

TRANSIT-ORIENTED DEVELOPMENT IN RENTON, WASHINGTON

by

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ABSTRACT

TRANSIT-ORIENTED DEVELOPMENT IN RENTON, WASHINGTON

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Transit-oriented development (TOD) is compact, mixed-use development around a transit facility in high-quality walking environment. The research question was “how did public and private entities collaborate to plan and implement transit-oriented development in Renton, Washington?” Research was focused on the process leading to Metropolitan Place, a mixed-use building directly abutting a new transit center. This effort was examined within the context of Renton’s downtown revitalization initiative.

State growth management policy facilitated TOD by legitimizing and incentivizing the concept. A local economic crisis sparked and facilitated redevelopment. Important conditions for project success included: (1) a growing regional economy; and (2) the presence of project managers with strong personal skills. Transit-oriented development efforts were strengthened by the fact that they originated with citizen groups who had been organizing for decades. Renton took a proactive approach, encouraging downtown auto dealers to relocate by buying their properties and incentivizing relocation. It aggressively recruited developers, and heavily subsidized pilot mixed-use projects.

As for Metropolitan Place, the presence of a TOD program within county government, rather than in a transit agency, made the project possible. The presence of the transit agency as anchor tenant of a joint development is a new model for public/private partnerships. However, proximity to a transit facility presented new challenges for the design of mixed-use buildings.

This case study highlighted the importance of a taking long-term approach to evaluating TOD success. TOD has generated benefits for Renton and the Seattle region by revitalizing Renton’s downtown, containing sprawl, generating transit ridership, reducing reliance on automobiles, and enhancing housing affordability.

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CHAPTER 1: INTRODUCTION

Peter Calthorpe originated the concept of transit-oriented development (TOD) in 1993 as a framework for developing neighborhoods around transit centers. The primary rationale for TOD was to bring traditional civic life back to Americans. Central to the TOD idea was the requirement that residents be able to access all points in a neighborhood by walking. Calthorpe proposed a number of guiding principles to ensure walkability and healthy civic life in transit-oriented neighborhoods. These principles include, but are not limited to: (1) organizing growth regionally; (2) providing a mix of uses; (3) creating pedestrian-friendly street networks; (4) preserving natural areas; (5) providing a mix of housing types; (6) making public spaces neighborhood focal points; and (7) encouraging infill development. Since TOD was first proposed, many urban planners, transit officials, and concerned citizens have advocated TOD and continued to build on Calthorpe's framework. While TOD proponents have not settled upon one definition, all agree that TOD is "compact, mixed-use development near transit facilities and a high-quality walking environment."¹

In this study, I examine the case of one Washington city that has chosen to redevelop its downtown as a transit-oriented center. The city is Renton, a suburban city located in the Seattle metropolitan area. Since the early 1990s, Renton has taken steps to plan and implement TOD in its historic downtown. The goal of this effort is to transform downtown into a vibrant, mixed-use district where Renton residents can "live, work, and play." In the course of redevelopment, a number of mixed-use multifamily buildings have been erected, and a bus transit center has been built.

One of these multifamily buildings, Metropolitan Place, is of particular interest, as it resulted from collaboration among the city, the county, and a private developer. Directly abutting the transit center, the building is comprised of 90 apartments, parking for the transit center, and a coffee and wine bar. In this study, I explore the development process leading to the completion of Metropolitan Place. This process was closely linked to the larger process of Renton redevelopment. Thus, in this paper I tell the story of Renton redevelopment, with a focus on Metropolitan Place.

¹ See Cervero, R., Murphy, S., Christopher, F., Goguts, N., & Tsai, Y.-H. (2004). *Transit-Oriented Development in the United States: Experiences, challenges, and prospects*. Washington, D.C.: Transportation Research Board, p. S-1.

Research Questions

Transit-oriented development offers many benefits, but it has received growing attention in recent years because of its potential to reduce automobile dependence and related greenhouse gas emissions. Thus, in this paper I ask and answer the question “how did public and private entities collaborate to plan and implement TOD in Renton, Washington?” My purpose for asking this question was to explore the TOD planning and implementation process as it was playing out in one Washington city. I was particularly interested in learning how public and private entities worked together, because such collaboration has presented a challenge for TODs in other locations. I intend this paper to inform readers, especially local government policymakers and practitioners, about one city’s implementation of TOD under the current state and regional policy framework.

In the course of exploring my central question, I have broadened my scope, expanding the unit of analysis from the construction of one building (Metropolitan Place), to the redevelopment of the surrounding neighborhood. I have also developed a number of “subquestions,” which are divided into three categories: (1) initiating the development process; (2) implementation; and (3) development outcomes (Figure 1).

Methodology

Before beginning my research, I developed a methodology that would guide my work. This included establishing units of analysis, following certain principles of data collection, and using specific methods to analyze data. As certain facts have emerged, I have modified these guidelines. But for the most part I have adhered to them, as I explain below.

In establishing units of analysis, I focused on organizations, temporal boundaries, and geographical boundaries. First, the City of Renton’s management of the development process was the central focus. I examined other organizations’ processes as they related to the development process as well, especially the work of the King County Transit-Oriented Development Program. Second, I had initially established temporal limits spanning from January 1997 through March 2009. I was obligated to expand these limits, however, because in the course of the study I learned that organizations central to visioning redevelopment began convening for this purpose in 1990. Thus, my focus is events from 1990 on, although I briefly describe relevant historical events since the 1960s. Finally, I initially set geographical limits as the Renton city limits. As it turns out, the study area was much smaller, consisting of the Center Downtown District.

In the course of this project, I have gathered three types of data – interviews, documents, and photos. Central to my research have been interviews. I conducted 12 open-ended interviews

Study Questions

Main Question: How did public and private entities collaborate to plan and implement transit-oriented development in Renton, Washington?

Initiating the Development

1. What events led up to downtown redevelopment?
2. What were key factors in redevelopment occurring?
3. Whose idea was it to have a walkable urban downtown?
4. Who initiated the development process?
5. Was Washington growth management policy a factor in the decision to develop as a walkable urban center?

Implementation

6. How did Renton encourage the developer?
7. What planning tools did Renton use?
8. How did Renton encourage community participation?
9. What role did the transit agency play in the process?
10. How was the Metropolitan Place project financed?
11. What other important steps were taken?

Outcomes

12. Was the development effort successful?
13. What have been important outcomes of development?
14. How has bus ridership changed as a result of redevelopment?
15. How did the transit agency influence outcomes for Metropolitan Place?
16. Did Metropolitan Place affect developers' decisions to create subsequent transit-friendly developments in the station area?
17. Has the park-and-ride lease been observed by Metropolitan Place managers?

Figure 1. Study questions.

with representatives of the City of Renton, King County Transit-Oriented Development Program, the transit agency, the Renton City Council, local citizens' groups, the developer, and the lender. I conducted interviews in person and over the phone, typing notes during each interview. After each interview, I proofread and edited my notes. I tracked interviews in a spreadsheet. To ensure

accuracy, all interview respondents reviewed and revised the portions of interview transcripts that are cited in this report.

Supporting findings from interviews were documents of several types. Interview participants provided many types of documents, including, but not limited to memoranda, maps, marketing materials, membership lists, and staff reports. I also obtained publicly available documents, including news articles, property records, municipal ordinances, organizational websites, and bus schedules. I maintained a spreadsheet to organize the documents, tracking name, date, author, source, location, and comments. For hard copy documents, I created a filing system, giving each document a code that would make it easy to locate, if needed. I hyperlinked electronic documents to the spreadsheet.

The last type of data I gathered was photographs. I took about 100 photos around the downtown district, with a focus on the transit center and Metropolitan Place, to help corroborate my findings, in addition to providing a visual aid for my report. City of Renton officials also provided images of projects described in the study; these are also listed in the spreadsheet mentioned above.

In order to ensure internal validity, I followed three principles of data collection. First, I collected evidence from multiple sources and multiple source types to determine facts. In some cases, this led to conflicting information, and I had to decide which sources were more reliable. Second, I maintained a spreadsheet of documentary evidence, as described above. Finally, I worked to maintain a chain of evidence so that no data would be lost, and so that it would be easy to track information in my final report back to original documents.

I analyzed the data to accomplish two tasks. First, I generated a timeline based on interview transcripts and related documents. In many cases, respondents were unsure about dates, and more than once I consulted news reports to ascertain the date of an event. Second, I used respondents' comments as starting points to answer the study questions. In some cases, interview data was sufficient, but in a number of instances I obtained documents to corroborate or extend information from study participants.

I also analyzed the case on a coarser scale; I wanted to know how Renton's case is similar to or different from other cities that have experienced TOD development. I reviewed five case studies from a 2004 study² and summarized them in Chapter 2. The five case study cities were: Plano, Texas (Dallas area); Beaverton, Oregon (Portland area); Boulder, Colorado; Miami;

² *Ibid.*

and Bethesda, Maryland (Washington, D.C. area). These cases provide a context for the Renton case, and have assisted in highlighting both unique and typical aspects of Renton development.

The Importance of Interdisciplinary Study

As the next chapter reflects, urban development has implications for a number of policy areas impacting daily life for all members of society. These include a variety of environmental and social issues, including climate change, transportation, air pollution, public health, housing affordability, and fiscal efficiency for governments. The wide reaching impacts of urban development introduce great complexity into the task of managing growth while preserving natural areas, maintaining clean air and water, and minimizing carbon emissions. Analyzing these effects upon only one indicator (e.g. vehicle miles traveled, air pollution, infrastructure costs) does not yield sufficient information to inform policy decisions based on multiple goals. Rather, a more complete understanding of the results of urban development policy requires interdisciplinary research.

Addressing the fragmentation of highly specialized public policy organizations, the United Nations Brundtland Commission recognized the need to work across disciplinary boundaries more than two decades ago, writing:

The integrated and interdependent nature of the new challenges and issues contrasts sharply with the nature of the institutions that exist today. These institutions tend to be independent, fragmented, and working to relatively narrow mandates with closed decision processes. Those responsible for managing natural resources and protecting the environment are institutionally separated from those responsible for managing the economy. The real world of interlocked economic and ecological systems will not change; the policies and institutions concerned must.

- United Nations Brundtland Commission, 1987³

Past research has reflected the specialization demanded by modern society, treating urban development and public transportation as separate issues. But more recent efforts have included interdisciplinary approaches. Transportation policy specialists have analyzed the influence of urban form on travel choices; specialists in urban planning have examined the relationship between urban form and vehicle miles traveled. Transportation researchers have even researched the implications of urban form upon public health.

Fortunately, the growing integration of disciplines as scholars study urban form and transportation as a whole has been reflected more and more in the policy arena. On a local scale,

³ See United Nations Brundtland Commission. (1987, March 20). *Our Common Future, Chapter 12: Towards Common Action: Proposals for Institutional and Legal Change*. Retrieved July 19, 2009, from UN Documents: Gathering a body of global agreements: <http://www.un-documents.net/ocf-12.htm>

this has happened as urban planners and transit agency staffers collaborate on TOD projects. Additionally, leaders are beginning to recognize the need for an integrated approach to transportation, urban development, and carbon emissions on a national level. The recently announced federal partnership among the Department of Housing and Urban Development, the Department of Transportation, and the Environmental Protection Agency to promote affordable housing, transportation options, and lower transportation costs while addressing climate change and protecting local environments serves as one example of this changing approach among decisionmakers.⁴

As these researchers and policymakers are now recognizing, the problems of air pollution, climate change, loss of natural areas, public health, and public infrastructure costs cannot be addressed effectively in isolation. An interdisciplinary approach is necessary to evaluate the full array of costs and benefits resulting from policy decisions. For that reason, this thesis contributes to this growing body of interdisciplinary research related to sustainable urban development. By taking this approach, I hope to shed new light on the question of how society can move towards transportation policy and urban development practices that address today's needs without lessening the ability of future generations to meet their needs.

Organization of This Report

This thesis is organized into six chapters. In this chapter, I have provided a framework for this study and explained how I conducted my research. The remaining chapters are organized as follows. The literature review, Chapter 2, highlights the breadth of academic fields relating to TOD. I explore research from fields including, but not limited to, transportation policy, urban planning, economics, and public health. In Chapter 3, I provide a background for my study, describing Washington's growth management policy and relevant aspects of history, geography, and land use policy in King County and in Renton. In Chapter 4, I present the results of my research. I provide a narrative of the development process, and answer the questions posed at the beginning of the study. In Chapter 5, I interpret the results, placing them in the context of the larger body of literature. Among the topics explored are: a TOD typology; barriers to TOD; impacts and benefits; and the case study cities reviewed in Chapter 2. Finally, in Chapter 6, I

⁴ See US Environmental Protection Agency. (2009, June 16). EPA Administrator Lisa Jackson, DOT Secretary Ray LaHood and HUD Secretary Shaun Donovan Announce Interagency Partnership for Sustainable Communities. Retrieved July 19, 2009, from <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/f500561fbb8d5a08852575d700501350!OpenDocument>

conclude by highlighting implications of the Renton case and returning to the topic of interdisciplinary study.

CHAPTER 2: LITERATURE REVIEW

Since the 1970s, policymakers have made efforts to regulate land use and combat sprawl. The concept of growth management led later on to the advent of smart growth as a movement among planners, officials, and citizen advocates. Transit-oriented development (TOD) is one strategy within the smart growth toolbox, and many of the issues relating to the rationale, institutional environment, and implementation of both TOD and smart growth overlap.

Smart growth and transit-oriented development are important strategies for planning development while addressing a myriad of social, fiscal, and environmental issues. These include climate change, local air quality, automobile dependence, housing affordability, public health, and mounting infrastructure costs. While smart growth and TOD can only yield incremental annual change in development density and other indicators of compact development, over the long term, there is great potential for compact development to become the predominant development type by the middle of this century, achieving important gains in the issues mentioned above.

TOD projects take place in complex institutional environments, involving a number of different entities. Typically, a TOD involves collaboration by a transit agency, a city, private developers, and at times a regional planning organization. It may also include funding from the state and federal government, and TOD projects are always implemented in the context of state-level land use and transit policy.

Since the 1970s, fourteen states have enacted growth management and smart growth legislation. The first wave, in the 1970s, was motivated by environmental concerns and employed land use regulations and urban growth boundaries. The second wave, in the 1980s and early 1990s, required comprehensive planning by local governments, and provided frameworks for planning. The third wave, in the late 1990s and early 2000s, took a more incentive-based approach, offering tools and funding but establishing fewer mandates.

Cities in states without growth management statutes have also participated in regional and local efforts to promote TOD and smart growth, equaling the success of smart growth states for some indicators. They have especially tended to fare better in terms of housing affordability,

but this may be because quickly growing regions are more likely to enact smart growth regulations *and* to have rising home prices.

Cities play a very important role in smart growth planning and implementation. They can provide station area plans, appropriate zoning and parking standards, pedestrian amenities, and infrastructure upgrades. They are also charged with implementing smart growth policy; the choice of whether and how to implement state-level mandates strongly influences policy outcomes. Transit agencies, of course, play a strong role as well, especially with regard to the immediate station area and integrating transit service with the TOD neighborhood.

Successful TOD implementation depends above all on favorable economic conditions, community support and involvement, and supportive public policy. While a strong local and regional economy do not alone spark TOD in most cases, they are an important condition for development. Because there is public concern about denser development in many areas, effective community outreach and early public involvement in the planning process can help ensure TOD success. On the other hand, in some areas TODs have resulted from public demand for economic development. And the policy environment can either present large obstacles or facilitate TODs; policies in state government, localities, and transit agencies all affect the potential to construct TODs.

There are at least 100 TODs on the ground in the United States, and many more projects are planned and underway. The five case studies reviewed in this chapter offer a sampling of the variety of TODs in the US. The cases represent downtown revitalization in a historic town turned bedroom community, a large mixed-use complex in a suburban city, a transit village on the edge of a small city, an office hotel complex near a major freeway, and an upscale mixed-use shopping district in a suburban city.

European cities and older districts of American cities still embody TOD principles. They are compact, mixed-use, have high connectivity,⁵ and offer high-capacity transit with pedestrian amenities like plazas, benches, trees, and public art. In combination with scarce and expensive parking and moderate to high congestion, as well as the affordable price of transit, TODs allow a high proportion of travelers to take transit, walk, or bicycle to destinations. Both these travelers and society at large benefit in many ways from these transit choices.

⁵ According to the Victoria Transportation Policy Institute, “Connectivity (also called permeability) refers to the directness of links and the density of connections in path or road network. A well-connected road or path network has many short links, numerous intersections, and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, creating a more accessible and resilient system.”

TOD comes in many forms and scales; from high-density urban development to lower-density single-family neighborhoods. One example of a TOD that falls between these two extremes is the Market Common at Clarendon, in Arlington County, Virginia. Situated four miles west of central Washington, D.C., the project includes 234,000 square feet of retail, including specialty shops and neighborhood services, 100,000 square feet of offices, and nearly 400 upscale apartments and condominiums. Set in a U-shape around a pocket park, the development features structured parking, and shops are situated with zero setback. Located within walking distance of two Metro stops and near a freeway exit, the project serves as an example of balancing pedestrian and automotive access, while maintaining a pedestrian-oriented character. The project is higher density than surrounding single-family developments, and street design encourages walking by offering an attractive and interesting environment.⁶

A Context: Urban Development in the United States

In the latter half of the 20th century, American cities underwent a massive transformation as federal policies induced the creation of large areas of single-use, low-density suburbs. By the 1970s, planners, officials, and others were increasingly concerned about the unintended effects of growing sprawl development; the smart growth movement proposed a new type of urban development that would return to the vibrant urbanism of the past, while preserving natural areas and the local cultural heritage. Within the context of smart growth, the concept of “transit-oriented development” was introduced in 1993; transit-oriented development in its fullest sense is a framework for designing neighborhoods, transit networks, and regions to promote multimodal transportation, a sense of place, and access to both urban services and green space. In the following pages I explain this history in more detail.

Post-War Suburbanization

With the age of the automobile, suburban areas and exurbs have developed to be entirely auto-dependent. Many federal policies supported this development through subsidies and conditions for funding. I describe several of these below, but this account is by no means exhaustive.

First, the Federal Housing Administration (FHA) is credited with encouraging the growth of single-use residential suburbs. From 1933 to 1960, the FHA issued \$119 billion in mortgage insurance to middle-class families to facilitate home purchases, mostly in new suburbs. The FHA favored homogenous new subdivisions over older or mixed-use neighborhoods. The suburban

⁶ For Google Street View of the Market Common Clarendon, click [here](#).

form supported by this practice later became the template for suburban subdivisions around the nation (Jackson, 1985).

In 1956, the Interstate Highway Act authorized the creation of the Interstate Highway System that Americans take for granted today. The Act provided 90 percent federal funding to states and local governments for the cost of new highway construction. At the same time, the federal government provided no funding for public transit. While the stated rationale for this legislation was national defense, chief constituencies advocating the road building legislation of the 1940s and 1950s were automobile, oil, real estate, and highway interests, who stood to benefit from the proposed highways. Over the subsequent decades, the new freeways facilitated rapid growth of low density, auto-oriented development in their vicinity (Hayden, 2003).

Meanwhile, planners were concerned that cities were unhealthy places, where crowded living conditions led to disease and other unhealthy conditions. The American Public Health Association issued its “Basic Principles of Healthful Housing” in 1938, recommending, among other things, plentiful natural light, more privacy, reduced noise, and “opportunities for family life (American Public Health Association, 1941).” In keeping with these ideas, planners and civic leaders supported policies to move people to lower-density areas in order to improve health outcomes (Sloane, 2006).

In 1954, another federal intervention promoted highway strip development. In that year, a Republican Congress modified the tax code in a way that encouraged rapid development along highways. It did this by modifying the depreciation period from 40 years to seven for income-producing greenfield⁷ construction. When a new buyer purchased a depreciated property, seven-year depreciation began anew; the result was cheaply constructed buildings that most owners did not maintain (Hayden, 2003).

In response to this tax write off, highway strip development took off. In effect, a developer could construct almost any sort of new building, as it would be profitable over seven years through the tax break alone. Chain stores and franchises predominated in the new strip development, including malls, gas stations, supermarkets, motels, and fast food restaurants. Existing mom-and-pop businesses, which did not receive the write off, could not compete. They struggled and many small businesses failed. Historian Thomas Hanchett has calculated that the total tax write off was at least \$750 million annually by the late 1960s, and over a billion dollars a year in the 1970s, a quarter of the federal budget deficit at the time (Hanchett, 1996).

⁷ A “greenfield” site is agricultural, natural resource, or undeveloped land that is marked for urban development.

All these policies combined with rapid economic growth to stimulate a transformative change in the American urban landscape, and in how many Americans lived. While in 1950, only 27 percent of Americans lived in suburban areas, by 2000 more than half the US population lived in suburbs (Nelson, 2006).

The Smart Growth Movement

In response to sprawl development, the smart growth movement arose among planners, architects, and government officials. Key concerns were fiscal impacts on governments, loss of natural spaces, growing congestion, and increasing air pollution. Beginning in the 1970s, various states passed legislation to require or promote growth management. By the 1990s, policies promoting compact, mixed-use development amenable to walking, transit, and bicycling were referred to as smart growth policies (Ingram, Carbonell, Hong, & Flint, 2009).

But how American cities plan urban form and transportation networks continued to set off controversy. For instance, the 1990 Washington Growth Management Act (GMA), which resulted from a heated three-year legislative struggle, has been amended in nearly every legislative session since passage. In the most recent session, a bill amending the GMA to require transit-oriented development around light-rail stations drew both considerable support and heated opposition. Those supporting the bill included advocates for environmental protection, land use planning, housing affordability, and action to address climate change. Opposing the bill were community groups concerned about gentrification and the effects of increased density, business interests, realtors, farm interests, and several cities concerned about the costs of implementation.

TOD is best understood through a review of smart growth principles. In a 1995 book, John DeGrove summarized smart growth principles thus:

1. Promote infill development in areas served by existing infrastructure, so as to reduce infrastructure costs;
2. Provide a variety of housing choices, including affordable housing, by promoting mixed land use;
3. Ensure an equitable and predictable process in land development decisions;
4. Facilitate an adequate mix of transportation modes;
5. Conserve natural areas, including farmland and sensitive land areas;
6. Preserve local culture and natural environmental features as part of new development;
7. Promote stakeholder collaboration and community participation;
8. Design staged growth in urban fringes with compact development patterns;

9. Enhance access to public and private resources for all residents; and
10. Revitalize existing urban and rural neighborhoods into safe and livable communities (DeGrove, Planning policy and politics: smart growth and the states, 2005).

Defining Transit-Oriented Development

These principles are not new; they are simply a return to the timeless goals of urbanism, in its best sense. They are principles which over time have created our most treasured man-made environments and which, although constantly evolving with culture and technology, remain true to the human dimension and our deepest social aspirations. But they are fundamentally different from the ideas that have guided planning for the last two generations (Calthorpe, 1993).

Many authors have defined TOD, including researchers, policymakers, planners, and advocates. Thus, definitions can be brief or detailed, while some, like Ellen Greenberg, offer a typology, recognizing the need for a variety of guidelines for different types of TOD (Greenberg, 2004). A shorthand definition of TOD is “compact, mixed-use development near transit facilities and a high-quality walking environment” (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004, p. S1).

But TOD at its best is much more than this minimal definition. In his 1993 book *The Next American Metropolis*, Peter Calthorpe introduced the concept of TOD, presenting a definition and offering a set of guidelines. Calthorpe defined

TOD as:

A mixed-use community within an average 2,000-foot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents to travel by transit, bicycle, foot, or car (Calthorpe, 1993).

Why did Calthorpe call it *transit-oriented* development? Calthorpe’s aim was to present an alternative planning framework to challenge sprawl as the norm for urban development. He sought to “redefine the American dream,” and create a blueprint for communities that could nurture civic life. A key element of the new American neighborhood was the pedestrian; for Calthorpe, the pedestrian is the “catalyst which makes the essential qualities of communities meaningful;” the pedestrian necessitates the public spaces that make community life possible – parks, sidewalks, squares, and plazas (Calthorpe, 1993, p. 17). In contrast, single-use suburbs demand heavy reliance on automobiles, necessitating low-density development, wide arterials,

and extensive parking lots, all of which discourage walking and detract from a sense of place (Figure 2).

But motorized travel is necessary in modern cities, as people need to travel further than

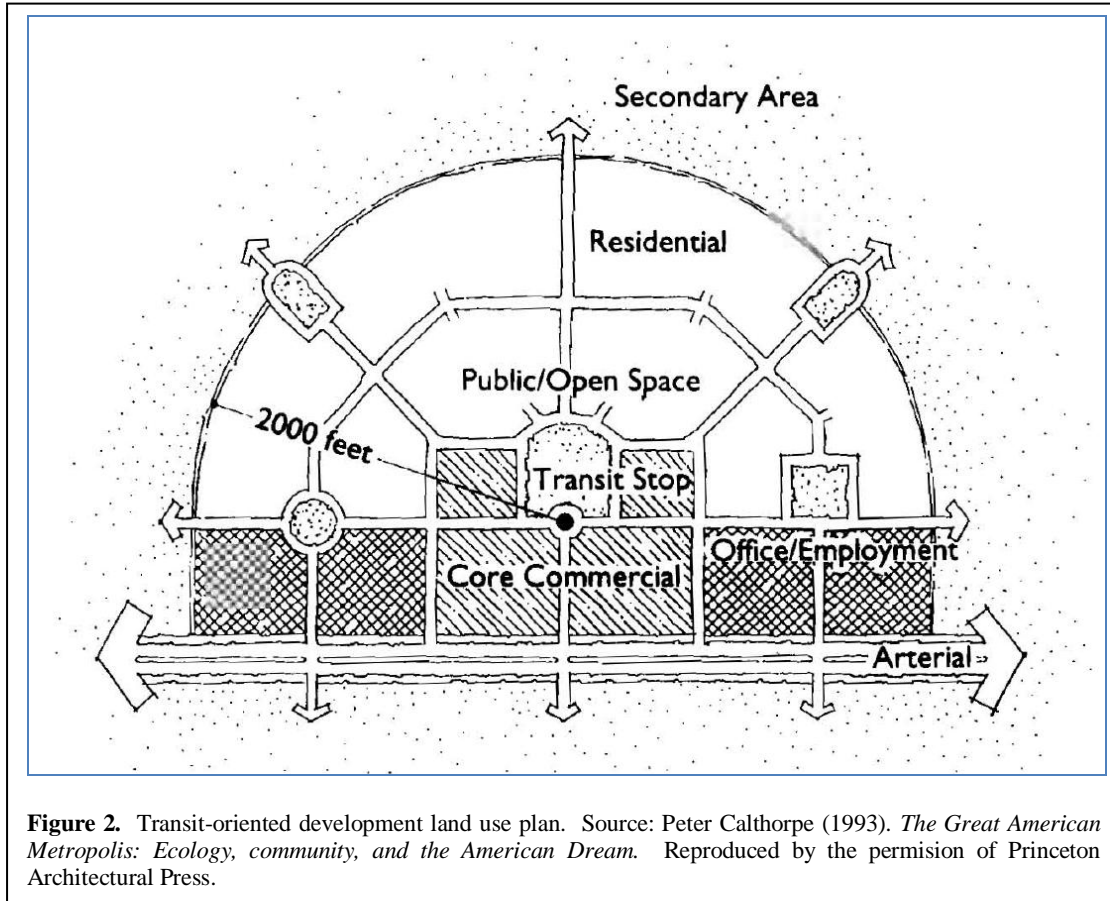


Figure 2. Transit-oriented development land use plan. Source: Peter Calthorpe (1993). *The Great American Metropolis: Ecology, community, and the American Dream*. Reproduced by the permission of Princeton Architectural Press.

they can walk. So Calthorpe proposed public transit as a technology meeting mobility needs without the place-destroying impacts of automobile dependence. Thus, he advocated development oriented towards pedestrians *and* transit in order to revive a traditional sense of community, in addition to reaping other benefits associated with reduced driving (Calthorpe, 1993). So in reality, the term “transit-oriented development” should be considered shorthand for a much larger concept that supports pedestrians, creates a sense of place, brings people in contact with nature, and enhances affordability for households.

Calthorpe developed a number of principles for TOD, including the following:

- *Organize growth regionally:* Growth should be organized to be transit-supportive and compact; larger areas of land should be planned in a coordinated way;

- *Provide a mix of uses:* Place commercial, housing, jobs, parks, and civic uses within walking distance of transit stops;
- *Create pedestrian-friendly street networks* that directly connect local destinations;
- *Preserve natural areas*, including sensitive habitat, riparian zones, and high-quality open space;
- *Provide a mix of housing types*, densities and costs;
- *Make public spaces the focus* of building orientation and neighborhood activity; and
- *Encourage infill and redevelopment* along transit corridors within existing neighborhoods (Calthorpe, 1993).

TOD principles overlap considerably with smart growth principles. Access to high-quality transit and reducing the need to drive are essential to smart growth; thus effective smart growth policy functions to focus growth around transit centers. Within the literature on TOD, authors emphasize many of the smart growth principles listed above, including infill development, multiple transportation options, promoting stakeholder collaboration, and revitalizing urban neighborhoods. Proponents tend to focus less upon affordable housing, although for some TOD advocates this is an important goal.

Compact development is an essential aspect of TOD and smart growth; in order to meet greenhouse reduction goals, Ewing et al. (2008) recommended an average density for new and redeveloped housing of 13 units per acre, a typical density for townhomes. Some TOD is much higher density than this; Dittmar and Poticha have recommended 7-60 residential units per acre, depending on TOD type (Dittmar & Poticha, 2004).

While Calthorpe's principles can be applied to all TODs, more specific guidelines are needed to facilitate planning TODs. In a 2004 book, Hank Dittmar and Shelley Poticha proposed a TOD typology, listing six TOD types, ranging from highly urban to commuter town centers. They defined TOD types according to seven variables: land use mix; residential density; housing types; scale; regional connectivity; transit modes; and transit frequencies (see Table 1) (Dittmar & Poticha, 2004).

The TOD type relevant to this case study is the suburban town center. As cities that were formerly small towns distinct from the larger city have become surrounded by growth, they have become job centers, as well as commuter cities. Dittmar and Poticha propose the following design principles for a suburban center TOD. First, land use may include a primary office center, urban entertainment, multifamily housing, and retail. Second, housing density should be at least 50 units per acre. Third, housing types may be multifamily, loft, or townhome. The area should

have strong regional connectivity, functioning as a regional hub with high access to downtown. Transit modes may include rail, streetcar, rapid bus, local bus, and paratransit.⁸ Transit service should be every 10 minutes during peak hours, and every 10-15 minutes during off peak hours (Dittmar & Poticha, 2004). Renton's TOD closely matches this description.

Well-planned parking is an important aspect of TODs. Parking policies should support transit and pedestrians, rather than creating a barrier. But many TODs also serve as park-and-rides, and large areas of parking around a transit stop inhibit pedestrian access, as well as reducing the area available for human-scale shops and other pedestrian-oriented uses. To address this, G.B. Arrington and Robert Cervero have recommended lower parking-to-occupant ratios, as well as shared parking, where possible (Arrington & Cervero, 2008).⁹ Parking may also be hidden behind buildings, so as to create a pedestrian-oriented streetscape (Duany, 2000).

TOD is a common and growing development framework around the US. In 2004, Robert Cervero and colleagues published a comprehensive survey of the US, finding over 100 TODs in the US, based mostly around heavy rail, light rail, and commuter rail stations. At the time, over 50 park-and-ride lots in the US were targeted for conversion to TODs (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). Notably, many developments that fit the simplest definition of TOD, "compact, mixed-use developments around transit facilities and high-quality walking environments" are not necessarily labeled TODs by their builders; if such developments were counted, the number of TODs in the US would be much higher.

What's the Problem, and Can Smart Growth Solve It?

Smart growth and TOD have the potential to help solve a myriad of policy problems. First among these is climate change; compact development could reduce driving and transportation-related carbon emissions considerably. Regarding housing affordability, TOD can enhance affordability by providing enhanced transportation choices and reduced distances. Conversely, without clear affordability benchmarks, smart growth can elevate monthly housing payments, potentially reducing affordability. Improved public health outcomes are associated with walkable neighborhoods, and local governments incur lower per capita infrastructure costs for compact areas. Finally, there is a growing unmet demand for walkable neighborhoods with access to jobs and services. For all these reasons, smart growth promises to yield many sorts of

⁸ "Paratransit" is specialized public transit for people with disabilities, usually provided by vans with no fixed route or schedule.

⁹ In a shared parking agreement, a transit agency and a private firm agree to share parking stalls in shifts. For example, apartment residents may use parking stalls at night, leaving for work in time to allow park-and-ride users to use their spaces.

TOD Type	Land Use Mix	Minimum Housing Density	Housing Types	Scale	Regional Connectivity	Transit Modes	Frequencies	Examples
Urban Downtown	Primary office center; Urban entertainment; Multifamily housing; Retail	> 60 units per acre	Multifamily; Loft	High	High; Hub of radial system	All modes	< 10 minutes	Printers Row (Chicago); LoDo (Denver); South Beach (San Francisco)
Urban Neighborhood	Residential; Retail; Class B Commercial	> 20 units per acre	Multifamily; Loft; Townhome; Single family	Medium	Medium access to downtown; Subregional circulation	Light-rail; Streetcar; Rapid bus; Local bus	10 minutes peak; 20 minutes off-peak	Mockingbird (Dallas); Fullerton (Chicago); Barrio Logan (San Diego)
Suburban Center	Primary office center; Urban entertainment; Multifamily housing; Retail	> 50 units per acre	Multifamily; Loft; Townhome;	High	High access to downtown; Subregional hub	Rail; Streetcar; Rapid bus; Local bus; Paratransit	10 minutes peak; 10-15 minutes off-peak	Arlington County (VA); Addison Circle (Dallas) Evanston (IL)
Suburban Neighborhood	Residential; Neighborhood retail; Local office	> 12 units per acre	Multifamily; Townhome; Single family	Moderate	Medium access to suburban center; Access to downtown	Light-rail; Rapid bus; Local bus; Paratransit	20 minutes peak; 30 minutes off-peak	Crossings (Mountain View, CA); Ohlone-Chynoweth (San Jose, CA)
Neighborhood Transit Zone	Residential; Neighborhood	> 7 units per acre	Townhome; Single family	Low access to center	Low	Local bus; Paratransit	25-30 minutes; Demand	

TOD Type	Land Use Mix	Minimum Housing Density	Housing Types	Scale	Regional Connectivity	Transit Modes	Frequencies	Examples
	retail						responsive	
Commuter Town Center	Retail center; Residential	> 12 units per acre	Multifamily; Townhome; Single family	Low	Low access to downtown	Commuter rail; Rapid bus	Peak service; Demand responsive	Prairie Crossing (IL); Suisun City (CA)

Table 1. A TOD typology (Dittmar & Poticha, 2004). Reproduced by permission of Island Press.

benefits in the coming decades, if implemented on a large scale, as I outline in the following sections.

Climate Change, Transportation, and Compact Development

It is well accepted by the scientific community that climate change is “unequivocal and primarily human-induced (United States Global Change Research Program, 2009).” With or without policy interventions, humanity faces large magnitude change in the coming century, including sea level rise, diminished fresh water supplies, increased flooding, and ocean acidification (Intergovernmental Panel on Climate Change, 2007). To stabilize global greenhouse gas emission levels, today’s overall emissions will need to be reduced greatly, and the strength of policies enacted today will have a great impact on the potential for stabilizing atmospheric CO₂ concentrations (Intergovernmental Panel on Climate Change, 2007). Answering these concerns, climate change and its impacts are becoming more and more prominent as a public policy issue in the United States, as was recently evidenced in a 2009 White House report,¹⁰ and the American Clean Energy and Security Act currently under consideration in Congress.

As part of a larger framework to reduce emissions, carbon emissions from personal vehicle use will need to be greatly diminished in order to reach a climate stabilizing emissions pathway. This is because personal transport generates a significant fraction of US carbon emissions. The transportation sector generates 28 percent of total US carbon emissions, with 61 percent of that generated by passenger vehicles (Energy Information Administration, 2008); (US Environmental Protection Agency, 2009).

Although increased fuel economy and lower carbon fuels will contribute to reducing transport-related greenhouse gases, even a generous extrapolation of current policy mandates in these areas will not achieve hoped for reductions on their own. But a combination of increased fuel economy, lower carbon fuels, and transportation demand management (TDM)¹¹ could, under the right scenario, stabilize transportation sector carbon emissions at 2007 rates, having a synergistic effect upon reductions (Mui, Alson, Ellies, & Ganss, 2007).

Reid Ewing and colleagues have calculated that strategic policy changes could greatly reduce US transportation-based carbon emissions between now and 2030. The researchers calculated that transportation-based emissions will need to be reduced to 47% below the projected trend to be on track for reducing emissions to 60-80 % below 1990 levels by 2050. They used

¹⁰ See (United States Global Change Research Program, 2009).

¹¹ TDM includes, but is not limited to, land use planning for pedestrian and transit-oriented uses, as well as road pricing and parking policies.

structural equation modeling to assess the relationships among variables relating to land use, transit service levels, highway capacity, road pricing, socioeconomic status, and vehicle miles traveled (VMT). The authors addressed multicollinearity¹² by systematically eliminating variables. They estimated elasticities¹³ between the remaining independent variables and VMT. Focusing on variables that can be modified by public policy, the authors found that slight modifications in policy variables,¹⁴ over time, had the potential to reduce total VMT by 38 % by 2030. Ewing et al. qualify this as good, but not good enough, suggesting additional transportation pricing measures, or additional “shoring up” of carbon fuel standards or fuel efficiency standards in order to meet goals (Ewing, Pendall, & Chen, 2002).

There are reasons to accept Ewing et al.’s projections with caution. First, their elasticities, when used to forecast VMT through 2030, yield a value very close to those projected by the US Energy Information Administration. Second, their elasticities are consistent with previous studies, and are highly statistically significant. Third, the authors generated both cross-sectional and longitudinal models that yielded similar results. Finally, the analysis corrected for interaction among variables, so as to guard against double counting independent variable effects upon VMT.

However, the actual magnitude of the impact of policy variables upon VMT may be less than Ewing et al. calculated. I used their elasticities and suggested modifications of policy variables to calculate the effect on 2030 VMT and found it would lead to a 32% reduction, not a 38% reduction. The difference was that I compounded the effect annually, which Ewing et al. did not do.

Transportation and Land Use

While the past sixty years has seen a trend towards increased dispersion of urban populations, recent data is revealing signs that the tide may be turning, with suburban residents returning to the cities. This is good news in terms of reducing VMT, and related carbon

¹² “Multicollinearity” is a problem when independent variables in a statistical model are highly correlated. When this happens, it is difficult to determine the separate influences of the variables.

¹³ “Elasticity” is the amount a dependent variable changes in response to an independent variable. If the elasticity of variable B with respect to variable A is 10%, this means that for every 1% increase in variable A, variable B increases by 0.1%.

¹⁴ The policy variables were: (1) gross population density, increasing at 1% a year; (2) highway lane miles per 1000 people, declining at 1% a year; (3) transit revenue miles (the number miles traveled by transit vehicles when they are in service), increasing at 2.5% a year; and (4) real fuel prices, increasing at 2.7% a year.

emissions, as those living in higher density areas tend to drive less than residents of low-density neighborhoods. I examine the literature on these issues in more detail in the following sections.

Population Trends and Changing Land Use Patterns

While recent data reveals that Americans are starting to return to cities, the trend towards ever more dispersed suburbs has continued up through the current decade. This trend has been documented using several measures. Research has found that outlying counties have grown faster than central cities (Mackun, 2009). Overall population density is declining, and new development has much lower density than central cities. However, new evidence suggests that this trend is shifting; a recent report indicated that city growth rates are increasing while suburban growth rates are declining (Frey, 2009). Smart growth and compact development policies may be helping shift growth back to cities; one study reports that states with smart growth policy have fared better in raising population densities and containing growth. I explain these findings below.

One way to view the trend towards low density and sprawl is by studying the geographic distribution of population growth. A recent report from the US Census Bureau reported that from 2000 to 2007, outlying counties of metropolitan areas had, on the average, grown faster than central counties, particularly in the West, Southwest, and Midwest. Central county populations grew about 8 percent over the period, while outlying county populations grew about 13 percent (Mackun, 2009).

Another lens for examining suburbanization is through changes in population density. Data show that the US population density is declining overall; in other words, sprawl is increasing. Researchers have quantified the increase of sprawl in various ways. For example, while the average land area used per person for housing in 1982 was just over 0.3 acres per person, the marginal land area per new person added to the US population was found to be higher, ranging from 0.5 – 0.7 acres per person between 1982 and 2002 (Ingram, Carbonell, Hong, & Flint, 2009). And land is being consumed for development at a rate almost three times faster than population growth. (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2008).

Regional development patterns are not the same across the US, however. An important indicator is incremental density, that is, the density of new development, which can be compared with the average density of a region. From 1992 – 2003, incremental density was much lower than average density for all US regions, ranging from 0.8 to 3.1 persons per acre (Ingram, Carbonell, Hong, & Flint, 2009). This is much lower than central city densities; recent reports indicate that Portland, Oregon has 6.1 persons per acre; Seattle has 11 persons per acre; and San Francisco has 26 persons per acre (US Census Bureau, 2009). Thus, while Western incremental

densities may approximate average regional densities, they do not approach the densities of traditional cities.

A recent analysis of census data reveals a trend towards a return to the cities. William Frey has found that the average annual growth rate for large US cities¹⁵ is rising to meet up with the declining growth rate of their suburbs. The gap between the two was a full percentage point in 2001, but declined to one-tenth of a percent in 2008. In Washington, D.C. and Atlanta, central city growth rates have surpassed those in the suburbs by 0.5 to 1.5 percent (Frey, 2009).

Frey attributed the shift in growth to the economic and demographic diversity that makes large cities economically resilient in comparison with one-industry towns. He also believed that the drying up of the mortgage market had slowed the rate of relocation to the suburbs. And he cautioned that the more recent effects of the recession have yet to be observed in the census data (Frey, 2009).

The more compact development characteristic of smart growth can be a strategy to dampen the trend towards increased dispersion and consequent conversion of natural areas. A study from the Lincoln Institute of Land Policy found that four states with long-standing smart growth legislation (Oregon, Florida, Maryland, and New Jersey) fared better than other selected states over two decades in containing growth, according to a number of indicators, including growth in density, population growth, and production of multifamily units. Oregon, with three decades of state-directed growth management policy, accomplished goals of preserving natural lands, promoting compact urban-style growth, and providing a mix of transportation options (Ingram, Carbonell, Hong, & Flint, 2009).

Urban Form and Vehicle Miles Traveled

In association with the increasing dispersal of the American population, per capita VMT has grown steadily for decades, and this trend is expected to continue. Higher residential densities and increased public transit access have been shown to be associated with lower per capita VMT. Critics claim that smart growth principles do not reduce VMT, but the research I review in the following sections debunks these claims. I explain all of these ideas in the following sections.

Per Capita VMT Is Growing

The average distance that Americans travel by private vehicle has been steadily increasing for the last 50 years. In 1969, the average driver traveled 20.6 miles per day by car.

¹⁵ Large cities were defined as those with populations greater than one million.

By 1990, daily VMT was 28.5 miles; this figure rose to 32.7 miles in 2001. One reason for increased VMT is the increasing distance between destinations; in the 1990s, the average trip length per vehicle rose from 8.9 to 9.9 miles (Hu & Reuscher, 2004).

Even with current policy interventions, total US VMT is projected to continue to rise faster than population in the coming decades, growing 50 percent from current levels by 2030. This is three times the projected rate of US population growth (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2008, p. 43).¹⁶ However, these projections do not include the recently recorded trend towards living in the cities (Frey, 2009); a large-scale migration back to the cities could dampen projected trends.

The Built Environment and Vehicle Miles Traveled

Research has shown that people in higher density central cities drive less than their counterparts in lower density suburbs (Newman & Kenworthy, 2007), but critics have pointed out several problems with the conclusion that higher density is the only factor affecting VMT.

For example, factors like personal income and public transit access also affect per capita VMT. In 2002, John Holtzclaw and colleagues studied households in three metropolitan areas (Chicago, Los Angeles, and San Francisco) to determine influences on household VMT. They found that residential density, household income, and access to public transit all had a strong influence on VMT per vehicle. The pedestrian- or bike-friendly character of the neighborhood had a lesser influence. But because density, transit access, and pedestrian- and bike-friendliness were all correlated in the data set, study authors had difficulty separating the influences of each variable. The authors reported that, holding income and household size constant, residential density and transit access could explain 75 percent of the variation in per vehicle VMT, and that a doubling of residential density in the target cities could reduce household VMT from 33 to 43 percent, depending on the city (Holtzclaw, Clear, Dittmar, Goldstein, & Haas, 2002).

In a 2003 study of a large international sample of cities, researchers generated a model in which they systematically eliminated demographic factors, including GDP per capita, a proxy for personal income, to find that only population density and traffic saturation were significant factors, explaining from 85 percent to 92 percent of the variance in vehicle miles traveled (Cameron, Kenworthy, & Lyons, 2003).

In an effort to synthesize the results of many studies on the question, Eran Leck conducted a 2006 meta-analysis which aggregated a number of studies on the relationship

¹⁶ Perhaps not coincidentally, land is being consumed for development at roughly this same rate as well (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2008).

between urban form and travel behavior. He found that higher urban densities and more mixed land use were negatively correlated with VMT at a highly significant level ($p < 0.001$), even after controlling for income and age. Interestingly, Leck found that block size did not impact VMT (Leck, 2006). But this conclusion should be taken with caution, as there is generally correlation between small block size, mixed-use, and density (Cervero & Kockelman, 1997); (Holtzclaw, Clear, Dittmar, Goldstein, & Haas, 2002). In this type of case, the only valid relationship is really the summative impact of all three variables; they should not be disaggregated without specialized techniques to treat multicollinearity.

While regional factors are important, local variables matter too. TOD residents drive fewer miles than non-TOD counterparts in their regions. For example, a 2004 study found that TOD residents use transit five times more than their neighbors with less transit access (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

One indicator often monitored by transportation and planning officials is job-housing balance. Intuitively, a city with many more jobs than workers requires many workers to commute from other cities in the region, inducing higher VMT than could theoretically be achieved in a region where each city has roughly the same number of jobs and workers. *Jobs-housing balance* is defined as the ratio of jobs to residents in a given area. Research has shown that a jobs-housing balance of about 1.0 reduces average commute distance, while conversely, a jobs-housing balance above or below 1.0 is associated with increased average commute distances and per capita VMT (Kuzmyak, Pratt, & Douglas, 2003).

Critiques of Smart Growth as a Strategy to Reduce VMT

Some authors claim that smart growth should not be used as a strategy to reduce VMT. They cite two principal concerns. The first of these is that reduced VMT will not reduce vehicle emissions, because engines get fewer miles per gallon at reduced speeds. The second claim is that smart growth principles do not result in reduced VMT per capita. I address these critiques below.

The first of these critiques is based on the fact that ideal fuel economy occurs for most vehicles at roughly 45 mph.¹⁷ Thus, smart growth critics assert that lower fuel economy from more on street driving could lead to higher fuel consumption, despite reduced VMT. However, Kenworthy and Laube put this concern to rest in a 2001 study, finding that on the contrary, cities

¹⁷ This calculation is provided in (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2008), based on data from *EMFAC2007 version 2.30: Calculating emissions inventories for vehicles in California* (2007), California Air Resources Board.

with lower average vehicle speeds (higher congestion) had lower per capita fuel consumption. Study authors attributed higher fuel consumption in less-congested cities to the higher proportion of people choosing to travel in personal vehicles, combined with the longer distance traveled in those vehicles. These gains cancelled out fuel-efficiency gains (Kenworthy & Laube, 2001).

Proponents of the second argument (that compact urban form is not associated with reduced VMT per capita) assert that instead, demographic factors, particularly household income, are the real influence on VMT, not residential density. This is an important criticism, but as discussed above, aggregate studies controlling for personal income, culture, and transit availability have all found that higher population density and urban density are associated with lower per capita VMT.

Housing Affordability

Studies have found that property values tend to increase around rail station areas. Research has found positive association between the extent of land use regulation and housing values, but conclusions based on this relationship should be taken cautiously. Most smart growth states have not succeeded in improving affordable housing indicators, but it would be more appropriate to consider the combined costs of housing and transportation when calculating housing affordability. I explore all of this in the sections below.

Transit-Oriented Development Increases Property Values

TOD can be useful tool for neighborhood revitalization, a process that goes hand in hand with increased land values. While increasing property values can be beneficial for landowners, developers, and local governments, housing and social justice advocates are often rightly concerned about TOD's affordability impacts upon marginalized populations.

Research suggests that TOD and walkable urban development do raise property values under certain circumstances. Gerritt Knaap and colleagues applied a multiple regression model to calculate the effect of announced light rail plans in an undeveloped area near Portland. They found that the announcement significantly ($p < 0.01$) increased land values within 1 mile of the station area. For properties within one half mile of the planned station, the model predicted that the average property sold for 103% more than properties far from the station in the year after plans were announced; this effect dropped to a 24% premium in the subsequent year. While the first figure is especially high, it can be explained by the fact that the area was completely undeveloped prior to plan announcements, and a number of developers may have been waiting

for plan announcements, ready to snatch up properties quickly once plans were announced (Knaap, Ding, & Hopkins, 2001).

Another study found that higher office property values were associated with proximity to rail stations. Arthur Nelson conducted a multiple regression analysis of commercial property sales in Midtown Atlanta from 1980 to 1994. He found that proximity to a heavy rail station was significantly ($p < 0.10$) associated with higher property values. His model predicted that, all else being equal, for each 100 meters distance away from the rail station, property values dropped by \$75 a square meter (Nelson, 1999).

But land value appreciation cannot always be taken as a certain effect of TOD. Necessary conditions include a growing regional economy, heavier traffic and congestion, amenable zoning, and an area not characterized by urban blight. Further, current experience indicates that it takes time for land values to increase around transit; a time scale of ten years or longer should be expected (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).¹⁸

Land Use Regulations and Housing Prices

John Quigley and Stephen Raphael analyzed housing prices in California cities from 1990 to 2000 to determine if the amount of land use regulations impacted the prices. Applying a hedonic regression model, study authors found a positive association between number of regulations and housing prices (Quigley & Raphael, 2005). However, for several reasons it would be erroneous to conclude, based on this study, that only growth management measures had this effect. First, the authors did not state the statistical significance of the findings. Second, most of the land use regulations counted were *sprawl-promoting* measures, such as maximum densities and height limits. Third, the only other independent variable in the regression model was “county fixed effects.” Omitting variables traditionally associated with property values, which may greatly vary across a county, obscured the influence of market demand upon prices. In fact, it is probable that market demand is a confounding factor, simultaneously causing prices to rise and leading to more stringent land use regulations. It would be reasonable to believe that regulations further elevate prices, but the Quigley and Raphael study did little to untangle the relationship among these variables.

More recent studies have disaggregated regulation variables considerably and included sociodemographic variables that can explain much of the variation in housing prices. Many of

¹⁸ On a related note, private investors in TOD may experience lower short-run returns, but elevated cumulative returns on investment. See Leinberger, C. (2007). *Back to the Future: The need for patient equity in real estate development finance*. Washington, D.C.: Brookings Institutions.

these studies are available only as working papers, which are not appropriate for review here. But because of the great concern among some constituencies about growth management regulations and housing prices, I offer a brief critique of such studies. Housing price and land use regulation studies only analyze a subset of total costs associated with regulations. These studies do not assess private costs, in terms of time and money spent traveling to work and other destinations, private benefits, or social costs and benefits. A full assessment of all costs and benefits, as well as a distributional analysis, would be necessary to determine what amount of regulation would be socially optimal.

Smart Growth Policy and Housing Affordability

Smart growth and compact development do not always produce high housing prices, but they have a tendency to do so. In the Lincoln Institute study,¹⁹ just one of four smart growth states studied, New Jersey, was successful in promoting housing affordability (see p. 34).

On the other hand, Oregon, while very successful in achieving other smart growth goals, did not succeed in maintaining housing affordability, as measured by the proportion of households spending more than 30 percent on rent. Oregon's rent-burdened households increased more than those in any other state studied.

David Ingram and colleagues ran a bivariate correlation analysis, using the change in share of cost-burdened households as the dependent variable and the presence or absence of state smart-growth policy as the independent variable. They found highly significant ($p < 0.01$) but weak ($r = 0.161$ and $r = 0.240$) correlation between smart growth policy and growth in the proportion of cost-burdened households.

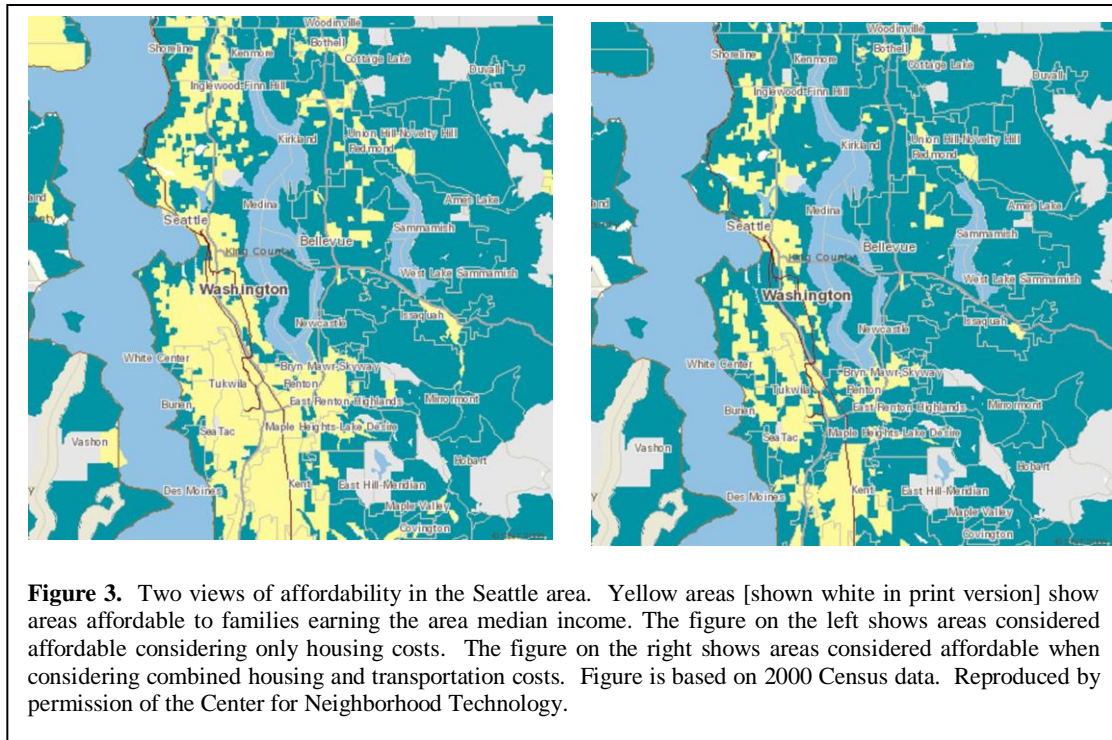
However, actual proportions of cost-burdened households matter too. For all states studied, the proportion of cost-burdened owners increased; in smart growth states it increased by 3.6 percentage points, compared with 1.6 percentage points in non-smart growth states. For renters, the cost-burdened proportion actually declined, on the average, across the board. This decline was very slight and of lesser magnitude in smart growth states; (-0.1 % for smart growth states and -1.8 % in non-smart growth states).

In the Lincoln Institute study, two caveats are important. The first one relates to the use of "smart growth" as a variable. The study compared states with the presence or absence of some kind of growth management or smart growth policy. Yet all the non-smart growth states, except Indiana, had notable smart growth efforts at the regional and city level. Arlington County,

¹⁹ The four smart growth states examined were Oregon, New Jersey, Florida, and Maryland. Indiana, Texas, Maryland, and Colorado were the non-smart growth states studied.

Virginia, has even been labeled “arguably the nation’s best TOD success story of the past 30 years (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).” And in the case studies section below (p. 43 and p. 47) I provide examples of TOD initiatives in Texas and Colorado. A second problem with using “smart-growth” as a variable is that it is a coarse-grained approach; it obscures important differences in policy frameworks. Examining exactly what policies have helped promote affordability teaches more than a simple study of presence or absence of smart growth policy.

A second word of caution regarding housing affordability is in order. While it is important to measure the proportion of “cost-burdened households” as an indicator of affordability, it is equally important to consider transportation costs.²⁰ When housing and



transportation costs are considered together, areas with lower residential density are less affordable, while higher-density areas with better transit access tend to be more affordable (Figure 3). Thus, it would be more appropriate to measure the proportion of households burdened by combined housing and transportation costs, rather than just housing. And even this type of measure would not incorporate other benefits, like improved public health for residents of

²⁰ See the Center for Neighborhood Technology’s (CNT) [Housing and Transportation Affordability Index](#). The CNT finds that when housing and transportation costs are considered together, many homes otherwise considered affordable should not be classified as such.

walkable neighborhoods. As for this last benefit, I explore the research on health and urban development in the next section.

Compact Development Promotes Public Health

Research has shown that sprawl development impacts public health in three ways. First, auto-dependent development is associated with reduced physical activity levels. Second, the higher rates of driving associated with sprawl are connected with increased air pollution and consequent health problems. Finally, exurban and lower density areas experience higher per capita rates of traffic related fatalities than central city areas. In the following subsections, I explore these issues in more detail.

Development Patterns and Physical Activity Levels

It is well recognized that lowered physical activity levels are related to numerous health problems. These include higher risk of cardiovascular disease, stroke, and mortality due to all causes. Lower physical activity levels are also linked with obesity, which has risen to epidemic proportions in the US. On the other hand, higher rates of physical activity are linked with many positive health outcomes, including lower rates of cancer, depression, and osteoporosis (Frumkin, Frank, & Jackson, 2004).

Recent studies have examined the connections between development patterns and physical activity; nearly all studies showed significant relationships among the built environment, and levels of physical activity, obesity, and morbidity. Susan Handy (2005) conducted a literature review of transportation and physical activity studies, analyzing 50 reports to determine the relationship between the built environment and physical activity levels. She found there was a clear connection between the two. Remaining questions related to the direction of causality, and exactly *which* aspects of the built environment affected physical activity levels.

Among her findings were the following. First, accessibility,²¹ measured in various ways, was correlated with physical activity. Second, the importance of design was ambiguous, but possibly important in affecting non-travel activity. Third, distance to destination was a factor affecting active travel (as opposed to recreational activity). Fourth, a supportive built environment was not enough, on its own, to ensure physical activity, but it did facilitate physical

²¹ In the transportation literature, accessibility is defined as a function of: (1) ease of reaching a destination; and (2) attractiveness of the destination.

activity. Finally, Handy acknowledged shortcomings in the literature, finding that cross-sectional design²² meant that factors like self-selection could not be ruled out (Handy, 2005).²³

Sprawl and Air Pollution

Increased air pollution is another pathway through which the built environment impacts health outcomes. As lower-density development is associated with higher per capita VMT, it is not surprising that sprawl is also associated with higher rates of air pollution. A 2002 study examined the connections between sprawl and air pollution and found a significant correlation between sprawl and air pollution, after controlling for many demographic factors. The association between sprawl and ozone pollution was strong enough that the degree of sprawl could predict compliance or noncompliance with federal health standards (Ewing, Pendall, & Chen, 2002). And of course, the harmful effect of air pollution on public health is well documented. Air pollution is recognized to be associated with reduced life expectancy, heart attack, allergies, pulmonary disease, and premature births, among other problems (American Lung Association, 2009).

Sprawl and Auto Accident Fatalities

A final health concern, in addition to concerns about physical activity levels and air quality, is auto accidents. Sprawl development is associated with higher annual rates of auto accident fatalities than more compact development. A 2002 study examined 83 metropolitan areas finding that the most sprawling area, Riverside, California, had 18 deaths per 100,000, compared with eight deaths per 100,000 in the least sprawling areas.²⁴ They attributed the higher death rates in sprawling cities to both the higher number of miles driven and the higher average speed of vehicles (Ewing, Pendall, & Chen, 2002).

In a later study, researchers examined the relationship between traffic fatalities and density. William Lucy and David Phillips analyzed traffic fatality rates for ten US metropolitan areas from 1999-2001. For every metro area, the lowest density county had a higher traffic fatality rate than the central city. The most extreme case was the Houston area; a resident of exurban Chambers County was more than four times as likely to die in a traffic accident as a

²² In a “cross-sectional” research design, multiple data points are gathered for one point in time. A shortcoming of this type of design is that it cannot examine changes over time.

²³ In other words, it is possible that individuals who prefer to walk and bicycle often are more likely to choose to live in walkable neighborhoods than other individuals. Such individuals *self-select* to live in walkable neighborhoods.

²⁴ The five least sprawling metro areas, as measured by the sprawl index, were New York City, Jersey City, Providence-Pawtucket-Woonsocket, Honolulu, and San Francisco.

central Houston resident. The relationship was least pronounced in Dallas; a resident of Henderson County, an exurb of Dallas, was only 80 percent more likely to die in a traffic accident than a central Dallas resident (Lucy & Phillips, 2006). While the methodology employed in this study was less than sophisticated, the results still suggest a meaningful relationship between density and traffic-related fatalities.

Smart Growth Is More Fiscally Efficient

Studies suggest that infrastructure costs more in sprawl development than in compact developments. In their 2005 book, Robert Burchell and colleagues projected that future costs for water/sewer and roads would come to more than \$21,000 per new residential or nonresidential unit, while this figure would be under \$19,000 per unit in a compact development scenario.²⁵ Total savings with compact development, nationally, would come to \$126 billion, 11 percent of the sprawl scenario cost (Burchell, Downs, McCann, & Mukherji, 2005).

But infrastructure expenses are just one component of a city's budget. Net impacts include both increased revenues and increased service demand resulting from new development. Burchell et al. also analyzed fiscal impacts on US cities and counties for 2000 through 2025 under sprawl or compact development scenarios. They compiled data from the Rutgers University Center for Urban Policy Research to forecast that with or without sprawl, localities should expect growing fiscal deficits from 2000 to 2025. Under a sprawl scenario, study authors project a total annual fiscal deficit of \$43.8 billion by 2025, 30 percent of annual expenses. However, the fiscal impact of a compact growth scenario would be about 10 percent less than under a sprawl scenario, saving \$4.2 billion annually by 2025 (Burchell, Downs, McCann, & Mukherji, 2005).

The Lincoln Institute study corroborated these projections through empirical study. Study authors found that four states implementing smart growth policy packages experienced more growth in areas already served by infrastructure. They then examined the economic efficiency of new tax revenues compared with infrastructure costs. Compared with the other four states in the study, the smart growth states experienced more net positive fiscal impacts than other selected states (Ingram, Carbonell, Hong, & Flint, 2009).

²⁵ To create a compact growth scenario, Burchell et al.: (1) drew an imaginary urban growth boundary around developed counties, allowing only a portion of growth to go to less developed counties; and (2) established imaginary urban service areas within counties, containing most of the growth within that area.

More Compact Development Is Needed

As discussed above, recent census reports reveal that population growth is beginning to shift from suburbs back to the cities. Given that there is significant unmet demand for walkable neighborhoods and that demographic trends are forecasted to amplify this demand, a great deal more compact development than what is on the ground today will be needed in the coming decades. I explain these issues in more detail in the following sections.

A Growing Minority of Americans Demands Compact Neighborhoods.

As observers debate the merits of TOD and compact development, it is often claimed that there is no market for such construction, and that if people demanded it, developers would build it. However, there are at least three reasons to believe this is not the case. First, in many areas, zoning regulations prohibit walkable mixed-use development, specifying single use at low densities. Second, in many areas there are so few options for walkable compact housing that it is impossible for consumers to reveal their preference. Finally, housing preference surveys, combined with demographic trends previously discussed, suggest an unmet demand for compact, walkable neighborhoods.

While in the past most Americans preferred detached houses on large lots, a significant and growing minority prefer compact residences in walkable neighborhoods. A University of Southern California study found that as Americans age, those over 45 will demand more compact residences in walkable neighborhoods, both as homeowners and renters. They also found that demand for townhomes in walkable areas outstripped supply, with 17 percent of survey respondents preferring such housing, while only 10 percent of housing stock is townhomes (Myers & Gearin, 2001).

Similarly, Jonathan Levine and Lawrence Frank, in a 2007 study of Atlanta residents, found that if given the choice between auto-oriented suburbs and pedestrian-oriented, compact neighborhoods, there was significant unmet desire for the latter. First, a significant minority of respondents expressed strong preferences for attributes of compact, walkable neighborhoods (roughly 20-40 percent, depending on the attribute). The survey found a significant positive correlation between desire for a “compact, mixed-use/pedestrian and transit orientation” and the desire for a change in the physical design of one’s neighborhood. In other words, the more a household preferred walkable, compact neighborhoods, the greater was the magnitude of change the household desired from its current neighborhood. Sixty percent of survey respondents comprised this category. The survey also found that about 40 percent of those living on large

lots²⁶ would choose to live on smaller lots in exchange for amenities like sidewalks, shops within walking distance, and narrower streets. Levine and Frank concluded that decades of public policy encouraging low density, single use development had resulted in a sizeable undersupply of compact, walkable development (Levine & Frank, 2007).

Shifting Demographics Mean a Growing Preference for Walkability

Shifting demographics imply a growing preference for walkable urban neighborhoods. That is because three demographic groups are growing as proportions of the population. These are childless households, single-person households, and elderly households. Members of each of these groups are more likely than others to prefer compact, pedestrian-oriented neighborhoods. For example, in 1950, more than half of all US households had children, while by 2025 this proportion will be less than a quarter. In 1950, just one in ten households was a single person, while this proportion will triple by 2025 (Nelson, 2006). And from 2000 to 2030, the proportion of those over 65 years old is projected to go up nearly 60 percent (US Census Bureau, 2008).

Another way to consider these demographic trends is through the number of households added over time. From 2000 to 2025, the US is projected to add 32 million households. Nearly nine in ten of these new households will not have any children, and a third of them will include just one person. Many of these single-person households will be elderly people as baby boomers move into retirement age (Nelson, 2006). Robert Fishman has concurred with Nelson, predicting a “fifth migration,” in which mainly white middle class families and immigrants return to living in urban centers and in first-tier suburbs (Fishman, 2005).

Finally, recent census reports, already discussed, suggest the trend towards more Americans living in cities has already begun. While suburbs and exurbs continue to grow faster, on the average, than central cities, their growth is waning while cities are picking up steam.²⁷ Thus, it is reasonable to believe that demographic trends are already helping to shift overall movement back to central cities (Frey, 2009).

Summary of Smart Growth Benefits

When successfully implemented, smart growth and TOD yield many benefits, which may be considered in three categories. First, social benefits include more mobility options, enhanced affordability, and improved public health. Second, governments and taxpayers benefit from reduced costs for providing infrastructure and other services. Finally, environmental benefits

²⁶ Large lots were defined as larger than a quarter acre.

²⁷ For more discussion, see page 21.

include reduced greenhouse gas emissions, improved local air quality, and protection of natural areas. For all these reasons, government decisionmakers and citizen groups have worked to promote smart growth and TOD. In the next sections, I explain in more detail how they have done this.

Government Roles in Smart Growth Efforts

States have promoted smart growth primarily through growth management policies. Since the 1970s, a number of states have enacted growth management statutes. Local governments can act to promote smart growth and TOD with or without the support of state-level policy; whatever approach localities take, citizen involvement is an important factor in achieving success. Transit agencies can play a strong role in transit-oriented development, since they control transit stations and in many cases, own adjacent land. I explain more about these roles and provide examples in the following sections.

State Level Growth Management Efforts

State level growth management efforts began in the 1970s, the “golden age” of environmental legislation. According to David Ingram and colleagues, growth management in this period was viewed as an environmental goal to protect natural areas. This first wave of legislation, in seven states,²⁸ established state level regulation of land development either regionally or statewide, depending on the state. Of the seven states, only Oregon and Florida can now be considered smart growth states (Ingram, Carbonell, Hong, & Flint, 2009).

Oregon’s 1973 Land Use Planning Act established the Land Conservation and Development Commission (LCDC) to oversee implementation of the law. The LCDC was required to develop rules by 1975 to meet 19 goals set in the statute. Five of these were especially important: land use planning; agricultural land; economy of the state; housing; public facilities and services; and urbanization. The urbanization goal required Oregon cities to establish urban growth boundaries to contain growth. The Act also required localities to submit comprehensive plans to the LCDC, which may approve, deny, or require modifications of the plans (DeGrove, 2005).

In response to concerns about congestion and quality of life, the second wave of growth management legislation came in the 1980s and early 1990s. In this wave, there was a shift from an emphasis on *regulating* growth to *planning* for growth. Legislation passed during this period assigned responsibility for planning to state, regional, and local governments. Infrastructure

²⁸ The states were California, Colorado, Florida, Hawaii, North Carolina, Oregon, and Vermont.

funding and concurrency requirements were established under this legislation.²⁹ Florida, Georgia, Maine, New Jersey, Rhode Island, Vermont, and Washington were second wave states (DeGrove, 1992).

One second wave growth management statute, Washington's 1990 Growth Management Act (GMA), regulates new development by establishing a comprehensive land use planning framework for counties and cities. Central provisions of the GMA were to: (1) concentrate new growth in urban growth areas; (2) ensure adequate public facilities through infrastructure planning and concurrency requirements; (3) protect critical areas³⁰ and rural and resource lands from incompatible development; and (4) achieve regional responsibility for locally undesirable but regionally essential resources among local governments by coordinating local plans and regulations (Settle & Gavigan, 1993).

Under the GMA, counties that exceed population or growth thresholds must plan according to the requirements of the Act. Other counties may opt to plan under the Act. All cities within planning counties are mandated to plan according to the GMA. Additionally, certain provisions of the Act apply to all counties and cities in Washington. Twenty-nine of Washington's 39 counties must meet all the requirements of the GMA.

New Jersey's smart growth policy is notable in that New Jersey has succeeded in improving housing affordability indicators while containing urban growth. During the 1990s, New Jersey reduced the proportion of rent-burdened households and increased the growth rate of rental units (Ingram, Carbonell, Hong, & Flint, 2009). The state's affordable housing policy results from state Supreme Court rulings that require municipalities to provide fair-share opportunities for construction of low- and moderate-income housing on a "regional, fair-share basis." Municipal master plans must include a calculation of existing housing stock, projected affordable housing needs, the municipality's fair share of such housing, and where such housing should be located (Ingram, Carbonell, Hong, & Flint, 2009).

According to John DeGrove, the third wave of growth management legislation, occurring in the late 1990s and early 2000s, was the smart growth wave (DeGrove, 2005). During this period, efforts shifted from *managing* growth to *accommodating* it. States emphasized economic development, rather than comprehensive planning and urban growth boundaries. States also worked to modify local zoning to allow for compact infill development in cities, coordinate state

²⁹ "Concurrency" requirements refer to mandates that jurisdictions ensure that essential infrastructure (e.g. transportation, water/sewer, etc.) is upgraded to accommodate new development.

³⁰ "Critical areas" are defined in the GMA as: wetlands; areas important for recharging groundwater; fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.

agencies with regards to growth policies, and plan capital investments to align with smart growth goals. Maryland, Massachusetts, Michigan, Ohio, and Pennsylvania were third wave states (Ingram, Carbonell, Hong, & Flint, 2009).

Maryland is one example of a third wave state that also passed legislation as part of the second wave. During the second wave, the Maryland's 1992 Growth Act, much like Washington's GMA, required local governments to produce comprehensive plans according to eight goals, which included protection of critical areas and concentration of growth in areas already served by infrastructure.

As part of the third growth management wave, Maryland passed four bills in 1997 that comprise the state's smart growth program. These were: (1) the Smart Growth Areas Act; (2) the Rural Legacy Program; (3) the Brownfields Voluntary Cleanup and Revitalization Program; and (4) the Job Creation Tax Credit Act of 1997. Also, a pilot "Live Near Your Work" program was introduced as part of the budget that year.

The Smart Growth Areas Act, a central component of the smart growth initiative, used funding as a tool to encourage growth within urban areas. Counties were required under this act to designate Priority Funding Areas (PFAs) that would receive growth-related state spending. These included heavily developed urban areas and incorporated areas. A large number of state programs were then grouped together to encourage development within the PFAs by making it less costly to build within their boundaries (Ingram, Carbonell, Hong, & Flint, 2009).

City Roles

Cities have considerable control over development outcomes through zoning and building codes. They are best situated to develop area plans, provide needed infrastructure, pedestrian amenities, and establish appropriate zoning for TODs. Land assembly is also an important tool. And if the market for TOD is uncertain, localities can fund market studies to assess the strength of demand for TOD. Finally, local governments are more accessible to the general public, and thus citizens' actions can influence policy implementation.

Portland, Oregon serves as an example of a case where the confluence of state level policy, citizen initiative, and local government action have combined to make real gains in shifting transportation mode shares. The Lincoln Institute study found that Multnomah County (where Portland is located) was particularly successful in increasing all non-SOV mode shares, posting an increase of more than 10 percent for both the transit mode share and the bicycle/walking mode share. What's more, this came at a time when these proportions fell nationally (Ingram, Carbonell, Hong, & Flint, 2009).

Why has Oregon been so successful in increasing non-SOV mode shares? This progress likely is linked to Oregon's unusual Transportation Planning Rule (TPR), promulgated in 1991. Among other requirements, the TPR requires municipalities to adopt land use and design regulations requiring bicycle paths, bicycle parking facilities, and pedestrian walkways. The rule also requires local governments to reduce parking spaces per capita by 10 percent. Metropolitan planning organizations have also been required to produce transportation system plans that would reduce principal reliance on cars (Adler & Dill, 2004).

Factors unique to Multnomah County are likely responsible for its success in increasing alternative travel modes. First, Portland Metro, the metropolitan planning organization overseeing land use in the region, is the only in the state that may *mandate* local government compliance with its transportation and land use plans (Adler & Dill, 2004). Second, citizen pressures have had a powerful effect on transportation planning. In the early 1990s, citizen groups won a lawsuit against Portland for the city's failure to comply with a 1971 state law requiring all new roadways to include pedestrian and bicycle facilities (McLaren, 2009). Since then, the city has aggressively promoted bicycling and pedestrian transit modes. In just five years, the city doubled its bicycle lane miles to 228, and plans are underway to expand this figure to an incredible 926 miles (Adler & Dill, 2004); (McLaren, 2009). The city has adopted a similarly aggressive plan to promote walking as the primary transportation mode in 16 designated districts.

As the Portland case confirms, political leadership is essential for promoting smart growth and TOD; a strong champion who advocates for smart growth measures, whether a citizen or elected official, is important for success. Such a leader can gather resources, build coalitions, and address problems as they arise (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Interagency coordination can be a very useful tool to facilitate TOD; with all the different governmental entities involved, developers can get wary of entering into a complicated and lengthy process. Several cities, including Denver, San Francisco / Oakland, and Baltimore have successfully formed interagency committees to facilitate TODs and interface with developers. In other cases, interagency cooperation happens more informally (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Localities can encourage developers to undertake TOD projects by offering certainty in their areas plans and in infrastructure improvements. Clear goals and commitments to meet them are important (Belzer, Autler, Espinosa, Feigon, & Ohland, 2004). For example, the developer of the Plano, Texas TOD said he would not have done the project without the city's explicit planning and efforts to assemble land (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Transit Agency Roles

Transit agencies often play a leading role in TOD because they own land adjacent to station areas, and seek to promote transit ridership and gain revenues through developing the land appropriately. They may play a number of roles in TOD. They advocate changes to facilitate development, such as zoning changes. They assemble land, and conduct outreach efforts to promote TOD (Cervero, Ferrell, & Murphy, 2002).

Robert Cervero and colleagues divide transit agency roles into three categories: proactivism, coordination and facilitation, and inactivity. In this framework, *proactive* agencies act as land developers and are heavily involved in the process. In contrast, *coordinating and facilitating* agencies encourage TOD type development in station area through a variety of means. Finally, many transit agencies are completely *inactive* with regards to land use planning (Cervero, Ferrell, & Murphy, 2002).

Belzer et al. recommended that transit agencies consider TOD planning on a systemwide scale. For example, one parking-oriented station can relieve parking pressures on other transit stations in the areas, allowing them to function more as places than as transit nodes (Belzer, Autler, Espinosa, Feigon, & Ohland, 2004).

However, most transit agencies take an inactive role; they have no personnel assigned to TOD, and shy away from land development activities. Just under half of rail agencies surveyed in 2002 and only 9 percent of bus-only transit agencies had any personnel assigned to TOD. Agencies without staff time dedicated to TOD reported that they encourage TOD in other ways: by reviewing development proposals to ensure that they are transit-supportive, and by issuing transit-supportive design guidelines (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Barriers to Transit-Oriented Development

Those promoting transit-oriented development often face a number of barriers. Most barriers stem from policy frameworks and citizen opposition. Other barriers result from regional economic conditions and the challenge of collaborating among multiple entities. I describe these barriers in the following sections.

Challenges in Policy and Politics

Because the policy environment in most areas supports sprawl development, TOD and smart growth require policy interventions to shift the balance in their favor. Policy barriers can be found at every level of government. In the following sections I present a brief overview of barriers encountered in state governments, local governments, and transit agencies. Lastly, I explore political challenges that have confronted TOD and smart growth initiatives.

While some state policies encourage or require smart growth and TOD, others impede them. For instance, statutes limiting transit agency real estate transactions to transit use only, as well as concurrency requirements, can present barriers to TOD, according to local officials. Similarly, without legislation that explicitly authorizes TOD and land development by transit agencies, transit agencies often feel uncertain about taking on TOD projects (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Local government policy, especially at the city level, has often functioned to encourage sprawl development while impeding TOD and compact, mixed-use development. Zoning plays a large role in this phenomenon; many suburban localities zone for large lot, single-family housing, and apply Euclidean zoning³¹ (Levine, 2006). Property tax policies encourage land speculation, rather than development, by taxing land based on its current value, not on its highest-and-best use³² (Nelson, 2006).

Other barriers at the local level are less apparent in written policy, but are still subject to local decisionmaker influence. One such barrier is increased permitting delays often faced by contractors constructing in urban areas, compared with constructing at the margins (Downs, 2005). Another is the “congestion conundrum” – proposed TODs often raise concerns about increased local congestion, leading officials to downzone the project area (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Transit agency barriers are mostly based in organizational culture and in precedent set by past development decisions. For example, rail lines have often been routed through unattractive industrial areas where it is difficult to develop attractive mixed-use neighborhoods. Transit agencies are often fixated on auto-oriented design, favoring park-and-rides and wide roads over designs oriented towards walking and riding (Porter, 1997).

In some cases, transit agency rules outright impede reaching TOD’s full potential. For example, many transit agencies require one-to-one replacement of park-and-ride stalls, which greatly increases the cost of implementing TOD. This tension between auto-oriented use and multimodal access can lead to design challenges, as planners work to create a pedestrian-friendly environment that is also accessible to cars (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

In addition to policy barriers, TODs and smart growth proposals often face political opposition for several reasons. Primary among these is concern about shifting land values. A

³¹ Euclidean zoning is characterized by single-use designation (residential single-family, residential multi-family, industrial, commercial, civic, and roads). Such zoning is effectively auto-oriented, because it necessitates auto travel to access different uses.

³² “Highest-and-best use” is the reasonably probable legal use that produces the highest property value.

shift from status quo development practice means that there are winners and losers. For example where an urban growth boundary is drawn, landowners outside the boundary may oppose the boundary because of lost development potential and related monetary value for their land. Conversely, restricting growth to already urban or suburban areas raises land values within cities, providing financial benefits to landowners and homeowners. This trend can also garner opposition, however, as lower-income residents oppose gentrification that may lead to their displacement (Downs, 2005).

Citizens may also oppose land use planning and TOD on ideological grounds, preferring a “free market” approach, subject to existing regulations.³³ Similarly, some citizens fear giving up local government control over planning, but TOD and smart growth is best organized from a regional level. Finally, many people favor compact, walkable development in principle, but fear increasing density in their own neighborhoods (Downs, 2005).

Other Barriers

TOD often faces financial and market barriers. Most of these stem from conventions that are currently the norm for developers and lenders. Planners and public sector officials often have trouble garnering interest from the development community for mixed-use development, particularly vertically mixed use. A related problem is that denser, infill development often entails higher costs and risk than new sprawl development (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Other barriers are really external problems, beyond local officials’ control. For example, some authors believe that TOD cannot be successful in a locally depressed real estate market, or in an economic slowdown (Seattle Department of Transportation, 1999); (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). Another consideration is mortgage lending practices that spur sprawl and long-distance commuting; homebuyers are encouraged to “drive until you qualify” because mortgage lenders do not consider household transportation costs or home energy costs when awarding loans (Nelson, 2006).

Difficulties also result from the challenge of collaboration across jurisdictions. Often, several public and private entities must cooperate and plan together, making coordination more complicated. Aside from this difficulty, public and private entities have different organizational cultures, and different time frames for action. For example developers generally hope to move

³³ However, a number of authors point out that current development practice is heavily supported and subsidized by local and federal policy. See (Levine, Zoned Out: Regulation, markets, and choices in transportation and metropolitan land-use, 2006) and (Hayden, 2003).

forward quickly with a project to minimize costs, while a public entity may require time-consuming legislative approval before authorizing an action (Walker, 2007).

Implementation

It is well recognized that TODs are challenging to plan and implement. Many authors have made recommendations about necessary elements for successful TODs. Key among these are: (1) strong regional and local real estate markets; (2) community involvement and support; and (3) supportive public policies (Seattle Department of Transportation, 1999); (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). I provide an overview of these issues in the following sections.

Definitions of success vary according to the goals of TOD participants. Transit agencies are primarily concerned with increased ridership and increased farebox revenues, as well as increased value capture through land leases. Cities and counties usually employ TOD as a tool for economic revitalization and enhanced livability; in some cases they hope for increased property tax receipts. Developers, of course, seek a return on investments and a predictable development process. Finally, members of the public have diverse goals, but some constituencies demand TOD and smart growth based on a desire for reduced auto dependence, reduced congestion, protection of natural areas, and more generally, better quality of life (Cervero, Ferrell, & Murphy, 2002); (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

It goes without saying that economic conditions are important to determining TOD success. Successful TODs are usually set within a growing regional economy. Such areas tend to experience higher congestion, making transit more attractive for residents, workers, and shoppers in a TOD area. An extensive transit network is also related to successful outcomes. (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). Renton fits this profile closely, with a healthy regional economy, a large job center in downtown Seattle accessible from the Renton transit center, and some of the worst regional traffic congestion in the country.

Another very important condition for TOD success is community support. While some TODs have faced community opposition that led to weakening of design standards, successful TODs, including Renton's, have often started out as the product of a community visioning process or regional plan that incentivizes TOD; in a 2004 survey, half of responding transit agencies said their region had a vision, policy, or plan in place that included TOD principles. Case study research indicated that including the public in visioning and planning a neighborhood was crucial to the TOD's success. Design charrettes have been used successfully in Pleasant Hill (Bay Area) and along the Wasatch Front in Utah (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Of course, public policy plays a strong role in TOD outcomes, and higher levels of government may support local TOD efforts through specific tools and policies. Local government officials reported in 2004 that the most effective tool that metropolitan planning organizations, state agencies, and the federal government could offer them was funding. In particular, they mentioned needing funds for station area planning, infrastructure improvements, and “on-the-ground” improvements (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).³⁴

At the local level, land-based tools such as land purchase and assembly have been important for TOD. These tools are often employed by redevelopment agencies (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). Because of this, these strategies are usually used only in economically depressed areas. By purchasing land and holding it until redevelopment can happen, an agency can directly influence the development process, rather than working with landowners to determine development outcomes. As I detail in Chapter 4, the Renton case provides another example of land assembly as an effective tool for TOD.

Robert Cervero et al. found that overlay zones were the most common means of implementing TOD. An overlay zone is a temporary zoning tool, in which specific uses are outlined. To encourage TOD, some localities have zoned to preclude auto-oriented uses, specifying desired land uses, like housing and convenience shops. Residential densities of 20 to 30 units per acre, and FARs of 1.0 or higher were typical of overlay zones TOD surveyed in 2004 (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). Renton has also used overlay zones to promote pedestrian-oriented character in its TOD.

Other important tools have been density bonuses and relaxed parking standards; careful planning of parking is important to an effective station area plan. Recommended elements include: (1) strict regulation of parking and vehicular traffic so as not to impede pedestrian travel; (2) comprehensive parking strategies to link parking requirements to actual vehicular use and ownership levels; and (3) unbundling parking costs from other costs such as housing (Belzer, Autler, Espinosa, Feigon, & Ohland, 2004).

Procedural approaches, like expedited design review, or excluding TODs from concurrency requirements, have been recommended as an incentive for TOD, but many city officials do not favor these tools, viewing them as relatively ineffective. Developers tend to disagree, however; the developer of the Atherton Place project near the Hayward BART in San

³⁴ For a discussion of federal grant funding for TODs, see (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Francisco attributes the project's existence to the expedited review process (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004).

Case Studies

In this section I synopsise five case studies, all conducted as part of the 2004 study for the Transportation Cooperative Research Program (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004). The five cases highlight the diversity of TOD, with regards to policy environment, urban form, and character. First, I examine Plano, Texas, a former farming town in the Fort Worth metro area that has revitalized its historic downtown around a new light rail station. Second, I present the Round, a less successful TOD in the Portland metro area. Third, I discuss a TOD subdivision in the city of Boulder, Colorado. Next, I have a look at an office and hotel TOD at a metro station adjacent to a highway in Miami. Finally, I present a mixed-use shopping district in the upscale suburban city of Bethesda, Maryland. These sections should give the reader an idea of the variety of TODs under development today.

Plano, Texas

In Texas, there is no state-level smart growth legislation, and the city of Dallas has taken a hands-off approach to TOD. In contrast, however, many suburban cities in the Dallas area have taken a proactive approach towards promoting new mixed-use centers. Importantly, these cities have seen TOD as a tool for economic development, rather than for containing growth.

The Fort Worth – Arlington metropolitan area, which includes Plano, has been rated as one of the top ten most sprawling American cities (Ewing, Pendall, & Chen, 2002). Yet within this region, many localities have taken the lead in promoting TOD and other ways of reducing auto dependency (Ingram, Carbonell, Hong, & Flint, 2009). For example, Fort Worth is taking steps to promote bicycling, walking, and public transit through its new infrastructure plan (Bike Friendly Oak Cliff, 2009).

The city of Plano (population 267,480) is an upscale community located 19 miles north of downtown Dallas. In the 1980s, the city experienced a boom in office park development and shopping malls. Amidst worries about a declining downtown, the city shifted gears in the early 1990s, and embraced TOD and New Urbanist principles. The city has worked to redevelop its downtown as a diverse, mixed-use, compact center. Guiding principles for its vision include improving quality of life for citizens, providing a sustainable development model for similar suburban cities, and creating a unique identity.

As shopping malls diverted customers from downtown Plano, by the mid 1980s, Plano's downtown had shifted from retail and services supporting residents (e.g. grocery, hardware,

pharmacy) to antique shops and novelty shops. Property values declined and the downtown was vacated each day by mid-afternoon. The trend began to spread into adjacent neighborhoods. A once prosperous downtown was in serious decline.

In the 1980s, the city worked to spark downtown redevelopment through aesthetic improvements. It conducted streetscaping, landscaping, and other aesthetic improvements. It built a new municipal building downtown, and demolished derelict buildings to restore Haggard Park, the historic “heart” of downtown.

In 1991, the pace picked up as the City Council approved a historic downtown redevelopment plan according to New Urbanist principles. In 1993, a Business / Government (BG) district was established around downtown and small parts of adjacent areas. The idea was to preserve historic commercial buildings by constructing infill development adjacent to such properties. The plan restricted surface parking, limited building heights to four stories, established zero setback, and mixed-use zoning. The city also improved the aesthetic character by reconstructing key streets, and implementing “historic” design finishes.

At the time there was no public transit service connecting Plano to Dallas. DART, the transit agency, was planning a special events-only bus service to Plano, but no light rail. But in 1995, DART changed plans to include a light rail station in Plano. DART and city planners worked to choose a location within ¼ mile of every point within the BG district. They settled upon a site on the edge of Haggard Park. The city already owned two-thirds of the neighboring city block, which it had planned to use for parking, and DART used eminent domain to acquire the rest of the block. DART used a portion of this to build its platform, and transferred the rest to the city in exchange for infrastructure to support the platform (e.g. expanded sewer, reconstructed streets, and drainage).

The city assembled the adjacent land, and issued a request for qualifications to developers in 1998. Amicus Partners, which had previously approached the city about building a TOD, was awarded the contract. To help plan the project, the firm held community planning events to assess residents’ desires for the new downtown. Although density was a point of great controversy, after extended negotiations, local citizens accepted an upzoning from 40 to 100 units per acre, with the understanding that higher density would help improve downtown.

The first project, Eastside Village Phase 1, was completed in 2001. Located near two performing arts centers, a transit museum, and a historic downtown, it features three- and four-story brick buildings with 234 upscale lofts, 15,000 square feet of ground-floor retail, and structured parking for residents and shoppers. The buildings wrap around three sides of a parking

structure, and directly abut the sidewalk. There are two restaurants, small offices, and a city-run community space. The residential units share a courtyard and pool.

Expecting that Eastside Village 1 would fare well, city staff and Amicus Partners began working to develop Phase 2. Just down the street, the city owned a parcel adjacent to a utility company property. Amicus Partners bought the utility property, and the city contributed its land in exchanged for 100 parking spaces in the finished project. The city also paid Amicus Partners \$800,000 to install infrastructure improvements.

Completed in 2002, the second project is similar to the first, featuring 229 loft apartments and 25,000 square feet of retail.³⁵ Parking is more visible to the street, which has helped businesses at the site. To leverage the projects, the city has funded aesthetic improvements to downtown, including brick sidewalks and street furniture. And as the City owns the parcels where the two projects sit, it was able to incentivize the projects by applying development fees to ground lease payments.³⁶

Going into the project, the developer expected that proximity to the planned DART station would help publicize the projects, but he did not expect it to attract residents. But he changed his mind. Phase 1, completed before the new station, rented out quickly at first, but then occupancy dropped from 98 percent to 89 percent. When the new station opened, occupancy jumped back to its former level. He believed that a quarter to half of new residents chose to move there because of DART. Since then, his company has concentrated marketing efforts on DART users, even handing out free coffee and donuts at the DART station.

As of 2004, the city had not completed the redevelopment effort, and planned to double the number of residential units downtown to 500. Other tools it used in the development effort were tax increment financing, parcel assembly, a neighborhood empowerment zone, and a historic preservation tax abatement program.

In response to the new development, new restaurants, a spa, an art gallery, and shops have been established downtown, making it an evening leisure center and a regional destination. Evening and weekend DART use has increased at the station.

Developer Robert Shaw believed that key to the project was the city's vision, provision of incentives, and a push from all levels of city staff to make the vision happen. Shaw described himself as "the arms and the legs" of the city; instead of having to push for the development, he felt that the city "pulled" him through.

³⁵ For a Google Street View of Eastside Village 2, click [here](#).

³⁶ A *ground lease* is a long-term lease (usually 99 years) of commercial property, in which any improvements, including construction of buildings, revert to the landowner at the end of the lease term.

Beaverton, Oregon

Beaverton is a suburban city located seven miles west of downtown Portland along the MAX line. Currently, Portland, Oregon is recognized as a leading city in smart growth and transit-oriented development. As previously discussed, Oregon is among the states that were part of the first wave of growth management legislation in the 1970s; urban growth boundaries were mandated statewide in 1973-74. Since then, Portland has been home to strong citizen initiatives to control growth and promote transportation options (Mayer & Provo, 2004). Portland has had remarkable success according to several indicators; it has experienced increasing public transit, bicycling, and walking mode shares, congestion growth has slowed, and property values have increased in transit-oriented districts like the Pearl District downtown (Ingram, Carbonell, Hong, & Flint, 2009). In 2002, Portland ranked as one of the top ten least sprawling metropolitan regions in the US (Ewing, Pendall, & Chen, 2002).

In 2002, Beaverton was working to plan a large, high-density town center project adjacent to the MAX station. When complete, the project is planned to contain 240 market-rate housing units, upscale restaurants, 125,000 square feet of retail, and 375,000 square feet of office space. The project, known as the Round, features a large, half-moon shaped plaza, set between the crescent shaped buildings. The plaza features a fountain and an amphitheater. It is a pioneering project in a city with no prior experience in mixed-use, infill development.³⁷

The city issued a request for proposals in 1997. The winning developer proposed 100 to 150 townhomes, 230,000 square feet of retail, an 800-space parking garage, a theater, and a hotel. In support of the project, the light rail transit agency, MAX, relocated its station from a nearby arterial to the new project.

From the start, the project was expected to be costly, because of expensive foundations, pedestrian amenities, and parking structures, among other elements. In addition to developer funds, federal agencies provided support. Federal funds of \$800,000 were secured for site improvements. An additional \$440,000 in Federal Highway Administration (FHA) funds was allocated for pedestrian improvements.³⁸

To incentivize the project, the city offered tax abatements of \$3 million over ten years, in return for the developer building infrastructure improvements. This amount was intended to reimburse the developer for having to unexpectedly lay out this same amount to stabilize “industrial muck” before building.

³⁷ For a Google Street View of the Round, click [here](#).

³⁸ These funds were awarded by the FHA’s Congestion Mitigation and Air Quality Improvement Program.

The developer began construction using his own equity, but was unable to get take-out financing. Then he went bankrupt, and the Round project lay partially complete and unoccupied for three years.

Robert Cervero and colleagues believed the project experienced these difficulties for a number of reasons. First, the unanticipated problems with unstable soil increased costs considerably. Second, the developer tried to finance the whole project at once, rather than developing in stages. Third, the city was unaware, when awarding the project, that the developer had *not* secured financing. Finally, in hopes of securing a loan, the developer gave up the plan for high-density apartments in favor of high-end condominiums. At the time, there was little precedent in the region, and none in Beaverton. The immediate neighborhood was characterized by car dealerships, making it hard to attract condo buyers.

In the end, the city bought the project from the developer, and then sold it to Dorn Platz Properties, a California developer experienced in building this type of project. The developer set about working to complete the project in phases, according to market conditions. As of 2004, the project included: (1) a five story office building with ground-floor retail, 90 percent rented out; (2) two buildings with condos and ground floor retail; and (3) a public plaza with walkways, waterfalls, and seating.

The city made streetscape improvements to enhance pedestrian access to the MAX station. As of 2004, several more buildings were planned, including a 24-Hour Fitness Center with condos above, and several more office buildings with housing above. The theater and the hotel were dropped from the plan.

Although more projects were added into the original plan, the developer did not add more parking, and worked to minimize parking through shared parking, valet parking, and reduced parking ratios.

While Cervero et al. (2004) were hopeful for the eventual success of this project, things have taken a turn for the worse, especially with the 2008 housing bubble and the economic downturn. Last year, Dorn Platz was facing foreclosure, with more than \$2 million in outstanding debts (Lent, 2008). It remains to be seen if the Round can become a financially successful TOD, and the case of the Round serves as a reminder that TOD success depends both on skillful implementation and on regional and national economic conditions.

Boulder, Colorado

Boulder is a mid-sized city of about 100,000, situated 25 miles northwest of Denver. Until recently, it has not had a strong TOD policy, but it has been recognized as one of the early

leaders in growth management, with a clear urban growth boundary, and 33,000 acres of protected natural areas surrounding the city. In 1994, Boulder renewed its bus system, by establishing a new agency, the Community Transit Network (CTN), to provide higher frequency bus service in a more efficient manner. Mixed-use developments have sprung up along many portions of the CTN lines, expanding the areas of walkability beyond the denser, mixed-use urban core. While these projects were not explicitly conceived as TODs, they may be viewed as *de facto* TODs, as they fit the minimum definition of “compact, mixed-use development near transit facilities and high-quality walking environments” (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004, p. S1).

Boulder has a limited amount of developable land, and the city specifies clear guidelines for TODs. For the most part, TODs have been market-driven in this area. However, the city made an exception to this rule for the Boulder Transit Village. It is partnering with the Regional Transportation District (RTD) to create a mixed-use, multimodal transit center, with residential, commercial, and retail development. I discuss this project in more detail below.

As of 2004, mixed-use development was already becoming commonplace in Boulder, and lenders were familiar with and supportive of the practice. Ten new mixed-use developments were planned for downtown, including office, retail, and residential units. Property values for mixed-use development in Boulder featured price premiums equal to that of the most high-end neighborhood in the area, the LoDo district in Denver.

Since the 1980s, there has been great concern among City Council members over traffic congestion. In 1989 the Council adopted a goal of reaching a 15 percent non-SOV mode share. When it was projected that meeting the goal would do little to mitigate congestion, the Council took another approach, recommending a goal of zero VMT growth after 1994. To meet these goals, the city established the Go Boulder Program, which established the CTN and strong transportation demand measures.

Through the planning process, the city has influenced development outcomes. Because the real estate market has been healthy, the city is able to set conditions on project approval. The city often requires transit demand management programs from developers, such as free bus passes for residents, and may require site design modifications.

One example of a project where the city used development review was the new CompUSA center on 30th Street. The city has a subarea plan to make the 30th Street corridor, which already features a bus line, pedestrian friendly. Although the neighboring development consists of strip malls and auto-oriented uses, the city worked with CompUSA to plan a pedestrian-oriented façade for the building. It has little setback and an attractive pedestrian plaza,

with greenery, that connects to the sidewalk. However, the front doors are locked, so pedestrians must walk 250 feet around the building to enter. This project serves as an example of a case where design guidelines were not enough to ensure pedestrian-oriented function.³⁹

The city may be experiencing more success with the Dakota Ridge development on the northwest edge of the city. The city took an active approach towards the development, with a plan that stated its vision for the community in this way:

This area should be developed with all the qualities of an attractive, established neighborhood: beautiful and walkable streets . . . convenient transit and neighborhood services, and proximity to a neighborhood park (City of Boulder, 1995).

The development features a pedestrian-friendly face, with front porches on houses and townhomes. Cars are parked in alleys, and the neighborhood has sidewalks, pathways, and civic space. The majority of the neighborhood is within ¼ mile of bus lines along major roads bordering the subdivision. When complete, the neighborhood will have 390 residences and 24,000 square feet of commercial space. The street grid has no cul-de-sacs, and block size is similar to that of traditional neighborhoods in Boulder, such as University Hill. Higher density units (townhomes and condos) are situated nearer to the village center, near planned transit stops.⁴⁰

Boulder has a serious jobs-housing imbalance, which has raised city officials' concern about the prospects for reducing congestion. While the ratio of jobs to residents in Boulder proper was 0.96 in 2004, the ratio for the region was 0.57. Boulder officials believe congestion problems result from this imbalance, and have sought to address the issue by establishing several mixed-use districts. Mixed-use zoning, combined with development reviews, has resulted in projects such as the Steel Yards on 30th Street. This project consists of 22 buildings, including 90 housing units and 137,000 square feet of office and retail. Commercial buildings front the street, with little setback, while parking and housing are hidden behind. The city rejected an application for big box development before approving the Steel Yards.⁴¹

The city has taken a different approach with the Boulder Transit Village. In this project, the city has taken an active approach in steering development. The Village is planned as a multimodal, mixed-use center a few miles east of downtown. The city's Department of Transportation had identified a need for an integrated transit center, with local and regional buses,

³⁹ For a Google Street View of the CompUSA building, click [here](#).

⁴⁰ For a Google Street View of Dakota Ridge, click [here](#).

⁴¹ For a Google Street View of the Steel Yards, click [here](#).

as well as future commuter rail and bus rapid transit. The city also saw an opportunity for affordable housing. The village is planned to be built over a former park-and-ride lot.

Planning for the project began in 2001. One major hurdle was site acquisition. After a site review process, the site selection team chose the site because of proximity to a rail line and ability to provide TOD and affordable housing. The price tag of \$7 million for the property proved a challenge, and the city pieced together funds from the sale of a park-and-ride lot, its Department of Housing and Human Services, and loans from Fannie Mae. The City Council had also approved use of eminent domain to acquire the land, but the city worked to acquire the property on the open market.

In 2007, the City Council adopted the Transit Village Area Plan. The Plan includes a vision for a “lively, mixed-use, pedestrian-oriented place where people will live, work, shop, and access regional transit.” Other objectives include urban character, encouraging alternative transportation modes, diverse housing for a mix of incomes, new retail and jobs, and inviting public spaces (City of Boulder, 2007). However, due to the current recession the project has faced challenges as expected funding has evaporated; funding shortfalls mean the district will probably not get the rail line planned to be in operation by 2016 (Morgan, 2008).⁴²

Despite this setback, the project has served as an example of successful collaboration among city government and regional agencies. The city worked with the RTD to head off a planned park-and-ride for the area, and to redirect funds to the transit village. Importantly, efforts to shift RTD goals were made years before the planned expenditures were scheduled.

Boulder has experienced increased transit ridership, which Cervero et al. (2004) attribute to the city’s policies that encourage walkable, compact development. Market forces are pushing transit-oriented development, and transit-oriented corridors are beginning to form.

Miami-Dade County, Florida

Florida has experienced explosive growth over the last half-century, with the 2000 population five times greater than the 1950 population. Florida enacted both first wave and second wave growth management legislation, and is still considered a smart growth state (DeGrove, Planning policy and politics: smart growth and the states, 2005).

Florida’s 1985 Growth Management Act (GMA) relies on principles known as the three Cs – consistency,⁴³ concurrency, and compact urban form. Like Oregon and Washington, Florida

⁴² For a Google Street View of the Boulder Transit Village site, click [here](#).

⁴³ Under Florida’s GMA, local plans must be *consistent* with criteria set by the state’s land use planning agency, and with the State Comprehensive Plan.

relies on a comprehensive planning model. The GMA requires each local government to produce comprehensive plans and enact ordinances that are consistent with the long term visions of these plans. Capital budgets must reflect the requirements of the plans. Planning also occurs on the regional and state agency level, and plans are subject to state agency review. Finally, there is strong state commitment to funding for planning and infrastructure (Ingram, Carbonell, Hong, & Flint, 2009).

Florida cities have been under pressure to limit growth by setting boundaries, or to plan for compact growth. Dade County, which includes Miami, is an unusual case because it has set countywide policies to encourage TOD. Several factors make this possible. First, the countywide transit agency has the right to plan and set zoning along transit corridors. Second, there is an emphasis on joint development.⁴⁴ Finally, TOD has long been viewed as a useful tool for economic revitalization.

Although Florida has used transportation planning as a land use tool for some time, TOD has been a slow idea to take off in policy spheres. Florida's Transportation Plan in 2004 only vaguely alluded to TOD in one place, calling for "land use planning and urban design practices that facilitate transit service and access (Florida Department of Transportation, 2000)." But local governments have taken more initiative to promote TOD.

Miami-Dade County is the most likely candidate for TOD in Florida, with high enough density to support transit, and a county Comprehensive Development Master Plan that calls for mixed-use, pedestrian-friendly development around transit. The plan specifies higher densities around transit stations and prohibits uses not conducive to transit ridership. However, market conditions and, in some cases, unsupportive local governments have presented barriers to TODs, and TOD has met with mixed outcomes.

Miami-Dade County has very little developable land, so developers have turned to infill development. The markets for office, retail, and multifamily housing construction are all strong. The transit agency, Miami-Dade Transit (MDT), operates a 21 mile elevated rail system from the northwest to the southeast. MDT has worked to plan joint development projects at 12 of the 22 stations along the line. As of 2003, four of these projects were moving forward, and eight more were in planning stages.

⁴⁴ According to Robert Cervero, "transit joint development is distinguished from TOD mainly by being tied to a specific real-estate project, venture, or brokered deal and involving the direct participation of a public entity, often a transit agency, in revenue streams and sometimes ownership. (Cervero, Murphy, Christopher, Goguts, & Tsai, 2004)."

Throughout its history, many have viewed the rail line as underused. MDT proposed to remedy this by extending the rail system another 50 miles, and encouraging development around the line.

Nine miles south of downtown Miami, the South Dadeland Metro Station lies along US Highway 1, just across the street from the largest shopping mall in the state. The joint development project there was initiated by a developer. The company, the Green Company, donated the six-acre property at the site to the county, and then negotiated a 100-year lease for all air rights at the station. The county receives either a flat rate lease payment or a percentage of gross sales from the property, whichever is greater. The developer built a midrise hotel and offices on the site. The county has received more than a half a million dollars annually from the arrangement.⁴⁵

The project serves as an example of cost-sharing in several ways. First, the county benefited from connecting the station to the two office towers, reducing the cost of excavation and the foundation. Second, the station and the towers share a ventilation system and auxiliary generators. Finally, the county and the developer jointly built and use the parking garage, which has 1650 spaces. Transit officials calculate an overall savings of \$4 million. The offices and hotel have performed very well; both have had occupancy rates of about 95 percent.

Bethesda, Maryland

As previously noted, Maryland has been a growth management state for decades, enacting both second- and third-wave legislation to promote growth management. As part of the smart growth framework, the Smart Growth Areas Act of 1997 incentivized compact growth by funding infrastructure in priority funding areas and by integrating goals and actions across state programs related to development.

Counties and municipalities are authorized under statute to develop comprehensive land use plans, implementing the plans via zoning ordinances, transfer of development rights ordinances, adequate public facilities ordinances, and other policy tools. Counties are the strongest players in Maryland land use; only four cities with more the 50,000 people even have planning and land use authority, and in many areas, counties provide planning services for unincorporated urban areas (Ingram, Carbonell, Hong, & Flint, 2009).

Serving many Maryland suburbs, the Washington Metropolitan Area Transit Authority (WMATA) was the first post-World War II transit agency to declare shaping regional land use a

⁴⁵ For a Google Street View of the South Dadeland Metro Station, click [here](#).

goal. It is widely viewed as a leader in joint development, and local governments have added support by encouraging TOD around rail lines. The WMATA is the second-largest transit system in the country, carrying one million passengers a day. Early leaders of WMATA saw the importance of shaping land use around the rail lines, and began to do so before the rail lines opened. By 2003, there were 52 joint development projects along the rail lines, with a market value of \$4 billion. These new developments are credited with generating 25,000 new riders.

Bethesda, Maryland is in Montgomery County, ten miles northwest of downtown Washington. In 1970, before the Metrorail line was built, the city revamped its Master Plan to restrict new development to the Central Business District (CBD), concentrating new growth at the center. At the same time, it zoned for an intermediary buffer zone around the core to provide a transition between the urban district and residential areas. The CBD plan was updated in 1982 to provide requirements that new development be transit-oriented and compact. The plan also requires public facilities and design standards.

Bethesda has also used public-private partnerships to manage TOD. A special tax is levied in the Bethesda urban district to pay for public services in the district. The Bethesda Public / Private Partnership was created to oversee distribution of these funds.

Cervero et al. (2004) classify Bethesda Row, a large-scale mixed-use TOD located within the central business district, as an “exemplary model” of public-private partnership. In 2004, three of four phases had been built, comprised of 110,000 square feet of office, 190,000 square feet of retail, and 40,000 square feet of restaurants. It is characterized by small to medium-sized shop fronts lining a tree-lined street with no setback. Sidewalks have attractive brick designs, and there are sidewalk cafes. It also has arts facilities and a cinema. It is within walking distance of a Metro Station and it is along a pedestrian / bike pathway.⁴⁶

The Bethesda Row developers used real estate investment trust funds to construct the project, and built it in phases to reduce risk. The county contributed by building a parking garage within the project, using parking district funds. Developers worked with county planners to decide on streetscape improvements and to address traffic impacts. They also met with community members who were concerned about the project’s impacts on local businesses. The issue was resolved by agreeing that the project would include a mix of local, regional, and national retailers.

As of 2004, Cervero et al. considered the project a success, with 99 percent of office space rented out and 53 stores leasing space. Office workers, nearby residents, and visitors from

⁴⁶ Click [here](#) to see Google Street View of Bethesda Row.

around the region frequent the shops and restaurants. Development continues in the district; currently a large 24-hour fitness club is being constructed (Hunter, 2009).

Conclusion

In this chapter I have laid the groundwork for presenting my case study of Renton, Washington. Smart growth and TOD have appeared in response to the explosive growth of American suburbs in the 20th century. Smart growth holds promise for helping to solve a number of societal problems; most pressing among these is climate change. Governments, having played a central role in the suburbanization of America, now have a strong role to play in fostering smart growth initiatives. Likewise, most barriers to smart growth and TOD lie in current policies at the state and local levels. Successful TOD implementation hinges on a healthy regional economy, citizen support, and the use of a number of policy tools. Finally, there is already a diversity of TODs on the ground in the United State, as the case studies presented here illustrate.

Having laid the foundation for my case study in this chapter, I move on to Chapter 3, in which I describe the specifics of the Renton case. In the following pages, I provide localized context, with an overview of the history, demographics, and economy of Renton and the Puget Sound Region. This background will set the stage for transit-oriented development Renton.

CHAPTER 3: BACKGROUND

Washington's Growth Management Act (GMA) of 1990/1991 required that certain cities and counties concentrate new growth in urban centers. Because it has experienced significant population growth, King County develops land use plans according to the GMA. Located in King County, Renton is a historic suburban community located 13 miles south of Seattle. Renton plans under King County's Comprehensive Plan, which sets growth targets for each city in the county.

In this chapter I review the history of the GMA. Then I describe the Seattle area and King County's comprehensive plan. Finally, I describe Renton and how it fits in with the larger regional planning framework.

Washington's Growth Management Act

The Growth Management Act of 1990/1991 resulted from monumental struggles within the Washington Legislature, over the legislative sessions of 1989, 1990 and 1991. In both 1990 and 1991, the acts passed in the final hours of the legislative session, only after lawmakers adopted ambiguous language that could be interpreted in ways favorable to growth management opponents. The resulting legislation represented a blend of goals for the state's two regions: western Washington, dominated by the liberal and quickly growing Puget Sound area, and conservative eastern Washington, which had experienced slow or no population growth in most areas (DeGrove, 2005).

The Passage of the Growth Management Act

During the 1980s, citizens in the Puget Sound region had become increasingly frustrated with gridlocked traffic, the loss of farmland and wildlife, and the threat to salmon-bearing streams from stormwater runoff. Efforts were made on the county level to address sprawl, including through King County's 1985 Comprehensive Plan, but by the late 1980s, mainstream voters had grown frustrated with unchecked development. Finally, in 1989, King and Snohomish county voters ousted incumbent county council members to install pro-growth-management council members (Oldham, 2006).

Meanwhile in Olympia, lawmakers were working to manage growth at the state level. Speaker Joe King, a Clark County Democrat, had tried and failed to pass a growth management act in the 1989 legislative session. King and fellow legislators worked through the interim to

bring another GMA forward. State Representative Maria Cantwell (who currently serves as US Senator) was instrumental in organizing the effort to pass the GMA (Oldham, 2006).

But while Puget Sound region voters and Democratic lawmakers favored growth management, Republicans and rural constituents opposed it, citing concerns about property rights and the need for smaller government (DeGrove, 2005). The intense controversy over growth management would have important implications for the legislation.

In the 1990 session, the House passed a strong version of the GMA, while the Senate passed a much weaker version, requiring a procedural checklist for development plans, rather than the state-level oversight required in the House version. Due to the ongoing controversy, lawmakers were obliged to hold a special session in an effort to pass an act both houses could agree upon. In the end, the two bodies came to a compromise. It was stronger than the Senate version, but not as strong as Democrats, environmental interests, and growth management interest groups would have liked.

The GMA regulates land use by requiring comprehensive planning of quickly growing counties and the cities within them. Counties with less rapid growth may opt in as planning counties. Twenty-nine of the 39 counties in the state fully plan under the Act. Comprehensive plans must contain a number of specified elements. Cities are required to pass development regulations consistent with the plans. The Act also requires cities to establish urban growth areas, comprised of incorporated and unincorporated areas, with planned densities high enough to meet 20-year growth projections.

Modified in nearly every legislative session since its passage, the GMA has been a point of continuing contention. For example, in 1995, the Legislature responded to property rights interests by passing a property rights compensation statute that led many to question whether the GMA could be effectively implemented. Voters responded by repealing the statute by initiative, that same year, by a wide margin. Even so, the GMA is a lightning rod of controversy even today, as a sizeable minority of Washington constituents continues to oppose the regulations imposed under the Act (DeGrove, 2005).

Comprehensive Land Use Plans

Under the GMA, planning jurisdictions are required to develop comprehensive land use plans that meet certain *goals* and contain specific *elements*. The plans must be consistent with land use plans developed by neighboring jurisdictions, and cities are required to implement them through development regulations.

Statute requires comprehensive land use plans to provide for fourteen goals. A number of these are relevant for transit-oriented development, including the following. First is urban growth; jurisdictions must encourage growth in urban areas where public facilities and services exist or can be provided. Second is transportation; localities must encourage efficient multimodal transportation systems,⁴⁷ based on regional priorities that coordinate with city and county comprehensive plans. Third is housing; jurisdictions must encourage affordable housing for all income segments, encourage a mix of residential densities and housing types, and encourage preservation of housing stock. Finally, there is an environmental goal; jurisdictions must protect the environment and enhance the state's high quality of life, including air and water quality.

Comprehensive land use plans must include six *elements*, which may consist of chapters or pages within the comprehensive plan. Of these, I list the five which are most relevant for transit-oriented development. First is land use; the plan must designate lands for natural resources, agriculture, housing, commercial use, industry, and recreation, among other uses. Second is housing; the plan must ensure the vitality and character of established residential neighborhoods. Third is rural lands; such lands are not available for urban growth. Fourth is the transportation element, which must be consistent with the land use element. Finally, the economic development element must establish local goals, policies, and objectives to promote economic growth and a high quality of life.

The Seattle Metropolitan Area

Renton is situated within the greater Seattle area, a region which has experienced significant population growth in recent decades. King County and the cities within its territory have employed comprehensive planning under the Growth Management Act to combat sprawl and traffic congestion resulting from this rapid growth. The region boasts one of the highest public transit use rates in the country, and King County's Transit-Oriented Development Program encourages mixed-use development projects around transit centers.

⁴⁷ Multimodal transportation includes automobiles, bicycles, pedestrian travel, and public transit.

Overview

The Seattle area is the largest urban area in the state of Washington, with about 3.1 million residents (Texas Transportation Institute, n.d.). The area includes a number of suburban cities, and extends outward to meet with farms and timberlands. Seattle is bordered to the east by Lake Washington, a lake over 20 miles in length. East of the lake lie suburban cities, including Bellevue and Redmond. To the west is Puget Sound and islands serving as bedroom communities. Renton sits at the southernmost reach of the lake, 13 miles from downtown Seattle. It is connected to downtown Seattle via I-5 (Figure 4).

The Seattle area is the commercial center of the Pacific Northwest. A number of important employers are sited within the region, including Boeing, Amazon.com, Starbucks,

University of Washington, Microsoft, and Weyerhaeuser. With one of the largest ports in the country, international trade also drives the regional economy (Long, 2006).

Seattle began as a small lumber town, but changes beginning during World War II have meant rapid growth for the city. Constructed in 1940, the Lake Washington Floating Bridge facilitated rapid growth for Eastside bedroom communities. In the 1960s, Interstate 5 was cut running north-south across the region, vastly changing the transportation landscape and urban development patterns. By the late 60s, protests put a

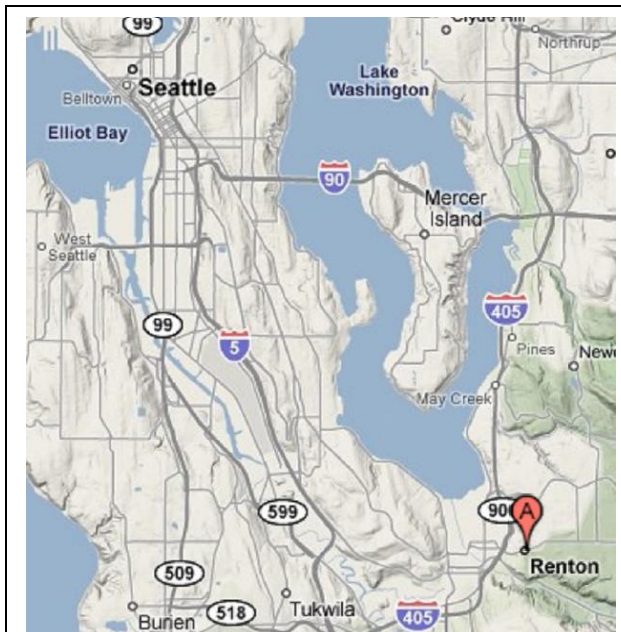


Figure 4. Seattle area map; ©2009 Google - Map data ©2009 Tele Atlas.

break on new highway construction (Long, 2006).

As Seattle's economy boomed, suburbs exploded to provide housing for new residents. Growth has been particularly rapid in recent decades in the outlying suburbs – especially those to the east and north of the city (The Brookings Institution, 2003). However, growth management efforts have brought growth back to the city; the city has posted record growth rates in recent years (Cohen, 2007)

Seattle's healthy economy, growing population, and ever-extending suburbs have meant that traffic congestion has long been source of frustration for Seattle residents; the Seattle area has consistently ranked as one of the top twenty most congested cities in the nation (Texas Transportation Institute, n.d.). Perhaps to avoid congestion and the high parking costs in the central city, many Seattle residents opt to commute by transit; in 2000 nearly 18 percent of workers took public transit to work (US Census Bureau, 2000).

King County Comprehensive Plan

In compliance with the Growth Management Act, the King County Comprehensive Plan governs land use planning for all cities within the county. The plan calls for compact mixed-use development in its urban centers, which include 13 suburban cities, as well as locations within Seattle. Suburban cities must meet housing targets within their city centers. For example, Renton, home to nearly 22,000 households in 2000, has been charged with absorbing over 6,000 more households from 2001 to 2012 (King County, 2009, p. 2.9). In the King County Comprehensive Plan, "urban centers" are defined as areas characterized by relatively compact development, access to high-capacity transit, and a mix of uses, including housing, employment, and retail. They must provide for at least 15,000 jobs within a half-mile of a major transit stop, and maintain an average employment density of at least 50 jobs per acre. A minimal residential density of 15 units per acre is required (King County, 2009, p. 2.18).

King County's urban centers include of number of sites where the King County Transit-Oriented Development program has implemented joint development projects, including Metropolitan Place in Renton, Overlake at Redmond, and the Northgate North Project (Walker, TOD Policy Framework, 2007).

The Comprehensive Plan emphasizes the importance of denser development around transit as a way to cut down on transit agency costs:

It costs more to provide transit service in low density, single-use communities. In denser, mixed-use communities like downtown Seattle, Belltown, downtown Bellevue and Renton, transit routes have high ridership and recover a high percentage of their operating costs, allowing for more frequent service. Transit-oriented development (TOD) and transit centers in transit corridors can provide similar benefits (King County, 2009).

Specific provisions of the Plan which are relevant to transit-oriented development include several key requirements. First, localities and the county must adopt transit-supportive road design standards to promote transit use, high density development, mixed uses, and reduced parking in the urban growth areas. Second, transit centers should include safe and convenient access for a variety of transportation modes, and mixed land use should be encouraged at transit

centers. Finally, King County encourages public/private partnerships and joint transit-oriented development in transit corridors.

Transit Agencies

Up until 1940, Seattle had a thriving bus and rail system; this system was allowed to decline and disappear with the construction of Interstate 5 in the 1960s. But as Seattle residents grew frustrated with the new freeways, they also began to demand the return of public transit (Hamilton, 2006).

Beginning in the late 1960s, citizen activists repeatedly brought forward plans for regional rail transit. But at the time, highway congestion was not seen as a problem, and voters repeatedly rejected such proposals. Finally, voters approved the establishment of Metro Transit, a bus-only transit system in 1972.

With the 1980s came rapid urban growth, and the public became more concerned about congestion and the conversion of natural lands for suburban development. More voters began to see public transit as a tool for relieving congestion, finally approving in 1996 a regional rail system and agency, now known as Sound Transit (Hamilton, 2006).

King County is now home to a number of transit agencies. Sound Transit provides regional express service, via bus and rail, linking important destinations across the Puget Sound region, including neighboring counties. King County Metro provides local and express bus service throughout the county. Some suburban cities, such as Bellevue, also have their own public bus systems.

Importantly for TOD in Renton, the King County Council established the Transit-Oriented Development Program within its Department of Transportation in 1997. The program was charged with collaborating with suburban cities to implement transit-supportive development on county properties. The program is also tasked with prioritizing county policy goals, as well as transit agency objectives. It was seen as an important tool to help the County and cities comply with GMA requirements (Walker, 2002).

The King County TOD Program has overseen a number of projects and several more are in the development or planning stages. To date, five mixed-use projects have been completed. The first of these was Metropolitan Place, a mixed-use building with park-and-ride stalls constructed adjacent to the Renton Transit Center. The second was the Village at Overlake in Redmond, a mixed-use project with affordable housing, a day-care, and shared parking, located near Microsoft's headquarters. Similar projects are underway; the Burien Transit Center was completed this June, complementing a downtown redevelopment effort by the City of Burien.

Negotiations are being finalized between county staff and a downtown developer to begin construction on the newest mixed-use TOD next to the Burien Transit Center.

Renton

Renton (population 83,650) has long been a blue-collar industrial town. The city is characterized by low density single-family residential development, but newer districts are zoned for high-density and mixed-use. A new transit center in the middle of downtown provides high-capacity bus service to important regional destinations.

Boeing is the largest Renton employer, providing jobs for 30% of Renton workers. It is a strong force in the economy; a Boeing job supports two to three other jobs in the economy (Radford, 2008). PACCAR also remains an important employer. Other large employers are Valley Medical Center, King County, and Renton School District (Pietsch, 2009).

Most of Renton is characterized by auto-oriented development; the majority of its territory is zoned for low density and single uses. Much of the street grid features cul-de-sac type developments, with a mix of housing types. In 2005, nearly half of housing units were single-family residences; roughly a quarter of housing units were in small apartment complexes (3 – 24 units); and about one in eight units was situated in a larger apartment development (50 or more units), such as those characteristic of new development downtown (Claritas, 2006). Zoning ordinances provide for several mixed-use centers, while much of the city is zoned as single-use residential at insufficient density to support transit – 8 units per acre⁴⁸ (City of Renton, 2009). Thus, much of the city is not very transit-supportive; recent efforts to promote mixed-use and pedestrian orientation have constituted a break with past trends.

As part of its effort to promote walkable, compact development, a new transit center has been built in downtown Renton on Burnett Avenue South, between South 2nd Street and South 3rd Street. Neighboring the transit center are several mixed-use buildings, the city parking garage, a convention center, and a small park known as the Renton Piazza.

Currently, the Renton Transit Center serves as one hub within the regional transit network. Both King County Metro and Sound Transit provide service to the transit center. Metro operates express buses to downtown Seattle, Seattle's University District, and other important destinations. Metro buses also serve local routes, facilitating access to Renton neighborhoods. Four Sound Transit bus lines carry riders to other regional centers, including Bellevue, Auburn, and SeaTac.

⁴⁸ At least ten units per acre is recommended to support local bus service (Calthorpe, 1993).

CHAPTER 4: RESULTS

Renton transit-oriented development resulted from a local economic crisis, with a cohesive community coming together to confront the problem and make a change. External factors, like a strong regional economy and an advantageous location were important conditions facilitating the process. Development resulted from collaboration among the City of Renton, Dally Properties, and the King County Department of Transportation (KC/DOT). Renton provided incentives and actively recruited Dally to build multifamily properties. Renton also pushed Metro to locate a new transit center downtown. The first three multifamily projects jumpstarted market-driven multifamily projects without further intervention by the City.

The following factors made Renton redevelopment possible: (1) the deterioration of its downtown; (2) community and City Council initiative to redevelop; (3) low property values; and (4) Renton's location within the Puget Sound region. Two factors made Metropolitan Place possible – a transit-oriented development program within the transit agency, and comprehensive plan goals consistent with the Metropolitan Place project. All in all, most development participants view redevelopment and Metropolitan Place as a “success in progress, (Covington, 2009)” although Metropolitan Place does offer several lessons for future shared parking projects.

In this chapter I report the results of my research. I begin with a summary of events. I then describe the development process in more detail. First, I describe and explain events leading up to Renton development. Second, I describe implementation of the development effort. Finally, I describe development outcomes from various points of view, and examine whether development has been a success. Most of the data presented here was gathered in interviews with 11 interview respondents (see Table 2).

Summary of Events

In the post-War era, Renton enjoyed a booming economy. The Boeing Company was the primary employer, manufacturing airplanes at its Renton plant. Downtown served as a community hub, featuring large national retailers and smaller businesses and restaurants.

Things began to change with the opening of two nearby shopping centers. The Renton Shopping Center and Southcenter Mall, both opened in the late 1960s, attracted the department stores and other businesses away from downtown. Shoppers followed and downtown character began to change. By the early 1990s, downtown property values were low. Downtown featured antique and novelty shops, and light industrial supply stores opened.

Name	Organization	Position
Cahan, Steve	King County Metro	Manager, Leased Lot Park-and-Ride Program
Callaghan, Kitty	Wasatch Management Company	Vice President of Training
Covington, Jay	City of Renton	Chief Administrative Officer
Dally, Don	Dally Properties	President (retired)
Henning, Jennifer	City of Renton	Current Planning Manager
Johnson, Doug	King County Metro	Transit Planner
Nelson, Toni	Renton City Council, Downtown Renton Association	Retired Council member, retired member of Downtown Renton Association
Pietsch, Alex	City of Renton	Administrator, Dept. of Community and Economic Development
Slavin, Skip	Seattle Mortgage	Senior Vice President
Taylor, Bill	Renton Chamber of Commerce	President & CEO
Walker, Ed	King County Metro	Project Manager, Transit-Oriented Development Program

Table 2. Interview Respondents

With the deterioration of downtown, business leaders and others worried about the future. Two citizens' groups, the Downtown Renton Association and the Blue Ribbon Committee, were instrumental in advocating for downtown redevelopment. However, downtown's economy continued to weaken, and in 1992, two major events intensified the economy's downward slide. First, Longacres racetrack, a regional destination drawing millions of visitors, closed. Around the same time, Boeing announced that it would transfer about 7000 employees to its Everett plant, leaving extensive office vacancies behind.

The City decided to take a proactive approach towards revitalizing downtown. In 1993, Renton hired Sue Carlson to direct the newly established Department of Economic Development to oversee development efforts downtown and elsewhere. The following year, Carlson would negotiate with downtown auto dealers who were considering moving to neighboring Tukwila. Carlson convinced the dealers to stay in Renton, and relocate to a new auto mall along the freeway. The City would purchase the auto dealers' properties and hold them for redevelopment into multifamily mixed-use buildings.

In 1995, Renton issued its first Comprehensive Plan, and adopted ordinances in accordance with the plan. The City upzoned most of downtown to a mixed-use designation with 100 to 150 residential units per acre. It also established an overlay zone to ensure pedestrian-friendly development. Later the City would adopt design guidelines to shape downtown character.

In 1996, Renton embarked on an aggressive redevelopment plan. The City recruited Don Dally of Dally Properties to build the first multifamily buildings. While at first reticent, Dally agreed to build the first two pilot projects, on the condition that the City commit to promised infrastructure and street improvements. The City also incentivized the projects by selling the auto dealer properties to Dally at greatly discounted prices. Dally went on to complete the first two properties, Renaissance Place⁴⁹ and Burnett Station, in 1999 and 2001. Both properties are within a block of the transit center (Figure 4).

Meanwhile, the City was negotiating with the transit agency, King County Metro, over the location of a new transit center. While Metro believed another location would be ideal, the City pushed to locate the transit center downtown, making downtown a hub with easy transit access for the residents and workers that Renton hoped to attract. Metro agreed to do so, and in 1996, an interim transit hub opened at 2nd Avenue and Logan Street. The following year, Metro decided to make the transit center a location for a pilot TOD project (Figure 6).

In the meantime, Dally and the City were working to construct another multifamily development. In 1999, Dally approached the auto dealer adjacent to the planned transit center in hopes of buying the property. But the dealer demanded such a high price that Dally could not afford to build a viable multifamily project and still get a return on the investment. At the same time, Metro was seeking to expand park-and-ride capacity in the Renton area. After much discussion, the KC/DOT and Dally agreed that Dally would construct a multifamily building with park-and-ride stalls on the bottom floors. Metro would be the anchor tenant, signing a 30-year lease. The agreement also contained other conditions which are detailed later in this chapter (see p. 73). The King County Council approved the agreement that same year.

At the same time, a community group, the Citizens for the Piazza, had been advocating for green space downtown. The City agreed and in late 1999 broke ground on the Renton Piazza, a green plaza adjacent to the transit center. The Piazza was complete shortly after, in early 2000. Around this time, another important project, the Spirit of Washington Event Center, was completed adjacent to the transit center and the new Piazza (Figure 7).

⁴⁹ This property was later renamed Revo225.



Figure 5. Revo225 (formerly Renaissance Place), Renton Washington, April 2009.

As a result of the agreement between KC/DOT and Dally, Dally purchased the future site of a third multifamily project, Metropolitan Place, in mid-2000. A year later, the new transit center opened, and Metropolitan Place was finished shortly after, in early 2002 (Figure 8).

Finally, a few other projects served as important anchors for downtown redevelopment. The City collaborated with IKEA to construct a new performing arts center at Renton High School, located within walking distance of the transit center. To provide expanded parking capacity for downtown, the City also constructed the seven-story Renton Municipal Garage at the transit center; this structure includes 250 park-and-ride spaces, as well general use parking (Figure 9 & 9).

Events Leading Up to Downtown Redevelopment



Figure 6. Renton Transit Center, April 2009.

Many events converged to induce Renton to choose to redevelop its downtown in the way that it did. Up until the late 1960s, downtown Renton was a thriving shopping district, attracting visitors from around the region. It featured department stores Woolworth's and JC Penney's, as well as smaller businesses. But when the Renton Shopping Center opened on nearby Rainier Avenue, downtown businesses started to leave. According to Toni Nelson, "that was the first hit for Renton, as far as business declining" (Nelson, 2009).

Shortly after, Southcenter Mall opened in neighboring Tukwila. The department stores and others began to move from the Renton Shopping Center to the new mall. This meant further deterioration of Renton's urban landscape and its economy, which concerned downtown business owners. Council member Nelson told City Council in 1998, "We have to concentrate on downtown. Otherwise it's going to be a ghost town" (Nelson, 2009).

Boeing and Longacres both served as important anchors of the economy. Since World War II, Boeing had been the most important landowner and employer in Renton. Longacres race track drew visitors from around the region to bet on the horses. Over two million visitors a year came, and they patronized local shops and restaurants. However, in 1992, Longacres closed, with a serious impact on the local economy (Taylor, 2009).



Figure 7. Renton Piazza, April 2009.

Downtown went from being a thriving shopping district to featuring used car lots, antique dealers, and light industry suppliers. Jay Covington described the downtown landscape this way:

When I came in 1990... downtown was old, most buildings had been constructed in the 1940s and 50s; nothing was newer than the 1960s. I just thought, “We’ve got a lot of work to do” (Covington, 2009).

Meanwhile, a group of downtown business owners, the Downtown Renton Association, had been organizing for years to advocate for downtown and to encourage people to support downtown businesses. Members of the Downtown Renton Association included property owners, downtown businesses, the City of Renton, Puget Power, Longacres, and Boeing. According to Toni Nelson, the group tried many tactics to encourage people to come downtown:

We had a “Downtown Renton Committee”; we called it 50 different things. We always had a group of people attempting to keep businesses downtown, by having celebrations, trying to keep people coming. The Downtown Renton Association was about maintaining a healthy business community downtown. How are you going to get people to come to Renton when we have these car lots in the city? (Nelson, 2009)



Figure 8. Metropolitan Place, Renton, April 2009.

Another community group, formed in 1990, played a strong role in redevelopment. The Blue Ribbon Committee, comprised of City officials, the school district, the Chamber of Commerce, and the Technical College, began meeting. According to Bill Taylor, it was the Blue Ribbon Committee that started the process of envisioning redevelopment (Taylor, 2009).

Shortly after, Renton's economy took another blow. Boeing transferred about 7000 employees to its Everett plant (Covington, 2009). The loss of jobs was significant, but the loss of sales and related tax revenues at Renton businesses also had a strong impact (Taylor, 2009). The office vacancy rate went up to 40% and "devastated the office market" (Pietsch, 2009).

By this time downtown had little retail that would attract casual shoppers; it was primarily characterized by used car lots (Taylor, 2009). Around 1994 or 1995 auto dealers downtown began complaining to the City, and threatening they would move to Tukwila if things didn't change (Pietsch, 2009). The City couldn't afford to let this happen, because the car sales were an important driver of sales tax revenues. In response, the City developed a plan to create a new auto mall at the intersection of the freeway and an important arterial street. This plan encouraged the auto dealers to move there, and the City helped them do so by purchasing their



Figure 9. Renton Municipal Garage

land downtown in the summer of 1995. Jay Covington explained:

Probably the biggest step forward was in 1994, 95, we looked at the auto dealers downtown. They said they were going to move to Tukwila. Sue [Carlson] and I wanted the dealers to stay; we said “what if we create an auto mall along the freeway?” (Covington, 2009)

In summary, a once thriving blue-collar downtown declined as a new freeway and shopping mall took business from the mom-and-pop stores in the historic core. The deterioration was exacerbated as Longacres closed, and as Boeing transferred a large portion of its workers elsewhere. The seeds of redevelopment began as local business and civic leaders came together to address the crisis, and began to vision a new kind of downtown. The City took the first major steps towards revitalization when it purchased properties from auto dealers and helped them move to a new auto mall.

Initiating the Development Process



Figure 10. Downtown Renton; ©2009 Google Imagery ©2009 GeoGlobe, DigitalEye, US Geological Survey.

In this section I describe the steps Renton officials took once they had decided to embark on a redevelopment effort. I provide information in a question-and-answer format to explain how the idea of development originated, and what relationship redevelopment had with the King County Comprehensive Plan.

Understanding who initiated development, why they chose the development type they did, and whether the Washington Growth

Management Act and the King County Comprehensive Plan affected development decisions are all important to understanding the development process. Community participation, or lack of it, is significant in light of the dampening effect that community responses to higher density redevelopment have had in some other cities. Finally, to really understand why redevelopment was able to occur in Renton, it is important to recognize key factors enabling redevelopment.

Who initiated the development process?

Many entities, including the Downtown Renton Association, the Blue Ribbon Committee, and the City of Renton, helped initiate the development effort. But the Downtown Renton Association was a central player, spearheading the development effort. Toni Nelson, a member of the Downtown Renton Association and the City Council, attributed the initial effort to redevelop to the Downtown Renton Association. She also pointed to herself as an advocate on the City Council for downtown redevelopment. And like other respondents, she emphasized the strong role Carlson played in pushing downtown redevelopment forward (Nelson, 2009).

But for Jay Covington, the City was the primary organization initiating the process, although other organizations and individuals played important roles:

The City initiated it [the redevelopment effort]. I think a whole lot of people had various roles. I, for example, recognized that it needed to be done. The woman who was our primary person on this for a number of years, Sue Carlson, had tremendous talent. She just had the ability to bring people together, and to promote a vision.... The Council and the Mayor had the guts to purchase the properties [from car dealers] (Covington, 2009).

Covington also agreed that the Downtown Renton Association was important in redevelopment, more so than the Blue Ribbon Committee:

I think that while they [the Blue Ribbon Committee] were aware of, and apprised of changes, it was really the Downtown Renton Association that was important... They taxed themselves, and hired a downtown executive director, and organized for redevelopment and better marketing. That's the group that really worked with the City (Covington, 2009).

Clearly, it is difficult to say with certainty that any one individual or group was solely responsible for initiating the redevelopment effort. But the Downtown Renton Association and Toni Nelson were important early instigators of the process, and once the City was on board, Sue Carlson was especially important in visioning and implementing the development process.

As for Metropolitan Place, KC/DOT, Renton, and Dally together initiated the project. The City wanted more housing at the transit center; Metro wanted more park-and-ride stalls, and Dally wanted to build another multifamily project. It was Renton officials who brought Dally and KC/DOT together:

We [KC/DOT] didn't own it, but the City was redeveloping downtown. Through them, we met the developer [Don Dally], who had built one complex... He was interested in doing the apartments, but he didn't have land... So we got an idea for the park and ride stalls at a location that would be good for housing (Walker, 2009).

Whose idea was it to have a walkable urban downtown?

The idea for a walkable urban downtown came from Sue Carlson, and more generally, elected officials and City staff. It was an idea everyone was talking about (Covington, 2009). But more specifically, Sue Carlson advocated for a pedestrian-oriented center:

It was Sue's idea to relocate the auto dealers, redevelop downtown, and work with the developers... Sue always said you need "synergy." She meant that people should be able to live downtown, commute easily to jobs, and people living downtown would bring in restaurants, shops, and grocers (Henning, 2009).

Was the Washington growth management policy a factor in the decision to redevelop as a walkable urban center?

Comprehensive planning required under the Growth Management Act provided a framework for Renton to develop as a transit-oriented center. The concept of denser urban

centers oriented towards transit and walking was legitimized and promoted by the King County Comprehensive Plan, created to comply with the Growth Management Act.

Rather than being a mandate for Renton to develop a certain way, the King County Comprehensive Plan designated Renton as an urban center as a *result* of Renton's efforts. As Jay Covington explained:

We worked hard to qualify as an urban center. We looked at the relationship with Seattle. ... Our downtown plan looked at the County Planning Policies. We said, "Yes, we want an urban center, and mass transit." ...we went after "urban center." We said, "We're going to create the zoning. We're going to apply for that. (Covington, 2009)"

How did Renton encourage community participation?

Many interview respondents have highlighted the importance of community involvement in redevelopment efforts. The political process was transparent, with the exception of City Council executive sessions (Henning, 2009). The City worked with the Downtown Renton Association and the Blue Ribbon Committee to envision a new downtown.

In addition to the direct involvement of these two organizations, the City called meetings and conducted surveys of the general population, but got little response in terms of direct involvement, with the exception of the Citizens for the Piazza:

Other than the Piazza group... there weren't many people looking to be part of it or interested... We had meetings, asking what people wanted to see downtown... For homeowners there were meetings, and polls in the newspaper, questionnaires (Nelson, 2009).

What were key factors in redevelopment occurring?

Many factors and conditions coincided to make downtown redevelopment occur. For Renton, several factors stood out. First, the City was facing an economic crisis. The community recognized the need to act; "it began with the realization that something had to happen" (Taylor, 2009). And elected officials responded to citizen initiatives to redevelop.

The economic crisis influenced the possibilities for redevelopment in more ways than one; not only did it spark citizen initiatives to change the situation, it also depressed land values downtown, facilitating City purchases to hold for future development.

Other external factors also influenced the possibilities for redevelopment. In particular, Renton's proximity to important regional destinations – Seattle, Bellevue, and the airport – allowed the City to make a case to developers that it was close in, and that it would be a good investment to construct there (Covington, 2009).

Finally, in the case of Metropolitan Place, two factors were important. First the King County Transit-Oriented Development program played an essential role in making the project possible. A dedicated project manager with strong personal skills advocated for the project and worked to see it completed. Also, the program's location within the county's Department of Transportation, rather than within the transit agency, meant that the program could consider King County goals, in addition to transit agency goals.

Second, the King County Comprehensive Plan included goals of producing more affordable housing in urban centers like Renton. Progress towards these goals was a factor in County Council approval of the Metropolitan Place Lease.

Implementation

Once Renton officials made the decision to redevelop, the City took many steps to advance the redevelopment initiative. In this section I outline several aspects of implementation. First, I describe strategies used to encourage the first developer to build multifamily projects in Renton. Second, I list planning tools, including zoning and code reviews. Third, I describe the lease agreement that made Metropolitan Place possible. Fourth, I explain how Metropolitan Place was financed.

How did Renton encourage the developer?

Renton encouraged and incentivized the first multifamily projects downtown in several ways. First, infrastructure and street improvements were a key incentive for Dally to go ahead with the projects. The presence of a signed legal agreement regarding improvements gave the developer confidence that the City would keep its promises (Dally, 2009); (Pietsch, 2009). Second, Renton assembled land for redevelopment, buying auto dealer properties and then selling them at reduced prices to Dally. Third, streamlined permitting gave Dally confidence that things would go through on time, keeping costs down.

What planning tools were employed?

In accordance with the Renton Comprehensive Plan, which designated downtown as a walkable urban center, Renton adopted ordinances to establish zoning, design guidelines, and appropriate parking regulations to support construction of the desired character.

In the early to mid-1990s, there was a neighborhood plan guiding downtown redevelopment, but this was rolled into the Comprehensive Plan. A new neighborhood plan is currently in planning stages (Henning, 2009). In the following sections, I describe regulations

governing downtown development, including zoning, overlay zoning, design guideline, and parking policy downtown.

Zoning

Renton used zoning and its Comprehensive Plan to facilitate and support a transit-oriented downtown. All of downtown is zoned for moderate to high density, and the majority is mixed-use with a pedestrian orientation. The downtown district is divided into three zones. The largest is the Center Downtown zone; city ordinance describes the zone as a “mixed-use urban commercial center serving a regional market” as well as high-density residential development. Permitted uses include residential development, retail, and recreational use. Density is high at 100 dwelling units per acre with a density bonus of 50 additional units per acre available for builders who provide open space.

Further from the transit center, zoning ordinances provide for a more tranquil neighborhood character. Roughly a quarter of the downtown district, located a quarter mile and further away from the transit center, is designated as Residential Multifamily Traditional and Residential Multifamily Urban Center. Maximum densities in these areas are moderate, at 35 to 75 dwelling units per acre. New services and retail are limited in these areas. These zoning areas currently consist of single family residences at lower than permitted densities.

Parking regulations also support TOD. Parking minimums are low for residential development, at one space per unit, and a parking maximum of one space per 1000 square feet for commercial development also supports pedestrian orientation.

Overlay Zoning and Design Guidelines

As for design and code reviews, this has changed over time. At the time the first two Dally projects went up, there was a code review, but no design review. The prospect of an undesirable project provided the impetus for the City to develop a design review process (Henning, 2009).

Renton has employed both overlay zoning and design guidelines to ensure a pedestrian-oriented character for downtown. The downtown district has two overlay zones. The first is District A, which coincides with the Center Downtown zone. The City’s goal for District A is a “downtown that will continue to develop into an efficient and attractive urban city.”⁵⁰ District B coincides with the two residential zones of downtown. In this district, the City plans to maintain

⁵⁰ See [Renton Municipal Ordinance 4-3-100](#).

“the existing, traditional grid street plan and respect the scale of the neighborhood, while providing new housing at urban densities” in this area.

Design guidelines for both districts provide for a number of elements. These include site design and building location, parking and vehicular access, the pedestrian environment, landscaping and open space, architectural design, and exterior lighting. Examples include requirements to: (1) orient buildings to the street with clear connections to the sidewalk; (2) hide parking behind buildings; (3) provide clearly delineated pedestrian pathways in parking areas; (4) plant street trees; (5) construct interesting building facades; and (6) provide pedestrian-scale street lighting in Center Downtown. However, one new building built prior to adoption of design guidelines does not have pedestrian-supportive parking design; Burnett Station fronts to a parking lot, rather to the street itself.

The Metropolitan Place Lease Agreement

The lease agreement signed by KC/DOT and Dally Properties was essential to completing Metropolitan Place. In the lease, Dally agreed to provide parking, and to fulfill other requirements. These included, but were not limited to, a free bus pass program for apartment residents, a commitment to maintaining half the units as affordable housing, maintenance of the parking area, and construction of a new bus bay. In return, KC/DOT would make a large down payment on the lease, and maintain annual lease payments for thirty years (Table 3).

Metropolitan Place Lease Agreement	
<p>Dally Properties agreed to:</p> <ul style="list-style-type: none"> • Free bus pass program for residents; • Half of the units would remain affordable for 80% of area median income (AMI); • 150 park-and-ride stalls; • Maintain park-and-ride stalls; • Construct new bus bay. 	<p>King County DOT agreed to:</p> <ul style="list-style-type: none"> • Three initial payments totaling \$987,000; • Annual lease payments of \$255,000; and • Provide reduced price bus passes (about \$51,000 value)

Table 3. Summary of Metropolitan Place Lease Agreement.

In order for KC/DOT to sign the lease, the King County Council had to approve the agreement. An important factor in the Council signing the agreement was a cost-benefit analysis generated by King County TOD staff. The analysis concluded that the agreement would provide overall transportation benefits that exceeded costs, and that it was a “reasonable but not outstanding deal (Carlson, 1999).” The analysis compared the cost of leasing the spaces with costs that KC/DOT would hypothetically incur by constructing its own parking structure on the site. The analysis also quantified transportation benefits including, but not limited to: (1) bus trip

benefit systemwide; (2) revenue from free bus pass programs; and (3) the value of a new bus bay. According to developer Don Dally, the project couldn't have happened without the lease (Dally, 2009) (Figure 11).

The park-and-ride lease has at times been a point of contention. Key issues have been: (1) lease payments are higher than for other comparable parking; (2) the management company did not effectively implement the parking decal program; (3) residents' cars have been parked in commuter stalls; and (4) the management company did not adequately maintain the garage. The lease has also meant higher costs for KC/DOT in terms of staff time invested in resolving these issues. However, as this goes to press, new management at Metropolitan Place is working with Metro to address these concerns (Cahan, 2009).

Problems with maintenance and parking enforcement point to lessons for future shared parking agreements. However, the fact that Metropolitan Place parking has higher charges should be considered alongside the fact that the lease agreement provides benefits other than parking capacity for Metro and King County, as the cost-benefit analysis shows.

How was Metropolitan Place financed?

Having a 30-year lease signed by a governmental entity meant that Dally would have a reliable anchor tenant guaranteeing his project would garner income for several decades. That security, in combination with large initial down payments from Metro, was essential for Dally to obtain loans to go ahead with the project. City-provided incentives also helped Good Chevrolet move to the new auto mall, making the sale more attractive to the seller (Walker, 2009).

For Don Dally, financing the project was straightforward once KC/DOT agreed to sign the lease agreement (Dally, 2009). Seattle Mortgage brokered the loans and US Bank provided the construction loan. Once all units were rented out, Artesia Mortgage Capital provided the second loan. For Seattle Mortgage, the project depended on Dally having sufficient equity⁵¹ to qualify for financing (Slavin, 2009). Dally believed that, in addition to having enough equity, his reputation as an experienced developer gave lenders confidence to back his project (Dally, 2009).

But despite the county's commitment to the project and Dally's strong reputation, lenders perceived higher-than average risk around the project because it was situated in an economically depressed area. The City's signed legal agreement to improve downtown through projects like the Piazza, the new parking garage, and a farmers' market gave lenders confidence that the project was worthwhile (Slavin, 2009).

⁵¹ "Equity" is the money a developer holds as cash so as to qualify for a loan sufficient to implement the project.

MP Lease: Cost-benefit Analysis

“a reasonable but not outstanding deal”

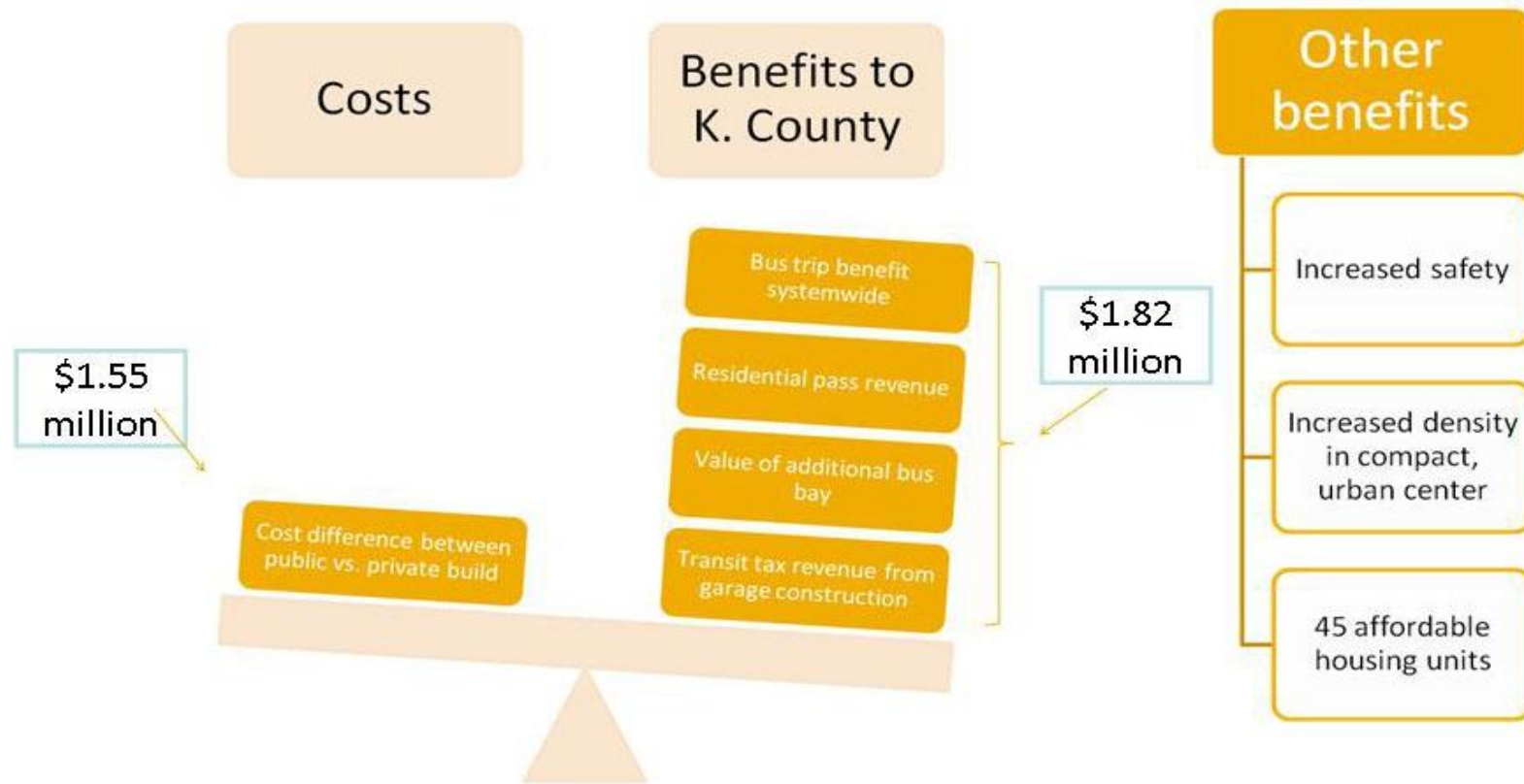


Figure 11. Metropolitan Place Lease: Visual representation of cost-benefit analysis prepared by King County TOD staff, 1999.

Outcomes

In this section I explore outcomes and lessons that may be learned more than ten years into an ongoing redevelopment effort. However, it is important to remember that Renton's redevelopment is far from complete, and that Metropolitan Place will continue to function for many years to come. Perhaps, in several decades' time, a reexamination of Renton and Metropolitan Place will yield very different conclusions from the ones I present here.

That said, in the following sections I explore four topics. First, I present different points of view on the success of Metropolitan Place. Next, I describe important outcomes of the development effort, from the points of view of study participants. Finally, I synopsise lessons that may be taken from the development of Renton and Metropolitan Place.

Was Metropolitan Place successful?

Most development participants considered Metropolitan Place a success. The investment yielded returns for the developer; it brought more housing and transit riders to the transit center, and it converted a deteriorating, auto-oriented site to a more attractive transit and pedestrian-oriented site. For the developer, the project was a success, but success hinged on a healthy economy (Dally, 2009).

For Wasatch Property Management, the company that now manages Metropolitan Place, it remains to be seen whether the project is a success. Wasatch had originally purchased property planning to convert it into condominiums, but now states "with changes in the marketplace, [we are] holding on to it as a rental until the market improves (Callaghan, 2009)."

Renton's chief administrative officer expressed the importance of looking at all three Dally projects when considering the success. He also cited the importance of meeting objectives to make downtown a residential, mixed-use district, observing that "the three developments really changed the face of downtown"(Covington, 2009).

Similarly, for Metro's Transit-Oriented Development Program, the project was an unequivocal success, because of net transportation benefits, operational benefits, and the creation of affordable housing (Walker, 2009).

For the loan broker, Metropolitan Place was successful, but the slowness of new retail to occupy ground floor commercial units dampened his enthusiasm:

I think the lower rents and those projects that didn't achieve as expected [the first two Dally developments] discouraged additional development... It took Don longer to lease out the projects, and corresponding retail, and he never got the rents he thought he would get (Slavin, 2009).

Another important question relating to the success of Metropolitan Place is whether residents use public transit more than they would if living in a location with less transit access. As reviewed in Chapter 2, a number of studies suggest that people living closer to transit in higher-density areas use transit more than they would otherwise. Such studies, in conjunction with survey data described below, suggest a higher-than average transit use rate among residents of Metropolitan Place.

KC/DOT conducted a survey finding very high bus pass usage among residents of Metropolitan Place. Survey researchers found that 75 of the 90 households used the annual bus passes, and that 38 percent of residents used transit at least seven times a week (Walker, 2007). This is much more than the 6% of Renton residents who reported commuting by transit in the 2000 Census (US Census Bureau, 2000).

What have been important outcomes of the Renton downtown redevelopment?

For Renton officials, the development effort is a success, but also a work-in-progress. Rather than measure success in terms of costs and benefits or tax revenues, they emphasized the qualitative benefits of the redevelopment. Interview respondents listed the following as key outcomes: (1) increased residential development; (2) a greater sense of “vibrancy”; (3) the Transit Center operating as envisioned; (4) more restaurants; (5) greater business activity; (6) development of the Landing;⁵² (7) community support of the Farmers’ Market; and (8) increased property values.

As Jay Covington emphasized, the redevelopment should be viewed as a long-run effort, rather than being evaluated in the short term. For him, redeveloping a city is a necessarily slow process. He also pointed out the more people come downtown now, and that it feels more “vibrant”:

It’s an investment. The parking garage doesn’t yet pay for itself. We look at it as a 50-year facility. In the last 15 years it is there, it will generate money. We are looking at the entire life cycle of the building...

People come downtown; it’s where people identify with. There is great support from people not living downtown. There is greater vibrancy downtown...(Covington, 2009).

Like many, Bill Taylor believed downtown redevelopment had made many more market-driven projects possible. He attributed the Landing development to the downtown effort. This is

⁵² Still under construction, the Landing is a mixed-use development situated north of downtown along the lake shore. It includes 600,000 square feet of retail, a cinema, and 900 high-end residential units.

an interesting conclusion; pilot development projects have been able to stimulate development outside of the downtown district (Taylor, 2009).

Alex Pietsch also believed the construction of more than 400 new housing units built downtown, as well as the 160 planned units occurred as a result of the Dally developments. He also recognized the ongoing nature of the effort:

Since Metropolitan Place, we've seen several hundred more housing units go in, and about a 1000 are planned. The project was a catalyst to revitalization that is not yet realized (Pietsch, 2009).

One interesting question is whether property values have changed as result of development, or due the influence of other factors. Since the start of the redevelopment effort, downtown property values have increased from \$7 to \$40 a square foot (Pietsch, 2009). There is a firm belief among city officials that, had the effort not taken place, tax revenues would have been much lower:

We tried to weigh the risk [of redevelopment] against not doing anything, which would have meant lower quality development that locks in lower taxes (Covington, 2009).

A related issue is the importance that city officials have placed on the tax revenues generated by auto dealers, who had planned to leave town before the City intervened. Without the City's involvement, auto dealers would have left town, impacting the city's sales tax base considerably (Pietsch, 2009).

What have been important outcomes of Metropolitan Place?

For the management company, an important indicator of success is occupancy rate. Metropolitan Place has higher-than-average occupancies, ranging from 90 to 92 percent. While occupancy rates are favorable, the company has experienced challenges relating to residents' parking; some residents have parked in park-and-ride stalls in an effort to avoid monthly parking fees (Callaghan, 2009).

As already noted, for city officials Metropolitan Place is successful because it has brought more residences downtown, facilitating greater vibrancy (Covington, 2009). And for King County, there have been several favorable outcomes for Metropolitan Place. These include: (1) 150 parking stalls; (2) additional transit riders; (3) bus layover space; (4) the new transit center; (5) revenues from bus pass sales; (6) tax revenues from garage construction; and (7) additional affordable housing units (Walker, 2009).

Lessons Learned

While nearly all interview respondents felt positive about Renton redevelopment and Metropolitan Place, reflection on past experience is bound to yield lessons for the future. In future projects, improvements could be made with regards to building design, security, and possibly decision making processes.

Initially, Metropolitan Place experienced two problems related to its extreme proximity to transit, leading to tenant complaints. First, because the transit center was a layover point for buses, buses would idle under resident windows, producing diesel fumes and noise. Second, the tenant entrance is situated near two bus bays, and thus is a place where transit riders and others are usually standing. Some felt uncomfortable with this, and complaints led to a higher-than-usual turnover rate for the building (Dally, 2009). Metro has worked to address the problem with diesel fumes by requiring drivers to turn off the buses when waiting in the bus bays.

From Renton's perspective, there have been challenges relating to security at the transit center. Two violent incidents in 2006 have made transit riders feel unsafe. To address this, the City has located a police substation to the area, and hired security (Pietsch, 2009).

Finally, for King County Metro, collaborating with a private entity presented challenges because of differing time frames. For instance, the delay in getting a Council approval for the lease slowed down the project for the developer:

What I learned for the next project is that you have to allow time for government to do things that are fast in the private sector. Be sure everyone in the government is into the project. Make sure (1) to inform them; (2) to let them know their interests are heard; (3) that they support the project (Walker, Project Manager, King County Transit-Oriented Development Program, 2009).

CHAPTER 5: INTERPRETATION

Two important background conditions allowed Renton redevelopment to begin. First, the early 1990s were a time of moderate to rapid economic growth in the Seattle area. Second, the Downtown Renton Association had decades of experience organizing for a stronger downtown. In this context, a local economic crisis acted in two ways to facilitate redevelopment. First, it sparked citizen action, inspiring the formation of the Blue Ribbon Committee and bringing together community leaders to work for a new downtown. Second, it lowered property values, enabling the City to purchase properties cheaply, assembling land for the redevelopment effort (Figure 12).

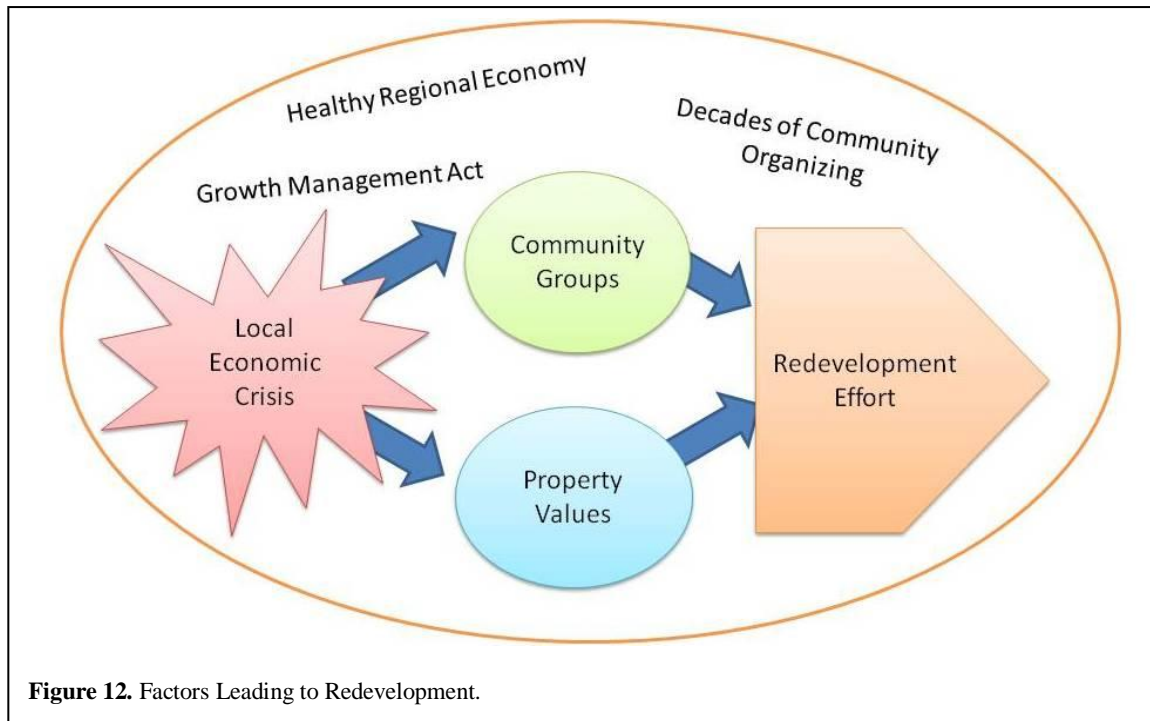


Figure 12. Factors Leading to Redevelopment.

This case study offers many useful lessons for cities and transit agencies considering transit-oriented development (TOD) initiatives. First, skilled project managers are necessary to spearhead a development effort, both for cities and transit agencies. Strong personal skills and the ability to empathize with all development actors are essential qualifications. Important contextual factors were state growth management policy, a growing regional economy, and years of community organizing. For Renton, accessibility from regional transportation networks was important to promoting itself as a desirable place to live. A local economic crisis caused citizen groups to take action to advocate redevelopment, and lowered property values, facilitating land

assembly by Renton. Renton took a very proactive approach towards redevelopment, relocating auto dealers and recruiting housing developers for pilot projects. Design guidelines and overlay zoning are important tools for ensuring desired development character.

Metropolitan Place also offered lessons for transit agencies interested in TOD. The presence of the TOD program within the county, not the transit agency, made the project possible. The transit agency's role as anchor tenant for a mixed-use project was a new model for joint development. Future mixed-use development neighboring transit centers should include design elements that distance tenants from the impacts of transit activity.

The City of Renton played an essential role in planning and implementing downtown redevelopment. The City did a number of things. First, it pushed to be designated an urban center under King County's Comprehensive Plan, and then zoned for urban walkable development downtown. Second, it bought properties and held them until the right developer was found. Third, it helped auto dealers relocate to a new auto mall. Fourth, it committed to street improvements. Fifth, it streamlined the permitting process for all builders. Finally, the City hired a skilled individual, Sue Carlson, to oversee and push forward the development process.

Throughout the development process, Renton experienced few barriers, along with an encouraging policy framework. The City did encounter a market barrier; the local real estate market was slow and values were declining. It overcame this problem within the context of a growing regional economy. It did so by hiring a redevelopment specialist to recruit developers, committing to infrastructure improvements, and subsidizing the first few projects by selling land at reduced prices. The success of city-sponsored pilot projects demonstrated that the market was ripe for mixed-used residential projects in Renton. Thus, a TOD initiative spurred further private sector efforts to develop TOD projects.

Renton and King County have both reaped benefits resulting from the TOD effort. The addition of 700 housing units has undoubtedly produced more riders for Metro, and these riders do not require expensive park-and-ride stalls. Land values have increased downtown, producing a stronger tax base for the city and encouraging higher-value uses for land. The effort has included the addition of affordable housing units, and more importantly for Renton officials, downtown is becoming a beautiful place that people gather and feel a sense of pride in their city.

Trends in the overall economy and regional real estate market cannot be ignored when developing TOD. The 2008 real estate bubble and the current economic malaise have curtailed Renton's development considerably. New construction has slowed and the City has had trouble recruiting developers for targeted sites. However, given the success to date, it is probable that

when the regional real estate market improves, developers will once again see downtown Renton as a good location for new mixed-use development.

In this chapter I interpret the data outlined in Chapter 4. I place it in the context of the scholarly literature and draw lessons from Renton's case, highlighting unusual features, what worked, and what can be improved in future efforts. I begin by placing Renton's case in the context of a TOD typology. Next, I discuss the roles played by government agencies and barriers experienced by actors in Renton's redevelopment. I go on to review impacts and benefits of Renton's redevelopment. Finally, I discuss tools and strategies for implementation, and how these led to development outcomes.

Renton in the Context of TOD Theory

Renton is in the process of redeveloping its downtown to have all the elements of a suburban town center TOD, as described by Hank Dittmar and Shelley Poticha in their 2004 typology (Table 1, p. 18). Land is zoned as mixed-use for most of the downtown core. Further from the transit center, land is designated as residential multifamily, in densities that support transit.⁵³

Renton's TOD also addresses regional connectivity. The downtown district is well connected to other regional centers via both public transit and automobile. Consistent with Dittmar and Poticha's model, the express and local buses serving the transit center run frequently; peak hour service connecting to Seattle operates every eight to ten minutes (Dittmar & Poticha, 2004).

Renton's TOD also features many elements recommended by Peter Calthorpe (Calthorpe, 1993). First, the city has incentivized mixed-income development by encouraging the production of affordable housing units alongside market-rate units. To maintain and enhance the pedestrian character of downtown, the city has adopted design guidelines for the downtown overlay zone with the intent of promoting "mixed uses with high-density residential living supported by multi-modal transit opportunities (City of Renton, 2009)." These guidelines contain recommendations regarding many elements, including the placement of parking, provision of weather protection for pedestrians, and shop windows to provide interest for those walking.

Renton parking regulations are also supportive of TOD. Consistent with G.B. Arrington and Robert Cervero's recommendations for reduced parking ratios in TODs, downtown parking

⁵³ Maximum densities range from 35 – 150 dwelling units per net acre. The lower density areas are furthest from the transit center.

ratios are lower than in less dense areas for both residential and commercial development.⁵⁴ Reducing the amount of space devoted to parking, especially surface parking, facilitates a more comfortable environment for those walking to destinations.

In addition to design guidelines and zoning regulations, the city has implemented measures to create a more pedestrian-supportive environment. City officials responded to citizen demands for green space, by creating the new Piazza at the transit center and maintaining other green spaces within walking distance. Street trees and flowers at the transit center and along the main street add beauty and a sense of enclosure to the street.

In Chapter 2, I presented five case studies describing cities that have implemented TOD initiatives. Plano, Texas is revitalizing its historic downtown with mixed-use development around a new rail station. Beaverton, Oregon, has worked to encourage an upscale office/residential complex at its light rail station. Boulder has encouraged several TODs of different types via zoning and design guidelines, only involving itself more directly in the new transit village. In Miami-Dade County, the transit agency has worked with developers to create an office/hotel complex oriented to the rail station. And in Bethesda, Maryland, the county has collaborated with private developers to build an upscale mixed-use shopping district, with offices, arts facilities, and a movie theater.

The diversity of these cases, both in terms of development character and in the collaborative processes leading to their implementation, provides a context for understanding the significance of TOD in Renton. The Renton case is similar the Plano case in several ways. First, the development character in both cities is similar. Both cities are historic towns now functioning primarily as bedroom communities within larger metropolitan areas. The TODs are set within the historic centers and are planned to have a mix of medium and high-density residential and retail. Renton's vision differs from Plano's in that Renton hopes to see downtown become a job center, and envisions services and retail serving downtown residents, rather than destination retail.

Renton's development process was also similar to Plano's. While not adopting a specific plan for downtown, Renton included zoning for an urban mixed-use center in its comprehensive plan. The city constructed streetscape improvements and infrastructure upgrades. Renton, like Plano, collaborated with the transit agency to locate a new transit center downtown. Like Plano, Renton and the transit agency partnered to build the transit center. In both cities, the city and the transit agency collaborated to work with a private developer on a residential mixed-use project

⁵⁴ The residential parking minimum is 1 space per housing unit; the commercial floor area ratio is 1000 square feet of net floor area per parking space.

adjacent to the transit center. And in both cases, the city built streetscape improvements to incentivize the first residential development.

This leads to a comparison factors leading to development. Renton, like Plano, faced a declining downtown, with low property values, industrial businesses, and a sense of abandonment as the downtown competed with nearby shopping centers and malls. Like Plano, Renton took the initiative to turn around this trend, taking proactive approach to reshaping downtown according a to a TOD model.

Government Roles

The regional orientation of TOD necessitates that public agencies play important roles in development efforts. State policy set a framework for redeveloping Renton, both legitimizing and requiring walkable urban development in the city center. The city government and the county were key players in Renton redevelopment, employing a variety of strategies to implement the project.

State Roles

State-level smart growth policy has had a strong influence on Renton redevelopment. As discussed in Chapter 2, provisions of Washington's Growth Management Act (GMA) were instrumental in setting objectives for growth in Renton. Among these are goals of concentrating new growth in already developed areas and encouraging efficient multimodal transportation systems. In compliance with the GMA, the King County Comprehensive Plan provided a framework and guidelines for urban center designation. The embodiment of a new development framework in statute and in the Comprehensive Plan validated the concept and encouraged Renton to consider developing downtown in a new way.

The Comprehensive Plan also played a role in supporting Renton TOD at the county level. County council approval was required to enter a lease agreement with the Metropolitan Place developer. In a cost-benefit analysis conducted on the proposed lease, some of the considerations were nonquantifiable benefits that advanced county goals, like producing affordable housing units in urban centers. Without housing goals as part of the plan, the county council could not have considered this benefit, and the cost-benefit analysis would have likely shown a net loss to the county.⁵⁵

⁵⁵ Nonquantifiable goals, (i.e. urban center development, transit center effectiveness, and operational safety) were valued at \$12,000 in the first year, and increased by 3% a year, with a discount rate of 6% a year. The analyst concluded they would have a net present value of \$226,000 over 30 years (Carlson, 1999).

Additionally, the state level Multi-Family Housing Property Tax Exemption has enabled Renton to incentivize apartments and condominiums downtown. Statute authorizes cities to offer a ten-year property tax exemption for multifamily housing constructed in targeted zones.⁵⁶ While Renton did not use the exemption in the three pilot projects, most subsequent developments have used it; roughly 500 of the 700 new attached units downtown were constructed using this tool.

City Roles

The City of Renton played an essential role in redevelopment, and an important role in Metropolitan Place. Renton supported TOD through several strategies. First, Renton provided land use planning in the station area, requiring high-density mixed-use development in the targeted district. Related to the zoning ordinances are the overlay zones adopted by the City to require pedestrian-friendly design downtown.

Second, Renton assembled land to spark new development. Without the City buying car lots from auto dealers and providing other incentives for them to relocate, it is likely that revitalization would not have occurred.

Third, Renton encouraged developers in several ways. The City streamlined the permitting process to make it predictable for builders. It conducted a marketing campaign to portray itself as reliable and easy for developers to work with.⁵⁷ Renton also provided amenities and infrastructure to support new development. And Renton actively recruited developers and subsidized the first two multifamily projects by providing land to the developer for reduced prices. The City also contributed land to the new transit center, and pressured Metro to locate the transit center downtown, rather than another location.

Transit Agency Roles

The transit agency, Metro, took an inactive role in planning and implementing Metropolitan Place. However, in lieu of the Metro's active participation building Metropolitan Place, the King County Department of Transportation (KC/DOT) proactively worked to make the project happen through its Transit-Oriented Development Program. The fact that the King County TOD program is housed within the Department of Transportation's Director's Office, not within Metro, meant that the TOD manager was mandated to consider county policy goals, not

⁵⁶ See the Revised Code of Washington, Chapter 84.14.

⁵⁷ The developer of Metropolitan Place has concurred that Renton was, in fact, very encouraging and easy to work with as his company went through the development process.

just transit agency goals, when considering the costs and benefits of Metropolitan Place. Without this big-picture view, Metropolitan Place could not have been constructed.

The Metropolitan Place case does not neatly fit into Cervero et al.'s (2002) typology of transit agency roles.⁵⁸ While KC/DOT has certainly taken a *proactive* approach towards developing Metropolitan Place, a literature review turned up no other examples of cases where the transit agency participated as an anchor tenant for a project. KC/DOT has used this model in several other projects, and governmental entities in other regions may find this arrangement of interest as they work to implement TOD.

Another condition that contributed to project completion was the presence of a skilled project manager at KC/DOT who could oversee the Metropolitan Place project and ensure that it was a priority for the transit agency and the county. The project was complex, requiring a significant investment of staff time and skill to reach agreement with other participants.

Implementation

Renton's development efforts were complex and required a multipronged approach for effective implementation. The City employed multiple strategies, conducting community outreach, assembling land, planning and adopting zoning ordinances, installing infrastructure and street improvements, and streamlining the permitting process, all in an effort to facilitate redevelopment. The following is a review of the roles that each of these strategies had in the final success of the project.

Community Outreach

Renton has had a particularly easy time redeveloping downtown with regards to community outreach and involvement. While redevelopment and TOD efforts in many cities have come from the top down, redevelopment in Renton has been initiated from the bottom up, with community groups convincing the City to redevelop. Thus, Renton has not faced the public opposition often encountered when cities propose higher density development.

In addition to shaping development around community desires, Renton has reached out to the larger Renton community throughout the development process. By conducting community surveys, inviting property owners to meetings, and soliciting community wide input on the first Comprehensive Plan, Renton ensured community understanding and support of redevelopment. The city also reached out to the community through events like the public celebration for openings of the new transit center and the Renton Piazza.

⁵⁸ As discussed in Chapter 1, (Cervero, Ferrell, & Murphy, 2002) classified transit agency roles as: (1) proactive; (2) coordinating and facilitating; and (3) inactive.

Land Assembly

Land assembly can be an important tool for TOD. But in some cities, land which would be appropriate for such development is comprised of numerous small parcels held by multiple owners. This situation can present a barrier for developers, who run the risk that any deal could go wrong as they attempt to assemble land for a project.

Renton's example is different from those described in the literature, in that the barrier to development was not the existence of many small parcels and owners, but a number of other barriers: (1) control over who bought parcels and what development would subsequently occur; (2) timing of development; and (3) land costs themselves. Renton addressed these concerns in three ways. First, it addressed land costs by purchasing car dealers' properties outright. Second, it addressed temporal issues by acting as an intermediary, banking land until the desired type of development was proposed. Third, it addressed land costs that could have been insurmountable barriers to initial development by selling two land parcels at greatly reduced prices.

Development Regulations

Having learned from experience, Renton's current zoning and design guidelines support development oriented towards transit and walking. Built before design guidelines were adopted, the parking lot in front of Burnett Station (the second mixed-use building constructed) serves as an example demonstrating the necessity of design guidelines to ensure a comfortable walking environment.

Parking policy embodies conflicting goals. While on one hand, the city seeks to encourage non-auto trips within and to downtown, on the other it wants to encourage people to visit downtown shops and restaurants. Therefore, parking policy encourages people to drive downtown, offering free two hour parking throughout the district. But parking standards for residential and commercial construction are set to discourage auto use by downtown residents and workers.

Tension between multiple goals evidences the fact that a city government cannot optimize parking management alone. If transit-demand management were the only goal, high parking fees would be charged downtown. But Renton is rightly concerned that such a policy would discourage most people from going downtown to shop or eat at all, since nearby locations offer free parking with similar amenities. The incapability of an individual city government to optimize its parking policy in the face of competition from neighbors speaks to the need for a regional parking plan to effectively manage parking and charge users market rates for parking.

A Commitment to Infrastructure and Rapid Permitting

Many cities have used street improvements like street trees, public art, and infrastructure upgrades as tools to encourage developers to construct TOD. For Renton and the developer, the city's commitment to install infrastructure, evidenced by entry into a legal agreement, was an essential factor in beginning the first multifamily projects downtown. Importantly, the agreement also included a promise to complete permitting within several weeks. This commitment gave the developer confidence that the City would keep its promises.

While city officials often do not favor streamlined development review, builders often cite it as an essential factor in the decision to construct TOD. Some cities incentivize TODs by offering expedited permitting only for TOD projects. In contrast, Renton offers streamlining permitting for all development. Rapid permitting has been an effective strategy for encouraging all new construction in Renton.

Renton's approach has differed from that taken by other cities that do not require TOD in a zoning area, but rather incentivize it through streamlined review. Renton, rather, has *required* TOD within the downtown core, while simultaneously *incentivizing* all development within the city.

Barriers to TOD

While Renton has experienced ongoing success in its redevelopment, the revitalization also provides examples of barriers to TOD. As reviewed in Chapter 2, TOD barriers may be considered in three categories: (1) market barriers; (2) organizational barriers; and (3) policy and political barriers. Renton overcame several of these barriers through the development process, providing lessons for other cities interested in similar development.

One market barrier was a depressed real estate market with no demonstrated demand for TOD. Renton overcame this obstacle through strategies described earlier, directly recruiting developers, offering infrastructure improvements, assembling land, and selling land for the first two projects at a deep discount. While a number of projects have been completed without further incentives, market forces continue to be a hindrance to TOD in Renton; the current recession has impeded development and the City is finding it difficult to recruit a developer for a key site downtown.

Another market-related barrier to TOD is unrevealed market preferences; because there was no compact mixed-use development in Renton, the market could not reveal a demand for this

type of housing. Renton surmounted this barrier by actively facilitating and incentivizing pilot projects that demonstrated the market's readiness for TOD in Renton.⁵⁹

A second type of barrier was organizational. Renton and KC/DOT faced the challenge of organizing multiple entities from the public and private sectors to accomplish the shared goal of TOD in Renton. Public/private collaboration can be very difficult because of differing organizational cultures, missions, mandates, and constituencies. But Renton and King County overcame this barrier by assigning the project to point people who oversaw the effort. Such collaboration is difficult, yet challenges were overcome through the hard work of skilled specialists overseeing the projects. Strong personal skills were essential for the project managers, especially understanding the motivations of different players and being able to express empathy, listening skills, trust, and respect. A challenge yet to be resolved is the differing time frames that public and private entities work under; KC/DOT's project manager cited the difficulty of responding quickly to developer questions because he had to wait for Council approval to enter the lease agreement.

Rather than hindering development, state and local policies encouraged TOD. Transit agency policy has also been supportive, constructing a transit center as well-oriented to pedestrian access as it can be, considering the large number of parking spaces in the structured parking garages. Seamlessly connected to surrounding streets, the center has street trees, a public plaza, restrooms, phones, public art, and an espresso and snack shop.

While some might contend that there is too much parking at the Renton TC, it is an appropriate transitional measure, considering high demand for park-and-ride stalls in Renton. With the low density development that characterizes the Renton area, transit service levels are too low to conveniently transport riders from neighborhoods to the transit center. Until cities are developed with sufficient density and connectivity to support transit, transit agencies wishing to generate ridership must continue to provide parking at transit centers.

However, the ample structured parking at the transit center comes at a high cost, in terms of public dollars and opportunity cost. At \$40,000 a stall, park-and-ride spaces cost taxpayers a great deal, and mean a missed opportunity for pedestrian-oriented development like neighborhood-supporting retail, offices, and housing. With the high social and private costs related to structured parking and to driving, large park-and-ride structures should become a thing

⁵⁹ The three mixed-use multifamily projects were: Renaissance Place (now Revo225), completed in 1999; Burnett Station, completed in 2001, and Metropolitan Place, completed in 2002.

of the past as cities evolve to be denser and transit-oriented, allowing people to walk to transit rather than driving there.

As for political barriers, these were not sufficient to impede development. While questions of how, exactly to develop, and what level of affordability could count as affordable housing were debated, the community on the whole supported the development effort. The support of community and the absence of strong opposition have helped make Renton TOD successful.

Evaluation of Impacts and Benefits

In chapter 2 I reviewed the literature on the impacts of urban development on a variety of indicators, including those relating to transportation, land use, and air quality. Because this case study was not designed to evaluate Renton TOD's impacts on most of the indicators, they are not included in this analysis. However, there is evidence that Renton's TOD has yielded positive impacts on transit ridership, land values, and quality of life. Related to this is the concept of success; while most actors in the development effort viewed the project as successful, there was some diversity of opinion on this point.

Ridership Impacts

Downtown car ownership was lower than for auto-oriented areas, suggesting that residents use alternatives to driving alone more than average. The low parking ratios used in downtown residential development (1 space per unit) evidences downtown residents' reduced reliance on autos.

A primary transit agency goal for TOD is to increase farebox revenues by generating more riders from areas surrounding transit stations. The presence of 700 new residential units within walking distance of the station, combined with the higher ridership rates, suggests more transit riders arriving on foot than a business-as-usual case. And as the development process is incomplete at this writing, it is premature to assess full impacts of redevelopment.

Ridership rates at Metropolitan Place are higher than average for Renton. According to a Metro survey, 38 percent of residents surveyed took the bus at least seven times a week. While this number may be skewed due to self-selection among residents, it is a great deal more than the 6 percent of Renton residents who reported using transit to commute in the 2000 Census. Even if the survey result has overestimated transit usage by 100 percent, the proportion of Metropolitan Place tenants using transit often would still be three times that of the average Renton citizen.

A high ridership rate at Metropolitan Place is also consistent with research finding that transit mode shares are high when worksites are located in dense downtown areas with limited,

expensive parking. Anecdotal evidence suggests that a significant portion of residents living in multifamily developments in Renton's downtown core commute to downtown Seattle for work. Seattle's downtown is characterized by heavy traffic and expensive parking. Thus higher ridership rates are consistent with research findings.

Land Values

Regional conditions have favored TOD and increased land values; these include heavy regional congestion, expensive parking in downtown Seattle, and a growing regional economy. Overall, increased land values in Renton's downtown have coincided with the redevelopment effort. Downtown property values have risen from \$7 per square foot in the mid-1990s to \$40 per square foot today. Of course, many factors influence property values, but city officials believe that the redevelopment effort, including the transit station, have helped increase land values.

However, the Metropolitan Place case supports research findings that housing located too close to a transit station can experience negative externalities which lower residential property values. Noise and diesel fumes outside residents' windows have led to complaints and higher-than-usual tenant turnover.

A final consideration with regards to property values is time frame. TOD may take ten years or more to impact property values, and the development effort itself is not yet complete. Thus, it is premature to assess the full impact of the redevelopment effort upon downtown property values.

That said, the redevelopment effort and Metropolitan Place have helped raise land values by making downtown an attractive bedroom community for Seattle workers. Downtown is becoming an attractive place to live and land values have increased as developers have recognized the growing demand for multifamily housing in the downtown district.

Other Public Sector Benefits

As discussed in Chapter 2, an array of benefits can stem from smart growth and TOD, including reduced VMT, enhanced housing affordability, improved public health, fiscal efficiency for the public sector, and better quality of life. While most of these elements cannot be assessed in this case study, the Renton case serves as an example of both improved quality of life and housing affordability.

When asked about the benefits of redevelopment, Renton officials have emphasized improved quality of life, pointing to greater "vibrancy" downtown, and the fact that Renton residents now go downtown to eat, shop, or attend arts events. And with the production of 140 affordable housing units and more planned, TOD has helped meet city and county goals for

affordable housing production. The proximity to transit leverages housing affordability, reducing household expenses for transportation. Thus, Renton and King County have met success in this effort to construct affordable housing, and should continue to be successful as redevelopment continues.

Defining Success

After its long decline, downtown Renton is once again becoming a place where people live and recreate. The city has attracted many condominium and apartment developments to downtown, including both affordable housing and market-rate units. New retail and office development have been slow to materialize, although some multifamily buildings feature businesses on the ground floors. City officials believe that a strong residential base will attract more service-oriented retail and job centers; this belief is consistent with the idea that TOD success must be assessed on a longer time frame. Especially in this time of recession, Renton will have to be patient with the pace of downtown redevelopment.

<p>Overall Lessons</p> <ul style="list-style-type: none"> • Skilled project managers with strong personal skills are needed; <p>Highlights from Renton</p> <ul style="list-style-type: none"> • Growing regional economy necessary; • State policy is important to facilitate TOD; • Desirable location is essential; • Local crisis a causative factor; • Citizen-led approach based on decades of organizing important; • City took proactive approach; and • Design guidelines and overlay zoning important. <p>Highlights from Metropolitan Place</p> <ul style="list-style-type: none"> • TOD program in county, not city; • Transit agency as anchor tenant for joint development project = new model; • Building entrance should be separate from transit users; and • Building design should separate residential units from bus loading areas.

Table 4. Lessons from Renton and Metropolitan Place.

Most participants in the redevelopment process viewed Metropolitan Place and the other two Dally developments favorably. Of course, different individuals had different goals, and therefore different opinions, regarding the success of redevelopment. City officials viewed the

project as a “success-in-progress.” They cited the fact that city-supported pilot projects jumpstarted market-driven multifamily developments, recognizing that the redevelopment process is not yet complete (Covington, 2009).

For King County, Metropolitan Place was a success. The TOD project manager considered multiple county goals when framing the project as beneficial. In addition to transit agency benefits, he cited additional property tax collections, more affordable housing, and enhanced public safety resulting from Metropolitan Place as important benefits.

Participants from the private sector have also, for the most part, considered the pilot developments successful. The developer, Don Dally, was astounded at how fast units rented out, and very happy with the ease of working with the city to plan and implement the developments. His loan broker was likewise pleased with the projects, saying the financing was no problem. The management company, having recently purchased Metropolitan Place, was more reserved about the project, saying they would “wait and see.”

CHAPTER 6: CONCLUSIONS

This final chapter has three sections. First, I outline new perspectives made possible by the Renton case. Next, I describe how Renton's case is similar to other transit-oriented development (TOD) cases, and serves to strengthen theory. Finally, I discuss the importance of an interdisciplinary approach as a strategy for addressing societal problems.

New Perspectives on Transit-Oriented Development

Much can be learned from Renton's transit-oriented development. Cities with declining economies can, under the right circumstances, use TOD as an effective tool for revitalization. In addition, TOD can also yield many benefits to cities and the general public, beyond mere economic growth. However, it takes time for TOD to be implemented and for the full benefits to accrue after implementation; a time frame of a few decades or longer is appropriate for assessing progress. Finally, TOD is an important tool for achieving housing affordability; it offers transportation options that cost much less than driving a personal vehicle. Decisionmakers and civic leaders should take Renton's example as an inspiration as they work to envision sustainable and prosperous communities for the future.

Two conditions allowed the 1990s economic crisis to spark downtown redevelopment in Renton. The first condition was a healthy regional economy. While Renton's economy was stagnating, the Seattle area economy experienced overall growth in the 1990s. Regional prosperity created a market for transit-oriented housing in Renton; Seattle area housing prices rose to premiums, and the city had some of the worst congestion in the nation. The possibility of reasonably priced housing and affordable, stress-free commuting for downtown commuters created a market for prospective renters and homeowners in outlying Renton.

Another precondition of development was the long history of community organizing among downtown business owners. Local businesspeople had long advocated for a stronger downtown and had made many efforts to promote a healthy local economy. Starting in 1988, the business community was represented on the City Council, which leveraged its capacity to push for a new downtown.

Within the context of these conditions, a citywide economic crisis loomed in the early 1990s, sparking wider interest in redevelopment. The local crisis was a key factor providing impetus for revitalization. It acted in two ways. First, it brought the larger community on board to organize for a change; the Blue Ribbon Committee was formed, and diverse civic leaders joined the effort to find solutions for Renton's troubles. The Blue Ribbon Committee joined with

the Downtown Renton Association and the city council to work together for a livable city. As the community rallied to revive downtown and Renton, community leaders became open to new ideas and were more willing to act.

Notably, Renton leaders advocated and worked for TOD. This stands in contrast to other cities, where local communities have resisted TOD, fearing gentrification, heavy traffic, or loss of neighborhood character. Renton business and civic leaders embraced the revitalization effort, rather than slowing the process and weakening measures that could promote transit accessibility.

The local economic crisis also had an indirect effect on the redevelopment effort. Once the process was underway, the depressed local economy facilitated redevelopment by lowering land values. The depressed real estate market allowed the city and developers to purchase land for redevelopment at low prices. Thus, by making community visioning and land assembly possible, the economic crisis had a “silver lining;” it enabled Renton leaders to implement a new downtown development plan.

As depressed small town centers competing with malls and big box stores are all too common these days, other cities may take a lesson from Renton’s story. As regional economies begin to recover from the recession, suburban cities may be able to take advantage of low property values to assemble land and take a proactive role in downtown development. However, cities should be ever aware of the importance of community involvement in redevelopment. Other localities may face opposition, rather than support, if they do not sufficiently involve the public and educate citizens on regional development issues. Cities can head off opposition to transit- and pedestrian-oriented redevelopment by involving the public and holding educational events to foster greater understanding of development issues.

Interestingly, the primary impetus for Renton’s redevelopment was not an effort to reduce greenhouse gases, reduce infrastructure costs, improve housing affordability, or achieve the many benefits that can be attained through TOD. Rather, the revitalization effort has been a push to revive an ailing local economy. The effort is working; TOD has been an important tool for achieving economic vitality and creating a sense of community and place in its downtown. Renton residents also enjoy improved health and increased affordability resulting from downtown TOD. The Puget Sound area at large benefits as Renton contributes to the regional effort to contain growth and reduce the distance the average driver must travel each day.

One little-discussed aspect of TOD is an appropriate time frame for development. Often, stakeholders are impatient for development to meet objectives, whether these are to receive returns on investments, to increase transit and pedestrian-mode shares, or to create a sense of

vibrancy in a deteriorating neighborhood. Private sector participants in particular may expect a quick turn around on investment, on the order of a few years.

But transforming neighborhoods to be fully transit- and pedestrian-friendly takes time; often ten years or more is appropriate for allowing a neighborhood to redevelop, as those with transit-accessible jobs relocate to live in the TOD, as new housing is built, and as new services and offices are established. Renton's development confirms that TOD efforts take patience. Theirs has met with initial success, but the process is far from complete. In terms of a walkable character, transit accessibility, and a sense of place, additional benefits can be expected as time goes on, especially as the regional economy improves. Renton officials, aware that a longer time frame is needed, are patient with downtown redevelopment. Because of the many benefits of TOD, this longer view is sure to yield greater gains for Renton and its citizens than continued sprawl development.

Another overlooked benefit of Renton's new downtown is enhanced affordability for all residents, whether they live in designated affordable units or not. With the cost of driving consuming a significant proportion of the average household budget, giving families the option not to drive greatly increases combined housing and transportation affordability, with the added bonus of predictable monthly costs. In contrast to the cost of a monthly bus pass, families who must drive are vulnerable to volatile expenses, as one cannot predict when a repair will be needed, or when gas prices will spike.

Strengthening Theory

TOD yields ongoing benefits to the city, providing a walkable, transit-accessible destination for all Renton residents to visit and enjoy. Renton's TOD also confirms that state-level policy, like Washington's Growth Management Act, can confer benefits by incentivizing and legitimizing TOD. And Renton's case confirms the importance of a strong regional economy and community support as conditions of successful TOD.

TOD has provided and continues to provide a number of benefits to Renton. It has made the downtown more vibrant by bringing a transit station, an urban park, an arts center, a farmers market, and more than 700 new housing units to downtown. The presence of residents and visitors walking to destinations creates a more lively feel than the early 90s atmosphere of concrete and auto lots. Land values have increased downtown, and while it is difficult to ascertain causality, it is clear that downtown development is associated with the rise in land values. Higher land values will hopefully lead to more pedestrian-oriented use of properties, including neighborhood services and employment sites.

Many benefits are accruing as a result of enhanced transit accessibility for all downtown residents. Downtown residents are much more likely to use transit than counterparts in areas underserved by transit. Transit users and society at large benefit as transit use rates increase – carbon emissions go down; congestion is reduced; the air is cleaner; household affordability is improved; and infrastructure costs go down.

A final benefit of TOD is the production of affordable housing units. Several hundred units have been developed as part of the revitalization effort, and when household transportation costs are considered, downtown housing is even more affordable, because many residents have the option of leaving their cars at home more often. When the average American household spends roughly \$8,000 a year for each vehicle it owns,⁶⁰ the option of not driving greatly enhances affordability and resilience for households.

As I described in Chapter 2, a state-level growth management policy is not necessary for TOD development, but it can be helpful. Washington’s Growth Management Act has facilitated TOD in Renton. It did this by legitimizing the concept among local stakeholders and providing a framework for implementation. It also required county officials to set the goal of concentrating growth in urban centers, which made TOD a natural choice for Renton decisionmakers as they planned to accommodate new residents. This was an especially important factor in the lease agreement between the county and Metropolitan Place developer, because the county considered progress towards growth management goals as a benefit of the proposed lease.

Renton faced a typical barrier to redevelopment: because no mixed-use projects were in the area prior to redevelopment, market demand for compact, walkable housing in Renton was not apparent. Renton overcame this problem in two ways. First, the city absorbed many development costs. It sold land to the developer at deeply discounted prices, and provided infrastructure upgrades usually paid for by developers. Next, the city proactively *recruited* developers, actively pitching the concept of mixed-use walkable development. Without active recruitment and heavy subsidy of the first two buildings, no developer would have taken the risks associated with the initial projects.

The Renton case confirms recognized tenets of implementation. First, a healthy regional economy is essential to successful TOD. A growing economy is associated with higher housing costs and heavier congestion; these factors make transit-accessible housing attractive to commuters employed in city centers. Fortunately for Renton, the time and place was right for

⁶⁰ See (American Automobile Association, 2009)

TOD, as Seattle's economy continued to grow at a healthy clip through the 1990s. With the current recession, it is not surprising that new development in downtown Renton has slowed.

A second important factor in implementation was community support. Renton's case is special in that the movement for a walkable downtown was a bottom-up effort; rather than convince the community of the need for denser, walkable development, city officials *responded* to residents' demands for it. Support from the Renton community means that TOD has a much better chance of reaching its full potential.

An Interdisciplinary Approach

Recognizing the interdependent nature of modern challenges, I have taken an interdisciplinary approach to studying the question of how transit-oriented development can help society move towards sustainable practice. To do this, I have conducted a literature review foraging into the fields of transportation policy, urban planning, economics, public policy, and public health. A multidisciplinary understanding of the full impacts and benefits of compact development have provided a fuller context for TOD than any one discipline could.

Building on this interdisciplinary foundation, I have documented the effort to create one particular transit-oriented development, gathering data relevant to land use planning, community development, and public-private partnerships. Because of the interdisciplinary nature of the research, this thesis has implications for practitioners in several fields, including land use planners, transit agency officials, economic development professionals, and private sector developers.

The interlinked nature of ecological systems, social systems, and economic systems necessitates interdisciplinary approaches to managing these systems in order to provide for the needs of both present and future generations. Yet the high degree of specialization demanded by advanced technological society has led to compartmentalization of policy approaches, often leading to conflicting policy goals. This fragmentation is reflected among researchers as well. For instance, as I reviewed in Chapter 2, economists have studied the relationship between land use regulations and housing costs, but these studies are focused narrowly, not accounting for the full costs and benefits of regulations. Because land use policy impacts so many facets of human lives, research and practice could benefit from more collaboration among experts from different fields, as well as from the contributions of interdisciplinarians.

Perhaps society is making progress towards the goal of integrating economic and environmental policy, as set forth in the 1987 Brundtland Commission report. Certainly many of the researchers reviewed in this study have integrated multiple disciplines in their studies. Likewise, proponents of integrated land use, transportation, and urban development policy have

recognized the interconnected nature of these policy areas and the need for collaboration. And as this study has documented, policies requiring multiple planning goals can help local decisionmakers attend to both economic and environmental goals as they work to promote a high quality of life for present and future citizens.

While skilled specialists are still needed, an interdisciplinary approach is essential to supporting the efforts of today's leaders to develop sustainable policies. Such a framework allows the researcher to step across boundaries of academic disciplines. It can yield new insights, and a more balanced, integrated approach to problem-solving. Rather than addressing competing issues in a piecemeal fashion, an interdisciplinary approach can be used to look at all of these at once. As society faces the complex challenge of climate change, an interdisciplinary approach, coupled with the continued work of specialists, is indispensable to meeting the needs of today and tomorrow.

WORKS CITED

- Adler, S., & Dill, J. (2004). The Evolution of Transportation Planning. In C. P. Ozawa, *The Portland Edge: Challenges and successes in growing communities* (pp. 230-256). Washington, D.C.: Island Press.
- American Lung Association. (2009). *State of the Air: 2009 Health Risks Overview*. Retrieved July 1, 2009, from <http://www.stateoftheair.org/2009/health-risks/overview.html>
- American Public Health Association. (1941). *Housing for Health: Papers presented under the auspices of the committee on the hygiene of housing of the American Public Health Association*. Lancaster, PA: The Science Press Printing Company.
- Arrington, G., & Cervero, R. (2008). *Effects of TOD on Housing, Parking, and Travel*. Washington, D.C.: Transportation Research Board.
- Belzer, D., Autler, G., Espinosa, J., Feigon, S., & Ohland, G. (2004). The Transit-Oriented Development Drama and Its Actors. In H. Dittmar, & G. Ohland, *The New Transit Town: Best practices in transit-oriented development* (pp. 41-56). Washington, D.C.: Island Press.
- Bike Friendly Oak Cliff. (2009, June 15). *BFOC Interview with Fort Worth's City Planner, Don Koski*. Retrieved July 1, 2009, from <http://bikefriendlyoc.wordpress.com/2009/06/15/bfoc-interview-with-fort-worths-city-planner-don-koski/>
- Burchell, R. W., Downs, A., McCann, B., & Mukherji, S. (2005). *Sprawl Costs: Economic impacts of unchecked development*. Washington, D.C.: Island Press.
- Cahan, S. (2009, April 14). Manager, King County Metro Leased-Lot Park-and-Ride Program. (S. del Moral, Interviewer)
- Callaghan, K. (2009, April 27). Vice President of Training, Wasatch Property Management. (S. del Moral, Interviewer)
- Calthorpe, P. (1993). *The Next American Metropolis: Ecology, community, and the American Dream*. New York: Princeton Architectural Press.
- Cameron, I., Kenworthy, J., & Lyons, T. (2003). Understanding and predicting private motorised mobility. *Transportation Research Part D*, 267-283.
- Carlson, P. (1999). *Staff Report - Proposed Ordinance 1999-0375*. Seattle: King County.
- Cervero, R., & Kockelman, K. (1997). Travel Demand and the 3Ds: density, diversity, and design. *Transportation Research Part D*, 2(3):199-219.
- Cervero, R., Ferrell, C., & Murphy, S. (2002). *Transit-Oriented Development and Joint Development in the United States: A Literature Review*. Washington, D.C.: Transportation Research Board of the National Academies.
- Cervero, R., Murphy, S., Christopher, F., Goguts, N., & Tsai, Y.-H. (2004). *Transit-Oriented Development in the United States: Experiences, challenges, and prospects*. Washington, D.C.: Transportation Research Board.
- City of Boulder. (1995). North Boulder Subcommunity Plan. In Cervero et al. (2004).

- City of Boulder. (2007). *Transit Village Area Plan*.
- City of Renton. (2009, April 10). *City of Renton Zoning*. Retrieved July 10, 2009, from City of Renton: <http://rentonnet.org/internetapps/maps/pdf/City%20Maps/Zoning.pdf>
- City of Renton. (2009, April 27). *4-2-020 Purpose and intent of zoning districts*. Retrieved July 14, 2009, from CodePublishing.com: <http://www.codepublishing.com/WA/Renton/html/Renton04/Renton0402/Renton0402020.html>
- Claritas. (2006). *Citywide - City of Renton Demographics*. Retrieved May 7, 2009, from City of Renton: <http://rentonwa.gov/business/default.aspx?id=1990>
- Cohen, A. (2007, June 27). *Seattle's growth is at its fastest in decades*. Retrieved August 26, 2009, from Seattle PI : http://www.seattlepi.com/local/321480_population28.html
- Covington, J. (2009, May 15). Chief Administrative Officer, City of Renton. (S. del Moral, Interviewer)
- Dally, D. (2009, April 8). Dally Properties, LLC. (S. del Moral, Interviewer)
- DeGrove, J. M. (1992). *Planning and Growth Management in the States*. Cambridge: Lincoln Institute of Land Policy.
- DeGrove, J. M. (2005). *Planning policy and politics: smart growth and the states*. Cambridge, MA: Lincoln Institute of Land Policy.
- Dittmar, H., & Poticha, S. (2004). Defining Transit-Oriented Development: The new regional building block. In H. Dittmar, & G. Ohland, *The New Transit Town: Best practices in transit-oriented development* (pp. 19-40). Washington, D.C.: Island Press.
- Downs, A. (2005). Smart Growth: Why we discuss it more than we do it. *Journal of the American Planning Association* , 367-378.
- Duany, A. (2000). *Suburban nation: the rise of sprawl and the decline of the American Dream*. New York: North Point Press.
- Energy Information Administration. (2008, December 3). *Emissions of Greenhouse Gases in the United States 2007*. Retrieved June 21, 2009, from Energy Information Administration: <http://www.eia.doe.gov/oiaf/1605/ggrpt/flowchart.html>
- Ewing, R., Pendall, R., & Chen, D. (2002). *Measuring Sprawl and Its Impact*. Retrieved June 26, 2009, from Smart Growth America: <http://www.smartgrowthamerica.org/sprawlindex/MeasuringSprawl.PDF>
- Ewing, R., Bartholomew, K., Winkelman, S., Walters, J., & Chen, D. (2008). *Growing Cooler: the evidence on urban development and climate change*. Washington, D.C.: Urban Land Institute.
- Fishman, R. (2005). The Fifth Migration. *Journal of the American Planning Association* , 357-366.
- Florida Department of Transportation. (2000). *2020 Florida Transportation Plan*. In Cervero et al. 2004.
- Frey, W. H. (2009, July 1). *Big City Populations Survive the Housing Crunch*. Retrieved July 4, 2009, from The Brookings Institution: http://www.brookings.edu/opinions/2009/0701_housing_frey.aspx#

- Frumkin, H., Frank, L., & Jackson, R. (2004). *Urban Sprawl and Public Health: Designing, planning, and building for healthy communities*. Washington, D.C.: Island Press.
- Greenberg, E. (2004). Regulations Shape Reality: Zoning for transit-oriented development. In H. Dittmar, & G. Ohlanrd, *The New Transit Town: Best practices in transit-oriented development* (pp. 57-82). Washington, D.C.: Island Press.
- Hamilton, C. (2006). *Sound Transit (King, Pierce, and Snohomish counties)*. Retrieved April 1, 2009, from HistoryLink.org:
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8002
- Hanchett, T. W. (1996, October). US Tax Policy and the Shopping-Center Boom of the 1950s and 1960S. *American Historical Review* , pp. 1082-1110.
- Handy, S. (2005). *Critical Assessment of the Literature on the Relationships Among Transportation, Land Use, and Physical Activity*. Washington, D.C.: Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use.
- Hayden, D. (2003). *Building Suburbia: Green fields and urban growth*. New York: Pantheon Books.
- Henning, J. (2009, May 14). Current Planning Manager, City of Renton. (S. del Moral, Interviewer)
- Holtzclaw, J., Clear, R., Dittmar, H., Goldstein, D., & Haas, P. (2002). Location Efficiency: Neighborhood and Socioeconomic Characteristics Determine Auto Ownership and Use - Studies in Chicago, Los Angeles and San Francisco. *Transportation Planning and Technology* , 25:1-27.
- Hu, P. S., & Reuscher, T. R. (2004). *Summary of Travel Trends: 2001 National Household Survey*. Washington, D.C.: US Department of Transportation, Federal Highway Administration.
- Hunter. (2009, May 22). *Bethesda Row Gets a Workout*. Retrieved June 26, 2009, from DCmud - The Urban Real Estate Digest: <http://dcmud.blogspot.com/2009/05/bethesda-row-gets-workout.html>
- Ingram, G. K., Carbonell, A., Hong, Y.-H., & Flint, A. (2009, May). *Smart Growth Policies*. Retrieved June 11, 2009, from Lincoln Institute of Land Policy:
<http://www.lincolnst.edu/pubs/smart-growth-policies.aspx>
- Intergovernmental Panel on Climate Change. (2007). *Climate Change 2007: Synthesis report - Summary for policymakers*. Retrieved June 21, 2009, from
http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf
- Intergovernmental Panel on Climate Change. (2007). *Issues Related to Mitigation in the Long Term Context*. Retrieved June 21, 2009, from IPCC Fourth Assessment Report: Working Group III Report "Mitigation of Climate Change" :
<http://www.ipcc.ch/ipccreports/ar4-wg3.htm>
- Kenworthy, J., & Laube, F. (2001). *The Millennium Cities Database for Sustainable Transport, in O'Meara (2007)*. Brussels: UITP/ISTP.
- King County. (2009, April 23). *Chapter 2 - Urban Communities*. Retrieved May 5, 2009, from 2008 King County Comprehensive Plan Update:
<http://www.kingcounty.gov/property/permits/codes/growth/CompPlan/2008.aspx#contents>

- King County. (2009, April 23). *Chapter 7 - Transportation*. Retrieved May 5, 2009, from 2008 King County Comprehensive Plan Update:
<http://www.kingcounty.gov/property/permits/codes/growth/CompPlan/2008.aspx#contents>
- Knaap, G. J., Ding, C., & Hopkins, L. D. (2001). Do Plans Matter? The effects of light rail plans on land values in station areas. *Journal of Planning Education and Research* , pp. 21(1): 32-39.
- Kuzmyak, J. R., Pratt, R. H., & Douglas, G. B. (2003). Land Use and Site Design. In T. C. Program, *Traveler Response to Transportation System Changes*. Washington, D.C.: Transportation Research Board.
- Leck, E. (2006). The Impact of Urban Form on Travel Behavior: A Meta-Analysis. *Berkeley Planning Journal* , 37-58.
- Lent, C. (2008, May 30). *Beaverton Round Financial Woese Resurface*. Retrieved June 24, 2009, from Portland Tribune:
http://www.portlandtribune.com/news/story.php?story_id=121217524555615400
- Levine, J. (2006). *Zoned Out: Regulation, markets, and choices in transportation and metropolitan land-use*. Washington, D.C.: Resources for the Future.
- Levine, J., & Frank, L. D. (2007). Transportation and land-use preferences and residents' neighborhood choices: The sufficiency of compact development in the Atlanta region. *Transportation* , 255-274.
- Long, P. (2006). *King County - Thumbnail History*. Retrieved April 1, 2009, from HistoryLink:
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=7905
- Lucy, W. H., & Phillips, D. L. (2006). *Tomorrow's Cities, Tomorrow's Suburbs*. Chicago: American Planning Association.
- Mackun, P. J. (2009). *Population Change in Central and Outlying Counties of Metropolitan Statistical Areas: 2000 to 2007*. Washington, D.C.: US Census Bureau.
- Mayer, H., & Provo, J. (2004). The Portland Edge in Context. In C. P. Ozawa, *The Portland Edge: Challenges and successes in growing communities* (pp. 9-34). Portland, OR: Portland State University.
- McLaren, C. (2009, August 4). Portland's Bicycle Brilliance. *The Tyee* .
- Morgan, R. (2008, October 4). Depot settled, Transit Village not - Redevelopment will happen without rail, backers say . *The Daily Camera* .
- Mui, S., Alson, J., Ellies, B., & Ganss, D. (2007, April). *A Wedge Analysis of the US Transportation Sector*. Retrieved June 21, 2009, from US Environmental Protection Agency: <http://www.epa.gov/OTAQ/climate/420r07007.pdf>
- Myers, D., & Gearin, E. (2001). Current Preferences and Future Demand for Denser Residential for Future Residential Environments. *Housing Policy Debate* , 633-659.
- Nelson, A. C. (1999). Transit Stations and Commercial Property Values: a case study with policy and land-use implications. *Journal of Public Transportation* , pp. 2(3):77-93.
- Nelson, A. C. (2006). Leadership in a New Era. *Journal of the American Planning Association* , 393 - 407.
- Nelson, T. (2009, May 18). Retired, Renton City Council, Downtown Renton Association, Renton Flower. (S. del Moral, Interviewer)

- Newman, P., & Kenworthy, J. (2007). Greening Urban Transportation. In M. O'Meara Sheehan (ed.), *State of the World 2007: Our urban future* (pp. 66-89). Washington, D.C.: Worldwatch Institute.
- Oldham, K. (2006). *Washington Legislature enacts Growth Management Act on April 1, 1990*. Retrieved April 1, 2009, from HistoryLink.org:
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&File_Id=7759
- Pietsch, A. (2009, April 10). Administrator. (S. del Moral, Interviewer)
- Porter, D. R. (1997). *Transit-focused development*. Washington, D.C.: National Academy Press.
- Quigley, J. M., & Raphael, S. (2005). Regulation and the High Cost of Housing in California. *The American Economic Review* , 323-328.
- Radford, D. A. (2008, January 9). 737 Sales Pump Economy. *Renton Reporter* .
- Seattle Department of Transportation. (1999). *Case Studies of Transit-Oriented Development*. Retrieved April 23, 2009, from
http://www.seattle.gov/Transportation/ppmp_sap_todstudies.htm
- Settle, R. L., & Gavigan, C. G. (1993). The Growth Management Revolution in Washington: Past, present, and future. *University of Puget Sound Law Review* , 867-948.
- Slavin, S. (2009, May 14). Senior Vice President, Seattle Mortgage. (S. del Moral, Interviewer)
- Sloane, D. C. (2006). From Congestion to Sprawl: Planning and health in a historical context. *Journal of the American Planning Association* , 72(1):10-18.
- Taylor, B. (2009, April 10). President & CEO, Renton Chamber of Commerce. (S. del Moral, Interviewer)
- Texas Transportation Institute. (n.d.). *Performance Measure Summary - Seattle, WA*. Retrieved August 26, 2009, from Urban Mobility Information:
http://mobility.tamu.edu/ums/congestion_data/west_map.stm
- The Brookings Institution. (2003). *Seattle in Focus: A profile from Census 2000*. Retrieved August 26, 2009, from
http://www.brookings.edu/reports/2003/11_livingcities_seattle.aspx
- US Census Bureau. (2000). *Renton city, Washington, DP-3. Profile of Selected Economic Characteristics: 2000*. Retrieved May 16, 2009, from
http://factfinder.census.gov/servlet/QTTable?_bm=y&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-lang=en&-sse=on&-geo_id=16000US5357745
- US Census Bureau. (2009, May 5). *State and County QuickFacts*. Retrieved July 3, 2009, from
<http://quickfacts.census.gov/qfd/states/53/5351300.html>
- US Census Bureau. (2008, July 31). *U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin: 2000-2050*. Retrieved July 4, 2009, from
<http://www.census.gov/population/www/projections/usinterimproj/>
- United States Global Change Research Program. (2009, June). *Global Climate Change Impacts in the US: Key findings*. Retrieved June 21, 2009, from
<http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/key-findings>
- US Census Bureau. (2000). *Seattle city, Washington - DP-3, Profile of Selected Economic Characteristics*. Retrieved August 26, 2009, from

http://factfinder.census.gov/servlet/QTTable?_bm=y&-qr_name=DEC_2000_SF3_U_DP3&-ds_name=DEC_2000_SF3_U&-lang=en&-_sse=on&-geo_id=16000US5363000

US Environmental Protection Agency. (2009, April). *Energy*. Retrieved June 21, 2009, from 2009 U.S. Greenhouse Gas Inventory Report:

<http://epa.gov/climatechange/emissions/usinventoryreport.html>

Walker, E. (2002). TOD Conference Paper. Seattle, WA: King County Transit-Oriented Development Program.

Walker, E. (2007, May 21). TOD Policy Framework. Seattle, WA: King County Transit-Oriented Development Program.

Walker, E. (2009, April 9). Project Manager, King County Transit-Oriented Development Program. (S. del Moral, Interviewer)

Walker, E. (2009, May 13). Personal Communication.