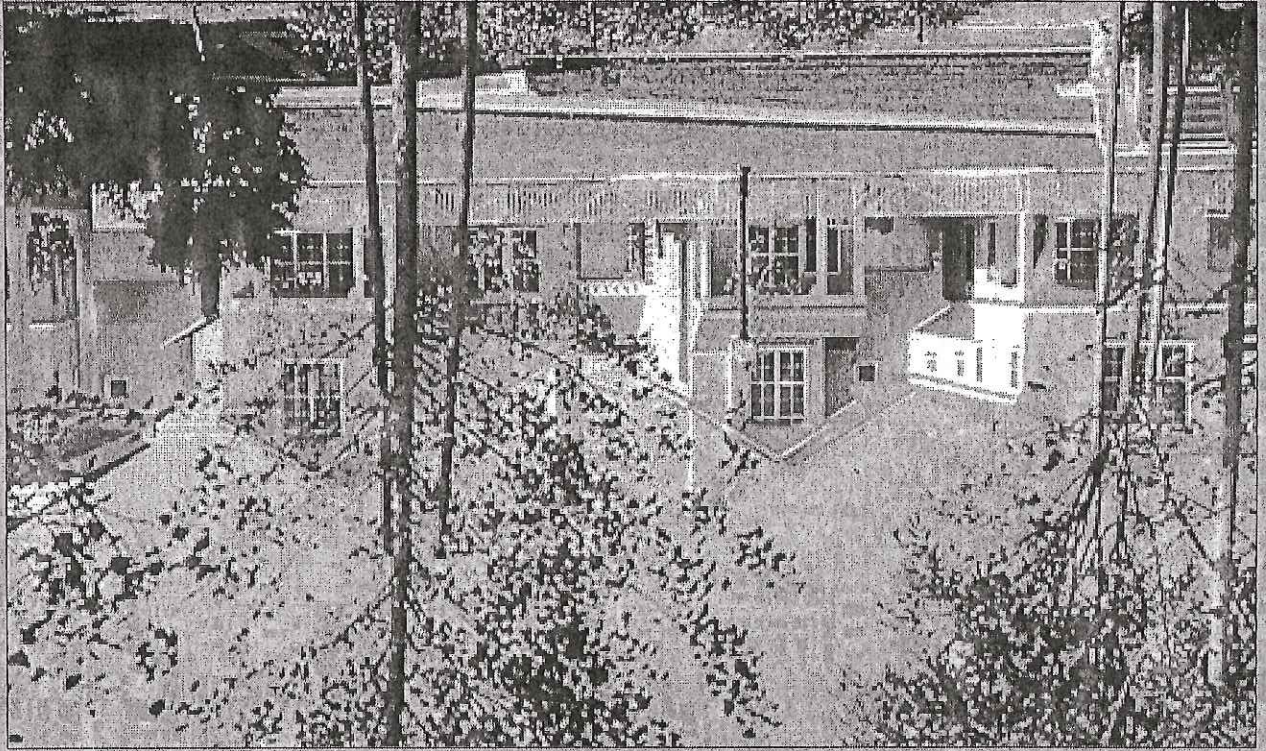


THE CROSSINGS

Mountain View, California

CASE STUDY

PHOTO: CALTHORPE ASSOCIATES



SUCCESSFUL URBAN DEVELOPMENT

The crossings provide 20 units per acre. California towns, walkable streets, low overall density, open areas, but within parks, a band stand, and for his arm the setting that recalls great, traditional some of the neighborhood.

TAKING ACTION

Is your community ready to take the steps described in the previous chapters? Once you have assessed your community's potential for successful infill, consider the following actions:

1. Build community consensus and involvement.
2. Identify important infill sites and zone them to encourage successful infill.
3. Make infill sites appealing by improving infrastructure and amenities.
4. Make infill appealing to lenders, investors, and developers.
5. Market infill sites aggressively.
6. Create design guidelines for infill.

1. BUILD COMMUNITY CONSENSUS AND INVOLVEMENT.

Most communities have seen poor development for a generation. Residents have watched with horror as perfectly good housing or business districts were destroyed for dubious urban-renewal projects, as asphalt replaced green space, and as traffic congestion increased. As a result, the public may be skeptical about the idea that some types of development can be good for a community. Infill advocates must trumpet the theme that successful infill provides alternatives to sprawl while making communities healthier places. Excellent design helps sell infill projects.

Understandably, planners who approach communities with final development plans in hand are likely to be sent back to the drawing board. Fortunately, many public involvement strategies exist that can help local officials, planners, and architects understand the evolving nature of community change and fare better in winning neighborhood support for their projects.

COMMON FEARS

Successful neighborhoods from Brooklyn to the Bay Area demonstrate that density offers the diversity, access, and vibrancy that sprawl usually lacks. Yet residents may fear that infill projects—whether residential or commercial—will affect property values or crowd neighborhoods. Therefore, local officials, designers, and builders must work with communities to address these fears and offer solutions that ultimately will make neighborhoods livable.

Concerns that compact development might generate more traffic are often well founded, especially in neighborhoods where parking is already inadequate. Yet by pursuing land uses that support a mix of activities—housing, entertainment, employment, and retail—communities like Manchester, Vermont, have been able to reduce downtown parking needs by instituting shared parking arrangements. In this scenario, parking lots are used by workers during the day and movie-goers at night.

Other communities are encouraging transit-oriented development (TOD), a strategy that concentrates housing, retail, and business around transit lines and stations. This approach can increase the customer base for both transit and area businesses, while taking more cars off the road.

The fear of neighborhood gentrification also can be real since certain areas always will be redeveloped sooner than others. Community advocates in Portland, Oregon, for example, complain that many older neighborhoods are losing their uniqueness as developers retrofit them with high-end housing and retail. It is critical, therefore, to include community representatives at the table to brainstorm approaches to smart growth and regionalism, including infill development.

Involving citizens from the start of a planning effort allays fears about infill.

SOLUTIONS

Architects Van Meter Williams Pollack faced opposition when trying to design Piedmont Commons, a 19-unit loft project on a .7-acre infill site in Oakland, California. Neighbors feared loss of parking and of treasured views and open space. So, the architects worked closely with the neighbors and developed detailed models that allowed citizens to grasp the design proposals. Once neighbors were convinced that their view was saved and new parking could be accommodated on site, the project went forward.

Lessons learned? "Don't approach the community with plans in hand," says Tim Van Meter, who launched the neighborhood design process by holding an informal meeting at his house. "Design a project that supports the character of the neighborhood and allows the public access to the site."

According to Gary Delgado at the Applied Research Center in Oakland, California, the best approach to community involvement is to talk to low-income residents and people of color about infill from the perspective of issues that matter to them, such as housing and employment discrimination, school quality, and police violence. Ensure that these same people are included in the various neighborhood task forces that advise different development projects. Delgado believes an infill strategy linked solidly to a strong regional plan for infrastructure, affordable housing, and economic development investments can produce a formidable coalition for change.

"We often start off with a walking tour with community members to talk about what they like and don't like," says Robert Freedman of Urban Design Associates (UDA), the firm that designed the Westbury neighborhood infill in Portsmouth, Virginia. "We also do three or four-day charrettes [workshops] on design issues. The involvement of the community is crucial to build consensus. We create the pictures that illustrate their vision. If the community doesn't feel like it owns the plan, it will never work."

The Westbury proposal ran into opposition from neighboring churches hoping to expand their parking onto the redevelopment site. The city and the design team

Architects should work closely with the neighbors and develop detailed models allowing citizens to grasp the design proposals.

won over the churches by offering to redesign on-street parking and assist with the landscaping of their parking lots.

Patrick Kennedy of Panoramic Interests has developed the first new apartment buildings in Berkeley, California, since World War II. To get his first project approved in a notoriously anti-development community, Kennedy made bold moves that won support from potential adversaries.

For example, Kennedy courted local environmental groups, who understood that additional density served by transit at the center stems sprawl and congestion at the edges of the metropolis. Once they understood the merits of his project, they became vocal advocates. Kennedy qualified for "density bonuses" by setting aside 20 percent of his units as affordable. The provision of affordable housing turned some residents into strong advocates for the project.

In a subsequent project, Kennedy created first-floor retail space for a much-loved local bookstore and a cafe that had lost its lease elsewhere in Berkeley. This won support while ensuring ground-floor activity to enliven the street and the neighborhood. (Panoramic Interests supports retail in its projects by keeping rents very low for the first few years, gradually increasing them to market rate as businesses become established.)

Building consensus in favor of infill may require compromise or rethinking strategy. In South-Central Los Angeles, Vermont Village Plaza was originally proposed as 130 units of low-income rental housing. Immediate neighbors objected intensely. Noting that the community already provided a large amount of low-income rental housing, the residents argued that only home ownership would add stability to the neighborhood.

As a result, Vermont Village Plaza was redesigned as 36 subsidized for-sale units. These sold for \$89,000 to \$118,000, with spaces for a dozen shops in ground-floor space. The project is smaller than originally intended, but it still includes a relatively high density of 20 units per acre, and it provides scarce middle-income housing for South-Central.

"Involve the people early on who are affected (or can affect) your

Building consensus in favor of infill may require compromise or rethinking strategy.

Density served by transit can alleviate sprawl and congestion at the edges of the metropolis.

project," writes Adele Fleet Bacow in *Designing the City* (Island Press, 1995). "Yes, it does take longer when you give proper attention to citizen participation . . . And, yes, it is much harder to make decisions . . . If you ignore this crucial step, however, you will definitely pay for it in the long run. People who feel excluded from the process may find inventive ways to stall or abort your effort."

Even well-designed projects may fail without sensitive efforts to bring neighbors on board. In Azusa, California, citizens concerned over traffic, pollution, and stresses on city infrastructure led to a petition drive to halt a proposed New Urbanist development called Rosedale. Voters soundly defeated the project.

"The developers . . . tried to be responsive to community concerns," says Rick Cole, Azusa's city manager. "But they never really developed a community partnership . . . I knew for certain they would lose when the developers mailed professionally produced videotapes to voters' homes. In a community where people are used to face-to-face communication, that kind of slick overkill backfires."

IDENTIFYING OTHER COMMUNITY ALLIES

Traditional community involvement strategies have focused on homeowners, civic leaders, and environmental groups, but infill development strategies must rely on a more inclusive approach that builds coalitions among nontraditional allies. This section describes some new allies and their reasons for supporting infill and community building exercises.

BUSINESS. A 1999 survey found that corporate leaders are highly interested in livable communities, even if their understanding of how to make them happen remains cloudy. Those mindful of the bottom line cited the economic opportunities inherent in more compact forms of development, including locating people closer to work and school. Others noted that infill development reflects a conservative approach to public infrastructure investment.

The survey by the National Association of Local Government Environmental Professionals (*sidebar*) highlighted private-sector actions necessary to support smart

growth and infill development. One example is the Sierra Business Council, a consortium in the 12-county region of eastern California that guides future investment to protect open space and spur development downtown. A local bank has revised loan policies to favor development providing a safer pedestrian environment.

Real-estate consultant Christopher Lienberger defines the "favored corridor" as the critical mass of housing, shopping, entertainment, services, and recreational opportunities that corporations consider when relocating. The favored corridor usually reflects the region's highest public spending on business recruitment, transportation, and other infrastructure.

Not surprisingly, Lienberger directs corporate leaders to areas that boast the optimal concentration of all these elements. Although those locations have tended to be suburban—such as King of Prussia, Pennsylvania, or Fairfax County, Virginia—there is no reason why developers and community leaders cannot envision a favored corridor in urban areas, such as the Capitol Hill neighborhood of Washington, D.C. In this case, the addition of an affordable and clean grocery store would round out the neighborhood's amenity package of urban parks, boutique retail, services, schools, restaurants, and offices. An additional focus on mid-level retail establishments might further increase the community's vitality.

As attractive as the notion of mixed-use development is, especially where it revives retail in underserved urban neighborhoods, some developers are cautious about including it in their projects. Retail remains a fragile enterprise,

Source: *Profiles of Business Leadership on Smart Growth*.
 (The National Association of Local Government Environ-
 mental Professionals, 1999).

- Increase awareness within your business of the economic impacts of sprawl.
- Participate in studies and analysis of sprawl and smart growth.
- Foster business-to-business education. Get involved in land-use and transportation planning.
- Support downtown revitalization initiatives, including improvements in existing infrastructure. Support the redevelopment of brownfields and other smart-growth development practices, such as infill and mixed-use developments, as alternatives to single-use development of greenfields.
- Promote alternatives to automobile-dependent commuting for employees.
- Publicize smart-growth practices and success stories.

PRIVATE-SECTOR ACTIONS TO SUPPORT SMART GROWTH

according to Joshua Simon of the East Bay Asian Development Corporation in Oakland, California. It is subject to cutthroat competition from big-box stores and regional malls, as well as local market pressures. The need to create a shopping atmosphere that is clean and safe becomes paramount in urban neighborhoods.

Local merchants are important allies in development decisions because they know their customer base well. Small steps, such as creating business improvement districts among even a modest collection of shops, can help demonstrate sufficient support for more retail. In Providence, Rhode Island, merchants formed a small business improvement district to address loitering and trash problems. The resulting streetscape improvements created an inviting shopping climate.

COMMUNITY DEVELOPMENT CORPORATIONS. Community development corporations (CDCs) can play the roles of planner, investor, fundraiser, educator, or arbitrator to advance the development process. The 37-member South Florida Community Development Coalition, for instance, has jump-started urban redevelopment by fostering partnerships among private investors and banks, local government, and members of the philanthropic and faith communities, and by spurring investment until "normal" market forces take over. Its officials argue that CDCs are well positioned to execute community-based economic development because they are close to residents' concerns about what constitutes meaningful investment and are undeterred by traditional barriers to private investment in depleted neighborhoods.

National foundations, banks, and community leaders are taking note of how successful CDCs evolve from the role of developer/investor to major "agents of change" in the rebirth of communities. A recent Enterprise Foundation study of CDCs in Portland, Oregon, revealed a pattern of activities that signaled a thorough approach to planning, implementation, evaluation, and change. In Portland's case, CDCs were instrumental in reversing a trend of increasingly expensive housing stock in a city that has gone from being one of the most to one of the least affordable places to live in the U.S. Through a campaign to work with neighborhoods, developers, and the city, CDCs advocated for and won changes to the city code to ensure a continuing supply of affordable housing. To date, the CDCs have helped build 2,000 more units of affordable housing. As Enterprise's Mike Andrews concluded, "The community

development industry in Portland is recognized as the most effective agent of change in neighborhoods, and CDCs have a strong voice in the development of policy that guides public investment."

EDUCATORS, SCHOOLS, AND UNIVERSITIES. Higher education institutions have long been regarded as important civic leaders. They are increasingly seen as important economic engines in traditional urban neighborhoods, employing large numbers of people and fueling many service and supply businesses. From an infill development perspective, they also are becoming involved in housing development, as more and more moderate- to high-income employees seek close-in housing. A 1999 survey by The Brookings Institution highlights the efforts of leaders at Yale University, MIT, Marquette University, the University of Pennsylvania, and other "eds and meds" (educational and medical institutions) that have realized the link between institutional and city fiscal health.

Trinity College President Ewan Dobell encourages institutions of higher learning to flex their financial muscle where urban redevelopment is concerned. Claiming that university endowments and other financial resources run into the billions of dollars, Dobell believes it borders on the unethical for schools to sit on the sidelines while local governments struggle to accomplish economic development objectives piece-meal through small grants and loans. This belief spurred Yale to commit \$41 million for various urban initiatives in New Haven, and the University of Pennsylvania to launch mixed-used development near its downtown Philadelphia campus. The Johns Hopkins University in Baltimore is helping to redevelop a brownfield into affordable and environmentally sound housing near the school. Because such educational institutions are likely to stay rooted in the city for the long-term, local officials do well to court them in development partnerships.

The location, design, and function of elementary, middle, and high schools make an indelible mark on the community form. For instance, state and federal design requirements encourage the creation of schools at the urban fringe, built amidst a sea of parking lots, which sit empty after school hours. By working towards the promotion of schools made safer through both physical and organizational improvement, crucial community support can be gained. Some local officials are trying to level the playing field between the boom in exurban school construction and the infrastructure needs of dilapidated urban schools.

The location, design, and function of elementary, middle, and high schools make an indelible mark on the community form.

In mid-1999, Maryland Governor Parris Glendening leapfrogged the legislature and directed additional funds for repairs and maintenance at urban schools, underscoring the reality that school quality—both physical and in test scores—is an important consideration for homebuyers and business location decisions.

Other officials are converting schools to joint-use facilities that house language instruction, health clinics, or recreational activities for local youth. This multi-function approach reinforces the idea of the school as the heart of the community, it saves on infrastructure costs, and extends the surrounding neighborhood's lifecycle beyond the school schedule, especially during summer months.

Additional opportunity exists to involve young people in civic issues, including development. The American Planning Association's recent publication outlining youth design charrettes builds on efforts to gain input from young people about their ideas for their physical environment. In Baltimore, a local foundation is sponsoring a series of workshops and art exhibits to encourage young people to help the city overhaul its comprehensive plan to deal with transportation, housing, economic development, open space, and education issues.

THE PHILANTHROPIC COMMUNITY. Facing a vast array of housing, jobs, health care, education, and environmental needs, funders are banding together to increase the impact of their grantmaking activities. According to the *Chronicle of Philanthropy*, community foundations are the fastest growing sector in organized philanthropy, increasing by 60 percent since 1988.

The Collaborative Process in the Great Lakes Region has highlighted land use planning, watershed management, and brownfield redevelopment as common themes for the region's foundations. Other issues also have emerged, including reaching out to nontraditional allies, including business and religious leaders.

At the national level, the new Funders' Network for Smart Growth and Livable Communities (a collaboration of 3 national, regional, family, and community foundations) is seeking to augment its members' giving power through better coordination of environmental and community development programs. The Funders' Network is commissioning research on smart growth and its relationship to the environment, fiscal health, children and families, the elderly, transportation, and open space.

Facing a vast array of housing, jobs, health care, education, and environmental needs, funders are banding together to increase the impact of their grantmaking activities.

It also will act as a clearinghouse to share resources among communities seeking advice on development issues, and track policy and grassroots campaigns.

THE FAITH COMMUNITY. Faith-based organizations are a major organizing force driving livability initiatives. Religious leaders support infill because they have seen the exodus from traditional neighborhoods deplete their memberships and parishes, and because they increasingly provide social services to the predominantly low-income members left behind. Though suburbanites may return to the downtown church or synagogue of their youth for services, they have few other ties to these deteriorating neighborhoods.

Charrettes can encourage people to think "outside the box" by literally putting a pen in every person's hand and breaking the group into working teams.

In one example, the Cleveland Catholic Archdiocese, led by Bishop Anthony M. Pilla, has become a vocal advocate of infill. The bishop has engaged a growing interfaith following in the Cleveland metro area intent on building partnerships among inner-city, suburban, and rural parishes. Launched as The Church in the City initiative in 1993, Bishop Pilla's message challenges citizens to experience a "change of heart" to nurture a spiritual and economic-justice movement that will help cities and suburbs bridge the socioeconomic and cultural gaps that divide them. Pilla's approach is a blend of leadership training, education, redevelopment, and advocacy. As Bishop Pilla states, "It means acting as conveners, catalysts, and anchors for community-based economic development initiatives. We cannot do such work alone. We are committed to collaboration."

TOOLS FOR ENCOURAGING INVOLVEMENT

While infill projects have the potential to help a community define a vision of what could be, they also are likely to provoke people's fears—the NIMBY issues of traffic, crime, and other negatives accompanying poorly conceptualized projects. Several tools are available to help local officials and project developers engage the citizenry in frank discussions about their needs and worries.

Charrettes. A charrette is a design workshop that invites public participation in the planning process. Charrettes have become one of the most successful ways to solicit community input on development decisions. Charrettes engage people to rethink

and re-envision the next generation of development. The term describes how 19th century French architecture students made last-minute revisions to their sketches, hence "en charrette," literally aboard the carts used to haul sketches away for review. Town planners and design firms have adapted the idea to evoke the interactive nature of neighborhood planning and development.

Charettes can encourage people to think "outside the box." By literally putting a pen in every person's hand and breaking the group into working teams, effective charrette facilitators encourage each person to think like a designer. This approach offers an important transition for many neighborhood activists; instead of saying what they are against, the charrette process enables them to write down or draw important elements of what they support.

This process can produce a holistic vision of a neighborhood's potential. The high degree of interaction encourages people concerned about ecosystem restoration to consider ideas on how to build neighborhoods where kids can ride bikes in the streets. A well-run charrette can help make connections between place, environment, transportation, and economy for people focused on only one or two of these issues.

Charettes usually end with a formal presentation of development options, supported by visual depictions such as renderings and computerized slide shows that can convey what each option would look like.

Geographic Information Systems (GIS). For at least 20 years, government agencies and academic institutions have been using GIS mapping systems to chart where we live, how much we drive, how our water demands change, and where we send our kids to school. What is new is how quickly GIS is becoming an off-the-shelf technology that can show how development proposals might affect environmental, economic, demographic, fiscal, or public health issues. Affordable software packages are now compatible with home computers, which means that citizen groups, planners, and government officials can use GIS as a public involvement tool.

GIS mapping can be useful in broadening understanding of the pros and cons of infill development. GIS can convey information on a watershed or airshed scale. For example, as agricultural or forest land is developed, GIS

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maps can show the effects of this conversion on regional water and air quality, using specific data about water flows, precipitation rates, and soil types and qualities.

At the site or neighborhood level, GIS mapping can be tailored to provide immediate information about proposed changes in zoning ordinances or site plans. School planning and construction, for example, is a hot-button issue and one of the most visible ripple effects of sprawl. Because school quality is such an emotional issue, the public often is suspicious of how data can be manipulated or controlled by special interests. Using GIS, the Blue Valley School District in Overland Park, Kansas, enabled planners and parents to overcome these concerns and reach consensus on options for new school construction. The Planning and Facilities Committee was able to produce a set of visual options for the parents to evaluate, based on data about subdivisions, population projections, existing school capacity estimates, building permits, zoning maps, and overall development plans.

Local governments, town planners, developers, and citizen groups are using GIS increasingly to motivate development proponents to consider and discuss the interrelated aspects of projects. GIS can respond to concerns identified in the community involvement process and provide quick answers to development questions.

Groundwork/USA. At the cutting edge of community involvement are long-term strategies that build capacity within a community to anticipate and plan for change. The Groundwork/USA program, modeled after a successful program in the United Kingdom, is one such approach. Proponents have dubbed the Groundwork/USA concept "environmental CDCs" to underscore the interplay among community economic development and brownfield cleanup, urban blight, open-space preservation, and natural resource restoration efforts. The effort is based on local priority setting among a wide range of possible options.

A joint project led by the National Park Service and sponsored by foundations and the U.S. Environmental Protection Agency, Groundwork/USA is now underway in Bridgeport, Connecticut; Lawrence, Massachusetts; Providence, Rhode Island; Yonkers, New York; Somerville, Massachusetts; and Concord, New Hampshire. Program directors envision Groundwork as a national network of communities sharing expertise, lessons learned, best practices, and access to national funding for local projects.

The program advocates self-sufficiency and uses a "turnkey" approach. Each Groundwork/USA office is located within an existing not-for-profit organization able to act as the project facilitator or catalyst. The effort saves money by concentrating under one roof the expertise in fundraising, business management, and other nuts and bolts of moving projects forward. A fee-for-service structure covers staff time and overhead.

Results to date have been impressive. Providence's Groundwork/USA office, for example, has facilitated the building of an outdoor art park for inner-city school kids that will provide year-round activities and a much-needed physical space that repels loitering, crime, and vandalism. The Lawrence initiative is reaping "value added" by integrating a combination of federal brownfield, transportation, and economic development programs.

Infill development projects can have either a galvanizing effect on a community or drive wedges of division and disharmony deeper. Success in obtaining community support for a project depends on a complex mix of factors, including community pressures, social equity, the process of community involvement, and the merits of the project itself.

A citizen involvement strategy must phase out the "rubber stamp" approach to public hearings that failed so miserably in the past when communities faced contentious development decisions. Developers and local officials now have interactive tools at their disposal that can ignite genuine interest from community advocates. Communities that demand more inclusive and interactive approaches to civic involvement in growth issues are those that will generate a more positive investment climate.

2. IDENTIFY IMPORTANT INFILL SITES AND ZONE THEM TO ENCOURAGE SUCCESSFUL INFILL.

Portland's Tri-Met transit agency wanted transit-oriented infill development within a half-mile of new stations on a light-rail extension. Success followed four years of hard work on an intergovernmental effort to update comprehensive plans and development regulations and to effect infrastructure improvements. Three counties adopted interim regulations to minimize parking, increase density, prohibit map-

appropriate uses, and require pedestrian-oriented design around stations. By 1998, the station areas had attracted \$505 million worth of mixed-use development, including 7,000 residences.

In Seattle, the regional transit authority plans 26 new light-rail stations, 15 commuter rail stations, and six major bus transit centers. Communities both urban and suburban are preparing to capitalize on this expansion. Kent, Sumner, and Auburn are revising their land-use regulations and improving pedestrian connections downtown. Mill Creek, Federal Way, and Silverdale are creating TODs patterned on traditional downtowns. King County is studying ways of attracting the development of housing above parking structures serving new transit stations.

3. MAKE INFILL SITES APPEALING BY IMPROVING INFRASTRUCTURE AND AMENITIES.

Concentrate public investment where you would like to see infill occur. A well-designed new library, school, or transit center becomes a catalyst for downtown and neighborhood revitalization. Public investment in parks and infrastructure also attracts successful infill. Improvements like these are often necessary to correct the shortcomings of typical post-World War II development: oversized streets, superblocks, no sidewalks, and no pedestrian connections. Infrastructure retrofits should keep traffic moving at safe speeds while making walking, cycling, and transit more pleasant and convenient. Steps can include:

- Build a traditional grid of streets with sidewalks, planting strips, and on-street parking; use on-street spaces to reduce the need for parking lots.
- Build or repair sidewalks and bike lanes.
- Plant street trees.
- Open a police substation in an area where fear of crime is a problem.

In Portland, three counties adopted interim regulations to minimize parking, increase density, prohibit inappropriate uses, and require pedestrian-oriented design around stations.

Source: South Florida Community Development Coalition

- low appraised values;
- high costs of development;
- high costs of land;
- expensive brownfield cleanup;
- expensive lien clearance, high relocation expenses;
- patchwork patterns of real-estate ownership; and
- decrepit infrastructure.

TRADITIONAL BARRIERS TO REDEVELOPMENT IN LOW-INCOME AND URBAN NEIGHBORHOODS

Portland's transit agency wanted transit-oriented infill development within a half-mile of new stations on a light-rail extension. Success followed four years of hard work on an intergovernmental effort to update comprehensive plans and development regulations and to effect infrastructure improvements.

- Renovate parks.
- Invest in public transportation.
- Install high-quality, human-scale streetlighting (not the yellow "crime lights" that make neighborhoods look less safe and inviting).
- Build a public parking garage to eliminate strict parking requirements.

Ten years ago, downtown Phoenix was dead after business hours—an area left behind during the region's phenomenal growth. Especially in summer heat, streets and public plazas were inhospitable at best.

In 1995, Phoenix funded \$8.8 million worth of street improvements for 18 blocks of downtown, including new street trees, lighting fixtures, banners, and trash cans. (Officials were surprised to find that only 14 existed in the entire downtown.) Major streets were redesigned using Hohokam Indian patterns and plants native to the Sonoran desert. Plazas now offer shade, water, and gardens.

The street improvements consolidated the more than \$700 million Phoenix had invested in downtown civic, convention, entertainment, and arts facilities within a cohesive pedestrian district. Once an eight-hour office district, downtown Phoenix is becoming the region's center for culture, entertainment, and sports.

Portsmouth, Virginia, is rebuilding traditional streets as part of the Westbury redevelopment. New streets connecting to the city's historic street grid will allow residents to walk to shops, schools, churches, and services.

To encourage the revitalization of its 20-block Old Pasadena historic district,

Pasadena, California, spent \$28 million on two parking ga-
rages and other public improvements. The returns have been
more than generous. From 1983 to 1998, the private sector
invested some \$500 million in the rehabilitation of 100 his-
toric buildings. Retail sales multiplied by a factor of 18. Prop-
erty values increased at least eight-fold. Some 5,000 new jobs
were created.

Public improvements may be funded through general
taxes; by creating a self-taxing business improvement district
(BID); through tax-increment financing (TIF); or by seeking
outside funds for street improvements, such as those available
under the federal Transportation Efficiency Act (TBA-21).
Infill projects based on excellent design are gaining ac-
ceptance within the mainstream real-estate community. A re-
spected publication in the real-estate industry, *Emerging Trends
in Real Estate 1999* (Lend Lease Real Estate Investments and
PricewaterhouseCoopers), argues that traditional cities and sub-
urban infill represent a better investment than conventional
sprawl:

“Increasingly, better suburban areas look like smaller ver-
sions of traditional cities, featuring attractive neighborhoods,
easily accessible retail and office districts, and mass transpor-
tation alternatives to the car. Refurbishing infill retail districts
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4. MAKE INFILL APPEALING TO LENDERS, INVESTORS, AND DEVELOPERS.

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- “Successful metropolitan areas will be those that rede-
velop and strengthen existing neighborhoods and districts, in-
tegrating residential with commercial and recreational uses,
rather than expanding and diffusing resources outward.”
To encourage this sort of investment, communities can
coordinate direct subsidies, tax breaks, loan programs, and

- Concentrate shops, services, entertainment,
public buildings, schools, libraries, and day
care at a point central to neighborhoods, of-
fice districts, transit stops, or parking.
Plan for mixed-use buildings with ground-
floor uses facing the street.
Make neighborhood streets no more than
30 feet wide with on-street parking and de-
tached sidewalks.
Redesign arterial roads as boulevards with
street trees, ample sidewalks, and land-
scaped medians.
Make sidewalks wider (five feet minimum)
and “detached” from the street by a tree
lawn.
Plant street trees along walking corridors.
Improve crosswalks with special paving,
longer signals, and “bulb-outs” that de-
crease the crossing distance and reduce
traffic speed.
Build or retrofit streets with curbs and ac-
cess ramps.
Improve street lighting using human-scaled
fixtures that provide more natural lighting.
Design or retrofit cul-de-sacs so pedestri-
ans and bicycles can proceed through the
dead end.
Create walking paths and greenways along
rivers, creeks, canals, and waterfronts.

MAKING COMMUNITIES WALKABLE

grants. *Building Livable Communities: A Policymaker's Guide to Infill Development* (Local Government Commission, 1995), offers the following tips:

- Use city and county funds, bond revenues, and tax-increment financing to finance infrastructure.

- Educate local leaders about the project and its goals.
- Investigate grants through federal programs such as Community Development Block Grants and the Department of Housing and Urban Development's Section 108 and HOPE VI programs.

- Help developers obtain financing through tax-exempt bonds, loan guarantees, or a letter of credit.
- Offer developers city-owned land or swap key parcels.
- Waive development fees and taxes.

Other strategies for local governments:

- Involve local nonprofit housing corporations.
- Create a nonprofit organization to guide, champion, and seek funding for a master-planning effort.
- Subsidize a portion of the costs of marketing and planning studies.

5. MARKET INFILL SITES AGGRESSIVELY.

In the 1990s, Tri-Met, the regional transit agency for metropolitan Portland, Oregon, sought to encourage transit-oriented development around new stations on the Westside Max light-rail line. Rather than expecting developers to come knocking, Tri-Met did its homework and marketed the type of development it wanted to see.

First the agency made an inventory of underused and vacant lots within walking distance of proposed stations. Then the agency produced 26 station-area development profile brochures, which were sent to property owners, developers, bankers, real-estate agents, businesses, and interested citizens. The profiles included the demographic information that developers need to make investment decisions.

As projects progressed, Tri-Met (and its partners, Metro, Washington County, and the cities of Beaverton, Hillsboro, and Portland) kept interested parties informed through newsletters that included pull-out maps of development sites. In six years, while light rail was under construction, Westside station areas attracted \$505 million worth of development, including 7,000 housing units. Henry Markus, Tri-Met's sta-

To encourage investment, communities can coordinate direct subsidies, tax breaks, loan programs, and grants. Resource guides often show the way.

tion area development coordinator at the time, says the marketing program sent the following messages to developers:

- The city (or county or region) wants transit-oriented development (TOD).
- There is a market.
- Building TOD will save time and money, increase profits, and reduce risk.
- The local government's TOD strategy provides flexibility and certainty.
- The local government is ready to work with you.

Across the country in the Tidewater region of Virginia, the Westbury redevelopment will create the first new middle-class housing built in Portsmouth in many years. The development team and the city based marketing projections for selling houses on improvements to be built in Portsmouth by 2005. They launched an aggressive marketing campaign, similar to many new housing developments, that includes a sales center, color brochures, and advertising.

"The marketing campaign makes it clear that this is a very different and much improved place," says Robert Freedman of Urban Design Associates (UDA). "A place that's safe and desirable in which to invest and raise a family."

6. CREATE DESIGN GUIDELINES FOR INFILL.

Design guidelines should ensure that an entire development maintains a standard of quality as it is built in phases. Guidelines achieve this by regulating architectural styles, forms, and materials. Properly applied, they ensure that new public spaces are lively, accessible, and safe.

"Many developers do not understand why it is desirable to integrate new buildings into historic streetscapes," says UDA's Robert Freedman. "In Portsmouth, we developed a set of general design guidelines to hand out to all prospective developers. They are not prescriptive, but rather explain the vision the city is aiming to achieve. The Planning Commission uses it when reviewing plans."

UDA's 23-page Portsmouth Design Guideline is an appealing and user-

Inform and educate the community with creative materials. For example: Tri-Met in Portland, Oregon kept interested parties informed through newsletters that included pull-out maps of development sites. In six years, Westside station areas attracted development, which included 7,000 housing units.

"Creating a magical place on vacant land is difficult"—Henry Markus

friendly document. In plain terms, it examines the five essential qualities of Portsmouth's architecture and streetscapes. It invites potential developers to share the vision to create new places with these qualities. The guidelines avoid legalese or jargon. They explain design principles using easily grasped drawings. With its helpful tone and graphics, the Portsmouth guidelines promote the idea of successful infill.

QUESTIONS ABOUT DEVELOPMENT PRIORITIES

- Where might a regional greenbelt be created?
- Where should new development be concentrated to promote livable communities and mixed land uses?
- How could the building industry's legitimate need for buildable land be satisfied in the most sustainable manner possible?
- Where should transportation improvements be focused to link town centers and reduce dependence on the automobile?
- How might sensitive natural areas and open spaces be preserved for future generations and to protect the region's biological diversity?

Source: *EcoCity Cleveland Bioregional Plan*, 1999.

Meanwhile, the city developed an alternative bus system called the Hop, Skip, and Jump to provide frequent service along Boulder's busiest commercial and resi-

sions. At the same time, the city streamlined development regulations. Working with local architects and urban designers, the city coordinated the cooperation and support of five planning and architectural review boards. The city also convened a round-

table of planners and developers to hammer out and review proposed zoning revisions. At the same time, the city streamlined development regulations. Working with local architects and urban designers, the city coordinated the cooperation and support of five planning and architectural review boards. The city also convened a round-

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REGULATIONS

STREAMLINE

Boulder, Colorado

CASE STUDY

INFILL STRATEGIES

SUCCESSFUL INFILL DEVELOPMENT

In Boulder, one strategy was to communicate the city's design and planning goals for successful infill more clearly to the development community.

dental streets. This dramatically increased ridership, demonstrating that alternative transit can alleviate traffic and parking concerns that sparked community opposition to new development.

Before rezoning took place, mixed-use projects averaged 3.5 years to receive the approval of Boulder's government and boards. Recent mixed-use projects in Boulder have been approved in as little as five weeks. Moreover, these mixed-use projects have been extremely popular, bringing new retail into downtown and proving a strong demand for downtown housing. Now the city is making an inventory of potential mixed-use sites as part of a process to update its comprehensive plan. Boulder also is convening teams of developers, zoning experts, architects, and economic consultants to propose practical infill strategies to redevelop strip malls and other sites.

CONSIDERING BROWNFIELD REDEVELOPMENT



Infill projects can face construction delays and additional costs if the property is contaminated from past industrial or commercial activities. Shoddy waste handling practices at dry cleaning, automotive repair, chemical storage, and a multitude of other businesses have left a legacy of pollution and disrepair in almost every American city. In addition to the groundwater and soil contamination left behind, remaining structures at these so-called brownfields often have to be cleaned of materials like lead paint, asbestos, and PCB-containing electrical transformers. As a result, the majority of the nation's estimated 450,000 brownfields sit idle.

While many developers have sought "greenfield" locations for new housing, commercial, and industrial projects, a growing number of architects, businesses, and lenders recently have recognized the benefits of developing brownfields, which often enjoy close proximity to major transportation networks, watertrons, and historic neighborhoods. Noting the ability of broad-based land recycling efforts to stem sprawl, government officials at all levels are trying to limit the risks, costs, and liabilities associated with brownfield redevelopment.

Reforms and new economic tools in the middle to late 1990s have helped local governments, lenders, and developers reduce many risks. Yet three primary challenges remain to brownfield redevelopment:

- manage liabilities;
- conduct the cleanup; and
- implement the redevelopment project.

MANAGE LIABILITY

Despite numerous congressional attempts to reform Superfund, liability under the 1980 law remains "strict, joint, and several," which means that regulators can cast a wide net to capture funds for cleanups. Owners and operators of these sites, past and present, can be forced to

pay for cleanup. Even prospective brownfield developers

fear that Superfund's liability provisions could make them responsible for cleanup costs, regardless of whether they

caused the contamination. By the late 1980s and early 1990s, real estate transactions involving potentially con-

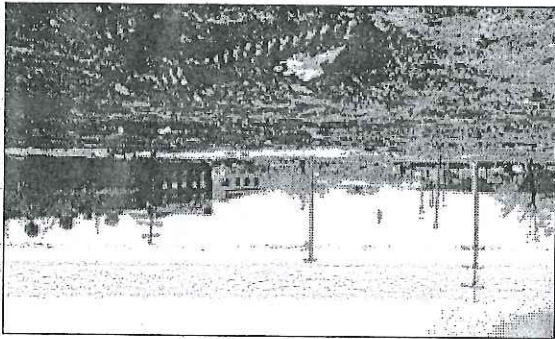
taminated sites were practically nonexistent, and it became apparent that Superfund played a role in complicating land

recycling goals.

A 1991 U.S. Supreme Court case further chilled the investment climate by holding banks liable for cleanup on

foreclosed properties in cases where they had played an active management role. The now famous Fleet Factors decision triggered congressional inquiries into Superfund's role in urban reinvestment and prompted the U.S. Environmental Protection Agency (EPA) to launch internal Superfund reforms in order to jump-start brownfield projects.

The Fleet Factors decision triggered congressional inquiries into Superfund's role in urban reinvestment and prompted the U.S. Environmental Protection Agency (EPA) to launch internal Superfund reforms in order to jump-start brownfield projects.



Since then, EPA, the U.S. Department of Housing and Urban Development (HUD), Economic Development Administration, and other federal agencies have channeled resources to simplify and accelerate brownfield redevelopment. Through its brownfield initiatives, EPA especially has worked with states to address barriers, such as liability, so they are no longer insurmountable obstacles to redevelopment. These reforms include "prospective purchaser" agreements to protect innocent developers; a contaminated-aquifer policy to protect owners of property affected by migrating underground contamination; and the removal of 30,000 low-risk sites from EPA's list of hazardous sites. Additional information is available through EPA's website, www.epa.gov.

After the Supreme Court's ruling in Fleet Factors, Congress addressed lender liability protection and responded with the Asset Conservation, Lender Liability, and Deposit Insurance Act of 1996, protecting lenders who are not involved in the management of a contaminated property.

While the legal liability of lenders has been clarified in both law and federal administrative policies, lenders may still have to pay for cleanup on properties that are foreclosed. In addition, some lenders do not believe that liability has been made clear and manageable, and they feel little incentive to understand their limits in the contaminated property market. Finally, lenders must rely on a borrower's stewardship of a contaminated property. If the cleanup is not conducted properly, or if the real-estate asset is mismanaged over time, the risk of default, degradation of collateral value, and lender liability increase.

CONDUCT THE CLEANUP

Another concern is funding the assessment and cleanup process at many sites, especially those sites lacking the amenities that lend instant "marketability"—contaminated or not. Ultimately, urban infill projects can be truly competitive with suburban development only if prospective residents or tenants perceive the surrounding environment to be clean, appealing, and a healthy place to live and work. While many forces drive development beyond the urban core, developers often view contamination as the "nail in the coffin" motivating them to seek alternative greenfield sites for their projects. On the other hand, the appeal that refurbished brownfields lend to a neighborhood speaks volumes about business and lender confidence, as well as community pride. Developers in all but three states can achieve accelerated brownfield cleanup and liability closure by participating in a vol-

COMMUNITY INVOLVEMENT

As with any infill project, developers who take special care to involve the community in decisions concerning cleanup achieve their goals faster. While public comment is a standard element of the development process when site cleanup is involved, the outreach dynamic of brownfield redevelopment is becoming multi-dimensional to address community visioning, job creation, and other economic benefits. Public involvement requirements of state cleanup programs range from none to very extensive. Some states require public input into the decision of whether to add or delete a site from a priority list, while other states provide for public comment on remedy proposals. Massachusetts and Michigan offer grants, similar to what is available under Superfund, in order to enhance public participation in voluntary cleanup decisions.

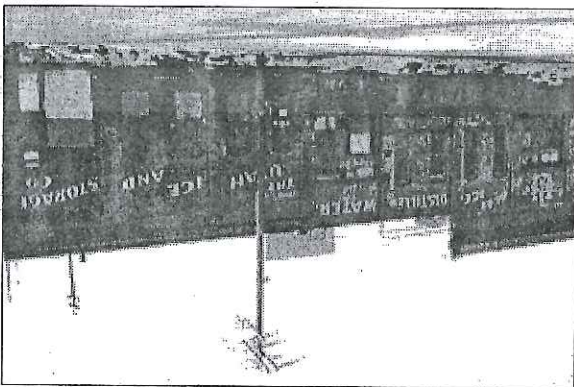
untary cleanup program (VCP). Most were adopted in the mid- to late-1990s to address many of the inherent uncertainties in a brownfield project. Many VCPs use a process known as risk-based decision making to balance cost, exposure, community needs, technical feasibility, and environmental outcomes. VCPs spell out eligible program participants and sites, liability protection provided, cleanup standards and conditions, and community involvement requirements. Increasingly, they offer financial incentives to link brownfield cleanup with broader economic development plans. Within this general model, states and communities are experimenting rigorously, sometimes in response to individual site conditions and sometimes as a way to better integrate communitywide land use and economic development trends.

Understanding the structure of a state's cleanup program and the manner in which local land use and economic development authorities interact with state oversight functions are key to successful redevelopment. State oversight of cleanup projects can include setting cleanup standards for a site, approving a cleanup proposal, ensuring the work is completed, issuing a statement of closure or liability release, and charging a fee to the redeveloper for these activities. Voluntary cleanup programs also differ in how they determine eligible participants and sites. For example, many states will not use brownfield funding to clean up former gas stations, since those sites are handled typically under state underground storage tank regulations and financing. This distinction nevertheless makes it difficult for developers who care more about a site's redevelopment potential, and less about which cleanup or funding eligibility

Some cities are developing "one stop shopping" programs to encourage private-sector interest in brownfield and infill sites. In Emeryville, California, for example, a One Stop Shop initiative, housed downtown, provides comprehensive information on contaminated sites throughout the city. A geographic information system (GIS) offers a list of sites, ownership history, land use, zoning ordinances, known environmental contamination, and financing information.

Source: California Center for Land Recycling

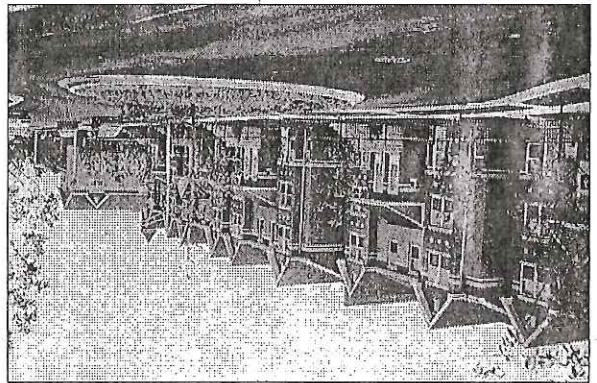
LOCATING BROWNFIELD SITES



standards the site must meet. Still, more and more states offer financial incentives to clean brownfields, including critical early-phase assessment funding. More than a dozen states have reached special "memoranda of agreement" with regional EPA officials that all but eliminate the likelihood of federal enforcement (or "over-filing") action in cleanup decisions.

Cleanup programs are evolving rapidly. To take some of the guesswork out of cleanups, the American Society for Testing and Materials (ASTM) has developed Risk-Based Corrective Action standards (RBCA, or "Rebecca") that many states have adopted to set appropriate and consistent cleanup levels for individual site conditions.

Two factors—site assessments and community opinion—continue to hamper cleanup at most sites. Although EPA has provided pilot grants to more than 350 communities, most jurisdictions find it difficult to identify ready lenders for funding the crucial site assessment stage. Such funding remains a critical first step if a developer stands any chance of securing additional loans to redevelop the property. For developers fortunate enough to have secured these initial dollars, the task of developing trust and communication with the affected community is another significant hurdle to overcome. For infill projects especially, residents often suspect that as blight is cleared from their neighborhoods, affordable housing will disappear. The previous chapter discusses how developers and local officials can involve local residents in plans to improve their neighborhoods.



Examples of successful infill development outside brownfield areas could be used as models for brownfield development. In Chicago, the Homer Neighborhood Plan eliminates dysfunctional 13-story towers of public housing and replaces them with townhouses, duplexes, and small apartment buildings. Intimate, tree-lined streets supplant the inhumane, unsafe "superblocks."

REDEVELOPMENT OF THE PROPERTY. Successful site reuse usually depends upon local leaders becoming "brownfield brokers" and helping interested parties find sites and facilitate deals. Local governments sometimes simply have to clean the property themselves to attract interest from developers. Local leaders also can play an important role by improving developer relations with the community and helping parties navigate regulatory requirements.

Local governments must develop the expertise to execute these roles if they hope to create a ripe reinvestment climate for brownfields. Ideally, officials will create a brownfield office of sorts, as a way to pool regulatory, real estate, business recruitment, and financial expertise. Communities taking these actions often accelerate interest in delinquent properties and help developers avoid the expensive delays associated with public oversight. Brownfield redevelopment is far from formulaic, so public-sector entrepreneurs become vital to successful projects.

FINANCING

Paying for brownfield reuse is a major issue, especially when cleanup costs exceed the property value. Most commercial lenders will provide up to 75 percent of a redevelopment project's cost (the figure can vary with development market trends), leaving the developer to provide 25 percent in equity. Cleaning up a property will not necessarily generate more value than already assumed by the proposed development, so increased costs often require a loan amount that would exceed bank policies on loan-to-value (LTV) ratios or that exceed the value of the development itself. Most banks adhere strictly to LTV policies to ensure that borrowers do not take on more debt than they can manage or a project can support. While more and more gap financing options are becoming available,

DEVELOPER INVOLVEMENT
 Developers can learn how to address the brown-field component of their infill project by posing some "threshold" questions to local and state environmental and economic development officials. Items to discuss include:

- Under which state regulatory program will site cleanup happen? For example, the site could fall under the state superfund program, the Voluntary Cleanup Program (VCP), or the under-ground storage tank program.
- Is the party eligible to participate in the voluntary cleanup program? For example, are they a prospective purchaser, a current owner responsible for the contamination, a public agency, or a third-party intermediary such as a land trust? Each state has different eligibility criteria.
- Exactly what does the state's voluntary cleanup program do? Understanding this is key. For some large corporations, the release from liability is more important than state funding for site assessments. For smaller developers, however, early-phase assessment money is crucial.

basic cleanup costs will challenge brownfield redevelopment for the foreseeable future.

Another financing obstacle is that lenders typically col-

lateralize a loan with land and/or equipment on the site. But the value of contaminated property, of course, is compromised. Even the long-term value of cleaned property, for the purposes of collateral, is at risk if the property requires additional cleanup, or if the project itself falls short of performance expectations. Also of concern is the borrower's ability to repay the debt if the project encounters schedule delays, a common occurrence where hazardous waste remediation is involved. Normally, developers begin to accrue interest costs once they start to draw down the construction loan for cleanup and construction activities. Such interest costs generally are anticipated based on an assumed schedule, so timing delays become some of the most costly problems encountered during the construction phase of development. Cleanup can be hampered by regulatory requirements, as well as by technical and physical demands of the property (such as discovery of additional contamination) that can emerge at any point. Because of these factors, environmental insurance is emerging as an important new tool to manage brownfield risk.

Though contamination historically has driven many developers from otherwise marketable property, private lenders and public agencies are committing resources and regulatory flexibility to promote the development of brownfields. Lenders increasingly consider the merits of the development proposal as much as they do the cleanup costs. Knowing the market and approaching lenders and regulators with projects that accurately reflect that market can downplay the importance of an infill project's cleanup costs and liability concerns.

LENDER RISK FROM TRANSACTIONS INVOLVING CONTAMINATED PROPERTY

- reduced value of collateral;
- excessive loan-to-value ratios when cost of cleanup is included in loan;
- potential (or perceived) lender liability; and
- possibility that borrower will not maintain facility in an environmentally sound manner.

TO

EXPLORING
FINANCING
OPTIONS

Infill developers and New Urbanist designers strive to build neighborhoods featuring a mix of uses and incomes, a transit or pedestrian orientation, access to retail and employment opportunities, and ample green space with recreational and environmental amenities. Unfortunately, this type of development seldom fits neatly into the standardized capital markets that ultimately determine what gets built. Redevelopment in the urban core can be a complex effort, and private financing sources generally are more expensive than in less developed suburban areas. While high-end office development often can generate enough revenue to be an attractive investment in urban core areas, less intense uses and smaller projects, such as infill housing and small-scale retail, often do not. Such mixed-use projects also can face additional financing hurdles because of their complexity and attendant time risks.

Financing infill projects can be challenging, but such projects have strengths that the financing community often undervalues. Successful financing often requires finding sympathetic lenders offering the most appropriate options within the capital market for real-estate development. To overcome financial barriers to infill, it is important to:

- understand how lenders evaluate loan applications;
- understand how mixed-use projects differ from traditional real-estate investments; and
- fill the gaps between standard and mixed-use lending.

UNDERSTANDING LOAN APPLICATIONS

Lenders pursue three primary objectives to ensure profitable loan returns:

- **Risk minimization:** Some key elements of risk include the owners' or tenants' creditworthiness (including a solid business plan), the developer's experience, the proposed mix of uses, environmental issues, and the project's location.
- **Exit strategy:** Lenders need to know how the loan will be repaid, whether through project revenues, the borrower's personal resources, or a subsequent loan.
- **Market conditions:** Lenders want to see strong demand for a proposed development, as well as healthy economic conditions.

The industry also uses several quantitative criteria when making underwriting choices:

1. *The loan-to-value ratio (LTV)* is a key limiting factor for the size of loan that might be available for a project. In general, a solid commercial project can expect to secure a loan for 75 percent of the project costs but will have to find investors to cover the other 25 percent. In contrast, a mixed-use project may be able to get a loan for only 50 percent of the cost. If the LTV decreases, its collateral, the equity ratio, increases correspondingly. Investors generally require a higher rate of return than banks that provide mortgages secured by the land; thus, as equity requirements increase, so does the project's overall cost.

2. *The loan-to-cost ratio (LTC)* similarly limits the bank's exposure. If environmental or other unforeseen site problems increase project costs or lower land values, a financing deal can slip out of reach for many infill developers.

3. *The debt coverage ratio (DCR)* assures the lender that there will be enough revenue from the project to service its loan. The riskier the project, the higher the DCR must be. On the other hand, if a project includes a solid anchor tenant, the DCR may drop. For infill projects that may be smaller or lack a major anchor tenant, requirements for a high DCR might limit available debt or require an unrealistically high revenue stream.

4. *The collateral value* offered to secure a loan is important. In redevelopment settings, concerns about environmental conditions or costs associated with retrofitting the site with appropriate infrastructure can reduce or eliminate the value of the land as collateral.

The strength of the net operating income—the cash flow after the borrower pays all expenses, including debt service—is of primary importance to permanent lenders when evaluating a loan. A more subjective criterion is the borrower's track record. Banks sometimes do not have the time or expertise to fully evaluate a project's economics, so they rely on assessing the developer's performance. Established developers are more likely to be able to obtain loans for innovative projects.

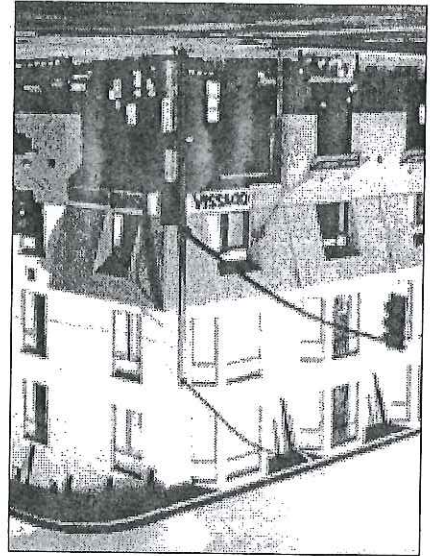
MIXED-USE PROJECTS DIFFER FROM TRADITIONAL REAL ESTATE INVESTMENTS

Numerous factors about infill projects make the financing process difficult. Mixing uses is fundamentally difficult because each product—residential, retail, or commercial—has different financing criteria. In general, construction lenders will allow different uses to "subsidize" each other; for example, the cash flow in the first year from a commercial development may be stronger than that from a residential project. Permanent lenders, however, tend to evaluate each use separately, which can pose challenges to a mixed-use project. Another challenge is that the equity requirement for mixed-use development can be as high as 50 percent.

The functional needs of a mixed-use development also are sometimes unique, and lenders and potential tenants may have a difficult time evaluating the proposal. For example, although mixing the day-time parking needs of offices with the evening needs of cinemas makes sense, this integrated approach may raise concerns about project viability if it appears that either use will suffer from inadequate parking.

Smaller projects are also more difficult to finance, since national lenders often require minimum loans of \$10 million to generate enough fees to cover their transaction costs. Many small developers wanting to stay or expand in existing areas often are not able to land long-term capital or construction loans at any price.

Additional institutional barriers to financing mixed use exist. For example, the Federal Housing Administration (FHA) limits commercial activity to 10 percent of



The key to putting together a financing package is to understand how an infill project's elements conform to lending practices.

the square footage of a residential project it supports. Federal National Mortgage Association (FNMA) allows up to 25 percent of a residential project to be in commercial use.

FILL THE GAP BETWEEN STANDARD AND MIXED-USE LENDING

The key to putting together a functional financing package is to understand how an infill project's elements do not conform to standard residential or commercial lending practices and then move to fill those gaps. Lenders often don't have the workforce or expertise to evaluate unusual facets of a project's economics. Developers who do their homework and provide well-documented, clear explanations will enable a loan officer to more equitably evaluate their projects.

Researchers at the University of Colorado Real Estate Center have conducted in-depth lender interviews on the subject of infill financing. Their research shows lenders have confidence in projects that:

- demonstrate the strength of the location and neighborhood context, especially neighborhood safety;
- show pent-up demand in the market;
- pre-lease over 60 percent of the project;
- include an experienced developer as a principal in the project team;
- incorporate excellent access to jobs, including transit availability;
- show that the city has adopted policies that will support the project, and that the city has a reputation of supporting the type of infill proposed; and
- incorporate tax incentives.

Changes in the capital markets are also important. Real-estate investments include a reasonable amount of risk. Lenders and investors generally work to mitigate that risk by applying consistent criteria to investment choices. While the globalization of capital markets has made more money available for investment, this trend also has promoted a standardized approach to projects. Infill development that in-

corporates mixed-use, pedestrian-oriented, mixed-income project elements does not fit into a standardized financing category. Such projects, therefore, are considered risky, and financing, if available, will be more expensive.

Filling in funding gaps with reliable sources is probably the most challenging aspect of infill development. Every state has a different combination of public-sector financing programs, ranging from low-cost loans to public-equity investments. Several valuable federal resources also are available, such as the Low Income Housing Tax Credits and the Community Development Block Grant program, but even federal financial assistance is usually allocated and managed at the state or local level. Locating a committed public-sector economic development staff person, therefore, is important when working with public finance options.

Building "out of the box" is difficult. The right financing team can be as crucial as an innovative design to turning a good idea into a workable project.

The rapid growth of Real Estate Investment Trusts (REITs), which both acquire and develop properties, has improved access to financing for infill projects. Because they tend to hold properties and develop an unusual depth of expertise regarding their markets, REITs can better manage risks. Several cities, including Dallas, point to the participation of a REIT as a key element of their successful infill development programs.

Several REITs, including Post Properties and Federal Realty, have had excellent experience with downtown infill projects that integrate residential, retail, and commercial uses. On individual projects, REITs have flexibility regarding their investment criteria, as long as the overall portfolio meets projected yields. Infill project proponents will enhance their chances for success if they understand the size and programmatic requirements of REITs active in the region that have a history of owning and building in urban locations.

From inner cities to inner suburbs to Main Streets, citizens and public officials can plan carefully for successful infill development. They can begin by reassessing their resources, building a vision among residents, lining up financial incentives, improving infrastructure, and creating guidelines to ensure excellent design. These are proven strategies that will result in healthier communities everywhere.

Economic factors indicate more cause for optimism. Financial institutions are beginning to understand mixed-use infill projects. As a result, they are more open to making loans to such projects. In addition, on-line discount sales are threatening the profits of the big-box stores that line suburban strips. Real-estate experts predict this will lead to declining demand for sprawling retail development and a dramatic opportunity to revive older shopping districts and neighborhoods.

Many real-estate professionals view the reuse of existing buildings and sites as an important component of development. One reason is that sprawling development cannot continue forever. Even in a nation of our size, there is a limit to how much land we can consume without permanently compromising our air and water quality. Just as significantly, more citizens are dissatisfied with the consequences of sprawl, especially long commutes to work, traffic congestion, faceless new communities, and decaying older ones left behind.

CONCLUSION



APPENDIX: CASE STUDIES

CHICAGO, ILLINOIS

The City of Chicago has promoted site reuse and infill development aggressively over the past decade. City officials—with the strong involvement of Mayor Richard Daley—have tackled the barriers to brownfield reuse, combined creative financing and technical assistance packages to advance new industrial and commercial activity, and worked to capitalize on the city's competitive advantages and its neighborhoods.

Infill was key to Chicago's resurgence in the 1990s. Two approaches characterize the city's efforts:

- industrial reuse via planned industrial districts; and
- infill housing.

INDUSTRIAL REDEVELOPMENT AND ITS ROLE IN INFILL

Chicago, recognizing the role that industry plays in its economic history, has promoted the redevelopment of heavy manufacturing facilities into industrial districts with production facilities that are appropriate to their surroundings and accessible to community residents who work in them. Through its zoning program of planned manufacturing districts, the city is making sure that industrial, commercial, and residential land uses are integrated in compatible ways. Industrial park redevelopment, in fact, has been the focus of much of the city's brownfield efforts, and a key element in the city's site reuse strategies.

To support these efforts, Chicago has established tax increment financing (TIF) districts that overlay most of its planned industrial districts, secured a \$54-million HUD Section 108 loan guarantee (to be repaid through sales or lease of sites in the industrial parks), and invested \$950,000 received as a supplemental environmental project (SEP) through the U.S. Environmental Protection Agency. The city also channels traditional economic development project resources, such as low interest loans and tax incentives, to sites in the planned industrial districts.

INFILL EXAMPLES

THE WEST PULLMAN BUSINESS PARK is a 160-acre site on Chicago's far south side that consists of numerous parcels historically used for industrial activities. The park is largely abandoned or unused, although several existing manufacturers—including Ingersoll, U.S. Gear, and Buddig Meats—serve as anchors to the upgraded park. The city currently is acquiring parcels within the park and assembling them into larger tracts more suitable for contemporary industrial operations. Some of this acquisition is being facilitated by creative use of nuisance ordinances and demolition liens, which allow the city to gain title more quickly. As the city obtains site control, the properties are tested and cleaned—sometimes by the city itself and sometimes in cooperation with private interests holding title. A pilot grant from the U.S. Department of Transportation also is part of the funding package that is being used to assist with cleanup and demolition of unstable structures at West Pullman Park that had been damaged badly by fire.

West Pullman is 1.5 miles from downtown Chicago and has good infrastructure already in place, including direct access to Interstate 57. The city is investing \$20 million in the area to upgrade that infrastructure, including street improvements and buffers for the surrounding residential area. The city also is addressing the community concern about through truck traffic by closing off streets with landscaped cul-de-sacs and constructing new street access on the opposite side of the park away from the community. The West Pullman area is surrounded by a strong, stable residential neighborhood, able to provide an excellent labor pool for companies locating there. Public transportation and METRA commuter rail serve the area.

By the end of 1999, Chicago was nearing completion of several five- to 20-acre sites within the park for industrial redevelopment, and had issued a Request for Proposals seeking new developers and users.

The city also is promoting the reuse of the 17-acre 445 N. Sacramento industrial tract to meet several important infill and environmental goals. This tract is located in a largely minority, low- and moderate-income area that needs jobs and new economic activity. The city's Department of Environment is in receivership of the site, which was the former home of an illegal rock crushing and salvage operation. Chicago shut it down in 1996 through enforcement action, and the owner subsequently declared bankruptcy.

To jumpstart the reuse process, the city began hauling away debris in February 1998. By the time removal is completed, the city will have removed some 300,000 cubic yards of concrete and asphalt and 250,000 cubic yards of construction and demolition debris, including soil, wood, scrap metals, and plaster. The city has submitted a site investigation report to the state and expects to receive a "no further remediation" letter for the site's front four acres.

The tract is divided into two sites. The front four acres will feature the rehabilitation of an existing 34,000-square-foot, 1960s building in a way that incorporates green building technologies. The American Institute of Architects' Committee on the Environment spearheaded the design effort with support from the U.S. Department of Energy and the Chicago Environmental Fund.

The building will incorporate a number of energy-efficiency innovations that will reduce significantly the need for electric and gas consumption, and for a variety of both business and personal transportation uses. This project, with its important emissions reductions, will serve as an excellent model of sustainable development for areas grappling with the twin challenges of promoting industrial and commercial infill and of reducing air quality problems.

The building will feature:

- rooftop photovoltaic cells for power;
- a superinsulated building shell that includes high-performance windows;
- high-quality, dimmable fluorescent lighting;
- high-efficiency HVAC;
- light colored roofing and paving; and
- innovative system recycling efforts, including use of heat from the greenhouse in other portions of the building, and rainwater collection and reuse.

In addition, the site will feature native landscaping, and the building will offer secure bike racks and showers for cyclists, in order to encourage alternative commuting methods. The site is within a block of bus and rapid transit service.

The building rehab and retrofit will cost \$5.3 million, including \$4.1 million for construction, demolition and renovation, and \$658,000 for design. Project funding came from several sources, including the city, which used Section 108 loan and EPA

showcase city grant funds for site assessment and cleanup. Commonwealth Edison supported the actual building rehabilitation with its settlement funds (available through utility deregulation agreements with the state).

When the rehab is completed by January 2001, the Chicago Solar/Spire Corporation, which will produce and install photovoltaic modules and systems, will move into the facility, bringing 100 new jobs in manufacturing and supporting industries with it. Chicago Greencorp will launch its Community Greening and Landscape Training Headquarters operation there, which will include a workshop, training garden, and greenhouse, literally restoring "green" to an inner-city area that had seen decades of contamination and neglect.

The North end of the back 13 acres, once the site has been cleared and cleaned, will be used by the Lakewood Fans company for business expansion. This expansion will retain 650 jobs and create 60 new ones in a low- and moderate-income area with good access to public transportation.

Finally, the **KINZIE INDUSTRIAL CORRIDOR** is another industrial infill focus. Located one mile west of Chicago's Loop and stretching for about six blocks along Lake Street, the corridor has direct access to three Interstate highways and also adjacent to the Chicago El and bus lines. After World War II, the west side area was a thriving industrial hub that brought employment opportunities to area residents and supported considerable commercial activity. Now, the area must deal with the results of decades of decline; the corridor took a severe hit during the 1968 riots and has struggled since as properties were abandoned and residents fled.

Chicago is making a major commitment to bringing good jobs and quality, affordable residential tracts back to the west side—a strategy that includes revitalizing the Kinzie Industrial Corridor area. A key element of that strategy includes acquiring former manufacturing parcels that adjoin sites the city already owns — usually taken for back taxes. Ultimately, the city would like to assemble a 70-acre tract that could be used to meet modern manufacturing needs.

The city is using \$4 million of its Section 108 funding for infill-related activities in the Kinzie corridor area—for site acquisition, site preparation, and environmental testing. The city is planning significant infrastructure improvements, such as street improvements and enhanced site access; officials also will include street and alley

closures as needed to accommodate manufacturers' acreage needs. A planned streetscaping project along Lake Street will make the site more attractive from the adjacent El line, as well as provide an aesthetic buffer for nearby commercial and residential areas. The corridor lies within a federal empowerment zone, state enterprise zone, and a Chicago tax increment financing district—all of which carry investment incentives to be marketed to prospective new site users.

The city already has had takers for three sites within the Kinzie corridor. Two are from existing operations that have committed to stay in the area. As part of its operational expansion and modernization, Standard Equipment will use 14,000 square feet at the corner of Lake and Damen Streets for a truck and Zamboni maintenance facility (with the latter serving the nearby United Center Arena). The \$1.5-million investment will provide ten new jobs. Clearwater Fisheries, a new occupant in the corridor, will construct a 31,000 square foot building at Lake and Western streets for seafood processing and distribution. Clearwater's \$6.5-million investment will create between 30 and 55 new jobs. Finally, the Northern Greenhouse will expand its existing wholesale landscapering business onto an adjoining parcel, at Wood and Wolcott streets, providing 40 new jobs.

INFILL HOUSING

Chicago has focused most of its infill efforts on industrial activities; the city notes that the average investment needed to prepare sites for industrial reuse is between \$1 and \$2 per square foot, while residential site reuse may command between \$7 and \$15 per square foot. Since the market for residential development in Chicago is strong, the city's strategy on infill housing has been more one of establishing and nurturing the climate that invites private investment—doing things like promptly responding to permit and zoning requests, targeting regular city services (like street repair and sidewalk improvements) to infill areas, and carrying out new initiatives in emerging infill housing areas. To this end, the city has installed several miles of new street median plantings in west-side and south-side areas where new infill housing is being constructed.

In addition, the city has accelerated its rate of open-space acquisition and restoration, an important factor in the attractiveness of downtown living. The new Museum Campus Park opened in June 1998, and the northbound lanes of Lake Shore Drive

- were moved westward, away from Lake Michigan, to create a green-space connection between the lake and the Field Museum, Shedd Aquarium, and Adler Planetarium. Under construction now is the new Lakefront Millennium Park, a 16.5-acre, \$150-million city investment to cover railroad tracks that separate part of downtown from the lakefront; this park will include a new bandshell and entertainment space.
- Like a growing number of cities around the country, Chicago is enjoying a residential renaissance in downtown and near-downtown areas. A 1998 Brookings Institution study projected that Chicago will see a 32 percent increase in downtown residents during the next decade. Another study, by Applied Real Estate Analysis, Inc., found that the number of households in the downtown area increased by nearly 15 percent from 1990 to 1997. Loft-style condominiums, developed in emptied older office buildings within the Loop, are attracting a combination of buyers—young professionals interested in making their first home in the city, and empty nesters from the suburbs interested in moving back.
- These infill trends that began with the conversion of Printers' Row lofts in the mid-1980s will continue into the future, as evidenced by the following developments:
- In the South Loop area, condo construction is spreading through an area that was abandoned for decades. The area's showcase project, begun in late 1998, is an \$800-million community of residences, stores, offices, and a hotel, located near Michigan Avenue and Roosevelt Road.
 - Far South Loop developments, mostly on derelict former industrial sites from Roosevelt to Cermak Roads, have proliferated over the past five years. They include half-million-dollar homes in several developments, such as Dearborn Park, Dearborn Station, Dearborn Mews, and Central Station—the latter now the neighborhood of Mayor Daley.
 - Chicago's Chinatown has seen a building boom over the past five years, as former rail yards are being reclaimed for new townhouses, shops, and stores with easy access to public transportation. The city, for instance, converted an abandoned parcel into a riverfront park, which opened in late 1999.
 - On the city's West Side, renovation of the El's Green Line and the construction of the United Center have provided the impetus for new housing development—

some near the Kinzie Industrial Corridor area described above. Hundreds of townhomes and apartments, designed for a mix of incomes, have been built, mostly on land that had stood empty since the 1960s.

- The Homan Square project, also on the west side at Roosevelt Road and Homan Avenue, brought more than 100 market-rate (about \$70,000) town houses to the area. Built on the site of the Sears' former distribution warehouse, the development has attracted a Walgreens drug store, a bank, and a cinema. With the city's support, the former Sears Administration Building has been converted into a small-business incubator.

- A significant investment by Oprah Winfrey, in her Harpo Studios near the declining Randolph and Washington areas just west of Chicago's Loop, has sparked considerable private activity to the neighborhood. Loft conversions are attracting new residents; a new condominium development sold more than 75 percent of available units before construction was completed. Commercial activity, such as restaurants and shops, is increasing. And the city is working to preserve the area's traditional restaurant supply and food service business.

By the end of the 1980s, nearly 30,000 new housing units were made available in central city Chicago. A critical factor contributing to this growth was the accompanying increase in downtown and near-downtown areas of basic commercial and service operations—ranging from grocery stores to dry cleaners. Under development southeast of the Loop, for instance, is the Grand Pier project, a 1.5-million-square-foot, multi-use development that will focus on stores serving the growing residential population. Already, the developer has gained commitments from a Dominicks supermarket and a movie complex.

DALLAS, TEXAS

Physically, Dallas is a relatively young city. Much of its development is postwar and many of its downtown historic structures were demolished prior to interest in historic preservation. Until recently, Dallas has had little housing development downtown and thus has missed out on the region's booming housing development market. Between 1990 and 1998, the region's population expanding by almost 17 percent or 686,000 people. The City of Dallas, however, captured only 6.5 percent of this growth. Another telltale sign of the city's failure to compete with its suburbs is the availability of office space. Downtown office vacancy rates still hover around 30 percent, despite the addition of 500,000 new jobs to the region. Vacancy rates in downtown Ft. Worth, by comparison, are 30 percent lower at 19 percent, and suburban office markets throughout the metroplex are much tighter.

The results of these economic and development dynamics for the City of Dallas can be summarized as follows:

- There has been a great deal of "churning" in the downtown office market. As new office space around the region that had been built or started during the early 1980s boom years came on line, the market for Class A office space moved away from downtown to occupy new space. As downtown rents dropped, the market for Class B and C space moved up, leaving many older office buildings empty. In addition, major retail buildings were vacant as downtown retailers following workers and residents to other locations.
- Tracts of vacant land exist in parts of the city because many parcels were cleared during the boom years and never redeveloped. It is not uncommon in Dallas for owners to simply clear land to avoid taxes.
- South Dallas, home to a large percentage of the city's poor, continues to suffer the effects of the late 1980s recession. Unemployment hovers around 10 percent, and the area is dramatically under-served by retail and other public and private services.
- Infrastructure quality suffers from delayed maintenance during the late 1980s and early 1990s when city resources were stretched thin and many infrastructure needs were put off.

- Finally, the shape and location of new growth has created a clear challenge to Dallas to redefine its role in the region. The locus of growth in recent years has moved away from the city. To ensure a prosperous future, Dallas needs to redefi-
fine itself to compete more successfully for a reasonable share of the metropolis' prosperity.

Also affecting the way Dallas approaches its infill development opportunities are brownfields, severe flood events, social service needs, open space/park develop-
ment needs, transportation improvements, and intense regional competition.

DALLAS' RESPONSE

During the late 1980s recession, city leaders viewed the sudden glut of down-
town office space and abundance of vacant land as a major opportunity to recast
Dallas as a 24-hour city with a vibrant downtown-residential element. The City Council
in 1994 adopted the Dallas Plan. The long-range strategic plan is the product of a
private nonprofit organization by the same name, formed by a partnership with the
city, and hundreds of community groups representing businesses and residents. This
30-year master plan sets forth six major strategic initiatives, each of which addresses
an element of infill development:

CORE ASSETS. Preserve and build on the unique assets that make Dallas a desirable
place to live.

NEIGHBORHOODS. Preserve, strengthen, and revitalize the foundation of community.
ECONOMIC DEVELOPMENT. Leverage resources to attract new business and support
expansion of existing business.

THE CENTER CITY. Transform the Center City into a dynamic urban area, with a vari-
ety of business, cultural, entertainment, and living choices.

THE SOUTHERN SECTOR. Strengthen Southern Dallas as an economically competitive
and desirable place to work.

THE TRINITY RIVER CORRIDOR. Protect and develop the Trinity River Corridor to be-
come Dallas' new front yard—a nature park and a recreational and economic asset.
Since adoption of the Dallas Plan, a number of important partnerships have over-

come obstacles. For instance, the Trinity River Corridor project—a billion-dollar infrastructure redevelopment effort among federal officials, state and local government, residents, and businesses—is addressing flooding issues and transportation needs, and it will provide some environmental restoration and development of much-needed recreational space within city limits.

The Central Business District (CBD) was particularly hard hit by the recession. Between 1990 and 1995, CBD tenants abandoned more than 3.5 million square feet of office space, catapulting vacancy rates to nearly 40 percent. The In-town Housing Program, run by the Department of Planning and Development, encourages market-rate development within a one-mile radius of the CBD, or affordable housing anywhere in the city. City leaders commissioned survey research in 1993 that indicated potential demand within Dallas County for 24,000 downtown residential units, with much higher regional demand likely. The major focus is to stimulate private development of 5,350 mixed-income residential units.

Affordable housing is required in all city-supported projects. Projects receiving HUD funds must set aside 20 percent of the units for households earning 80 percent or less of the Dallas-area median income for households of equivalent size. Where HUD funds are not involved, the portion of the project that must be reserved as affordable housing varies from 12 percent to 20 percent, depending on the level of the city's participation.

Historic buildings remaining in the CBD are seen as a rare cultural asset, and virtually all of them are being converted to residential use. Over 2,000 residential units have been completed, are under construction, or have been announced in the CBD, and almost all are in historic structures.

Large-scale conversions of historic properties are a study of the difficulties infill projects face. For instance, redevelopment of the Kirby building, a 17-story office and commercial building dating to 1913, required approval from both the National Park Service and the state's historic commission. Disagreement over appropriate garage construction standards added months and cost to the construction project. Infrastructure upgrades for older structures also can pose barriers, as was the case in the conversion of the Santa Fe Terminal project. Conversion of this warehouse to 157 loft apartments also required an unanticipated \$50,000 repair to the underground storm drainage system.

Almost \$2 billion has been invested in downtown real estate in the past two years, and virtually every major office building has changed hands in that time period. While many factors ignite interest in downtown, not the least of which is the expense and dearth of suburban office space, the In-town Housing Program has played an important leadership role.

THE STATE-THOMAS DISTRICT

Private investment is a vital component of the city's infill strategy. One of the first major private investments was in a neighborhood known as the State-Thomas District, an area of vacant land with a few disconnected structures and uses just beyond the central business district. As city leaders recognized that housing downtown was indispensable for a revitalized center city, the city worked with a developer on the State-Thomas Planned Unit Development (PUD) to achieve the following goals:

- Residential use was to be dominant, while compatible uses would provide services;
- Existing streets were to be maintained but improved, with traffic calming devices;
- Destination uses were discouraged to keep traffic and parking demands manageable;
- Mixing and layering of uses was encouraged;
- Parking was to be in a secondary position to enhance streetscape architectural continuity; and
- Investment in the public domain was quite high; for instance, large street trees, excellent lighting, and textured sidewalks were planned.

After the State-Thomas PUD obtained approvals in 1986, it took a year to put together the project's financing. Post Properties, a real-estate investment trust (REIT) experienced with downtown redevelopment, is the primary developer and investor in the State-Thomas neighborhood. Though privately driven, State-Thomas has been a public-private partnership. In addition to approving the State-Thomas PUD, the city created a Tax Increment Financing (TIF) district for the neighborhood, and it supported all the public space improvements, even at the high cost planned.

THE TRINITY RIVER PROJECT

Dallas was born on the Trinity River and has grown up around it. The river runs through the heart of the city, from the northwest corner, past downtown and southeast to the county line. Early in the city's history, the Trinity was an important element of the economy, but over time, has been relegated to a flooding concern. The Trinity now flows through much of the city between levees, which have received more attention than the river channel itself.

The Trinity River Project is a major infrastructure investment program that will address flood threats from the river, enhance an environmental asset for the city, and redevelop several major roads in the corridor. A combination of five separate efforts,

the Trinity River Project is an investment of over \$1 billion in federal, state, and local dollars that will transform the city's river corridors. The project is not without controversy, but voters approved the bond referendum in November 1998 that will provide \$246 million for the project.

While the Trinity was not considered an important resource, residents and businesses are beginning to see its potential as a greenway coursing through Dallas instead of as a

waterbody that needs little except flood management. Explosive urban development in the Trinity watershed over several decades has both increased water volume and decreased water quality. The initial response, as in most cities, was to separate the built and natural environments by engineering the river channel to prevent flooding and by building the city to minimize the waterway's presence.

In the early 1990s, however, flooding was still an issue in Dallas, and the U.S. Army Corps of Engineers was contemplating additional investments in the levee system. At the same time, the state highway agency was planning to redevelop a set of major highway intersections near downtown, known as the "mixmaster." As it became apparent that funding, scheduling, and design needed to be better coordinated,

INFRASTRUCTURE INVESTMENT:	
Project Element	Cost (in millions)
Dallas Floodway Extension	\$127.0
Trinity Lakes	31.5
Trinity Transportation	825.0
Great Trinity Forest	41.8
Elm Fork Levee	60.0
TOTAL	1,085.3

civic leaders conceptualized a comprehensive Trinity effort to incorporate the river as a central environmental and community asset. An important outcome is that the Trinity increasingly is seen as a shared asset of the community and a force that brings divergent populations closer together.

In 1994, the City Council formed the Trinity River Corridor Citizens Committee (TRCCC), and Mayors Steve Bartlett and then Ron Kirk supported the work and the recommendations of the Committee. The TRCCC developed a vision for what the corridor should mean to Dallas and the role the Trinity River will play in making Dallas a "world class" city. With the referendum approval in 1998, the vision of the Trinity River Corridor created by this process takes its place as official policy that will guide development and restoration on the river for the next two decades.

Most of the project funding will improve transportation and flood control structures, including an entirely new highway segment, an unusual project in a downtown area. The Trinity Parkway will handle traffic while the "mixmaster"—the intersection of two major highways downtown—is being rebuilt over the course of 15 years to provide additional access to downtown. Proponents of these highway projects note that air quality improvements are anticipated as a result of relieving some of the current intense congestion. In addition to automobile access, rail access has been dramatically improved via the growing Dallas Area Rapid Transit (DART) system.

Environmental goals have been given a more prominent role as the project has evolved. The state legislature in 1989 created the Trinity River State Park, a 200-foot strip on each side of the Trinity River, with a total park area of 1,200 acres. The Great Trinity Forest is a relatively young forested area (approximately 1,000 acres) in a floodplain of the Trinity River just southeast of downtown. Much of it and the surrounding area are in public ownership, but it is not currently managed as a park. A master plan, presented by the TRCCC to the City Council in 1997, envisions 6,000 acres of parkland that will protect both the river and the forest. It will have an extensive trail system, 20-25 miles of equestrian lanes, a multi-purpose park center, and numerous other amenities to make the park an environmental and educational asset to Dallas. It will cap landfills and create a large meadow for passive recreation uses. When city officials talk about the Trinity River Project, they tend to highlight the park since it has captured the imagination of residents, developers, and businesses.

DALLAS AREA RAPID TRANSIT (DART)

While the Trinity River Project contains enormous highway investments, Dallas has retained its interest in a balanced transportation network. The DART system was created in 1983, and received dedication of some sales tax revenue to begin transit operations in 1984. It is now a multifaceted transit agency that combines light rail, commuter rail, HOV lanes, and bus service. DART's ridership has exceeded expectations since light-rail operations began, and the agency won the 1997 Outstanding Achievement Award from the American Public Transit Association.

When the current capital projects program is complete, DART's miles of light rail will increase from 20 to 60, its commuter rail miles from 10 to 40, and its HOV lane miles from 18 to 100. The bus system, serving 137 routes with a fleet of 800 buses, is fully integrated into the rail system.

DART receives some of the credit for spurring and supporting center-city investment. According to DART, most office relocations in the central business district are within walking distance of a DART station, as are several historic buildings undergoing conversion to loft apartments. DART is credited with supporting the \$150 million investment by Adams Mark Hotels to convert a hotel and office complex across from the Pearl Station into the largest convention facility in Texas. The development features 1,900 guest rooms and almost 300,000 square feet of meeting and exhibit space. In addition, the city is working with DART to open a new public library near the Hampton Station, and the Dallas Zoo's attendance has increased 25 percent since the opening of a DART station. Clearly, weaving DART facilities into Dallas' transportation complex is helping to create infrastructure that is of great value to investors, developers, residents, and tourists.

DART also is credited with a significant mixed-use, transit-oriented development project underway adjacent to the Mockingbird Station. A 50-year old brick warehouse is being redeveloped into lofts with ground floor specialty retail and restaurants. The 6.75-acre site also will include a 500,000-square-foot office tower. Additional retail, hotel, and conference centers also are planned for the site. Kenneth Hughes, a Dallas developer, noted that the project would not have proceeded without the DART station and that projects associated with the DART system will enjoy a distinct advantage over other similar projects.

BROWNFIELD REDEVELOPMENT

In October 1995, Dallas and the U. S. Environmental Protection Agency entered into a cooperative agreement to initiate a brownfield program that would facilitate the cleanup and redevelopment of contaminated property. Dallas has leveraged \$109 million in private investment in seven substantial redevelopment projects and \$1.9 million in additional federal support for the program.

The Dallas Brownfields Program (DBP) is an important element of the city's infill development efforts. There is a great deal of vacant land, particularly in South Dallas, and contamination is often one of several obstacles to redevelopment. In its first three years in operation, the DBP has played an important problem-solving role in moving complex development projects forward. According to Ann Grimes, an analyst with the DBP, the city has worked hard on education and outreach. Since most brownfield sites are privately owned, communication with property owners and developers has been an important element of their success. Grimes and Marilyn Avinger, also with the DBP, work to resolve impasses that often stall challenging projects.

An excellent example of this approach was the Centennial Plaza Addition. The site had been used for a municipal landfill from 1951 to 1964 and later hosted a cement company. In addition to the landfill, it contained several under- and above-ground storage tanks. The site's current owner was eligible to participate in the Texas' Voluntary Cleanup Program and planned to develop a 1.5-acre portion of the site for restaurant, hotel, and office/warehouse use. In addition to property costs, the private owner invested in infrastructure, environmental research, and cleanup costs.

A Schlotzsky's Deli franchise purchased one of the restaurant sites, but the company reached an impasse with the city over landscaping requirements. The state-approved closure plan for the landfill included planting guidelines, and Schlotzsky's had been unable to procure the appropriate landscaping stock. DBP staff quickly convened a meeting to reach a compromise but still meet the requirements of the landfill closure regulations. The project proceeded as planned. The DBP has become an integrative force in the city government. For example, it worked closely with the Department of Public Works on the Trinity River Project to remediate two closed landfills and plan for future uses for those sites.

ECONOMIC DEVELOPMENT PROGRAMS

A key issue for Dallas, which is competing in a burgeoning region, is job creation and retention. The city's economic development initiatives, which include the Dallas Brown-fields Program outlined above, are quite diverse, ranging from small business incubators to tax abatement policies. The following list provides a snapshot of the economic development net cast by the city.

Business Retention and Expansion Services—Professional business development coordinators help find solutions to problems with city services and help businesses access beneficial city programs.

One-stop Permitting Center—Staff help businesses understand the city development code and expedite permits, licenses, and other requirements.

Bill J. Priest Institute Business Incubator—The Business Incubation Center has 30,000 square feet of space available to young companies for up to four years. The Center also provides business management services.

Business Assistance Centers—These five centers are housed in community organizations and assist new business with research and start-up services.

Public-Private Partnership Program—Gap financing is provided to diverse development projects, including:

- temporary tax abatement
- sales-tax exemptions in enterprise zones
- infrastructure cost participation
- development fee rebates
- right-of-way abandonment rebates and credits
- public improvement districts
- tax increment financing
- high-impact project mitigation
- target industries projects
- nonconforming projects

Loan Programs and Financing—The Southern Dallas Development Corporation offers the City of Dallas several financing programs, including:

- SBA 504 loans
- Community Development Business Loan

- Southern Dallas Development Fund
- Investment Zone Loans
- Citywide SBA Micro Loans

Neighborhood Renaissance Partnership Program—The effort provides grant funds for business facade improvements, infrastructure, and housing rehabilitation.

Business Parks—Six industrial parks are targeted for business attraction and expansion in the City of Dallas. The City of Dallas Business Development Corporation administers the program in the six facilities.

Job Training Programs—Business services coordinators will facilitate a relationship with the Texas Smart Jobs program, which provides matching grants for eligible jobs paying a minimum of \$8 per hour.

CONCLUSION

Infill development is proceeding in Dallas, and a multitude of public programs, private investments, and community efforts have created a positive framework for the city's revitalization. Much remains to be done, of course, and effective implementation of numerous programs will determine whether investments really become relevant to South and West Dallas, the city's poorest sections. While most observers believe the downtown has reached a critical mass of residential use to support retail and other services, public and private investment must continue to solidify this growth. Dallas already is seeing the fruits of its labor in a revitalized downtown and the approved Trinity River Project. Connecting the many elements of the Dallas "infill development strategy" has been the commitment of city leaders. Key city departments—Public Works, Housing, and Economic Development—have made revitalization a priority at the highest level. Former Mayor Steve Bartlett and current Mayor Ron Kirk have recognized the opportunity to make the city a competitive force in this fast-growing region.

The Dallas Plan has been an important coordinating document, in part because its action orientation gave it a unique currency among comprehensive plans. Yet it took the shear force of will, as well as the resources and leadership of the mayor's office, to make many of these ideas a reality.

DENVER, COLORADO

The Denver metropolitan area, comprising the city and 49 municipalities, is trying to balance a booming economy with environmental and social needs. While the region attracted 161,000 people from 1990 through 1996, the Denver Regional Council of Governments (DRCOG) estimates another 770,000 will arrive by the year 2020, pushing the metropolitan head count to 3 million. Current land use stands at just over 500 square miles, yet the pressure to develop is staggering, and the demand for housing outstrips supply significantly.

Even in this boiling real estate economy, infill development is challenging, and two key strategies are important to success in the Denver metro area:

- revitalization of downtown, and
- creation/protection of smaller urban centers around the region.

THE DOWNTOWN BOOM

When prospective developers approach the Downtown Denver Partnership's (DDP's) Annie Warhaver for tips on marketable properties in the city's core, she invites them to browse "the book." Warhaver takes pride in this three-ring binder that encourages infill development and provides a market profile of motoballed buildings. The book contains beautiful photographs of elaborately detailed turn-of-the-century buildings, most still in good shape.

When DDP compiled the book in 1992, it profiled 60 structures, complete with information about floor layouts, amenities, and needs assessments. Today, only 20 of those buildings stand empty, evidence of both the Partnership's aggressive marketing of the sites and the good times that Denver's economy is finally enjoying after the devastating recession of the late 1980s. DDP itself purchased and redeveloped one of the buildings in order to gain firsthand experience with the obstacles confronting the renovation of older buildings that may be subject to stringent new building codes and historic preservation requirements. Armed with that experience, DDP has been able to provide valuable technical assistance and advice to prospective developers of downtown projects.

DDP is working to implement the City Council's new Downtown Area Plan, the result of a planning process begun in the late 1980s following the collapse of the

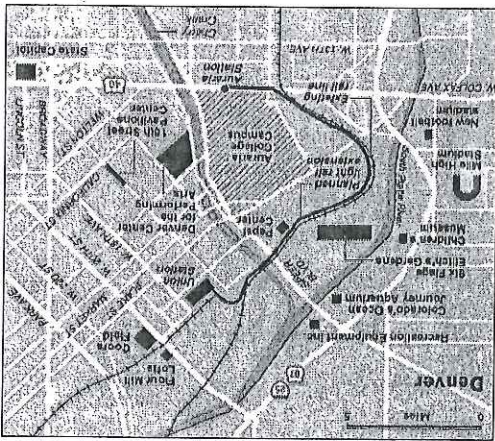
economy and real estate market. The business alliance enables Denver to compete for investment with the surrounding—and booming—suburbs. DDP's growth and evolution have been tracked by the Urban Land Institute and International Downtown Association, which credit its structure and mission with the ability to chart successful development strategies for the city while maintaining flexibility to change course. Warhaver acknowledges that DDP's most important role is that of advocate, both for recruitment and retention of downtown jobs. DDP tries to convince the business community nationally and regionally that Denver is the regional business center in Rocky Mountain region, pooling the economic energy for cities and towns reaching to Wyoming, South Dakota, or Kansas.

DDP's vision is to transform Denver from the western cow town of the 1970s and the oil-rich boom town of the 1980s to a regional cultural, entertainment, and sports mecca for the millennium. The city's recent roster of development successes includes:

- Coors Field (for the Colorado Rockies) in LoDo
- Pepsi Center (Denver Nuggets)
- Elitch's Amusement Park
- Denver Aquarium
- Children's Museum
- Denver Center for the Performing Arts
- Museum of the West
- a vastly expanded and renovated Central Library

Many of these projects have spurred investment in surrounding neighborhoods. Six months after construction of the Coors Field baseball stadium, for instance, nearly 22 restaurants and shops had opened along and around Blake Street.

While the city has achieved a major advantage in having secured this tourist/entertainment/sports triumvirate of development projects, it faces an uphill battle on additional infill development. One challenge comes from suburban office parks, which are wildly successful, especially with the growing number of high-tech companies in the region. Denver also faces cutthroat competition for retail from the suburban counties, whose budgets are based on the retail sales tax and so are constantly engaged in predatory practices to lure retail into their jurisdictions.



Denver has achieved a major advantage in having secured a triumvirate of tourism, entertainment, sports, and other development projects.

METRO VISION 2020 GOALS

- Limit urban development to within a 700-square-mile area around the metro Denver area, a 165-acre expansion over current land use.
- Preserve open space through a regional system that protects resources and provides recreational opportunities.
- Allow freestanding communities (e.g., Boulder, Longmont, Brighton, and Castle Rock) to retain their individual character rather than become absorbed into the general urban area.
- Develop a balanced, multi-modal transportation system, including rapid transit, buses, regional beltways, and bike and pedestrian systems.
- Encourage communities to create urban centers as a way to promote walkability, reduce auto dependence, and make more compact land uses attractive and efficient.
- Ensure environmental quality, with specific attention to the region's air pollution problems, as well as reduce impacts on water supplies through an integrated regional watershed protection plan.

Source: Metro Vision 2020 Plan, Denver Regional Council of Governments, 1997.

PLANNING IN THE REGION

The Downtown Denver Partnership is both the beneficiary and the victim of extensive strategic planning undertaken by the city in an effort to stave off financial disaster. While the DDP grew out of the competing urban centers surrounding Denver also benefited from an amalgam of growth management imperatives.

Though Colorado has no state statute requiring counties to participate in growth management strategies, Governor Roy Romer in 1996 launched the Smart Growth Initiative in order to counter sprawl and attract infill development on a region-by-region scale. One of the first groups to answer the governor's challenge was the Center for Regional and Neighborhood Action, a relatively new nonprofit organization headed up by John Parr, who for ten years directed the National Civic League; former Jefferson County commissioner Peter Kenney; and Katherine Archuleta, an aide to former Mayor of Denver and U.S. Secretary of Transportation Federico Peña. CRNA, which is fluent in the principles of town planning, runs interference among stakeholders, builds coalitions, and teaches mediation skills—important activities that local government officials either don't or can't do well.

CRNA led the Denver Regional Council of Governments through a needs assessment and priority-setting process, resulting in the Metro Vision 2020 Plan. This plan, based strongly on the input of environmentalists and businesses, outlines means to reinvest in existing communities.

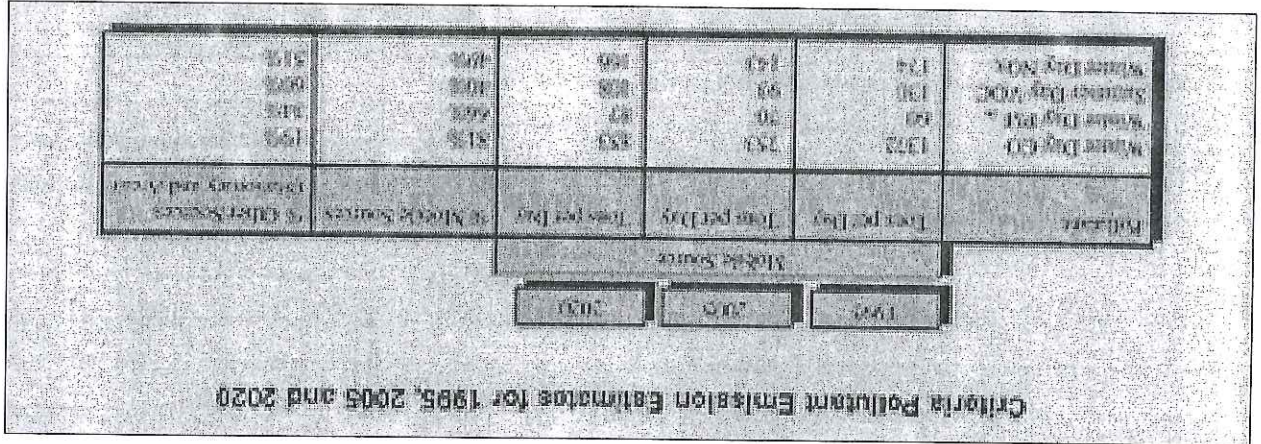
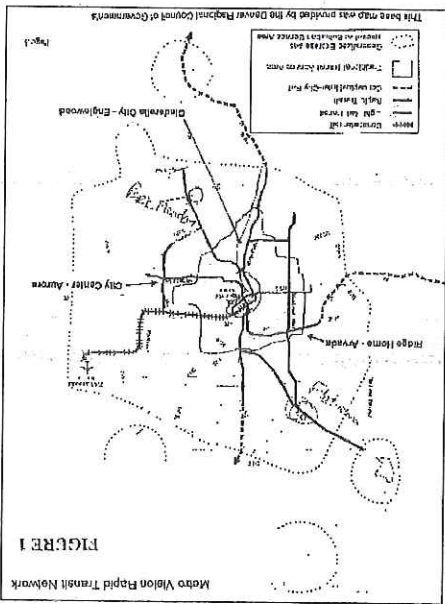
The Metro Vision 2020 Plan, completed in 1997, is the blueprint for growth management around which other discussions revolve. Though adherence to its principles and goals is entirely voluntary, the plan presents a fairly comprehensive cataloging and accounting of what the region's 49 municipalities stand to lose and gain depending on their approaches to growth issues.

TRANSPORTATION: LINKING LIVES IN THE WEST

Ridding Denver of its 'Brown Cloud'

The regulatory forces behind strengthening urban centers were imposed by the Clean Air Act Amendments of 1990 (CAAA). In 1995, the state set a cap on the Denver region's allowable emissions under the 1990 CAA Amendments. Since city and regional air pollution problems are directly related to mobile source (car and truck) emissions, officials are trying to reduce vehicle miles traveled (VMT). Unfortunately, the region's VMT has increased 14 percent faster than population growth—a phenomenon typical of sprawl development. In 1999, VMT was almost 49 million miles a year, and is expected to increase to 73 million miles a year by 2020 if aggressive growth management steps are not taken.

In Denver's case these numbers pose an especially urgent problem because of the unique geographical restraints on the region's ability to disperse air pollution. The "inversion effect," resulting from



the city's altitude, emissions level, and proximity to the Rocky Mountain range, gives rise to the ubiquitous "brown cloud" of noxious contaminants that some public health officials attribute to the city's high asthma rates and other respiratory problems among children, the elderly, and those with suppressed immune systems. Thirty miles northwest of the city, Boulder is now beginning to generate its own brown cloud, especially during rush hour and on hot summer days.

Housing is a key element of Denver's infill strategy. The DDP and the City of Denver in 1992 formed the Center City Housing Support Office which sought to be

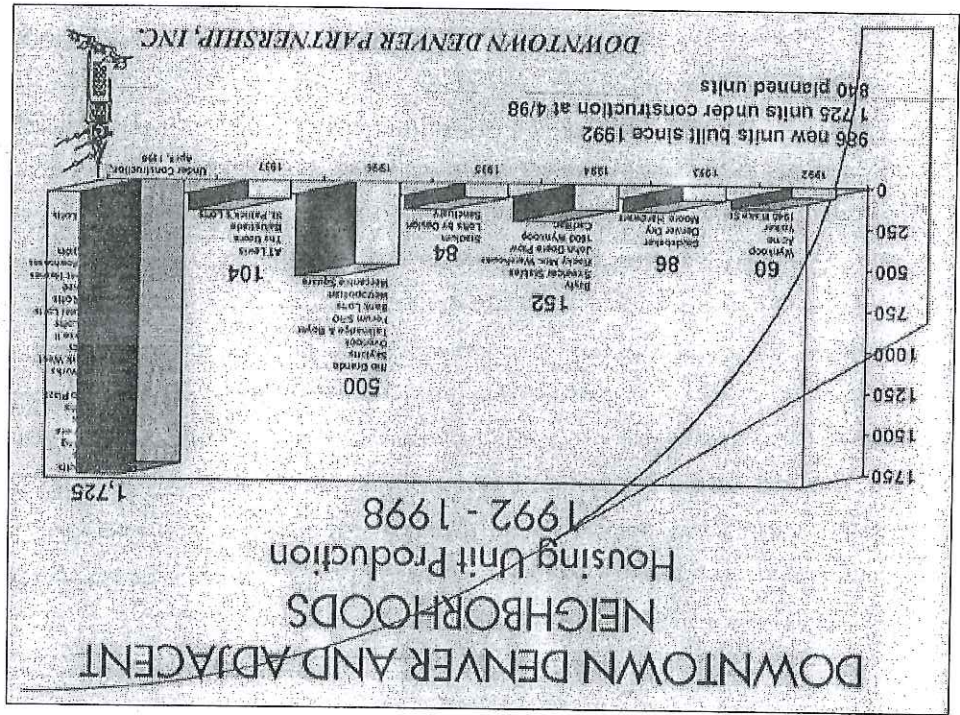
Infill Housing Strategy

Denver is unique in that it still has numerous large parcels of land available for development or redevelopment. With the closing of the Lowry Air Force Base, for example, the city has an additional opportunity within its boundary. The Lowry Redevelopment Authority pitches the project as a "vital new center of education, employment, recreation, and gracious neighborhood living—all within a self-contained urban community in the heart of metropolitan Denver." Though the development will not be completed until 2004, some residents began moving in April 1998. Lowry features mixed-use development, integrating office retail and commercial space with education and training centers, as well as plenty of housing. Twelve percent of the housing is being set aside for low-income families.

Infill Challenges & Opportunities

Governor Romer's Smart Growth Initiative focused largely on the need to reduce congestion through transit and highway investments. Noting the public's perception that traffic was out of control, a Blue Ribbon Panel on Transportation took 90 days to paint a picture of the transportation needs facing Metro Denver. The panel, composed of environmentalists, local officials, and business leaders, initially identified the massive budget increases needed to reduce the area's traffic congestion and smog. Stakeholders, however, quickly sought to change the focus from transportation investments and the divisive issue of "sprawl" to the more unifying message of improving the quality of life for Denver area residents. A diverse coalition then promoted a "Guide the Ride" referendum—calling for a small increase in the Regional Transportation District sales tax in order to pay for expanded commuter rail and bus transit systems—but voters, largely in auto-dependent suburbs, rejected the referendum. CRNA rallied after the defeat and sought to expand its coalition by linking transportation-transit funding with infill development and senior citizen needs.

Pushing for Transportation Options



DPP believes Denver needs 20,000 units of housing in the downtown area to make it a livable and pedestrian-friendly city.

a "one-stop" shop for developers seeking information and permits. DPP believes Denver needs 20,000 units of housing in the downtown area make it a livable and pedestrian-friendly city. The count has reached 4,000 and is climbing; another 1,700 units of housing are under construction, solely from private funding. In LoDo, the Central Platte Valley, and the Golden Triangle, old lofts and warehouses are being converted rapidly to housing, and in 2000 are selling for as much as \$250 per square foot.

The proliferation of Manchester's stores sector generates passionate debate about the future of the town's growth. While opinions exist at either extreme—abolishing outlets altogether or allowing them even greater latitude to expand—most residents want to discourage continued proliferation of outlet stores. When the town commissioned a study of its commercial zone build-out potential in 1993, many town residents were shocked to learn that existing zoning ordinances and regulations would allow even further expansion of the town's outlets, making Manchester one of the state's largest retail centers. Residents and town leaders subsequently began to take a hard look at how the town's regulatory authority can be used to help diversify the economy, offer more affordable housing, and preserve Manchester's streetscape for pedestrians—residents and tourists alike.

In recent years, the town also has attracted factory outlet stores. Like the towns of Kittery and Freeport, Maine, national brand name retailers and discount outlets have flocked to Manchester's historic downtown, bringing jobs but also attracting tourists and traffic. At the same time, local residents now must travel half an hour to Bennington or Rutland to shop at department stores that can no longer afford downtown Manchester rents.

Manchester, a town of barely 4,000 nestled in the foothills of the Green Mountains National Forest in southwestern Vermont, wants to maintain a balance between a thriving downtown and open lands. It is a gold coast tourist town, having grown up around the ski industry since the 1940s and subsequently nurtured a popular summer resort-town atmosphere centered around arts and music. Part-time residents, retirees, and wealthy out-of-state benefactors have donated considerably to the town's cultural and educational infrastructure, adding a skating rink, performing arts center, and library.

Early in 1998, an editorial in the Rutland, Vermont, Sunday newspaper railed against sprawling commercial development and reminded readers that "tourists come to Vermont to indulge the memory of livable communities." The reality of "livable communities" is evident but uneven across the state, despite a vocal commitment by many Vermonters to preserve the small-town way of life. In Vermont, many residents regard the loss of an acre of farmland or the closing of the local hardware store more as a sign of civic failure than of the casualties of a changing economy.

MANCHESTER, VERMONT

MANCHESTER AT A GLANCE

Manchester's situation is instructive because a backbone of its economy—brand-name retail outlets—runs directly counter to the vision held by many of the residents of how a small Vermont town ought to look and function. The 1997 Town Plan targeted consumerism as one of the biggest threats to the town's survival: "Manchester clearly sees the need to guard against threats to our quality of life which stem from retailing trends. Our entire society is debating the effects of consumerism in general, and two phenomena which have worldwide implications for cultural homogenization: big-box retailing and name-brand retailing of goods and services."

Vermont has been one of the more vocal and organized states against allowing big-box stores such as Wal-Mart and Kmart inside its borders, criticizing the impacts these retailers have on local businesses and the environment. Yet it is precisely the presence of retail outlets—including such national brands as Osh Kosh, J. Crew, and The Gap—that keep the tourists coming after ski season. Manchester's infill development strategy, therefore, is to diversify the town's retail economy in order to provide residents with livable-wage jobs, educational opportunity, and affordable housing.

Like many New England communities, Manchester's economy was hit hard by the recession, the energy crisis, and regional disinvestment from the mid-1970s to the mid-1980s. Reinvestment in the late-1980s was spurred by the upsurge in tourism and recreational activities, and it brought an influx of wealthy retirees, many of whom hailed from out of state. These newcomers have been generous contributors to both educational and recreational facilities in Manchester, helping to maintain the city's outward image as a well-heeled small town.

In recent times, however, longtime residents have voiced conflicting feelings about Manchester's identity, trying to reconcile the realities of being a service-based economy centered around tourism with a strong desire to preserve the small-town New England experience. In past planning and visioning exercises, residents have raised such intangible but persistent themes as loss of civility, lack of familiarity with one's neighbors and business leaders, and the lack of high-quality educational and employment opportunities for Manchester's youth.

Although the town continues to ride high on the upscale retail outlet wave and the jobs and sales tax revenue it provides, Planning Commission Chairman Bill Drunnic noted in October 1998 the need to prepare for the eventual wind-down of that par-

In addition to these tools, Krohn notes that the town recently adopted a "goal-based regulatory" strategy to give it latitude with certain zoning requirements in order to design a livable, pedestrian-friendly community. For example, the use of conditional-use criteria allows the city to reject a project if it fails to mitigate off-site problems such as traffic circulation. This approach evolved in response to the Build-Out Analysis which criticized the existing regulatory structure, but it also reminded residents that many zoning ordinances are adopted "with an imperfect understanding as to how their rules will shape development. Often the development that does occur under these rules is not what they want to see." For example, current code aids the proliferation of retail outlets often because those stores have been able to conform to the "footprint size limit" imposed on the properties, where alternative uses—such as hardware, variety or department stores—have been blocked from locating downtown. With this in mind, the planning committee reviews projects as much on the basis of how they look and feel, as on how they function. Using a goal-based

often can spell the difference between tasteful and tacky tourist destinations. This design review process also applies to standards for signage and lighting, which harmony with predominant architectural styles, character, and historical attributes. development proposals to high-quality design and construction standards, including this land-use pattern. Also in place is a design review process that subjects all new and open space on the periphery. The town's sewer and water system accommodates component to the downtown core, favoring high densities downtown and residential courage infill. A 30-year-old law, for instance, restricts commercial and retail development. Town Planning Director Lee Krohn identifies several regulatory aids that en-

Residents and town leaders have been engaged in a planning process for at least the past five years to restore a sense of balance to the town's physical, economic, and aesthetic character. A 1996 vision statement pressed for an infill development strategy that would diversify the economy and provide affordable housing.

BUILDING BLOCKS OF AN INFILL PLAN

Invest in services and amenities that benefit residents and visitors alike. core; reduce curb cuts to make a friendlier, pedestrian-oriented environment; and ticular retail sector. In the meantime, the city is on a mission to limit traffic in the

regulatory approach to zoning and permitting, the town has the authority to emphasize and value the impact of a project's aesthetics and function in a community.

Town planners want to extend the goal-based regulatory approach to the commercial core and to support mixed-use development as means to preserve the city's character. In addition, the transportation plan recommends breaking up the commercial core into five subareas and applying appropriate design, site, sign, and use criteria to them. The further use of overlay districts will help the town delineate various use areas, ranging from the intensively developed commercial district, to the open space districts designated for forests and recreational uses. The town also uses overlay districts to protect wetlands and address flood control.

In this context, the town is pursuing three primary goals to restore its balance: reduce traffic congestion; increase affordable housing units; and diversify commercial and retail activity downtown.

PARKING AND TRANSPORTATION

Town officials recently have completed two major transportation studies to address what residents feel is out-of-control congestion exacerbated by tourism-related traffic. In 1994, they participated in a regional study on traffic and transportation planning for all of Bennington County, and in 1996 the town selectmen adopted a local transportation plan, which was seen as a blueprint for action. The plan called for a shift away from auto-focused transportation planning and toward a vision of downtown livability and functionality in which pedestrians feel comfortable.

One initiative on the pedestrian safety front has been to limit the number of curb cuts along streets in the downtown grid. Curb cuts generally pose a pedestrian safety concern because of the high volume of delivery trucks and cars turning in and out of them. This is a real problem in Manchester's outlet shopping district, and one that pits residents against tourists (or shoppers against nonshoppers).

The historic street grid also provides too much parking beside buildings, and town officials believe it needs to be reduced to enhance the sidewalk environment. In response, Manchester is developing well-lit shared parking behind buildings. Eventually, as the commercial core becomes host to a broader mix of uses, demand for parking will vary throughout a 24-hour period, rather than be concentrated in the peak shopping hours of the typical work day.

Manchesters is a town in flux, holding on tenaciously to the benefits of small-town living, while confronting the need to offer its residents economic opportunity. At the very detailed level of reorganizing traffic and parking in the downtown, Manchesters wants to restore richer human interactions on its streets while bringing into balance the heavy consumer culture that has dominated its identity.

One of Manchesters' innovative (and controversial) tactics to achieve a more balanced mix of business downtown is a proposal to categorize commercial establishments based upon their clientele and their provided product or service. For example, the proposal offers three categories of commercial activity: those providing "everyday" products and services of value to the resident community; those providing higher-end products, but which are locally owned and not found to foster the intense consumer activity associated with the outlet shopping; and those that are "dependent upon nonresident, visitor, and tourist traffic attracted to Manchesters, and/or whose promotion of national brand names diminishes the uniqueness of what Manchesters has to offer tourists and other visitors." Companies in the latter category would be subject to permitting constraints to enable the town to achieve its other goals of traffic management, affordable housing, and economic development.

COMMERCIAL CORE

Mixed-use development is the primary approach used to reintroduce housing downtown, with the hope of building live-work units and providing low-income units above commercial and retail space. Where housing is integrated in a mixed-use project, the town will consider removing density requirements.

The shortage of affordable housing is severe in Manchesters. This shortage is exacerbated by the state's big retiree population, rising second-home ownership, a large low-income population (24 percent of the population is Medicaid-eligible), and limitations on building because of land-use restrictions. The town in 1989 assessed its housing needs and found that fully 25 percent of the local housing stock (as of 1986) was second homes. At the same time, the median sales price of housing was close to twice what the median of residents could afford, which contributed in part to a 180 percent jump in mobile homes between 1980 and 1990.

HOUSING

ORANGE COUNTY, CALIFORNIA

Orange County, sandwiched between San Diego and Los Angeles in the heart of Southern California, expects its population to soar by 25 percent over the next two decades, and it will have to support 3.2 million people by 2020. According to researchers at California State University at Fullerton, the county's 935,000 housing units will need to increase to 1,155,000 to accommodate this growth.

Orange County is an extreme example of the modern, car-dependent built environment. The county's 31 smaller municipalities, some of which incorporated in the 1800s, exist in loose affiliation and lack an established urban center that is the defining element of many metropolitan regions. While there are historic employment centers such as Costa Mesa, Irvine, and Santa Ana, there is no "downtown." It appears to be 100 percent suburbia, dominated by strip malls, highways, gated subdivisions, and general sprawl. The county's development challenges mirror those of other suburban and exurban areas that are capturing the lion's share of growth and development.

INFILL DEVELOPMENT IN ORANGE COUNTY

Orange County's older developed areas are small and scattered throughout its northern and western reaches. Growth is occurring in undeveloped areas within the county where land is less expensive and service levels are improving. Many of the municipalities that experienced tremendous growth in the 1950s are having difficulty competing with new growth centers.

The county's infill development challenge is best understood as an exercise in managing neighborhood succession, according to Rick Cole, city manager of Azusa and a longtime observer of growth and development in California. Even as small downtown areas compete for residents and businesses to maintain the tax base, they face obsolescence as retail moves to regional malls and other large shopping venues. In Orange County, as elsewhere in California, the intense

Pressure on Orange County's natural resource base has been a driving force behind its embrace of "smart growth" development principles. The county boasts dramatic variation in landscape, with sensitive coastal areas, chaparral and dry grasslands, mountain ranges, and foothill canyons. Development pressure on these diverse ecosystems is uneven, yet extensive oceanfront development and erosion pose risks of habitat destruction and flooding.

DEVELOPMENT IN A SENSITIVE ECOSYSTEM

Air quality poses another challenge. While Pacific breezes maintain high air quality along the coast, inland areas are typically degraded. Like many states, California faces its steepest challenge in limiting emissions from mobile sources, including automobiles and trucks. Unfortunately, Southern California is witnessing the fastest growing vehicle-miles-traveled (VMT) rate in the country. The region, built on automobile transportation, now confronts the attendant congestion and air quality problems.

pressure to maintain a strong commercial tax base drives municipal economic development efforts.

In addition to these competitive pressures, municipalities must meet a 20-percent affordable housing set-aside requirement to qualify for tax increment financing (TIF). As a result of the amended California Redevelopment Act that was intended to reverse the trend of building more lucrative commercial projects at the expense of housing stock, municipalities cannot access any TIF revenues unless affordable housing is actually built. On the positive side, the new requirement has generated interest in building mixed-use projects that incorporate commercial space as well as housing for a variety of income levels. The City of Brea provides an excellent example of such infill development.

BREA

Located at the county's northeastern corner, Brea and surrounding cities are affected directly by the movement of residents—and jobs—to the “inland empire” counties of San Bernardino and Riverside, where land and housing are less expensive. Brea leaders responded by focusing their redevelopment efforts on the community's downtown, the historic hub of an active oil economy.

The city, whose name means “tar” in Spanish, began losing retail and commercial businesses in 1974 when the 57 Freeway was completed just east of downtown. Abandonment of aging housing stock followed, until vacant buildings dominated the once thriving area. Into the 1980s, downtown Brea hosted numerous vacant structures originally built for oil field workers. Most of these houses were in poor condition; indeed, some had never been tied into the city sewer system and were still served by aging septic systems. The city initiated several condemnation proceedings, ultimately assembling and clearing 55 acres of land.

City leaders in 1972 formed the Brea Redevelopment Agency (BRA) to speed revitalization of the older commercial area. While the 57 Freeway continued to drain economic activity away from downtown, it also updated and improved access to the area. In 1977, the agency completed its first project, the Brea Mall near downtown. Expanded and upgraded since then, the mall has become the region's second largest, generating \$350 million in sales annually.

In October 1989, the City Council hosted a charter to create a downtown master plan that would reflect the community's vision of a new city center. The charter was broad in scope, designed to elicit comments on both the role, location, and design elements of downtown. The result of this exercise was a vision document that articulated the community's goals and values and created a framework for master planning and development.

The charter process revealed several opinions and findings. In particular, residents felt that:

- Downtown should be the community's symbolic focal point.
- High-quality design and development are needed.
- Downtown should appeal to Breans of all ages and backgrounds.
- Downtown should be linked visually and functionally to the Brea Mall and the Civic Center, including the city's oil industry heritage.
- Downtown should be a 24-hour destination.
- Diverse housing options should be provided downtown.
- Traffic facilities should not carve up downtown activities, but vehicular traffic must be well served.

The ideas and choices articulated during the charter allowed a resource team to follow up with a conceptual plan that included renderings of village-style development.

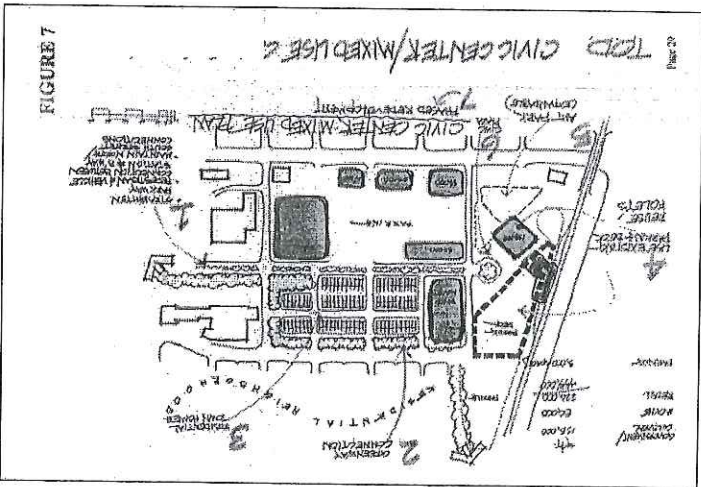
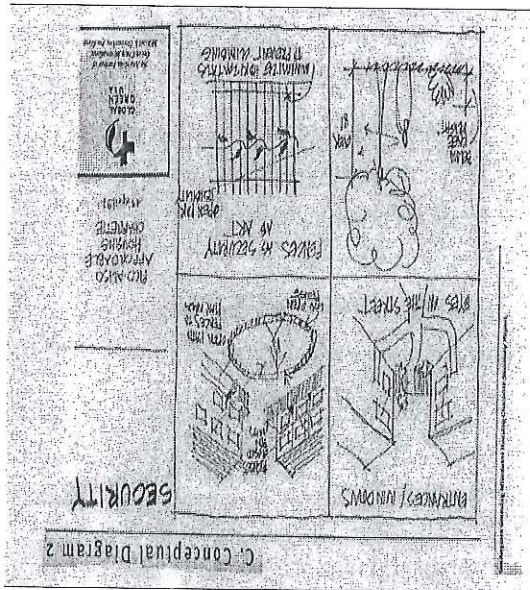


FIGURE 7



C. Conceptual Diagram 2