

Infill Development

I. Introduction

A. Problem Statement

Are you concerned that development is moving farther and farther into the periphery of your community? Does it seem that most of the developable land has disappeared in your community?

Have you noticed vacant lots scattered in good locations and wondered who owns them and whether they might be developed one day?

Are there vacant strip shopping centers in neighborhoods near you?

Are your elected officials looking for ways to get developers interested in investing in some of the overlooked parts of your community? Are there ways to more efficiently use the existing roads, water and sewer rather than extending utilities?

Perhaps your community already has development “popping up” in established neighborhoods. Are residents concerned about:

- houses that don't fit the neighborhood's character?
- loss of mature trees and open space?
- traffic, schools, and drainage problems?

Do you wish there was a way to have this development, but make it more compatible with the rest of the neighborhood?

If you answered “Yes” to any of these questions, then read on!

This tool provides a step-by-step description of how to channel development back into the existing neighborhoods and commercial areas as an attractive alternative to suburban sprawl. It also identifies the issues that must be resolved in order for “infill development” to be good a neighbor. These issues relate to the scale of new development, design of structures, stormwater control and tree preservation. Additionally, the tool describes incentives that can be used to encourage greater redevelopment of underutilized parcels. The incentives include expedited reviews of development, reduced local government fees, and preferential zoning and other incentives used in conjunction with appropriate design guidelines. The tool includes a model infill development ordinance that incorporates these features.



B. What is infill development?

According to the Lied Institute of Real Estate at the University of Nevada College of Business, “Infill development is the construction on vacant parcels of land generally served by utilities and surrounded by older urban growth.” This description could be expanded to include development or re-use of all

vacant or underutilized land. (Las Vegas Review Journal). Infill development occurs in a variety of forms and intensities. While the most prevalent form of infill development is small-scale residential or commercial development, infill projects like the Atlantic Station project, a brownfield redevelopment located on a large site of a former steel mill in downtown Atlanta, may occupy parcels over 100 acres in size and be a virtual new town with a full complement of urban land uses.

C. What is the role of infill development in achieving Smart Growth?

The Atlanta region is especially susceptible to urban sprawl because its growth appears to have no natural boundaries. The perception that there is a boundless supply of inexpensive land for development has caused some of our communities to spread themselves too far, too thinly and too quickly. If this continues, it can pose a risk to our region's economy, infrastructure, and natural resources. This form of growth has led to the development of low density or inefficient uses in relation to the public investment in transportation and utilities in many locations in the Atlanta region and the state. Nationwide, studies of sprawl have advocated infill development as an important antidote to urban sprawl and offers needed alternatives in terms of both housing and lifestyle. Infill development is a strategy that can contribute to many goals of Smart Growth, including:

- reducing consumption of forest and agricultural land;
- increasing access of people to jobs, and jobs to labor force;
- making better use of existing infrastructure and lowering costs of public services such as:
 - transit
 - sidewalks
 - public water and sewer
 - public schools
 - public safety (police, fire, ambulance);
- reducing the time, money ,energy, and air pollution associated with commuting and other uses of single occupant automobiles;
- strengthening real estate markets and property values and renewing existing neighborhoods and housing stock;
- replacing brownfields and abandoned industrial areas with functioning assets;
- adding to socioeconomic diversity; and
- supporting unique cultural, arts, educational and civic functions, such as museums, opera, sports, and universities.



Although many communities are talking about encouraging infill development for its public benefits, in some places, like Fairfax County, Virginia, planners have found that infill development is occurring on its own. After a prolonged period of sprawl, even in the absence of natural boundaries, development may be reaching its economic limits. Recent predictions are that a significant portion of the county's new residential construction will develop or redevelop sites that had once been passed over. One reason for this reversal of sprawl is that large, developable tracts of land that drove development to far reaches of the region during the 1980s and 1990s are disappearing. Developers are returning to more close-in locations in order to take advantage of pockets of developable land that remain where urban services already exist. (Fairfax County, Infill & Residential Development Study, July 26, 2000)

In Atlanta, an important objective of Smart Growth is to improve air quality by reducing vehicle miles traveled by single occupant automobiles. The infill, redevelopment and reuse of vacant and under-utilized parcels within the existing urban area and cities throughout the region can be an economically feasible way to decrease vehicular travel, promote pedestrian usage while reducing walking distances and support transit use. Large-scale infill development can additionally take advantage of transit and other measures to reduce travel demand through mixed-use development. Do not forget that the benefits of infill development are not just moral platitudes - they are financial realities. For instance, in the three cities studied by the Real Estate Research Corporation, commuters from infill residential sites would save an average of \$3,000 to \$4,000 each in annual transportation costs compared to the average commuter living on the suburban fringe.

II. What are the alternatives to infill development?

Greenfield Development - At the regional level, the primary alternative to infill development is "greenfield development" - the continued subdivision and conversion of fields, forests, and other undeveloped land into low-density urban or suburban land uses. These uses are accompanied by more land disturbance for parking lots, streets, power lines, sewer lines, and other public facilities.



Alternative forms of infill development – There are also many alternative forms of infill development, for instance, using residential examples:

- developing one or more new residences on an undeveloped or underutilized site within an existing, established neighborhood;

- developing a relatively large subdivision that is surrounded by other recently developed subdivisions;
- redeveloping an existing subdivision;
- subdividing an existing lot into two or more building lots and adding houses on the newly created lots; and
- demolishing an existing home on a lot and building a larger home incorporating an additional residential unit (“tear downs”).



Similar infill situations apply often in commercial areas where there are redevelopment and infill activities happening at differing scales. New commercial uses often appear as a replacement of a vacant lot or parking lot. Examples include the East Gate Mall in Chattanooga, Tennessee and another failed shopping mall in Winter Park, Florida, where large, blank parking areas were redeveloped with new streets lined with housing and street-oriented retail uses.

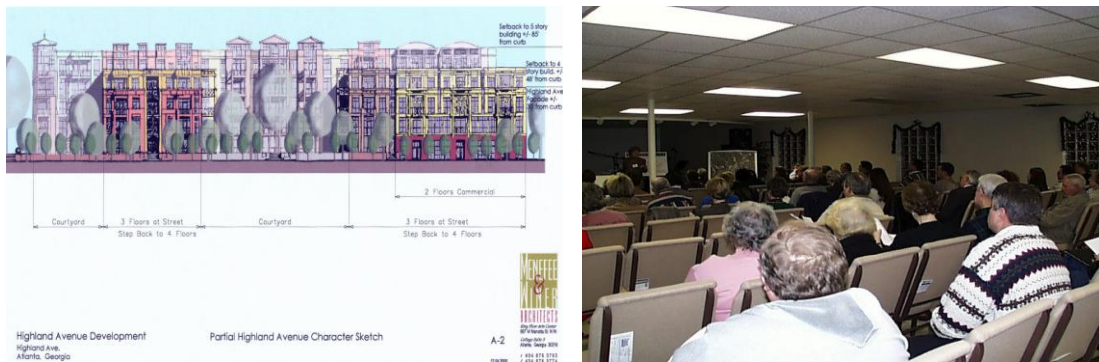
Increasingly, infill development is permitted to include a mixture of uses. This is generally true of large infill developments, such as Atlantic Station, (already described earlier) a large, urban infill development comprised of housing, offices, and retail development that was recently announced on the former Atlantic Steel site in Midtown Atlanta. This type of infill development can offer needed diversity and interdependent land uses that should reduce automobile travel demands compared to single purpose, greenfield developments.

III. Things to Consider to Prepare for Infill Development

A. What you need to do first

If your community intends to prepare the way for successful and harmonious infill development, here are some things to consider early in the process:

Involve the public – Identify the stakeholders in your community – property owners, neighborhood groups, environmental groups, realtors, home builders, developers, and officials from neighboring local governments. Organize public forums in different parts of the community. Go prepared to educate them about the benefits of infill development for your community. At the same time, invite the public to raise their concerns, and take note of their issues before proceeding. Different areas of the community will raise different concerns. Some people may fear that infill will increase density in a way that further exacerbates traffic congestion, when the goal of infill is just the opposite. This process may help establish what type of infill development is appropriate where, and suggest guidelines for different situations. Keep the public involved throughout the process.



Get the facts – As part of the infill development process you should consider creating an inventory of the vacant and underutilized property in your community. Underutilized property should be determined by a close examination of the intensity of uses in relation to infrastructure and location. Does the property have access to adequate infrastructure and services? How is it zoned? This research will be most successful if you have a good mapping system and aerial photos. With the cooperation of the county tax assessor you can compile owners' names and find out if some of the vacant lots are tax foreclosure properties. A Geographic Information System (GIS) would be an excellent foundation for this type of project.

Review plans and codes – Read the Comprehensive Plan and look for data, policies, and projects that support the infill development and the research that you are doing. Also consider ways that the Comprehensive Plan, Future Land Use Map, zoning ordinance, subdivision regulations and building codes present barriers to infill development. This would be a good topic for an open forum in which developers offer their suggestions for code improvements or streamlining that would facilitate infill development. At the same time, experienced staff from other cities could share their experience with the risks and rewards of using more flexible regulations for infill development sites.

Assess the real estate market – Invite realtors and developers to a meeting to discuss how they view the climate of the real estate market. What types of buyers would they expect to be attracted to infill projects? What types of uses would be feasible and what would be the likely density and selling prices?

Consider a pilot study – A good way to judge how successful a community-wide infill strategy will be is to try it out on a small scale. Test the data collection on a portion or district of the community before expanding it to the entire community. Find a completed example of infill development in your community, or in an adjacent community, and find out how well it accomplishes the objectives of Smart Growth, and what the problems were.

B. Relationship to the Comprehensive Plan

The adopted Comprehensive Plan is a good starting point for planning an infill redevelopment strategy. The Comprehensive Plan should provide the goals, objectives, policies, and implementation strategies that guide future development either to

greenfield sites or infill sites. It should also contain data, maps, and lists of community development projects and programs that will influence the future character and shape of the community. Table 1 identifies information from each element that could be used to frame a successful infill development strategy. If your Comprehensive Plan does not encourage infill development, you can make these changes part of the next scheduled update of the Comprehensive Plan and Short Term Work Program.

Table 1: Ways the Comprehensive Plan Can Support Infill Development

Comprehensive Plan Element	Examples of Useful Information	Examples of Supportive Policies
Population Element	Number of future residents by age, income, family size	Celebrate the diversity of incomes, cultures and lifestyles in our community.
Economic Element	Number of new jobs created in the community in each employment classification	Encourage the retention and appropriate expansion of population-serving business opportunities in the central business district.
Natural and Historic Resources Element	Location of fragile areas of natural resources, steep slopes, floodplains that make vacant land unsuitable for further development	Protect sensitive areas, prime forests and other natural resources from unsuitable development.
Community Facilities	Location and capacity of schools, parks, libraries, streets, public transportation, water, and sewer service that would support infill development	Provide for the maintenance and improvement of public facilities in older areas, especially those capable of supporting infill development.
Housing	Age and condition of existing housing stock. Number of new housing units needed to meet projected population growth	Provide incentives for mixed-income housing to be located closer to major employment concentrations.
Land Use	Location and acreage of current supply of vacant and undeveloped land. Amount and location of future development and redevelopment	Promote the preservation of older neighborhoods through appropriate infill and redevelopment where adequate public facilities exists.

C. Administrative and enforcement issues

1. Legal Framework

Encouraging infill development is a widely used public policy that is accepted in Georgia and in other states. No additional statutory authority is required.

However, the specific strategies used to promote infill development can lead to legal issues. Examples are adopting stricter development and design standards for infill sites, and public funding of infill redevelopment efforts. Many of these legal considerations are related to the due process and equal protection clauses of the Fourteenth Amendment to the U.S. Constitution.

a) Due process - The Fourteenth Amendment to the U.S. Constitution prohibits any government action that deprives “any person of... liberty or property, without due process of law”. Four principles of due process relate to the governmental actions used to promote infill development:

- Vagueness - the provisions of the zoning and development codes must avoid imprecise terms that require an undue amount of discretion. An example of a vague provision might be, “Ensure appropriate separation between adjacent structures”.
- Procedural due process - This standard demands that all property owners affected by the proposed infill regulations or public actions be given ample public notice and an opportunity to freely express their opinions.
- Substantive due process - This standard requires that a land use regulation advance a legitimate governmental purpose. Here are some tests to apply this principle:
 - Are the infill regulations based on policies in the Comprehensive Plan or other technical studies that document the public benefits (such as the reduction of vehicle miles of travel the preservation of existing neighborhoods)?
 - Are the specific benefits of infill development cited in the ordinance to demonstrate the public purposes of the proposed regulations?
- Appropriate exercise of the police power - Every part of a zoning ordinance is an exercise of the police power - the power to abridge private property rights in order to protect the public from harm and promote public health, safety, general welfare, morals and aesthetics. The courts have determined that under the Fourteenth Amendment the public benefit from land development regulations must outweigh the property owners’ loss of the value, use, and enjoyment of his/her property. Here are some questions to ask before adopting a new provision regulating land use to promote infill development:
 - Does each provision of the infill development ordinance advance the public health, safety, general welfare, morals or aesthetics of the community?
 - Is the chosen form of regulation the least restrictive means to accomplish the purposes expressed in the adopting ordinance?

b) Equal protection clause - the Fourteenth Amendment to the U.S. Constitution also provides that no state “shall deny to any person within its jurisdiction the equal protection of the laws.” This means that a local government must show that a land use regulation, code enforcement action, or incentive is fairly administered. Here are some questions to ask before adopting a public action to promote infill development:

- Are property owners in similar circumstances being treated equally?
- Is the proposed regulation, code enforcement, or other action being applied to one property owner to the disadvantage or omission of another in the same situation? If so, it must have a rational basis that is essential to achieve the benefits of infill

development or other public purposes documented in the ordinance (Blaesser and Weinstein).

2. Political Concerns and Public Acceptability

Planners that initiate public discussion of the need for more infill development may find that they have opened a classic dialogue between neighborhoods and developers. It is important to be prepared with public education about the advantages of infill development and to offer positive visual images that can allay misplaced fears. Where there are genuine obstacles, move slowly, provide time for all sides of the discussion to be heard, and look for small, comfortable steps that can head the community in the right direction. The most important issue is to be sure that the first instances of infill development are of high quality and set a positive tone.

a) Objections from Local Residents - Sometimes new infill developments do not fit comfortably into existing neighborhoods. This can lead to objections from local residents that express their concerns to elected officials.

In Fairfax County, Virginia, infill housing is being constructed on lots that were bypassed in the first round of suburbanization. These sites are well-located, but have remained vacant because of site-specific problems such as poor drainage, rough topography, poor access, or other difficulties. The issues, associated with infill development, that are cited most frequently in Fairfax County are:

- 1) compatibility of the new development with the existing neighborhood, including lot sizes, house sizes, house orientation, setbacks, and topography;
 - 2) inadequate infrastructure;
 - 3) additional traffic congestion and cut-through traffic;
 - 4) loss of mature trees and open space; and
 - 5) storm drainage and erosion control.
- Neighborhood compatibility - New housing styles may create “mismatches” with the older housing and development patterns of the “host” neighborhood. Since 1975, the nationwide average size of a single-family residential lot has decreased by 17 percent. At the same time, according to the National Association of Home Builders, the average size of a single-family house has increased by over 30 percent, to approximately 2,500 square feet. Consequently, new houses tend to have a larger footprint and greater height and bulk than older homes. This causes aesthetic discord, and also means more tree loss and impervious surface per house.



- Traffic - Increased through-traffic can result when an infill subdivision is built on land that is surrounded by existing subdivisions. The recommended practice for traffic circulation is to extend or connect the streets of new subdivisions into the existing street system. Often this interconnects the infill development with older subdivisions that have houses of another era that had been placed on cul de sacs or stub streets. Residents of the existing homes may have enjoyed being on a “quiet, out of the way” street and become concerned when they learn that traffic entering the new subdivision will pass down the existing streets in front of their own homes.
- Loss of vegetation - Infill development often occurs on a vacant tract of land that was serving as open space with mature vegetation that separated several homes or subdivisions. The new development replaces the previously natural area with impervious surface in the form of rooftops, driveways, and streets. Even if the development has adequate stormwater management facilities, neighbors miss the buffer and are often concerned that the new development will result in stream erosion and drainage problems for them.

b) Concerns from the Development Community - Other concerns about infill development programs may come from home builders, bankers, and developers. Usually this is based on the uphill financial barriers that they face in trying to implement infill development:

- high land prices;
- fragmented ownership patterns make it difficult to assemble minimum land requirements;
- inadequate or aging infrastructure;
- code conflicts;
- brownfield liability;
- difficulty securing financing because of untested market demand; and
- consumer resistance because of the perception of noise, racial tensions, density and crime in urban neighborhoods with which they are unfamiliar.

According the Lied Institute of Real Estate at the University of Nevada College of Business, (Las Vegas Review-Journal, 1998), the foremost obstacles are land costs and multiple property owners. Land costs are estimated to be two to three times the cost of raw land at the fringe, and even at these prices, some land owners are reluctant to sell because they believe the land may be worth more in the future.

Other concerns include:

- Conflicting code standards - Oftentimes in infill neighborhoods, current land development regulations mandate contemporary standards that are different from those that were in effect when the older neighborhood was built. This can result in better standards for some facilities, such as stormwater detention. However, conventional suburban-styled lot regulations can result in mismatches in lot sizes and setbacks when applied in older neighborhoods. In some cases, vacant lots platted before the 1960s are non-conforming and declared unbuildable because the new codes require more frontage, more lot area, setbacks or buffers than will fit on the typical infill lot.

For example, the City of Tallahassee, Florida, systematically demolished houses that had chronic code violations or were tax delinquent. However, in the Frenchtown neighborhood the prevalent house lots that were platted in the 1920s and 30s had been made non-conforming by the contemporary zoning ordinance. Most were narrower and had less area than the zoning ordinance required for construction of a new house in the Frenchtown neighborhood – redevelopment would have required combining and re-platting lots. Individual lots were unbuildable as platted. In order to use such a lot, it would have to be combined with an adjacent lot or the owner will have to request numerous variances, then withstand the risk of delay and possible public opposition. Commercial infill may be similarly affected by updated fire codes, handicapped building access, parking, outdoor lighting, signs and other contemporary code requirements. If applied “by the book” these variations may cause incompatible design features that are visible from the street.

- Inadequate infrastructure – Sometimes the original infrastructure in older neighborhoods is aging, under-maintained and not capable of carrying additional loads. This can apply to a city’s older streets, sidewalks, schools, water pressure, sewer lines, and stormwater management facilities. New land development regulations may require the infill developer to install or improve new infrastructure, such as wider streets with curbs and gutters, piped drainage catch basins, and larger stormwater detention areas. Ironically, these “improvements” may look out of place and prove ineffective if not made on an area-wide basis.
- Socioeconomic perceptions - Demographic contrasts may be an issue with infill. Infill development often mixes urban and suburban, old and young, rich and poor, black and white. These contrasts can become concerns to potential buyers, the developer, and to the existing residents of surrounding neighborhoods. These concerns need to be addressed early on, or else they can become enlarged by public perceptions and become fatal to infill projects.

In order to overcome the barriers to infill development, it is necessary to conceive of strategies that will work from the standpoint of three different stakeholder groups: developers, potential infill residents, and existing residents of host neighborhoods (Municipal Research and Services Center, 1997).

Some strategies to improve the public acceptance of infill development include:

- Establishing task forces of developers and neighbors in target areas in order to facilitate two-way negotiation and draft a specific plan for infill development that addresses public concerns;
- providing technical assistance to developers seeking to develop infill sites;
- reducing regulatory constraints and providing incentives for development;
- preparing marketing strategies that address the questions and concerns of potential residents and tenants of infill development projects; and
- securing funding for public improvements to offset costs of inadequate infrastructure.

3. Administrative Complexity

Depending on the specific strategies undertaken to spur infill development, planning staff and the development community may encounter greater administrative complexity.

However, reducing complexity and red tape should be one of the goals of a good infill program in order to “make it easy to do the right thing”.

Examples of infill development strategies that could add administrative complexity are:

- public acquisition of infill sites to facilitate redevelopment - the acquisition and redevelopment process will require a redevelopment plan to meet state requirements, separate ordinances for each action, property appraisals, and a variety of legal actions.
- financial assistance to developers from public sources - grants and loans from state and federal sources may take months to process, require significant paperwork to assure eligibility and accountability, and often come in the form of reimbursements instead of covering “up front” costs.
- fee waivers, tax abatements and sale of publicly foreclosed property - require action by several boards and filing processes that may be scheduled for only certain times of the year.
- detailed design standards that require multiple reviews and public meetings.

One useful way to streamline regulatory review for infill development is to establish a designated “expeditor” who walks paperwork through appropriate agencies for review or “one-stop” permit processes that bring reviewers together to carry out the review process in a coordinated conference.

4. Costs to Implement

How much does it cost to implement public policy that encourages appropriate infill development? The answer depends on the complexity of the program and the size of the area. Public agencies starting infill development programs will incur two kinds of costs:

- administrative cost; and
- program benefit cost.

Administrative costs are the costs of salary, benefits and related office expenses for additional program staff that are necessary to start up and support the program. For instance, there may be consultants needed to design the program and carry out the initial public participation and data collection. These costs will vary depending on the size of the area, the precision of the mapping, and the quality of data and mapping that is available at the outset. An infill development program in a mid-size metropolitan county might include the following administrative tasks:

1. organizing public involvement;
2. inventorying vacant land;
3. reviewing codes;
4. meeting with property owners and developers;
5. establishing and administering design guidelines;
6. setting up programs to streamline permitting; and
7. providing incentives for infill development

This process could keep an experienced planner busy for 3-6 months and require one to two additional technicians working full time for a six-month period. A consultant contract for a similar project would likely cost \$75 -150,000. Assuming five applications and one round of design review meetings per month dedicated to infill proposals, and an annual

program summary, the administration of an infill development program would require between one-fourth and one-half person year to administer.

Program benefits are the financial outlays for grants and loans, if those are provided through the program. These benefits are costs to the provider for infrastructure improvements, development loans, and other financial incentives used by public agencies to stimulate infill development. Local governments may be able to use Community Development Block Grants, Section 108 grants and loans and other state and federal programs that have matching requirements ranging from 20 percent to 50 percent. The total amount of program benefits are highly discretionary and are dependent on the grant availability from the funding source. A program that entails sale or donation of tax foreclosed property would require little program cost except for administration, and may result in net program income if the real estate market is strong.

In addition to the public costs, it is arguable that the program will also have indirect costs and benefits that may or may not have as financial impacts. One example is the loss of foregone revenue when public land, such as tax-foreclosed property, is given to developers. However, this cost may be more than recouped later through increased property tax revenues from taxable improvements on the subject property. Some Georgia communities are using Tax Allocation District financing to purchase and clear under-utilized land and vacant or dilapidated structures and resell it for redevelopment. This method pledges future public revenues from anticipated development for a specified period of time as a way of financing immediate costs of land acquisition, demolition, and public improvements. The net return on this investment is hard to measure, as it may include increased property tax revenues from stimulation of values on surrounding property.

IV. Case Studies

Case Study: Fairfax County, Virginia Infill Development Strategies

Fairfax County, Virginia has two new initiatives that are designed to stimulate more infill and redevelopment opportunities:

1. Infill and Residential Development Study; and
2. Commercial Revitalization Districts and Areas.

The first is targeted to residential infill development and the second is targeted to commercial redevelopment.

The purpose of this case study is to demonstrate how a local government can proactively involve citizens and developers to improve county land regulations to stimulate infill development without significant public expense.

1. Infill and Residential Development Study

As of January, 2001, the Fairfax County Board of Supervisors is holding public meetings to discuss recommendations of the Infill and Residential Development Study prepared by the Department of Planning & Zoning, Department of Public Works & Environmental Services, and the Department of Transportation. These departments were tasked by the

Board of Supervisors and Planning Commission to evaluate the issues and make recommendations to improve the manner in which residential infill development occurs.

Extensive public outreach has been a key component of the study. Civic associations have been kept apprised of the status of the study and its findings and have been encouraged to attend ten community forums held in different parts of the county to identify issues that need to be addressed. The principal issues identified were:

- density;
- additional traffic congestion and cut-through traffic;
- compatibility of the new development with the existing neighborhoods; including lot size, house size, house orientation, setbacks, and topography;
- loss of trees and open space in the neighborhood; and
- the impact on streams.

Separate teams were formed to make recommendations regarding four of these issues. A selection of recommendations is given below:

Issue: Site Design and Neighborhood Compatibility

Recommendations:

- Allow cluster development by right, provided certain criteria are satisfied, such as increased tree protection.
- Establish a neighborhood conservation overlay district to address compatibility by requiring new development to be consistent with existing neighborhood elements such as lot size, house size, and yards.
- Revise impact analysis methodology to assess cumulative impacts associated with numerous small changes to the Comprehensive Plan.
- Create an award program to recognize examples of residential infill development that demonstrate creative design features that improve compatibility with surrounding development.

Issue: Traffic and Transportation

Recommendations:

- Modify design requirements for streets (width, curvature, and slope) to allow for “traditional street design”.
- Adopt specific standards for traffic calming features and landscaping for residential streets
- Require sidewalks on streets that are suitable for transit service as well as streets that are within walking distance of community facilities and neighborhood retail uses.
- Establish explicit goals and policies regarding the interconnection of local and collector streets.
- Include the provision of connections to existing local streets as a factor in determining the appropriate density of infill development, with higher density conditioned on the provision of appropriate access to the local street network

Issue: Tree Preservation

Recommendations:

- Modify calculations of stormwater retention so as to provide incentives to reduce grading and increase tree preservation in infill development that is displacing forested areas.

- Request conservation easements for common open space in order to provide perpetual protection of forested areas.

Issue: Stormwater and Erosion and Sediment Control

Recommendations:

- Allow the use of bonded matrix fiber products on exposed highly sensitive soils on steep slopes at construction sites in order to reduce erosion that occurs between the time the exposed area is seeded and mulched and when the grass is fully established.
- Facilitate the implementation of bioretention/ biofiltration facilities and underground sand filters in residential areas.
- Encourage the retrofitting of existing stormwater detention ponds to become adequate for water pollution treatment
- Amend the Public Facilities Manual to require a formal adequate outfall analysis in conjunction with review of proposed construction plans and give the Director discretion to require additional measures where runoff will discharge in to an inadequate channel.

Issue: Public Participation

Recommendations:

- Provide more extensive public education and information and informational web sites.
- Distribute comprehensive brochures on the development process, and
- Hold annual seminars on the development process for community representatives.

2. Commercial Revitalization Districts and Areas

In the year 2000, the Board of Supervisors of Fairfax County adopted changes to the Zoning Ordinance and development process designed to enhance opportunities for development and redevelopment in older commercial areas. The adopted Zoning Ordinance revisions recognize that redevelopment and infill efforts are especially challenged by parcels that may be encumbered with:

- underutilized or dilapidated structures;
- lot configurations that require special consideration to become suitable for development; and
- the need for appropriate transitions to adjacent residential areas.

Under this program, in five Commercial Revitalization Districts and two Commercial Revitalization areas within Fairfax County overlay districts were designated and mapped that:

- allows height increases by right from 40 to 50 feet in the predominant commercial zoning districts;
- reduces the minimum required front yard in all commercial districts;
- allows 20 percent reduction in the parking requirements of all nonresidential uses;
- allows Director to approve off-site parking for nonresidential uses that is accessible within 500 feet of the building entrance or by valet shuttle; and
- establishes a special exception use that combines all requested modifications and waivers related to site development waivers, such as open space, setbacks, floor-area-ratios and building heights, into a single application for expedited consideration.

Other strategies are designed to facilitate the review process and save applicants time and money in gaining County permit approval. These strategies include:

- A “lead planner” is assigned to each Revitalization District to convene a review team of the agencies that evaluate zoning applications in order to expedite the zoning review process.
- The applicant is encouraged to attend a pre-application conference with the lead planner to discuss the application process and ways to speed up review and permitting. Applications for rezonings and special exceptions are given an expedited schedule for public hearings before the Planning Commission, Board of Supervisors, and Board of Zoning Appeals. Special treatment includes concurrent processing of rezonings, waivers, modifications or special exception applications.
- After the rezoning is approved, a Project Manager is assigned to serve as the plan advocate through all phases of processing and to serve as the applicant’s primary point of contact and liaison. The Project Manager facilitates site plan review and ensures that the plans are reviewed as efficiently and completely as possible.
- In the building plan review process, Fairfax County provides a walk-thru program that allows commercial infill and revitalization projects to be reviewed by county staff while the customer waits.
- For an extra fee, proposals to change the use of an existing building located in the Commercial Revitalization District may request a team inspection in which different types of inspectors arrive together and provide a written pre-application inspection report in a single trip.

Case Study: Fernwood

The purpose of this case study is to point out that our zoning ordinances can be obstacles to achieving innovative infill design. In the end, the persistence of the developer and a certain measure of flexibility by DeKalb County finally overcame a zoning barrier that would have thwarted the successful introduction of a new housing concept in an upscale suburb of Atlanta.

The Fernwood development is an innovative application of residential infill development in a mixed-use neighborhood adjacent to the Brookhaven MARTA Station in DeKalb County, Georgia. It is located on Apple Valley Road between North Druid Hills Road and Dresden Drive. The developer was Jack Hondred. The development is now in phase 3 and construction of the last two buildings has begun.

The developer, Jack Hondred, wanted to introduce Atlanta to an innovative housing option that has been used successfully in other communities: the “live-work” unit. Live-work units are housing units built in accessible, mixed-use locations that combine comfortable living quarters with a studio or office for one or more of the occupants. Usually the business portion of the house is located on the ground floor and the living quarters are upstairs. This style of housing is actually akin to the “cottage industry” pattern that was a tradition in early American small towns. It is an efficient pattern to re-introduce to contemporary urban life because it eliminates commuting travel for the owner - saving time and energy, and reducing air pollution.

The Fernwood project consists of 72 townhouses on an urban infill site of 6.3 acres, located between a relatively dense residential district and a commercial district. The project’s net density is 12 dwellings per acre. Each unit has professional office space on

the ground floor and two residential floors above. People can live here without a car because it is a short walk to the MARTA rail system, and the surrounding uses include a grocery store, and other retail and conveniences. (For more on Transit Oriented Development, see the Tool Kit on the topic).

There were two major obstacles that Jack Hondred had to overcome.

1. Land assembly: Although the site was relatively small, it had been previously subdivided into 26 individual parcels with 18 different owners. Land assembly required over 1-1/2 years.
2. Zoning: It did not appear that the DeKalb County Zoning Ordinance would allow live-work units. There is virtually no provision for mixing living and working in the same building in DeKalb County. The residential zoning of the property forbade business occupancy except for a narrow exception: a home occupation. Home occupations are considered an incidental use of residential property in DeKalb County, and there are many restrictions - such as strict limits on customer-contacts, storage of inventory, signs, and other outward evidence of business activity.

The developer, who has an office in the same neighborhood, wanted to make the buildings compatible with the residential character of the surrounding neighborhood. Therefore he used an urban residential scale with vernacular architecture, residentially styled, double-hung windows and lots of balconies. As a result, there was relatively little neighborhood resistance.



The arrangement of the units faced outward to the surrounding streets, forming an inner green space that the developer wanted to remain as an urban forest. The developer designed walking paths in the green, but left it undisturbed to encourage animal habitat. In addition, the developer installed a \$40,000 bridge to an adjacent park and partnered with the county in building a walking path in the park, and planting trees.

The zoning conflict was overcome in the case of Fernwood by variances made to the County's provisions for home occupations in the Zoning Ordinance. The variances only apply to Fernwood, and another home occupation will have to seek its own resolution. Fernwood is allowed to sell the live-work units subject to the following conditions:

- no more than 33 percent of the floor area of each unit may be used for the occupation;
- no more than two outside employees per occupational use; and
- each business is limited to no more than 6 client visits per day.

Case Study: Crossroads at Gwinnett Place Mixed Use Development

Crossroads at Gwinnett Place is a “Smart Growth” example of infill development in a sprawling suburb of Atlanta. It demonstrates the power of a flexible zoning ordinance to attract a plan that is more innovative than would be possible with a conventional ordinance.

The story of the Crossroads at Gwinnett Place begins with developer, Steven Gaultney, who saw an opportunity to develop a unique parcel of land that Norfolk-Southern Railway had decided to place on the market. The parcel totaled almost 200 acres of undeveloped property and was located adjacent to a rail spur and between two major arterials in the heart of fast-growing Gwinnett County. Surely it was one of the last remaining undeveloped parcels of this size in the county. The parcel was zoned M-2 (Heavy Industrial) and had been held off the market by Norfolk-Southern for over forty years while the rest of the county had grown around it. It was truly an infill site - surrounded by developed land. It was also a transitional location from a land use perspective - located in between medium density residential subdivisions and a number of manufacturing and warehouse uses such as lumber supply, steel fabrication and plywood manufacturing. It also lay directly across from a large community park.



According to Gaultney, the site had excellent rail and highway access. It could have been developed, without rezoning or public hearings, as a massive industrial park containing over 2 million square feet of industrial and manufacturing uses. However, this would mean paving over the headwaters of the Brumolow Creek which traversed one portion of the property, and creating a nuisance for the abutting neighborhoods. Therefore, Gaultney foresaw a better outcome for himself and the community - a mixed use development with housing, jobs, and supportive retail development. He also envisioned the need to provide a new

parkway through the length of the property that would serve as a connecting link between the two major highways that framed two sides of the property. A new bus system for Gwinnett County was also planned to pass by the property along one side, and Gaultney wanted to attract the bus route to use the new road so it would pass through his property on its way past Gwinnett Place Mall, about three miles away.

The Crossroads at Gwinnett Place is currently under construction as a mixed use development containing four uses:

- 150 townhomes on approximately 18 acres;
- 650 one-bedroom and two-bedroom apartments on approximately 50 acres;
- 425,000 square feet of retail space on approximately 48 acres; and
- 1,070,000 square feet of warehouse-distribution on approximately 80 acres.

The site plan, shown below illustrates how the uses were arranged on the site so that the distribution uses are abutting the existing manufacturing uses. On the other side of

the parkway townhouses and apartments provide a transition to the single-family neighborhoods along the southern boundary of the site.



The site plan contains a number of Smart Growth features and amenities:

- 20 percent of the site is to be maintained as natural and undisturbed open space.
- Residential units are clustered to preserve open space, including the floodplain along Brumolow Creek which passes through the property.
- Parking areas are to be located behind buildings or screened from main roads.
- There will be five-foot wide sidewalks and an eight-foot wide multi-use trail alongside the parkway, connecting the residential and commercial components of the site, and eventually connecting to Shorty Howell Park across Pleasant Hill Road.
- There is a large recreational area that will be shared between the residents of the townhomes and apartments.
- The commercial development will be constructed with residentially-scaled buildings placed near the street, with most of the parking on the sides and rear instead of in the front yards.
- Architectural standards require offsets in the building facades and arcades, alcoves, porticoes, awnings, or covered walkways that protect pedestrians from sun and rain.
- The commercial parcels will share driveways and have interconnections within the development to minimize traffic weaving in and out of the busy arterials.
- The central parkway will be lined with street trees, sidewalks, underground utilities, the multi-use trail, and landscaped areas on both sides.

The primary obstacle faced by the developer was re-zoning the property. While county planners were supportive of the concept, the county zoning ordinance would require separate zoning districts for each of the contemplated uses. There would have to be multiple variances to satisfy the county's buffer and setback requirements. By contrast, the neighboring municipality of Duluth had a zoning ordinance that allowed mixed uses and was eager to accommodate Gaultney's plans. They agreed to annex the property and encouraged Gaultney to offer the mixed use concept for rezoning as a Planned Unit Development.

Gaultney took his time at the early stages of the project, meeting with the neighborhoods inside and outside the city, and discussing his plans with them. The vast majority of the neighbors supported the plan. In order to address their concerns about traffic, Gaultney paid for a traffic study and hired a traffic engineer to design traffic calming measures for one of the abutting neighborhoods. The Atlanta Regional Commission reviewed the proposal as a Development of Regional Impact and found it consistent with its Regional Development Plan and exemplary of many of its Best Land Use Management Practices. The project has also been nominated for the Atlanta Business Chronicle's "Best Mixed Use Project" award.

V. Lessons Learned

Below is a summary of the key issues addressed in this review of infill development:

Benefits of Infill Development - The principal benefits of infill development include:

- making better use of urban land supplies while reducing consumption of forest and agricultural land;
- increasing access of people to jobs, and jobs to labor force;
- making better use of existing infrastructure and lowering costs of public services;
- reducing the time, money, energy, and air pollution associated with commuting and other use of single occupant automobiles; and
- renewing older neighborhoods and housing stock.



Barriers to Infill Development - From the developers' point of view, deterrents or barriers to infill development compared to greenfield development include:

- higher land costs and infrastructure costs;
- peculiar lot size, shape, topography; and
- neighborhood resistance to density.
- Higher density is often needed to recoup the financial costs of land and infrastructure.

From the standpoint of existing residents in neighborhoods experiencing infill development, there are many reasons to oppose infill development. The most common ones are:

- concerns about density;
- impact on property values;
- increased cut-through traffic;
- loss of mature vegetation; and
- drainage problems.

The Paradoxes of Infill Development

In reality, infill development raises several paradoxes:

1. Infill development represents a sizable land supply with locational advantages, but it is harder to assemble and more expensive than land used for greenfield development.
 - Potential land supply - Infill development represents a sizable, but latent, land supply in many major cities in America. An in-depth study by the Real Estate Research Corporation of the urbanized areas of three major metropolitan areas was commissioned by the U.S. Department of Housing and Urban Development (H.U.D) in the late 1970s. It found that there were 10,000 acres of suitable residential infill land in Miami; 24,000 acres in Seattle; and 13,000 acres in Rochester, New York. These properties could satisfy all future residential growth for the next ten years in metropolitan Rochester and Seattle, and two-thirds of the residential land needs in metropolitan Miami. This land supply is “latent” because most realtors and local governments are unaware of the magnitude of these opportunities. Unleashing the potential of these properties through appropriate promotion and incentives, could significantly reduce the cost of land and public services throughout their metropolitan areas.
 - Difficult assembly - The rewards of infill development may require considerable effort to harvest. Infill lots tend to be small. Many may be 1/2 acre or less in size. However, some of these tracts may be bordered by other vacant lots or underutilized lots that could be redeveloped and assembled into larger tracts.
 - Expensive land - Land price is a significant issue in the infill process. An infill study by the (HUD) found that infill land in stable, middle-income neighborhoods can be as much as 12 times as expensive per acre than raw land at the metropolitan fringe. Although the initial infrastructure and site development costs of infill development may be significantly lower than for greenfield sites, the increased cost of land for infill development often more than offsets these advantages.
2. It is often true that infill development is good public policy because it makes effective use of existing infrastructure capacity, but in many cases, this assumption needs to be closely analyzed. In fact, infrastructure capacity varies. Therefore, the benefits from better use of existing infrastructure depend on how well the existing infrastructure was constructed to begin with and how well it is being maintained today. Sometimes when infill development occurs, the infill developer gets blamed for pre-existing problems that are common in older in-town neighborhoods— drainage problems, inadequate water pressure, under maintained streets, lack of sidewalks, and deteriorating parks.
 - Is infill development worthwhile? In these cases, the existing infrastructure is not an effective drawing card for infill development. This is a paradox because inner city neighborhoods need upgraded infrastructure, whether or not they develop infill parcels. Once constructed, new infill projects will buoy the economic power of these neighborhoods and spread the cost burden of the upgraded infrastructure among more users. The question is, should the infill developer bear all the cost of upgrading a neighborhood’s infrastructure to modern standards?

- Long-term benefits - The true public benefits of infill development are the reductions in long-term service costs, reduced commuting costs, and the social and environmental benefits that accompany infill development. For instance, in the three cities in the H.U.D. study, commuters from infill residential sites would save \$3,000 to \$4,000 apiece in annual transportation costs compared to the average commuter living on the suburban fringe. (Real Estate Research Corporation, 1982).



This means that even if infill development makes good regional policy, it can be an uphill battle for developers and local governments without close public/private partnerships, technical and financial assistance, regulatory change, and incentives. The Appendix contains a comprehensive list of actions, incentives, opportunities, and cautions for selecting strategies for infill development programs.

Table 2 outlines the specifications of the optimal infill development site.

Table 2: The Optimal Infill Development Site

The Context	The Property
<ul style="list-style-type: none"> • Viable market area • Compatible, well-maintained surrounding properties • Receptive local government • Absence of environmental problems • Workable land development regulations • Good public services 	<ul style="list-style-type: none"> • For sale at realistic price • Sufficient size for intended use • Perceived market for intended use(s) • Adequate utilities in place • Street frontage • Regularly shaped developable parcels • No major topographic, drainage, or subsoil problems • Appropriate zoning • Potential development profitability compared to alternative sites

Source: RERC, Infill Development Strategies. 1982.

VI. Implementation Guidelines

The following is a step-by-step process for implementing an infill development program:

1. Establish public involvement - Identify stakeholders and form a task group or steering committee that is capable of representing the various points of view in the community and working together toward a common agenda. The stakeholder may include:
 - neighborhood organizations;
 - property owners;

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- realtors;
- home builders and commercial developers;
- bankers;
- government staff: public works, planning and zoning; transportation; tax assessor; school district; and
- government officials: planning commissioners; commissioners.

2. Prepare work program - The initial work program, schedule and budget should address desired work described in steps 1 through 17. Leave the remaining steps unbudgeted until decisions are made about how to proceed at step 18.

3. Review Comprehensive Plan - Identify data on availability of infrastructure, community facilities, housing, and land use.

4. Identify appropriate goals of infill development and prepare supportive framework of goals and policies for the Comprehensive Plan:

- economic development;
- increase land supply for market rate housing;
- provide affordable housing;
- increase utilization of existing infrastructure, such as transit; and
- revitalize neighborhoods.

5. Design data base - Use Geographic Information Systems, if available, to map and analyze the impacts of potential infill development. Discuss with the public and identify priority areas for infill development of appropriate types. Consider a Pilot Study for testing inventory and database procedures.

6. Carry out infill parcel inventory - Acquire coverages and compile data from aerial photos and tax assessors' maps. Find out how much vacant land exists, where it is, and how it is zoned. Research tax delinquencies, code violations or complaints that can be traced from the Code Inspector's files. Inventory and map infill potential, considering vacant lots, tax-foreclosed properties, and under-utilized or under-maintained properties. Carry out field work to verify and complete data files. Enter maps and data into Geographic Information System (GIS) at parcel level and add other coverages, including public facilities and infrastructure, soils, floodplain, wetlands and topography.



7. Prepare photo log – Perform a windshield survey in the most sensitive areas. Look for street and drainage problems, crime and safety problems, and dump sites on vacant

lots. Also photograph landscaping, tree canopy, site design, subdivision, and architectural features that could support guidelines for compatibility.

8. Compile Infrastructure inventory – In the areas where infill development is most likely, identify the age, condition, and residual capacity available for schools, water, sewer, parks, sidewalks, public transportation, streets, and stormwater drainage. Consider the ramifications of connecting streets through from the new to the existing neighborhoods. Refer to the community’s Comprehensive Plan and Capital Improvements Program for useful information. Determine what deficiencies are likely to occur in priority areas and whether there are planned improvements already budgeted. Consider alternative ways to finance infrastructure improvements.

9. Market assessment – Enlist assistance from realtors and developers to talk about the market trends and economic feasibility of infill in various parts of the community. Tell them what goals the community seeks for infill development. Ask their opinions about what market types, densities, and price ranges are likely to be feasible. You may need to consider incentives for desirable forms of infill development.

10. Ascertain availability for sale - Survey a sample of owners of vacant lots with infill potential to classify the types of owners, how long they have owned the property, their expectations for use of the property, and their interest in selling or developing their property.

11. Classify and prioritize infill parcels – Evaluate the inventory of infill parcels and prioritize their developability and their contribution to achieving Smart Growth objectives in your community. Evaluation measures include:

- size of parcel;
- configuration of parcel;
- size, condition, quality, and value of existing structures;
- character of the neighborhood;
- dynamics of real estate market;
- capacity and condition of infrastructure; and
- surrounding amenities and support services.

12. Review regulatory framework of zoning, land development regulations, and fire and building codes. Anticipate where there will be non-conformities and conflicts that could lead to unbuildable lots, multiple variances, or discordant appearances. Consider establishing a code review committee to draft code revisions, special overlay districts, and guidelines for compatible design.

13. Review efficiency of permitting process - Consider the permitting process and ways to streamline reviews of infill projects. Consider the staffing requirements for administering the infill program, including the proposed code changes.

14. Evaluate barriers to infill development, such as

- zoning;
- permitting;
- financing;
- environmental constraints;
- political resistance; and

- socioeconomic perceptions.

15. Present your data, analysis and findings - Brief public officials, prepare public presentations for stakeholder groups and neighborhoods.

16. Design an action plan to address the most significant barriers, such as:

- revising zoning, land development, and building codes;
- preparing design standards for compatibility;
- improving infrastructure, public services, and neighborhood amenities;
- encouraging development of convenience goods and services;
- applying for brownfield grants, wetland delineations, and environmental mitigations;
- arranging for tax abatements, financial incentives, Sect. 108 loans, bonds, TAD, grants and loans to builders;
- financing; and
- preparing public education for staff, neighborhoods, and technical assistance for developers.

Match strategies and forms of assistance to sites.

Consider a pilot project - a quick success to tune up process.

17. Prepare budget for action plan.

18. Gain community acceptance and official approval for infill development action plan.

19. Begin implementation.

20. Track progress, address problems, and publicize success.

VII. Additional Resources

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Model Ordinance Provisions

The following model ordinance is drawn primarily from one prepared by the Oregon Transportation and Growth Management Program.

Purpose and Intent

[An explicit purpose and intent statement helps to clarify the legal and policy basis of incentives for infill development if they are challenged in court. They also provide direction for interpretation and discretionary decisions. This purpose statement can be tailored to support the community's vision and its objectives for infill and redevelopment.]

The purpose of this district is to encourage infill development in areas with existing infrastructure investments as a means of achieving balanced growth with efficient land use and cost-effective delivery of urban services. The provisions of this district recognize the design challenges inherent in developing successful infill properties, and ensure that new development is consistent in character and scale with established neighborhoods and business districts.

The specific objectives of this ordinance as related to infill and redevelopment are to [select or modify as appropriate]:

- allow flexibility in housing location, type and density within the densities allowed by the Comprehensive Plan;
- provide flexibility in lot size, configuration, and vehicle access to facilitate infill development;
- provide clear development standards that promote compatibility between new and existing development and promote certainty in the marketplace;
- encourage development of needed housing in close proximity to employment and services;
- promote neighborhood preservation and enhancement through redevelopment of blighted distressed, and underutilized properties;
- provide standards of 'historic appropriateness' for redevelopment and alteration of historic buildings;
- encourage mixed use development to complete neighborhoods and provide housing close to jobs;
- encourage development and preservation of affordable housing through infill development.

Applicability

[This section answers the questions, "When? Where? How? and By whom? the code standards are applied. Choose one of the two alternative applications provided by this section. The first option applies infill development standards generally in the ordinance "by definition" as a "floating zone" without pre-determined geographic locations. It then can be applied at the developer's option whenever and wherever the specified conditions of applicability pertain. The second alternative is applied when the infill provisions are contained in a mapped overlay district within fixed geographic limits.]

Option 1 - Standards applied “by definition”:

These infill development standards shall apply to all lots and parcels that are adjacent to developed land on two or more sides. “Developed land” means lots and/ or parcels that have the following urban services with adequate capacity located at or near the property line: public water, public sanitary sewer, stormwater management facilities, and access to a public street.

Option 2 - Standards applied “by district”:

This district implements the Infill Development Overlay District [IDOD]. The provisions of this district apply to all parcels designated “IDOD” on the official zoning map.

All land uses and development, including buildings, drives parking areas, landscaping, streets, alleys, greenways, tree protection, and pedestrian/bicycle ways, shall be located and developed in accordance with the provisions of the zoning ordinance and land development regulations, except as modified by this chapter.

Permitted Uses

[Some infill development districts could allow non-residential uses at a residential scale to increase the jobs-housing balance and to provide a mixed-use transition between existing residential and commercial developments. Design standards are necessary to ensure compatibility].

Accessory Apartments

Definition: An accessory dwelling is a secondary unit permitted on a single family lot. The additional unit can be a detached cottage, a unit attached to a garage, or in a a portion of an existing house.

Standards:

1. The structure must comply with all residential building, health, safety, and fire codes.
2. A maximum of one accessory dwelling unit is permitted per lot.
3. The accessory dwelling shall not exceed 650 square feet in floor area.
4. Accessory units may contain no more than one bedroom and no more than one bathroom.
5. No accessory dwelling unit shall be permitted on lots containing less than 5,000 square feet.
6. The exterior appearance of an addition or detached accessory dwelling unit shall be architecturally compatible with the primary residence. Compatibility includes coordination of architectural style, exterior building materials and colors, roof form and pitch, window style and placement and landscaping.
7. Separate entrances shall be oriented towards the side or rear yards.
8. The placement and design of windows on detached accessory dwellings shall ensure privacy for abutting properties. Privacy is maintained by orienting windows away from sight lines (i.e., above or out of view into adjacent yards or opposing windows of adjacent dwellings) or by using obscure glass.
9. A minimum of one parking space shall be provided for each accessory dwelling. The parking space may be provided on a street in front of the lot, if on-street parking otherwise permitted.

See the Mixed-Income Housing Tool Kit for more information about accessory apartments.

Non-residential Uses

The following non-residential uses are permitted as neighborhood conveniences as infill uses on residentially zoned lots. Buildings may be new construction or alterations to existing residential structures, Non-residential buildings shall not to exceed 3,000 square feet of heated space per lot. Lots must having at least 75 feet of frontage on a public street, be located on a corner lot across from other commercially zoned property or along a street abutting office or commercial development on at least one side, not including the rear property line:

1. Neighborhood Retail Sales and Services uses listed below are permitted subject to design review and conformity with design standards below.
 - Child Care Center
 - Restaurant, excluding drive-through service.
 - Laundromats and dry cleaners
 - Neighborhood convenience store, excluding sales of gasoline, kerosene or diesel fuel.
2. Lodging - limited to Bed and Breakfast Inns, subject to the design standards below.
3. Personal and professional services listed below, not to exceed 3,000 square feet of heated space per lot and subject to design standards.
 - Medical and dental offices and clinics
 - Counseling services
 - Barber shops, beauty shops, nail and pedicure, and similar uses
 - Attorneys, life insurance, real estate sales, and repair services except for auto related repair and services
 - Uses similar to the above when approved by the Planning Director.

Design Standards for Permitted Non-Residential Uses

Neighborhood commercial, personal and professional uses, and Bed and Breakfast uses permitted above shall conform to the following design guidelines:

Location and Access:

1. Permitted non-residential uses shall be located adjacent to non-residentially zoned property or on corner lots which are contiguous to commercial uses on at least one opposite corner.
2. The site shall have frontage on a collector or arterial street.
3. When two or more such uses abut one another, driveways shall be at least 100 feet apart or be provided by a shared driveway subject to a cross-access easement.
4. No building shall contain more than 3,000 square feet.
5. If more than one use shares a single building, no single use shall contain less than 1,000 square feet.

Hours of Operation.: 6 a.m. to 10 p.m.

Outdoor Storage: No outdoor storage shall be permitted.

Waste containers: All waste containers shall be enclosed by a wall or opaque screening.

Parking areas. The following vehicle parking standards shall be met:

1. On-street parking may be credited toward the minimum parking requirements except where otherwise prohibited.

2. All off-street parking must be provided in the rear or side yards and screened by an opaque wall or landscaping at least four feet in height.
3. No commercial vehicle may be parked on the street or on the premises over night except in an enclosed garage or basement.

Setbacks for Buildings in Established Areas:

[The intent of these provisions is to provide flexibility in meeting the setback requirements, so that lots that have remained undeveloped and parcels legally existing prior to 1960 and which do not conform to present-day lot width and lot area requirements, may be developed without the necessity for variances.]

Front Yard Setback

When a new or redeveloped building is proposed to be constructed on a lot adjacent to one or more existing structures having the same or similar permitted use, then the setback for the proposed building shall be not more than five feet greater than the average setback of the two closest buildings on the same side of the street. In the case of a corner lot, or where an adjacent lot is vacant, the setback of the proposed building shall be not less than five feet more than the average of the front yard setback of the adjacent building and the minimum front setback required by the underlying zoning district.

Side Yard Setback

1. For infill development, the minimum required side yard may be met by computing the average of the area lying between the side wall of the main building and the side property line, divided by the length of the side wall.
2. The sideyard setback shall be met by all portions of the applicable side of the building except for roof overhangs, gutters, downspouts, cornices, chimneys, and uncovered or unenclosed decks, driveways, or porches.
3. No portion of a side wall of a proposed structure, including roof overhangs, gutters, downspouts, cornices, chimneys, and uncovered, or unenclosed decks, driveways, or porches be closer than three feet from the adjacent property line.
4. The distance between the closest points of adjacent residential structures in a single-family detached zoning district shall not be less than fifteen feet.
5. Zero-lot line buildings require an access easement not less than ten feet in width running the entire length of the side wall to be granted by the adjacent property owner and filed as a covenant running with the titles for both properties.
6. The placement and design of windows on the proposed building shall support privacy for the occupants of the abutting lot. Windows on the portion of a side wall directly opposite an existing residence that is closer than fifteen feet from the proposed building shall be limited to obscure glass or similar material approved by the Building Inspector.

Lot Size Averaging

[Lot size averaging allows the developer flexibility to establish lots on properties of irregular shape or topography. Exterior lots should be consistent with abutting developed lots.]

When a new infill subdivision of not fewer than five lots and not more than 25 lots is proposed, the minimum lot area required in the applicable zoning district may be satisfied by the average area of all lots in the subdivision, provided that no lot shall have a lot size of less than 75 percent of the minimum lot area required by the Zoning Ordinance and proposed lots that abut an adjacent lot containing an existing

residence shall have no less than the minimum lot area required by the zoning district in which it is located.

Building Height

[For infill compatibility, building heights need to reflect those of adjacent buildings.]

For a proposed new or enlarged building located between two existing buildings in the same zoning district, the maximum height measured at the highest point along a roof or highest ridge line of the proposed building may be no higher than five feet above the average height of the adjacent buildings measured in a like manner. Chimneys, flues, vents, pipes, antennae, and other small projections less than 24 inches in width shall not be included in the above measurement.

Architectural Standards

All new development (residential and non-residential) shall be of a compatible design with residences located on the same block and shall follow these design standards:

1. Building materials shall be of siding, brick, stone or other materials that are similar in color and otherwise in common with other buildings located on the same block face.
2. Buildings shall not be more than 150 feet in length and shall not exceed six attached units in one building.
3. Buildings shall provide offsets, projections, and or recessed entries located at least every 30 feet along a facade facing a public street.
4. Buildings shall use at least three of the following design elements along the facades facing public streets:
 - dormers
 - gables (pitch not less than 4:12)
 - recessed entries
 - covered porch entries
 - cupolas
 - pillars or posts
 - bay or bow window (minimum 12 - inch projection)
 - eaves (minimum 6 - inch projection)
 - off-sets in building face or roof (minimum 16-inches)

APPENDIX

TOOLS AND TECHNIQUES FOR ENCOURAGING INFILL DEVELOPMENT			
Needed Actions	Possible Incentives	Target Opportunities	Cautions
Stimulating Developer Interest in Infill Development	Training programs/seminars/publicity campaign	Outreach to builders, developers, and realtors through professional associations and the news media	May have to go outside the region for speaker who have had success with infill development.
	Parcel files; information on prototype projects	Comprehensive; or only for special uses (multi-family; industrial)	Needs careful staff supervision
	Design competitions	For scattered small lots; for large areas offering unique opportunities	Needs volunteers to serve on review committees and needs funds for prizes.
Removing Obstacles Created by Government			
Reducing delays in project reviews	Reform of staff review procedures	Small scale projects	Must assure adequate citizen participation
	Elimination of unnecessary hearings	projects requiring variances or special use permits	Requires cooperation of many city departments and staff members
	Creation of ombudsman or expeditor	all projects; or just those involving assisted housing or employment generation	Obstacles in state enabling legislation
Correcting excessive or inappropriate standards	Re-examination of code provisions; encouragement of performance-based requirements	All infill projects; Most important for redevelopment and rehabilitation projects	May encounter resistance from staff; building trades, or neighborhood groups; results will not be immediately visible.
Improving zoning balance (not enough multi-family land;	Comprehensive review of zoning map and/	Designated neighborhoods as part of	May encounter resistance from neighborhood and

overzoning for industrial uses)	regulations	neighborhood planning process	property owners depending on the types of changes proposed. Must be based on sound market analysis.
Creating Neighborhood Support for Infill Development	Prepare neighborhood plans with explicit strategies for dealing with vacant lots.	All neighborhoods with infill potential	Neighbors must see advantages for existing housing and businesses as well as the developer if they are to be convinced; developers must be flexible and willing to listen
	Project review meetings with developer in advance of official hearings	All projects likely to generate controversy	May also need to meet neighborhood groups in advance
Addressing Market Weakness or Uncertainty	Demonstration projects involving local development corporations and neighborhood interests	Low-and moderate-income neighborhoods, especially for projects providing jobs and/or increased shopping or services	Builds confidence if successful; high risk; limited expertise in dealing with risky situations
	Loan guarantee	Projects in areas with poor image but location advantages (near jobs, transit, major institutions)	Risk of unsuccessful projects requires expertise of experienced builders and banks
	Below-market financing through mortgage revenue bonds, Tax Allocation District, CDBG or Section 108 financing	Target neighborhoods and projects where special financing terms can act as a magnet to households or businesses who would otherwise locate at the urban fringe	Federal regulations limit flexibility and specify eligibility criteria; need for careful market studies.
	Greater attention to	Low-and moderate-	Concern over long

	maintenance and rehabilitation	income neighborhoods	term displacement of the poor
	Visible public commitment to upgrading public works	Target neighborhoods	Political resistance to targeting on a neighborhood basis
	Interim uses (parking, gardens, play areas)	Areas with established neighborhood organizations that will assume maintenance responsibility; areas with open space or parking needs	High maintenance burdens; resistance to future change
Addressing Site Specific Problems			
Reducing the high cost of infill land	Land price write-down	unique opportunity to achieve public purpose	high costs if used extensively; adverse political impacts from using public funds to subsidize strictly private projects.
	Tax abatement	Definite project with committed developer	Concern regarding foregone tax revenues
	Leasing of publicly owned land	Varies; generally used for housing developments priced for low/moderate-income occupancy	Careful lease structuring needed to protect public interest
	Density bonuses; permitting variances from side-yards or setbacks to allow greater coverage	Projects with exceptional merit, e.g. mixed-use projects; projects incorporating assisted housing; transit-supportive infill developmen	Need to assure design compatibility with suuounding areas; possible opposition of neighbors.
	Forgiveness of delinquent back taxes	Definite projects with committed developers	Legal obstacles in some states.
	Downzoning	Areas where permitted densities do not match local	Objections of landowners; potential legal

		housing market preferences	challenges
	Fee Waivers	All infill projects	Fees are not a high proportion of project costs; effects are more psychological than financial
	Impact Fee Waivers	Projects with extraordinary employment benefits or affordable housing	Subject to fee replacement from other funds.
Increasing land availability	Land assembly	Definite projects with committed developers	Expensive; legal limitations on use of eminent domain powers
	Land banking	Areas with extensive scattered parcels; high incidence of tax delinquency	Expensive; may require enabling legislation; land may not be marketable in the short run; especially in weak markets
Correcting infrastructure	Public funding of off-site capital improvements (minor street and utility extension or upgrading)	small-scale infill projects, especially for affordable housing or job-creation in distressed areas	Reluctance of elected officials to target limited capital dollars to new development; need for flexibility in CIP.
	Tax allocation district	Larger projects, especially mixed use	State approval and regulatory limitations
	Community Improvement District	Commercial and industrial areas covering both infill and rehabilitation	Majority of commercial property owners must be willing to participate
	Greater flexibility and creativity in plan review	All infill projects	Resistance from city public works/engineering staff to deviation from standards

