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Research Report
Research Project T9903, Task 46
Less Auto-Dependent

**HOW DO YOU IMPLEMENT LESS AUTO-
DEPENDENT URBAN FORM?**

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Executive Summary	vii
Purpose and Method.....	vii
Findings and Recommendations	vii
Introduction	1
Changing Policies	1
Implementing Change	2
Example Communities and a Case Study	4
Basis for Research.....	5
Related Literature.....	7
Study Approach.....	9
Approach to Theory	9
Urban Management Theory	9
Urban Conflict Theory	10
Market Model of Urban Development.....	11
Application to Less Auto-Dependent Urban Form	12
The Case Study Approach.....	12
Findings	15
General Theory	15
Planning Principles	17
Value and Visualize "Places Where People Want to Be"	17
Adopt Public Plans	19
Hire and Support Strong Professional Managers	19
Have a Collaborative City Council That Will Defend the Vision	21
Make Public Investments to Make the Place Desirable	22
Regulate Growth to Balance Conservation and Development.....	27
Help Developers Obtain the Resources They Need	36
Summary and Conclusion	38
References	39

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1.	Urban Management Concepts	

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1.	1990 Characteristics of the 10 Most Compact and Complete Communities along I-5 in Washington	5

EXECUTIVE SUMMARY

PURPOSE AND METHOD

The purpose of this study was to help planners and policy makers implement urban form that is less auto-dependent in suburban communities. This objective was accomplished by developing a general theory about the production of less auto dependent urban form and a set of planning principles for leaders to follow based on the theory. The theory was derived by synthesizing established theories of urban change. The principles followed from the theory, and both were tested and illustrated in a case study of Kirkland, Washington, which has made significant progress toward less auto dependent land use patterns since 1970.

FINDINGS AND RECOMMENDATIONS

Both the theory and case study suggest that urban development patterns are created by the actions of and interactions between the public and private sectors. These sectors respond to feedback given by consumers and citizens, as well as to goals and values, available resources, and development rules. Certain conditions in this process will result in greater density and mix in suburban communities. Paramount among these conditions are increased access and amenities in order to attract development and to avoid an anti-development public backlash. Certain planning principles can help produce these conditions. They include the following:

- *Value and visualize “places where people want to be.”* Values and vision drive both public policy and market behavior. People want to be in places that include amenities such as waterfront parks and human-scaled and pedestrian-oriented shopping districts. By having a clear vision of what it wants and by placing high value upon the vision, a community can motivate itself to accomplish changes that

will both attract new development and retain public support for change as it occurs.

- *Adopt public plans.* Long-range city, district, and neighborhood plans show how both vision and values can be implemented. They inform and educate, and they provide guidance to both shape and strengthen the resolve of leaders as individual development and investment decisions are made.
- *Hire and support strong professional managers.* Highly capable city managers and department heads provide the stable, professional expertise needed to achieve change in suburban communities. In particular, skills in working with elected officials, financing public investments, and negotiating successful development are essential.
- *Have a collaborative city council that will defend the vision.* The city council should have the capacity to see an issue from all sides and to protect every neighborhood in the city. It must also be committed to its plans and able to defend them in the face of criticism. Plan implementation requires stability and consistency, which will not occur unless adopted plans are defended.
- *Make public investments to make the place desirable.* Public spending on parks and other amenities creates the desirability that will attract private investment. In addition, it maintains public support for community growth policies.
- *Regulate growth to balance conservation and development.* Land use controls should be fair and predictable to encourage quality, innovative development. They should also be tough in regard to protecting quality of life in the community. A balance must and can be struck between facilitating growth and insisting that it be well done. This includes channeling growth away from "sacred spaces" in the community, such as stable, single-family neighborhoods and prized areas such as waterfronts and main streets.

- *Help developers obtain the resources they need to develop.* An adequate land supply and access to efficient permitting are essential if the development process is to successfully build more compact and complete communities. Cities can adopt regulations that ensure these are available.

The case of Kirkland, Washington, shows that these principles can work in a real world setting to produce progress toward less auto-dependent urban form.

INTRODUCTION

In response to legal requirements, grass-roots movements, and the work of transportation and environmental agencies, efforts are under way throughout Washington and the U.S. to reduce traffic and air pollution. Local and regional governments are responding with transportation and land-use plans aimed at reducing auto use. Increasingly common features of these plans are policies to create urban development patterns that are less auto-dependent and more transit-oriented.

This study was aimed at improving the capacity of public agencies to implement these plans. This report presents general strategies that communities can use to make their physical form less auto-dependent. The principles come from urban development theory and are illustrated by a case study of Kirkland, Washington.

CHANGING POLICIES

A growing body of literature suggests that a variety of changes in urban form could reduce the number, length and proportion of trips made by single occupant vehicles (SOVs) (Ewing 1994, Ewing 1997, Cervero and Seskin 1995, and Parsons Brinkerhoff Quade & Douglas, Inc., 1996). These changes include higher densities; more land-use mixing; greater jobs-housing balance; lower SOV parking supplies and road capacities; improved facilities for alternatives to SOVs; better connected street and pedestrian facilities; and street, site, and architectural designs that increase the usability and safety of SOV alternatives.

The City of Everett illustrates the response of local government agencies. In 1994 it adopted the *Everett Growth Management Comprehensive Plan* and included within it a number of policies intended to create less auto-dependent urban form, such as the following:

- "promote increased densities...in all residential neighborhoods
- "consider allowing...small scale, compatible neighborhood retail uses within walking distance of all homes in neighborhoods
- "improve the pedestrian system and public transportation system serving each neighborhood
- "promote high density residential use in well designed, mixed commercial developments and activity centers...where a mix of uses will promote...support of transportation facilities
- "require new commercial development to be pedestrian friendly and compatible with public transportation service
- "[create] land use designations in proximity to high capacity transit stations [that]...provide for a variety of uses which support the needs of commuters and area residents...
- "in designated activity centers and corridors...manage the supply and location of off-street parking to support a balance of travel modes...
- "develop a network of pedestrian pathways and bicycle trails...with connections to adjacent neighborhoods."

The adoption of these kinds of policies by a growing number of local governments is a victory of sorts for proponents of multi-modal travel, but it will be a hollow one if the policies do not change how development actually occurs. Although many plans do shape growth, American city planning is also notorious for its implementation failures.

IMPLEMENTING CHANGE

There is a sizable literature on how cities must be shaped if they are to become less auto-dependent. However, very little is available on what we must do to effect these changes. Aside from manuals that list the kinds of regulations or funding tools that a community might adopt to implement their policies, almost no empirical research is

available on what separates communities that have successfully implemented less auto-dependent development from those who have not. Planners are left with the educated guesses of well meaning individuals who recommend unproved strategies that may or may not work.

What we do know about implementation comes from studies of other policy agendas. The lessons there suggest that it takes more than the adoption of land-use controls, such as new zoning and subdivision standards, to successfully implement public policies. Non-technical considerations such as leadership, governmental capacity, and commitment also can be critical. These kinds of issues are not yet addressed in the implementation strategies of planners seeking to implement less auto-dependent urban form. Instead, they simply rely on lists of capital projects or new regulations they hope to adopt.

The City of Everett *Growth Management Comprehensive Plan* again provides an illustration. It includes implementation ideas with each of its plan elements. However, these are limited to a description of changes Everett would make to design guidelines, development regulations, and capital improvement programs. The implementation strategy does not address the range of regulatory, administrative, political, and other factors that will likely affect the city's ability to change its urban form.

Implementing policies to reshape urban form could easily fail in Washington as the effort as already failed elsewhere. Such policies are a break from past development trends, and there are market, political, and bureaucratic forces that will push for the status quo. Failure would create a very real problem at many levels of society. The success of aspects of local planning, private development, state and local capital investment, and even federal law depend on the policies' implementation.

On a more immediate level, local planners, the Washington State Department of Transportation (WSDOT), and regional transportation planning organizations (RTPOs) are

responsible under the state's Growth Management Act (GMA) for recommending actions necessary to implement planning policies. They presently have few sources to turn to for those recommendations.

EXAMPLE COMMUNITIES AND A CASE STUDY

Luckily, other places may help provide some answers. Many communities have made strides toward less auto-dependent urban form. Over the past decade or more, communities in Washington and elsewhere in North America have successfully limited parking supplies, increased density, mixed land-uses, and created other aspects of a new urban form. A few better known examples include Portland's downtown parking cap, downtown Bellevue's center development, and the dense residential development in Seattle's Denny Regrade. Many lesser known examples can also be found.

A previous project by the author to study trends in transit oriented development discovered several cities in Washington that exhibit less auto-dependent development patterns (Pivo, Hess and Thatte 1995). Table 1 lists the 10 most compact and complete communities in metropolitan areas along the I-5 corridor, as measured by employment density, housing density, jobs-housing balance, and retail-housing balance. They range in size from Bothell, at only 12,000 residents in 1990, to Seattle, with over 500,000. A related project by the author found other examples of cities that exhibit transit oriented form in Oregon and British Columbia (Pivo 1996).

Real world examples can provide both positive and negative lessons to others who are committed to moving in the same direction. They may also be the successful models that some are looking for before they will make a commitment to change. This project was devoted to searching out factors that can help communities implement less auto-dependent urban form policies by highlighting one place that has already moved in that direction—Kirkland, Washington. It used a case study approach to look for the economic, political,

Table 1. 1990 Characteristics of Ten Most Compact and Complete Communities Along I-5 in Washington (density given in jobs or units per square km).

<i>Place (total standardized score)</i>	<i>Job Density (standardized score)</i>	<i>Housing Density (standardized score)</i>	<i>Adjusted Jobs-Housing Balance Sq (standardized score)</i>	<i>Adjusted Retail-Housing Balance (standardized score)</i>	<i>Total Population</i>
1. Seattle City (93)	2021.62 (25)	1146.11 (25)	1.39 (19)	1.11 (24)	516259
2. Kirkland City (73)	837.94 (10)	651.46 (14)	1.01 (25)	1.16 (23)	40052
3. Tacoma City (71)	821.67 (10)	603.88 (13)	1.07 (24)	1.11 (24)	176664
4. Vancouver City (69)	955.53 (12)	574.28 (13)	1.31 (21)	1.08 (24)	46380
5. Edmonds City (67)	620.53 (8)	684.45 (15)	.71 (21)	.88 (24)	30744
6. Richmond Highlands (66)	510.76 (6)	806.91 (18)	.50 (18)	.88 (24)	26037
7. Des Moines City (65)	576.47 (7)	844.56 (18)	.54 (18)	.62 (21)	17283
8. Burien (65)	524.67 (6)	687.00 (15)	.60 (19)	1.05 (25)	25089
9. Federal Way (63)	491.41 (6)	551.49 (12)	.70 (21)	1.03 (25)	67554
10. Bothell City (60)	601.42 (7)	373.74 (8)	1.27(21)	1.16 (24)	12345

regulatory, and social factors that most helped Kirkland move in a new direction. It examined the early struggles Kirkland had in implementing its plans, and the report presents recommendations on actions communities can take to increase the likelihood that their plans for less auto-dependent urban form will be implemented.

BASIS FOR RESEARCH

This project is a logical extension of previous research by the author and furthers *A Strategic Plan for Researching Urban Form Impacts on Travel Behavior* (Pivo and Moudon 1992). That plan was prepared at the request of WSDOT's planning office and recommended a systematic approach based on literature reviews and interviews with experts and policy makers in the field.

The research approach included three areas of inquiry. The first area included studies on how urban form affects travel behavior. *Relationships Between Land Use and Travel Behavior in the Puget Sound Region* (Frank and Pivo 1994) was a first effort under that heading and is being supplemented by additional work currently under way. The second set of projects recommended in *A Strategic Plan* fell under the heading of market studies and were aimed at examining how less auto-dependent urban form fits into market trends. *Trends and Patterns in Transit-Oriented Development* (Pivo, Hess and Thatte 1995) was a WSDOT research project that tracked changes in urban form that affect auto dependence. The project presented in this report falls within the third part of *A Strategic Plan* which generally deals with how public policy can help implement urban forms that reduce driving alone. With the completion of this project, WSDOT has become fully engaged in a comprehensive and strategic approach to researching urban form and travel behavior.

One of the results of *Trends and Patterns in Transit-Oriented Development* was the discovery of communities in Washington State that have experienced land use changes between 1970 and 1990 that can reduce auto use. They were good candidates for case studies in this project. For example, higher population density is known to be associated with shorter auto trips and higher transit mode splits. *Trends and Patterns* uncovered several places in Washington that became denser during the study period, including the cities of Kirkland and Des Moines, both in King County, between 1970 and 1990. These cities experienced population density increases of 473 and 248 dwelling units per square km, respectively. They now rank among the 25 densest places in Washington State. Other results from that study concerning employment density, jobs-housing balance, and land-use mixing uncovered a number of communities that were good candidates for the case study in this report.

RELATED LITERATURE

As was briefly mentioned, a literature review done for this study found almost no empirical work on the factors that influence the implementation of less auto-dependent urban form. One exception is a recent pair of case studies on two neighborhoods in Vancouver, B.C., that were built in the 1960s and 1970s on the basis of principles that are now referred to as neo-traditional design. The studies focused on the role that an interactive consultative process had in the successful development of False Creek and Champlain Heights (Hardwick 1994). Another exception is a theoretical article on redesigning suburbs for transit and walking that concluded that successful implementation depends on supportive metro-scale land use and transportation plans (Atash 1993). There have also been a few studies on implementing specific land uses that are known to be less auto-dependent. For example, the author's article on suburban office clusters in Toronto is one example that focused on creating empirically grounded guidelines for the implementation of regional plans for suburban centers (Pivo 1993).

Although little work has directly addressed the study problem, a good deal of related work has been conducted. This work can be divided into six categories. The first category includes guidelines on how to implement less auto-dependent urban forms (Pivo, Moudon and Loewenherz 1992). Although most of these documents focus on what the form should be, they also pay some attention to regulatory devices (such as minimum density standards) and implementation strategies (such as public-private partnerships). They do not provide empirical evidence of which actions are most important, however.

A second category of related work includes studies on implementing urban development that has some similarities to less auto-dependent development. *Downtown, Inc.* (Frieden and Sagalyn 1989) is one example of this kind of work. It offers case studies of how central cities revitalized retail activity with festival marketplaces and other actions.

A third category includes more general works on implementation and urban development in urban planning. For example, Dalton (1989) studied the value of incentives versus regulations. Other examples include *Successful Communities*, a report by Mantell, Harper and Propst (1990) on implementing growth management and the study by Pivo, Abbott and Perkins (1992) on factors that affect the use and effectiveness of growth management plan implementation tools.

A fourth category of related studies are those that address the implementation of public policies in general. This is a very large body of work that is found in the political science and public policy literature and is covered in a number of journals and textbooks devoted to the subject. These studies provide clues about both impediments and catalysts for change, many of which are probably relevant to urban form and transportation policy.

A fifth category of work looks at the creation of planned change from a more theoretical and political-economic point of view. These documents are found in the planning literature and emphasize issues such as the importance of social movements in creating change.

A sixth category of useful material comprises journalistic accounts and case reports of specific projects and plans that have elements of less auto-dependent urban form. These reports can be found in professional magazines such as *Urban Land* and *Planning* and newsletters such as those of the Conservation Foundation's *Successful Communities* and the Urban Land Institute's *Project Reference Files*.

STUDY APPROACH

The goal of this work was to help planners improve their capacity to reshape cities into places that are less auto-dependent. In practice, planners benefit from having both general principles to guide their work and specific, real world examples to refer to. Therefore, an effort was made to produce both theoretical principles and specific examples.

APPROACH TO THEORY

Three theoretical frameworks provided the basis for the principles contained in the findings. The first, referred to as “urban management,” seeks to present a set of concepts that explain how change occurs in urban development. The second, “urban conflict theory,” seeks to understand the competition that occurs between urban users and developers over who will control the direction of urban change. The third framework is the market model of urban development, which explains what type of development works in different locations. The first theory is used below to explain how change occurs, while the second and third explain the direction change will take.

Urban Management Theory

The urban management model employed here was taken from Wallace Smith’s book entitled *Urban Development* (1975). His original model is presented in Figure 1. It shows the major elements that influence the development of urban areas and how they interact. Briefly, the model points out that the kind of development that occurs (referred to in Smith’s model as Land, Buildings and Infrastructure), which in this case would be less auto-dependent urban form, depends on production decisions made by the public and private sectors. Both sectors, Smith reminds us, make decisions about what to build on the basis of feedback received from either the market place or the community. In addition, the two sectors require resources and are shaped by institutions. Finally, the private sector is influenced by “rules of the game,” such as zoning standards, set by the public sector.

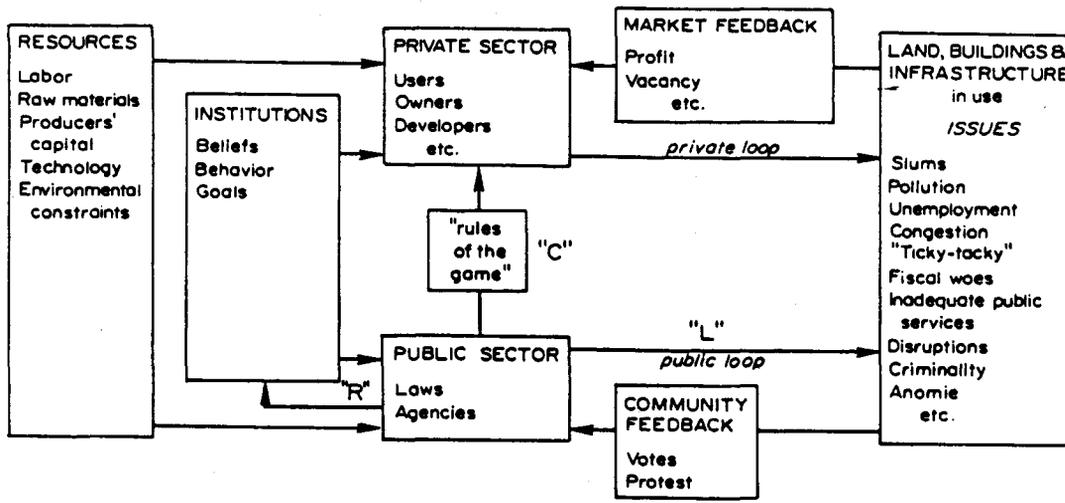


Figure 1. Urban Management Concepts (Smith 1975).

Urban Conflict Theory

Smith's model does not describe the specific conditions that will produce less auto-dependent urban form, only the processes that these conditions will affect. To understand the conditions that are likely to produce less auto-dependent urban form we need to supplement Smith's model with the notions of use value and exchange value from urban conflict theory. Use values refers to the qualities sought in urban environments by residents, such as livability, accessibility, and security. Exchange value refers to enhanced property values sought by land investors and developers. Urban conflict theory says that there is a continuous struggle in cities between interests promoting these two values. Some want to plan land uses that will protect the qualities of life that they prefer, whereas others want to plan in a way that makes money for land owners and investors.

Unless there is a balance between the production of use and exchange value in a community, less auto-dependent form cannot be produced. If development occurs solely to make money, then, according to Smith's model, community feedback will push the public sector to set rules of the game that stop development. If, on the other hand, nothing is done to enable development to profitably occur, then the market will not support private sector investments in higher density or mixed-use development. Thus, only by balancing use and exchange values will a community be able to sustain the production of less auto-dependent urban form. Such a balance will produce higher densities and greater mixing of land uses that are not blocked by negative community reaction.

The management of this balance is the responsibility of the public sector in most cases, although a privately developed, master planned community, for example, certainly could be managed according to similar principles. The motivation to choose this balanced approach comes from believing in both the need for this balance and the goal of building less auto-dependent form, both suggested under the concept of 'institutions' in Smith's model.

Market Model of Urban Development

The last concept that is important comes from the market model of urban development. The model suggests that density can be increased in a certain location by increasing the location's accessibility and amenities. Both features raise the location's desirability, inflate the location's land price, and stimulate greater density as the market substitutes capital for land in order to adjust to higher land prices. In the suburban context, where jobs are scarce relative to housing, improving the mix and balance of land uses requires attracting jobs. Insofar as jobs are generally attracted to accessible and, increasingly, high amenity locations, improving a location's accessibility can also increase its mix of land uses.

Application to Less Auto-Dependent Urban Form

This report will argue that the production of less auto-dependent urban form (e.g., greater density) can result from investments made by the public sector in accessibility and amenities. These investments stimulate market demand, which causes the private sector to build denser housing and create more jobs. To the extent that development regulations both support development and ensure that it preserves community character, the private sector will be further encouraged and the community will remain neutral. However, if highly valued public amenities are disturbed, community activists will try to halt this process. It is also necessary for leaders in both the public and private sectors to believe in improving the community and to seek an equitable balance between public and private interests. These sectors are really not as separable as Smith's model suggests. They often work together to promote development in what Logan and Molotch (1987) have called the "growth machine." Finally, it is important that both public and private capital, as well as developable land, be available as basic resources for the development process to proceed.

These concepts provided the basis for a general theory and specific planning principles, which are presented and discussed below. First, however, the methods used to validate the principles are presented and discussed.

THE CASE STUDY APPROACH

The case study method was chosen to provide empirical evidence to support the theoretical principles presented in this study. This approach was chosen because of the large quantity of primary data collection and the diversity of variables required for the study.

One of the more important characteristics of case studies is that their findings should not be generalized to apply to other cases. Cases can be used to generalize to a theory, but the theory should not be assumed to be applicable in all circumstances until it has been tested with additional studies. Therefore, the responsibility for generalizing falls

on the case reader or user. He or she must determine whether the facts of the reported case fit another situation. Like courtroom judges, case readers must decide for themselves whether previously reported cases set appropriate precedents for their own circumstances.

The case selected for study was Kirkland, Washington. Kirkland was selected because of the considerable progress it has exhibited in developing less auto-dependent urban form over the past few decades. In particular, the city has become much more dense and better balanced between the 1970 and 1990.

According to census data, Kirkland's dwelling unit density increased by 61 percent between 1970 and 1990, growing from about 400 to about 650 dwelling units per square kilometer. This increase of 250 units per square km was about 2.5 times the median increase experienced by all other Washington cities and census designated places during the same period. Even if the area that was inside the Kirkland city limits in 1970 is examined in isolation, ignoring changes in density caused by annexations during the 20-year period, dwelling unit density still increased 57 percent.

Another indicator of the progress Kirkland made toward becoming more compact is the average density of new single family lots. Whereas the typical city in King County developed fewer than 2 lots per acre of land used, Kirkland developed more than 5 lots per acre of land used (based on data available for the 1982 to 1992 period).

Census data also show that Kirkland's land-use mix was a nearly perfect balance of jobs and housing in 1990. In fact, its adjusted jobs-housing balance was almost exactly 1.0, or an equal number of jobs and employed residents. Things were quite different in 1970. At that time the city had roughly half the number of jobs it needed to employ its residents.

Statistical data on the quality of pedestrian facilities were not readily available, so they were not used as a major element in selecting cases; however, most experts who are

familiar with Kirkland would agree that it has made substantial progress in this area as well.

FINDINGS

As will be shown below, the Kirkland case is consistent with theoretical planning principles for implementing less auto-dependent urban form. In this section the theory is introduced in the most general terms. It is then discussed as a more detailed set of planning principles whose validity is supported and illustrated by the Kirkland case study.

GENERAL THEORY

For a typical suburban bedroom community to become less auto-dependent, it must increase both its job and housing densities. In addition, the growth in job density must be greater than the growth in housing density to improve the mix and balance of land uses in the community. A further requirement is that the community improve its pedestrian facilities and other urban design elements that encourage pedestrian activity.

It is possible to accomplish these objectives through public actions that enhance the accessibility and the attractiveness or livability of the community. By preserving and enhancing local aesthetic quality, desirability, and accessibility, the community will increase the demand among firms and households to locate there. This will bid up land prices and consequently development densities. Just as important, if quality of life is improved as development occurs, the public will remain supportive and not produce an anti-growth backlash.

A community wishing to achieve these results should recognize that certain specific actions are likely to be most productive. These actions include the following:

- preserve and enhance natural environmental amenities
- protect highly valued single family residential areas and other “sacred spaces” in the community from large-scale redevelopment projects
- make public improvements to existing residential areas

- provide top quality public parks and civic spaces, particularly adjoining water resources
- firmly regulate new development to ensure it meets high quality design and environmental standards
- maintain a developer-friendly permitting process that is inexpensive, fair, fast, and flexible
- preserve or produce a human scaled, pedestrian-oriented central shopping district.

These specific activities will produce both the market demand and residential satisfaction that are the keys to successfully changing the density and mix of existing suburban communities.

The major threat to this process is from public backlash against development. As long as the area remains accessible to the region and presents reasonably high public amenities, it will be attractive to private development and densification. However, if the development begins to change places that are highly valued for conservation by the community, or if the change is too rapid and concentrated, the community will react politically and take measures to slow or halt further densification.

To successfully achieve this balance between residential satisfaction and development attraction, community leaders must be motivated by a set of values and visions that recognize the importance of environmental quality, human scale, balanced growth, shared responsibility, and civility. In addition, the community must have at its disposal certain resources, including capital, management skill, land, and natural or built amenities and historic resources.

By combining this specific mix of resources, institutional values, and public actions and regulations, a suburban city can produce responses from both the marketplace and the community that are supportive of changes toward less auto-dependent urban form.

PLANNING PRINCIPLES

Value and Visualize “Places Where People Want to Be”

In Smith’s framework, the behavior of both the public and the private sector are driven by beliefs, behaviors, and goals. He refers to these as “institutions,” not in the organizational sense but in the sense that they are the traditions, the customs, and the culture that motivate action.

In the case of Kirkland, reference was frequently made by newspaper articles and informants to the “vision” that drove Kirkland’s policies. The city was said to have a vision, certain officials were referred to as visionaries, and the good that befell the city was said to have started with a vision.

There were two central elements to the Kirkland vision. One was to preserve and provide public access to the Lake Washington waterfront, and the second was to protect the downtown district as a human scaled, pedestrian oriented shopping area with links to the waterfront.

I think, I honestly think, it started from a vision...City councils 30 years ago started acquiring land for parks and public access to the waterfront. That was before Kirkland was popular. That was a vision...There were people who saw some things before this was the place to be and put some things in place that have helped that... Former city official

Attitudes and values underlying this vision included what Jerry Link, speaking in 1975 as the planning director, called Kirkland’s “cautious approach to growth.” The city manager at the time, Alan Locke, echoed the caution that existed when he said that Kirkland had “no interest in growing just to be bigger.” He recognized that the city would get denser, but he said it wanted to hold onto its small town charm.

The waterfront, in particular, was prized as a community resource and environmental amenity. One proposed development project on the downtown waterfront in the early 1970s produced newspaper quotes that illustrate the point. “If you have a string of towers along the lakefront, you’re Bellevue, not Kirkland,” said one city council

member. “Comparing Kirkland to Bellevue is like comparing Washington state to California,” said a local shopkeeper. The writer summed it up this way: “Kirkland sees it as a choice between ecology and economics.”

This high regard for the downtown waterfront dates back to at least the late 1950s. According to the city’s 1963 Comprehensive Plan, a Waterfront Coordinating Committee representing all interested groups in the city was formed in 1959. This led to the preparation of the 1960 Waterfront Plan by the Planning Commission, which envisioned the park, plaza, boardwalk, and boat facilities that are there today.

Leaders wanted Kirkland to be a place where “people want to be” and in fact have recently made that their city motto. But this value existed a long time ago. In 1971, for example, city manager Locke said that the primary goal was “development of an enjoyable place to live.”

It’s not known when and how these values took hold in the community; however, they were given expression in policy documents and by references to other places the leaders hoped to emulate. There was a conscious effort to connect values to development. One former official said in a recent interview that the reason leaders built parks and installed art was because they were trying to follow their vision of becoming a place “where people want to be.”

Sausalito and Carmel, California, and Vancouver, B.C.’s, Granville Island were referred to as places that inspired Kirkland’s efforts. These places were recognized for having the human scale, charm, and vitality that Kirkland wanted to achieve. Having real examples to point to made their own vision seem possible.

These visions and values are found in numerous city plans adopted since the early 1960s. One succinct policy statement that summarizes the policy direction that has guided the city for the past few decades is the 1975 Land Use Guidelines, which were composed

during the work on the 1977 Land Use Policy Plan. The guidelines were clearly an effort to protect and enhance the city's quality of life. According to the guidelines,

- The natural environment must be preserved.
- Growth must not exceed the city's ability to provide services.
- Downtown business must not proliferate beyond the population's ability to support it.
- Downtown must be waterfront and pedestrian oriented.
- Commercial strip development will be limited.
- The town will retain single family residential character.

Adopt Public Plans

Planning documents developed with citizen and expert assistance can help articulate what a community is trying to achieve. They give a point of reference for citizens, officials, and developers and form the basis for implementation actions by public managers.

Kirkland's development was guided by several plans during the study period. The 1960 Downtown Waterfront Plan has already been mentioned. Others include the citywide comprehensive plans of 1963 and 1977, the Shoreline Master Program of 1974, the CBD Plan of 1970, and the citywide comprehensive parks plan adopted in the late 1960s. In addition, the City of Houghton, which was consolidated with Kirkland in 1968, had its own 1960 Comprehensive Plan and 1965 supplement.

Hire and Support Strong Professional Managers

Having professional staff who are skilled in both articulating and carrying out a vision is a key ingredient to changing urban form. A strong city manager and planning director are necessary, as is strong leadership in other specialized areas such as the parks department. The leadership should work as a team in the sense of sharing common goals. They should know how to work with people and negotiate compromises among competing

interests. They should have the ability to stand up to developers who would make changes that are inconsistent with the community's values. One of the more important skills for the staff to have is knowing how to finance public improvements. The staff should be patient when working with elected officials. Staff should have the ability to both educate officials about technical topics and understand their values. Finally, staff should engender respect among the elected and appointed bodies so that their actions are given political support and adopted with minimal delay.

There is wide agreement that the fortunes of Kirkland improved in the late 1960s when it changed forms of government from having a strong mayor to having a city manager. With a strong mayor, the city did not have the professional management capacity it needed to accomplish its goals. One newspaper account put it this way:

Townspeople say things started changing for the better in 1965. It was then that the Kirkland City Council recognized that their existing strong mayor form of government, being subject to political winds, was not suited to coordinate the many changes that were needed to restore Kirkland's vitality. (Hale 1976)

To give an example, the 1963 Comprehensive Plan recommended that a downtown waterfront park be built, but it was not until the city hired its first city manager who knew how to obtain federal grants that it began to implement its vision. Together with the parks director, who is remembered for his grant writing abilities, the management team got the city moving toward accomplishing its objectives. As one informant put it:

The [downtown] waterfront park had been talked about. Alan Locke (the new city manager) came from a city in Minnesota that had done a lot of waterfront projects. He saw the need for a comprehensive park plan to get the federal money. So he wrote the plan in one weekend and passed it in one month. Every one of the parks in the plan are the parks in Kirkland today...Locke knew there were lots of federal dollars for recreation land and Dave Gray, the parks director, was a master at writing the grants so it impressed the grantors.

By virtue of their talent, vision, and pragmatism, the staff enjoyed the support of the City Council, creating a unified government that could move forward on various issues.

One informant put it this way:

The council didn't rubber stamp staff work but it had a lot respect for what they sent up.

Another stated that

...the planning staff had vision that the council immediately saw the logic in.

Describing the confidence the council had in its city manager, one former council member simply said,

If Al liked it, I liked it.

Have a Collaborative City Council That Will Defend the Vision

Elected leaders play a critical role by setting the rules for development, making investments in public infrastructure and services, and providing the beliefs and values that guide a city's development. The council must work as a unit, must be able to make compromises and implement its vision. In addition, the council should represent both those in the city concerned with promoting real estate values and those concerned with preserving and improving community character. If it can represent both of these perspectives and work as a team to reach good compromises, a policy balance can be struck that encourages development and maintains public support for growth.

These characteristics were found in the Kirkland city council. First, the council knew how to compromise.

...early on they learned to compromise. They could accept compromise. Our council could have battles, and go have a beer after....We had a few council people who did not like compromising. They did not last very long.
Former city official

Second, the council contained both business and neighborhood interests

We had a dynamic council created by having both business and neighborhoods represented. Former council member

Third, the council followed its own plans for the city.

Elected and appointed officials have been very careful and rigorous about applying those policies [from the comprehensive plans]...in a very intelligent and consistent way. Former city official.

Make Public Investments to Make the Place Desirable

Public investments in access and amenities serve two purposes. First, they make an area more attractive to development by creating a place where both firms and households want to be. Accessibility is valuable to firms and households because it enables them to make trips to employment, shopping, and recreational destinations throughout the region. Amenities are important because firms are increasingly interested in locating in communities that are attractive to their workforce and executives and because households place a high value on quality of life.

A second purpose for investing in access and amenities is that they enhance the satisfaction that residents have with their community. This is crucial for maintaining the public support necessary for ongoing change in the physical environment. If people perceive a decline in quality of life, particularly in suburban communities, they will produce anti-development backlash that can result in growth controls, such as down-zoning or annual growth limits, that stall efforts to produce less auto-dependent urban form.

Accessibility is a multifaceted concept today that involves multiple modes of travel to locations throughout a metropolitan area, as well as to information sources through cyberspace. Amenities is perhaps even more multifaceted insofar as different types of households and businesses may be attracted to different types of amenity values. However, it is possible that some amenities are nearly universal and have proven to be highly attractive to many types of people over many generations. Two of these more universal amenities are waterfront access and vibrant, pedestrian-oriented, human-scaled

main streets and marketplace districts. Across nations and generations and in contemporary urban settings, these amenities are nearly always strong attractions to urban development.

In Kirkland, accessibility was altered in three major ways that increased the demand for growth. The first was the installation of the State Route 520 floating bridge across Lake Washington, which opened in 1963 and made Kirkland a 10- or 15-minute drive to Seattle. As one informant put it,

Until the Lake Washington floating bridge went it, Kirkland was really a sort of backwater.

One newspaper account from 1988 put it this way:

The new bridge was a conduit for growth and mobility. No longer would people...have to drive around the lake or take the Mercer Island bridge...Otto Shneewind, an 80 year old Kirkland resident, says the bridge has helped bring many changes to the Eastside community. "It was a nice little town, with three drugstores, two real good restaurants, a couple of barbershops and a bowling alley," he said. "Now we have apartments and condominiums by the glory."

The second key increase in Kirkland's accessibility was caused by the tremendous employment growth during the 1970s and 1980s in downtown Seattle and at the University of Washington, both just a short distance from where the 520 bridge met land in Seattle. Third was the emergence of the City of Bellevue, immediately south of Kirkland, as a true central city employment center during the same 20-year period. All of these changes increased the centrality of Kirkland in relation to the economic engines of the metropolitan region. Relocating businesses and households, alike, were more attracted to Kirkland than before by its greater regional accessibility. Quite significantly, this is happening again in the 1990s as, just beyond Kirkland's eastern boundaries, the City of Redmond, home to Microsoft, is emerging as a major center of high tech employment.

Kirkland also made a number of improvements to its own amenities which enhanced its attractiveness to newcomers and the quality of life of its existing residents. City leaders were conscious of its opportunity in this regard:

Economics is a game of finding competitive advantage...We have a setting.
former city official, quoted in Better (1973)

One newspaper writer suggested that this strategy was not always known to city leaders:

In recent years Kirkland's downtown promoters, searching for a theme, have considered gimmicks such as "Olde England." But Kirkland's theme has been there all along. It is reverence for the city's history and preservation of the natural elegance of its setting. (Better 1973)

However, the opportunities presented were in fact recognized at least as early as the 1963 comprehensive plan, which stated:

The location of the Kirkland business center on the shore of Lake Washington is an asset most unique and should be capitalized on as a distinctive feature of the community.

Also, in 1971, then city manager Locke seemed well aware of a conscious strategy to "work the aesthetics":

A new hospital, a progressive school system and a variety of cultural attractions including art galleries and theater groups, help attract residents to Kirkland. One thing we consider important are our natural amenities. We are working toward creation of a series of waterfront parks interconnected by trails to other community facilities and schools...We have been striving to become a truly 'people oriented' city. (Buckley 1971)

The most significant actions the city took to improve its amenities were the installation of a string of waterfront parks and a waterfront trail along the Lake Washington shoreline, the acquisition of wetlands and other natural areas throughout the city, the development of neighborhood parks and other improvements, the construction of ball parks and a public swimming pool, and several improvements to the downtown, including improved parking, a waterfront park and plaza, public art, pedestrian facilities, historic architectural restoration, and upgraded retailing.

One 1992 newspaper account captured the attractive powers of the human-scaled downtown this way:

It's difficult to imagine Kirkland without its low-key downtown. Even in the pouring rain there's something comfortable and charming about Lake Street, the main drag that leads visitors through the heart and soul of the city. It's a part of the city that feels like a sort of yuppie small town with its art galleries, restaurants, bakery, waterfront parks, bookstores and boutiques.

Another columnist discussed the overall emphasis on amenities in 1976:

It is the sense of stability as well as Kirkland's feeling of smallness and the emergence of an active art and cultural interest, that have been the foundation of Kirkland's rebirth..."Kirkland wants to keep its small town flavor," says Chuck Morgan. "That and the emphasis on history and the arts, is what makes the city appealing. We can't imitate Bellevue, and don't want to. We have quality of life here. We're not going to lose it."

The crown jewels of Kirkland's amenities have been its parks, particularly those along the Lake Washington waterfront. Eight waterfront public parks are placed every one-third to two-thirds of a mile along the shoreline and cover roughly 25 percent of the 5.5 miles of shoreline. Another 25 percent of the shoreline is accessible by public trails and easements. According to one newspaper report, Kirkland had more park land per capita in 1976 than any city in the State of Washington.

Several of the waterfront parks were former industrial sites. The downtown's Marina Park was a gravelly parking lot. It was the first park to be built and was financed with a local park bond passed in 1967 and a federal grant. After the bond, parks began appearing at the rate of almost one a year.

In addition to the parks, there were many other improvements to the city's amenities. Although the city was an important player in most of these, not all were the result of strictly governmental action, even if they were the result of a sense of civic improvement. Several Local Improvement Districts, for example, were voted in by downtown business owners to make improvements there, which created new fees and taxes to finance planned improvements. In addition, building restorations, public art

projects, park land donations, and retail tenant improvements were made by private individuals working to improve their city.

Residents, developers, and businesses responded to the access and amenities.

Those who didn't live there decided to:

I moved here because it was different...People don't want Kirkland to become Anywhere, USA. New resident quoted in Byrnes (1994)

One developer summed up its attractions this way:

It has location, location, location—proximity to the water, to Seattle and to the freeway—and it's a walkable town that's uncongested with small town atmosphere and lots of waterfront parks.

A former city planner put it even more succinctly:

One of the things that brought about the increase in density is the attraction of Kirkland as a place to live. If you ask developers and builders where they would like to build an apartment that would be kept full, they would say Kirkland.

The attractions to Kirkland not only worked to bring in new residents, they also brought it new industry, particularly offices, that came there to take advantage of Kirkland as a good place to both work and live:

...housing opportunities with water and view amenities created an office market in downtown Kirkland. Commercial developer

Of equal importance, however, was the fact that the progressive increase in amenities kept the people who were already living there from reacting too negatively to the growth that the amenities and accessibility were attracting:

There was no no-growth backlash because the amenities were coming.
Former city official

By investing in access and amenities in certain locations, any city or region can promote the development of jobs and housing in those locations and thereby make them less auto-dependent. However, this action will not by itself result in a sustained change in

urban form. For the investments to pay off, a jurisdiction must create rules that facilitate the development business while maintaining public confidence that growth is being properly managed. This leads to the next planning principle for creating less auto-dependent urban form.

Regulate Growth to Balance Conservation and Development

Communities can promote denser, mixed development by creating higher density zoning districts, rezoning some single family and industrial areas to more intensive uses, employing planned-use and mixed-use development zones, adjusting subdivision standards, cutting red tape, lowering fees, and maintaining a customer service orientation toward development applicants. Places can ensure the conservation of community character by down-zoning in sensitive locations, limiting the amount of multifamily and commercial development in neighborhoods, minimizing the use of large-scale projects, employing design guidelines, tailoring zoning districts to the unique character of specific areas, preserving environmentally sensitive or attractive features, and requiring pedestrian access.

The most basic method for encouraging greater density and land-use mixing is to reflect these objectives in the zoning code. Greater density can be permitted, for example, by reducing the minimum lot size for single family development, increasing allowable commercial floor area ratios or building heights, and reducing the square footage of land area required for each multiple family housing unit. Other standards can also affect the density yielded by development projects, such as the amount of land required for setbacks and street improvements and allowing development to be transferred from unbuildable portions of lots to more buildable locations. The mix of land use in the city can also be affected by the zoning code. The most common way is to zone for a reasonable balance or mix of residential and commercial land uses and to allow the market to create greater mixing within zoning districts by allowing a variety of uses to occur in particular zones. In

addition, mixed-use and planned unit zoning districts can be created that permit or require mixed-use development projects.

In Kirkland, higher density was encouraged by the zoning code. The most common single family zoning districts required either 7,200 or 8,500 square feet per lot, which is not particularly high in density but when coupled with the subdivision standards discussed below yielded a relatively high single family density in comparison to other cities in the county. In fact, single family subdivisions during the 1980s achieved an average density of about 5 lots per acre, in comparison to less than 2 for all other cities in the county during the same period. Medium and high density residential zoning (8 or more units per acre) covered about 13 percent of the city in 1990 (City of Kirkland 1992). This is not a large portion of the city; however, multifamily housing was produced not only within the multifamily zoning districts. Multifamily housing was allowed in nearly all of the non-residential and planned area zoning districts, such as the central business district zones, the planned area zones, and the freeway commercial zones. In fact, nearly 40 percent of all the areas of greater than 5 acres that changed from some other use to multifamily between 1970 and 1990 were not in multifamily zoning districts. They were in planned area districts that allowed a variety of land uses (typically single family, multi-family, and office). As a result of this zoning arrangement, multifamily housing composed nearly 50 percent of the city's housing in 1990 (City of Kirkland 1992).

Mixing of uses was also encouraged by the zoning code. City wide, only about 12 percent of the land area was zoned in non-residential districts. However, this was enough, given the allowable densities there, to produce a substantial level of employment growth. At the sub-city level, mixing of land uses was encouraged by allowing a variety of land uses in many zoning districts. For example,

The Professional Residential zones are defined as office uses but may also allow residential and some commercial uses. Similarly, many of the commercial zones such as the Central Business District allow residential and office uses while many of the medium and high density residential zones

also allow office and limited commercial uses. An additional consideration is that institutional uses are allowed in all zones in the City. (City of Kirkland 1992)

In addition to utilizing this basic zoning district structure in which mixing and density was encouraged, the city allowed a number of areas to be up-zoned and redeveloped into higher density land uses. Between 1970 and 1990, for example, approximately 200 acres were developed into multifamily housing in the area that had made up the city's limits in 1970. Of these 200 acres, roughly half had been for single family uses in 1970. Similarly, of the 300 acres of new job related land uses that were created inside the 1970 city limits between 1970 and 1990, about one-third of these had been for single family use in 1970. While down-zoning also occurred during this period, the city did allow up-zoning where appropriate to achieve more intense and varied land use.

Kirkland's development regulations were configured in other ways to promote development. Greater single family densities were achieved, for example, by

- using planned developments to permit smaller lots
- allowing more wetland area to be counted when the allowable density of developments was computed
- allowing narrower driveways
- eliminating minimum single family lot widths
- allowing lot averaging to permit some substandard lots in subdivisions
- allowing narrower access easements instead of wider public rights-of-way for small short plats
- allowing these easements to be counted in the density calculations for short plats of two or fewer lots
- allowing density to be transferred from unbuildable portions of lots
- allowing flag- and wedge-shaped lots

- not requiring sidewalks on both sides of residential streets that are shorter than 400 feet.

Additionally, swifter permitting was achieved by using regulations rather than the EIS process to protect the environment, raising the short plat threshold from three to nine lots, and allowing short plats and subdivisions to be approved by the planning director and hearing examiner, respectively. These procedures not only shortened permitting time, they also reduced the fees for permit processing because the fees were directly related to the staff time required for processing. The efficiency and flexibility of Kirkland's permitting system was summed up by one of the city planners:

When people would come to the counter, it was always, "You're so much cheaper and faster than the county or anyplace else." It would take us two or three months to approve a short plat but for other cities they say it would be 6 months to just get on their docket. Kirkland city planner

The clarity and specificity of the regulations, as well as the supportive attitude of public officials, also were appreciated by the development industry. The rules, for example, were detailed and tough, but it was their clarity more than their strictness that seemed to matter:

Developers like developing in Kirkland, not because it's easy, it's not. We have very tough standards. But they know what the rules are. It's very clear what they can do and what they can't do, the process is fair, you get pretty darn expeditious service, relatively speaking, you know. So not only was there a vision, but I think it's been implemented well. Former city official

Developers and businessmen agreed with this assessment:

The atmosphere for development was very friendly. Department heads were very clear on their requirements. Kirkland developer

Most businessmen mention the cooperative attitude at City Hall as a plus for them..."they suggest changes I have to make," says Keith Kehoe, who is redeveloping the old Kirkland Hospital..."and they give me suggestions, but they aren't heavy handed." Newspaper report (Hale 1976)

City officials seemed to understand they had a responsibility to both the permit applicants and the public and believed they could do good for both groups:

Developers need to know what to expect and how long it's going to take...and that there is such a thing as the public interest. Former city official, being quoted in the newspaper (Varosh, 1981)

With discretionary permits the predilection was to say yes but look at design issues and fit without formal design review. Same official, during a 1995 interview

The planning staff were willing to work cooperatively with applicants, and this was much appreciated by developers:

Where Bellevue tells you what they want to see developed, in Kirkland they say, "Bring us what you want and we'll consider it." In Bellevue, the preliminary drawing must be very specific; in Kirkland they'll discuss a conceptual site plan. That's more affordable and less risky. Kirkland developer

The rules of the development game in Kirkland were not only there to facilitate greater density and land-use mixing. Of equal importance was managing development to protect certain public interests. The most important aspects of this were channeling development toward some and away from other locations and requiring certain public benefits to be provided as development occurred.

An analysis of development patterns conducted for this study revealed a number of relevant facts about how growth was distributed. First, it showed that 75 percent of all land-use changes between 1970 and 1990 inside the 1990 city limits in occurred on vacant land, while 14 percent involved redeveloping single family housing, and 11 percent used other developed areas. Second, 52 percent of all of this development was located in only 20 percent (or 6) of the city's census block groups. Inside "old Kirkland," or the block groups that were within the city limits by 1970, a similar pattern was observed. Sixty-seven percent of the development occurred on vacant land, and nearly 60 percent of the

change occurred in 20 percent (or 4) of the block groups. Together, these figures suggest that development was mostly on vacant land in a limited number of areas.

Multi-family housing development was even more concentrated into certain neighborhoods. Nearly two-thirds of the multi-family acreage that was added between 1970 and 1990 inside the 1990 city limits was built in 20 percent (or 6) of the city's block groups. In the area that had been inside the city limits in 1970, nearly 50 percent of the new multi-family acreage was concentrated in just 15 percent (or 3) of the block groups.

Significantly, a strong association was observed between neighborhoods that received most of the multi-family housing development and those that received most of the additional park and open space acreage. For example, the 6 block groups inside the 1990 city limits that received nearly two-thirds of the new multi-family acreage but composed only 20 percent of the block groups received 50 percent of the new open space acreage and 72 percent of the new park acreage created between 1970 and 1990. This pattern is consistent with the city's basic values that emphasize parks and open space and the city's commitment to respect and protect its neighborhoods as growth occurs. Whether intentional or not, the open space and park program seemed significant in mitigating the neighborhood impacts of higher density housing development.

Even greater concentration was found for nonresidential land-use changes. Between 1970 and 1990, 82 percent of the new commercial acreage, 88 percent of the office acreage, and 77 percent of the new industrial acreage were added to just 20 percent of the block groups inside the 1990 city limits. Four block groups—Totem Lake, South Juanita North, South Juanita East, and Central North—were among the 20 percent in at least two of these three nonresidential categories. Nine others were among the 20 percent in only one category. Institutional uses were also highly concentrated. In “old Kirkland,” a similar pattern of concentrating changes in a few areas was found.

Thus about half of all land-use changes, two-thirds of the changes to multi-family housing, and about 80 to 90 percent of the non-residential changes were located in 20 percent of the neighborhoods. This pattern of concentrating change is true for both the city limits of 1990 and the city limits of 1970.

One way of viewing this concentration is to argue that it served the interests of the more powerful neighborhoods by protecting them from unwanted change. However, the available evidence does not support this idea.

It is generally agreed that the Houghton neighborhood was the most powerful and strongly resistant to change. At one time, five of the six city council members were from Houghton, and a neighborhood council had statutory veto authority over land-use changes. However, the Houghton area actually received roughly its proportionate share of land-use changes. In terms of type of land use, it received more than its share of new office acreage and less than its fair share of housing and other commercial uses, but not dramatically so. Interestingly, it also received more than its fair share of new parks. In fact, in strictly mathematical terms, it received more than 3 times its fair share. However, there were other considerations, such as its waterfront location, which made it a good location for parks that serve the entire city.

What's more likely is that the concentration of growth left the immediate neighborhoods of the vast majority of city voters relatively undisturbed by development. It is this majority that the city council was most concerned with. As one former council member put it:

I don't think we had people (on the City Council) who would see only one side of an issue consistently...For example, because of the fact that we had five members from Houghton you would think that everything would be Houghton oriented and the rest of the city would get nothing. But that was never true. In this small a city, you could oversee all of it.

It was not that the concentration was being done to protect certain powerful neighborhoods; it was being done to protect the neighborhoods of the broad majority of citizens.

One particular area of the city that was important to everyone, regardless of where they lived, was the downtown core. It was the closest thing in the city to what Randy Hester (1990) refers to as “sacred space.” The downtown constituted the “heart and soul” of Kirkland, and the protection of its human scaled, pedestrian friendly, historical charm was a top priority in the city.

Part of the city’s plans since at least the 1963 Comprehensive Plan was to ring the downtown with higher density housing. However, between 1970 and 1990, very little land-use change actually occurred in downtown Kirkland. The Central South block group, which comprises most of what is generally thought of as downtown Kirkland and other locations, received only 36 acres of land-use changes, or only about 1 percent of all changes citywide. More than three-fourths of the change occurred on vacant and single family lands, which were not the important downtown elements. The human scaled commercial buildings and parks were what most people cherished about downtown Kirkland, and less than 2 acres of land that had been used for commercial purposes in 1970 was changed to other uses by 1990. No open space or park land was lost, and about 1 acre of park land was added. In addition to these figures, several other accounts by Kirkland observers note that any changes in downtown Kirkland began happening only in the past 5 years.

The occurrence of so little change in this highly valued area, together with little change in most people’s neighborhoods, allowed most residents to be unalarmed by the changes that were occurring elsewhere in the city. The places people cared most about were not changing, except perhaps for the better.

A recent boom in condominium development in downtown Kirkland helps prove the point. As this report is being written, several large housing projects of about five stories are under construction or have been recently completed in the city’s core. Coincidentally, Kirkland is now experiencing a severe citizens’ backlash to development.

Most recently, in response to public concern, the city passed a temporary moratorium on buildings higher than 35 feet. This is not only remarkable for Kirkland, it is a rare event in the entire state. The lack of change in downtown Kirkland between 1970 and 1990, despite the city's plans to the contrary, helped maintain public satisfaction with change in the city while it helped preserve the widespread attraction to Kirkland among firms and households. The city is in a way fortunate that its plans for downtown growth did not take off until recently because its trek toward less auto-dependent urban form may have been stymied by earlier public reaction.

In addition to channeling growth toward certain locations and away from others, Kirkland managed growth in the public interest by requiring and encouraging development to provide certain desired public benefits. The most important requirements pertained to providing pedestrian access and environmental protection. In addition, incentive zoning and negotiated development were used to encourage pedestrian improvements and other beneficial features.

The two most unique pedestrian features required of developers were public access to the waterfront and pedestrian connections in subdivisions. Public ownership of waterfront park land and open space provided only part of the public access to Kirkland's shoreline. Access was also ensured by requiring access easements from any non-single-family shoreline projects. This requirement was highly controversial when it was first adopted in the early 1970s and the subject of several legal battles. However, firm leadership and good staff work allowed the requirement to withstand attack. Public access easements also were required from property owners in subdivisions in order to facilitate pedestrian access to schools, transit routes, and shopping areas. By requiring direct connections between cul-de-sacs and arterials, the city made it easier for residents to walk to bus stops, shopping, or schools.

Negotiated development and incentive zoning also were employed to obtain public benefits. For example, downtown projects were allowed to build closer to the street in exchange for having wider pedestrian easements behind them along the waterfront. Also, planned developments were given density bonuses in exchange for providing public benefits such as extra landscaped buffers or public walkways.

These rules of the development game achieved a balance between facilitating growth and protecting community character. By both supporting development and conserving neighborhoods, the downtown, and the waterfront, the city enjoyed support from both its citizens and the development industry.

One last piece of the puzzle remains. Growth depends on the availability of certain raw materials or resources. In particular, buildable land and capital are needed. This is the subject of the next and final section.

Help Developers Obtain The Resources They Need

For development to occur, buildable land and development capital must be available. Buildable land requires adequate infrastructure capacity and sufficient land supply. Capital requires a combination of entrepreneurship and the support of financial institutions.

Kirkland provided buildable land by employing a rational zoning strategy and by managing its infrastructure to ensure that it did not present a development bottleneck.

An analysis of where development occurred in relationship to zoning indicates that the city zoned land for development that was either vacant or used at lower intensities than the zoning would permit. In both instances, the market could efficiently convert the land to the higher intensity uses permitted by the zoning code. For example, of the 900 acres of land that were converted to job related land uses between 1970 and 1990, 68 percent had been vacant and 21 percent had been used as single family housing in 1970. Similarly, of the 600 acres converted to multifamily housing, about 57 percent had been vacant and 32

percent had been single family housing in 1970. Thus, nearly 90 percent of the land that was converted to multifamily or job related land uses between 1970 and 1990 had been either vacant or single family in 1970. A similar pattern existed in the portion of Kirkland that falls inside the 1970 city limits. There, about 80 percent of the land that was converted to jobs or multifamily housing had been vacant or single family in 1970, with a somewhat higher portion of this coming from single family because of the older, more developed nature of the area. By allowing less intensively used single family and vacant land to be developed for jobs and multifamily housing, the city helped provide an economically feasible land supply for development.

Of course, having the land zoned for development is insufficient if permits won't be issued because of inadequate infrastructure capacity. The city is served by the Northshore Utility District, which has had more than enough water supply capacity to meet the city's needs. In fact, the Northshore District was well over-designed to meet the needs of growth in the area, and it is surprising that it has not had a detrimental effect on growth by charging high rates to cover its greater-than-needed capacity. Sewer capacity has also been provided in anticipation of growth. On-site infrastructure is provided by the developers themselves. This has enabled adequate on-site services to be provided, and its cost has not hampered development.

Development capital has not always been easily available in Kirkland. Mixed use buildings, for example, have been difficult to finance. In addition, during the 1970s when the city was building its first waterfront office space, bankers were reluctant to make loans for office projects in Kirkland. Nevertheless, certain entrepreneurs signed unusual letters of credit that exposed them to great financial risk in order to build the waterfront office space they felt would be successful. It was a success, and future financing was easier to obtain. This suggests that entrepreneurship rather than banks may be the key to innovative development.

SUMMARY AND CONCLUSION

In theory the public and private sectors have roles to play in the creation of less auto-dependent urban form. These roles are shaped by feedback, resources, rules, and institutions. If the public sector achieves a balance between growth and protection, greater density and mix can be achieved. This balance can be produced by following the planning principles presented in this report.

The production of less auto-dependent urban form will be a challenge, but it is not impossible, at least in theory. Moreover, at least one case—the City of Kirkland—supports the theory. By following the approach presented here, our society may be able to implement its goal of creating less auto-dependent cities.

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