

**OVERCOMING BARRIERS TO, AND
BEST PRACTICES FOR:
URBAN CENTERS, AND
TRANSIT-ORIENTED DEVELOPMENT**

An annotated and representative bibliography

Prepared for:

The Quality Growth Alliance

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Contents

Overview of Work

Case Studies

Comprehensive Analysis

Design, Land Use, and Regulatory Barriers

Fiscal Barriers – Public and Private

Organizational Barriers

Political Barriers

Transit Service Supply and Demand

Urban Centers and Livability

Appendix A: Professional Association Bookstore Resources

Appendix B: Other TOD-Related Bibliographies

Appendix C: Ready Accessible Online Resources

Appendix D: Stephanie Parkins – ULI Reality Check Seminar White Paper

Overview of Work

This bibliography includes resources selected for their analysis of best practices, overcoming barriers, and case studies for urban center and transit-oriented development. Indented audiences include city and government officials, developers, and citizens. The bibliography serves as an additional resource to the final report on overcoming barriers to, and best practices for, urban centers and transit-oriented development.

Channeling growth into urban centers and transit-oriented developments (TODs) is widely recognized as an effective strategy to limit sprawl, and improve quality of life in communities. But what should these centers look like? What level of density, amenities, and mix of uses are most appropriate? What level of transit service is needed? While all neighborhoods are unique, there are some general principles repeatedly identified in the body of urban center and TOD literature. The resources included with this bibliography explore these principles in detail.

Case Studies

Arlington Virginia Network. (n.d.) Arlington's Smart Growth Journey. Retrieved May 18th, 2009, from:

http://arlington.granicus.com/MediaPlayer.php?view_id=4&clip_id=1206

This Arlington Virginia Network documentary gives an overview of the Roslyn-Ballston corridor's transformation to a transit-oriented community. The video discusses planning for Metrorail service, and reviews political battles over rail service, station locations, and freeway expansion.

City of Bellevue. Bel-Red Area Transformation. Accessed May 26th, 2009, from: http://www.bellevuewa.gov/bel-red_intro.htm

The Bel-Red corridor is the first area in Washington that will be redeveloped with TOD specifically in mind. Many of the industrial-related businesses that formerly used the corridor are relocating. Between 1995 and 2003 employment dropped 6% in the corridor while increasing 18% in Bellevue as a whole. Bellevue is now wrapping up a three-year planning effort that will initiate redevelopment for the corridor.

- Overview of the vision for Bel-Red: [Bel-Red project brochure](#)
- Documentation of current review drafts, planning commission recommendations, the Bel-Red land use incentive system, and capital project funding strategy: http://www.bellevuewa.gov/bel-red_intro.htm

Bertolet, Dan. (November 6th, 2008). Town Centers Are a New Catalyst for Small Cities. Daily Journal of Commerce. Retrieved April 28th, 2009, from: <http://www.djc.com/news/ae/11206443.html>

Bertoloet discusses the reemergence of town centers as a focus of planning. He offers Burien Town Center as perhaps the best regional example of development with the potential to deliver the ideal vision for a new town center. The Town Center is comprised of 10 acres surrounding a park, and includes three mixed-use buildings, 400 housing units, a library, and Burien City Hall. Bertoloet offers it as a salient example of the role of public-private partnerships in town center development.

The Center for Livable Communities. (1995). *Building Livable Communities: The Transit Stop Opportunity A Resource Guidebook for Local Officials. Model Projects*. Sacramento.

The Model Projects section of this comprehensive TOD guide offers basic information on TOD projects from California, Maryland and Virginia; a more in-depth look at Portland's experience with MAX follows.

** This report is available at the UW College of Built Environments library under call number: HE148 .B84 1995*

Cervero, Robert. (1998). *The Transit Metropolis A Global Inquiry: Chapter 3 - Public Policies and the Sustainable Transit Metropolis*. Washington DC: Island Press.

Case studies from Toronto and The Bay Area offer comparisons of fundamentally different approaches to public-sector involvement at the regional level. Chapter three reviews demand-side and supply-side approaches that are consonant with the broader objectives of what Cervero defines as, "the sustainable transit metropolis." Demand-side approaches offered are: 1) Transportation demand management; 2) Restraints on automotive use; 3) Regulation of automobile performance; and 4) Pricing. Supply-side approaches offered are: Advanced technologies; 2) Telecommunications; and 3) Nonmotorized transportation.

Cervero, Robert. (1998). *The Transit Metropolis A Global Inquiry: Chapter 11 - Creating First-Class Transit with Transit-First Policies*. Washington DC: Island Press.

Zurich displays one of the most efficient surface transportation systems in Europe through expropriation of a significant share of road space for trams, buses and bicycles. Zurich boasts one of the highest rates of transit usage anywhere. Success lies largely in the execution of numerous carefully conceived measures that together give clear priority and preference to trams, buses, bicyclists, and pedestrians. An important feature is the self-service basis of the fare collection system. More than 800 automated ticket machines are spread throughout the region instead of aboard trains, buses, and trams; providing more punctual service. Automobile disincentives have complemented transit incentives. The city's supply of curbside parking has fallen from 1970 to today. The overall supply of commercial off-street spaces has been halved. New, private multistory parking has been effectively banned.

Cervero, Robert. (1998). *The Transit Metropolis A Global Inquiry: Chapter 13 - Adaptive Light Rail Transit Karlsruhe, Germany*. Washington DC: Island Press.

Karlsruhe, Germany is experiencing a surge in transit patronage over the last decade, despite a downward ridership trend in the rest of Germany. Karlsruhe's innovative rail system allows integration of inner-city tram and intercity heavy rail services, virtually eliminating suburban/urban transfers. The system is well tailored to the region's spread-out settlement pattern, but also blends with pedestrian-only districts.

Dunphy, R., Cevero, R., Dock, F., McAvey, M., Porter, D., Swenson, C. (2004). *Developing Around Transit Strategies and Solutions that Work: Chapter 4 - Urban Opportunities: Successful Transit-Related Urban Infill*. Washington DC: Urban Land Institute Press.

Chapter four provides an overview of challenges and opportunities for housing and office development around transit. Case studies and a discussion of public policies and programs are included that explore how select cities addressed these challenges and opportunities.

Leach, D. (2004). Chapter 7 *Rosslyn-Ballston Corridor*. Dittmar, H. and Ohland, G. *The New Transit Town - Best Practices in Transit-Oriented Development* (132-151). Washington DC: Island Press.

Leach offers a detailed analysis of planning and implementation of Metrorail in the Rosslyn-Ballston Corridor.

Stiles, M. (2009, May 29th). 'Get ready to plan for projects' in Eastside's Bel-Red corridor. *Daily Journal of Commerce*. Retrieved May 30th 2009, from: <http://www.djc.com/news/re/12006540.html>

Bellevue planning director Dan Stroh is quoted as saying, "Its all about transit-oriented development." The corridor is forecast to get 4.5 million square feet of commercial development and 5,000 residents by 2030. Stroh said there is a tremendous amount of interest in opportunities afforded by transfer-of-development rights programs. Bellevue officials estimate it will take \$600 million to fund the transportation, open space, stream enhancements and other projects needed to transform the corridor.

Comprehensive Analysis

The Center for Livable Communities. (1995). *Building Livable Communities: The Transit Stop Opportunity A Resource Guidebook for Local Officials*. Resources. Sacramento.*

The guidebook's resource section is comprised of a bibliography and list of resources for TOD categorized into: Land Use and Transportation Overview; Land Use Guidelines, Ordinances and Policies; Citizen Participation; Transit-Based Development Projects; Measuring Success of Transit-Oriented Development; Economics/Financing; Travel Behavior/Ridership; Pedestrians/Bicycles; Air Quality; Transit Planning and Telecommuting.

* This report is available in the College of Built Environments library under call number: HE148 .B84 1995

Cervero, Robert. (1998). *The Transit Metropolis A Global Inquiry*. Washington DC: Island Press.

Author Cervero provides comprehensive look at the influence of public policy and land use on transit. The text's central premise is sustainable transit metropolises of tomorrow will embody an intimate "fit" between transit services and built forms. The text offers case studies of twelve global cities, which offer insights and policy lessons into how more economically, socially, and environmentally sustainable transit services can be designed and implemented.

Corrigan, M., Dunphy, R., Gabel, N., Levitt, R., McMahon, E., Pawlukiewicz, M. (2004). *Ten Principles for Smart Growth on the Suburban Fringe*. Washington DC: Urban Land Institute Press.

1. Create a shared vision for the future and stick to it
2. Identify and sustain green infrastructure
3. Remember that the right design in the wrong place is not smart growth
4. Protect environmental systems and conserve resources
5. Provide diverse housing types and opportunities
6. Build centers of concentrated mixed uses
7. Use multiple connections to enhance mobility
8. Deliver sustainable transportation choices
9. Preserve the communities character
10. Make it easy to do the right thing

Dittmar, H., and Ohland, G. (Eds.). (2004). *The New Transit Town – Best Practices in Transit-Oriented Development*. Washington DC: Island Press.

This text offers a fairly comprehensive look at TOD-related issues. The first half of the book gives an overview on TOD-actors, regulations, financing, traffic and parking. The second half of the text offers five in-depth case studies from Arlington, Dallas, Atlanta, San Jose, and San Diego.

Dumbaugh, Eric. (2004). *Overcoming Financial Barriers and Institutional Barriers to TOD: Lindbergh Station Case Study*. *Journal of Public Transportation*, 7. Retrieved May 25th, 2009, from:

<http://www.nctr.usf.edu/jpt/pdf/JPT%207-3%20Dumbaugh.pdf>

This study examines Atlanta's Lindbergh Station TOD to understand how a real-world development was able to overcome the substantial development barriers TOD developments face. The study finds transit agencies have a largely underappreciated ability to overcome the land assembly and project financing barriers that have prevented the development of these projects. Because they provide a means of converting capital investment into positive operating returns, this study finds that development projects provide transit agencies with a unique means of overcoming the capital bias in funding apportionment mechanisms. This latter factor will undoubtedly play a key role in increasing the popularity of transit-agency sponsored TOD projects in the future.

Dunphy, R., Myerson, D., and Pawlukiewicz, M. (2006). *Ten Principles for Successful Development Around Transit*. Washington DC: Urban Land Institute Press.

1. Make it better with a vision
2. Apply the power of partnerships
3. Think development when thinking about transit
4. Get the parking right
5. Build a place, not a project
6. Make retail development market-driven, not transit-driven
7. Mix uses, but not necessarily in the same place
8. Make buses a great idea
9. Encourage every price point to live around transit
10. Engage corporate attention

Dunphy, R., Cevero, R., Dock, F., McAvey, M., Porter, D., Swenson, C., (2004). *Developing Around Transit Strategies and Solutions that Work*. Washington DC: Urban Land Institute Press.

Chapter 1 - Who, What, Where, Why; Chapter 2 - The Property Value Case For Transit; Chapter 3 - Planning The Transit District; Chapter 4 - Urban Opportunities; Chapter -5 Suburban Challenges; Chapter 6 Accommodating the Terminal Function; Chapter 7 ULI's Ten Principles for Development Around Transit

Goodwill, J. Hendricks, S. (2002). *Building Transit Oriented Development in Established Communities*. Center for Urban Transportation Research. Retrieved May 25th, 2009, from <http://www.nctr.usf.edu/pdf/473-135.pdf>

This report suggests good transit-oriented design alone is not enough to make TOD work. This report offers tools, in addition to design, to help make TOD work. Suggested tools include: Developing financing methods; Offering financial incentives to land developers; Coordinating stakeholders; Careful tailoring of land development regulations; Crafting transit supportive design guidelines; Providing effective access by alternative transportation modes; Managing parking; Pre-designating transit corridors and incorporating transit service into future development; Adapting transit services to suburban areas; Providing home loan incentives to homebuyers; and addressing and overcoming community resistance through public education.

Kelbaugh, Douglas. (1997). Chapter 10 *What We Should Do A.S.A.P. Common Place - Toward Neighborhood and Regional Design*. (pp.287-300). Seattle and London: University of Washington Press.

In Chapter 10 Kelbaugh offers seven policy initiatives for immediate action to promote the creation and maintenance of more livable, affordable, and sustainable communities through public policy.

Parkins, Stephanie. Overcoming Barriers of Transit Oriented Developments Through Transit-Oriented Districts. ULI Reality Check Seminar White Paper. University of Washington Department of Urban Design and Planning. March 17th, 2008.

This white paper aims to help readers better understand the components of TODs, what barriers government agencies and developers face when trying to implement a TOD and various approaches to lessen these barriers to make TOD developments a feasible solution for the Puget Sound region.

** The white paper is included with this bibliography as Appendix D*

Puget Sound Regional Council. (1999). Creating Transit Station Communities in the Central Puget Sound Region: A Transit-Oriented Development Workbook. Retrieved May 26th, 2009, from: <http://psrc.org/projects/tod/workbook.htm>

- Part 1, Guiding Principles: compact, mixed use development, pedestrian friendly design, and parking access and management.
- Part 2, Assessing the market for TOD
- Part 3, Implementing TOD in station communities. This section includes a discussion of Washington State, regional and local funding sources.

Seattle Department of Transportation. (n.d). Policy, Planning, & Major Projects Station Area Planning – Transit-Oriented Development Case Studies. Retrieved May 25th, 2009, from:

http://www.cityofseattle.net/transportation/ppmp_sap_todstudies.htm

Twelve cases provided through this website provide valuable insights that could help the City ensure station area plans meet the City's goals and avoid mistakes that have limited transit-oriented development elsewhere.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Washington DC: Transportation Research Board. Retrieved May 26th, 2009, from: http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

This TCRP document includes an extensive literature review divided into four main sections: Institutional Issues; Evaluation of Impacts and Benefits; Implementation; and Urban Design. An annotated bibliography, thought by the authors to be representative of much of the scholarly and analytical literature on TOD, follows. Annotated summaries are organized into the same sections as the literature review.

Section IV.6 reviews procedural and programatic tools that have gained a political foothold in the United States; notably streamlining of development reviews, remediation, resource sharing, siting of public facilities, and travel demand management initiatives.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Washington DC: Transportation Research Board.

This Federal Transit Administration-sponsored document takes a comprehensive look at TOD-related issues and gives an overview of implications for both the public and private sectors. The document is divided into four parts: Part 1 TOD in the USA Today; Part 2 The Policy Environment; Part 3 The Impacts of TOD; and Part 4 Case Studies from Boston, New Jersey, D.C., Miami, Chicago, Dallas, Colorado, Portland, The Bay Area, and Southern California. Chapter highlights include: Chapter 4 Implementation Tools; Chapter 5 Building and bankrolling TOD; and Chapter 6 Barriers to TOD (fiscal, political, organizational and barriers unique to TOD), and public and private sector perspectives on TOD barriers.

Transit Cooperative Research Program. (2008). Effects of TOD on Housing, Parking, and Travel. (TCRP Report 128). Washington DC: Transportation Research Board.

This report builds on the work of TCRP Research Results Digest 52, and TCRP Report 102. TCRP Report 128 addresses the following questions: 1) What are the demographic profiles of TOD residents and employers; 2) What motivates residents or employers to locate in TODs; 3) What are the travel characteristics of people who live or work in a TOD; 4) What was the travel pattern of the TOD resident prior to moving to the TOD; 5) What levels of transit connectivity are required to promote transit ridership at TODs; 6) What motivates or impedes transit ridership in a TOD; 7) Which strategies have been effective in increasing transit ridership at TODs; 8) What steps should transit agencies take in supporting TODs to maximize transit ridership; 9) What TOD land use and design features have had an effect on travel patterns, transit ridership, or the decision to locate in a TOD?

Design, Land Use, and Regulatory Barriers

Bertolet, D. (2009, May 14th). TOD awaits the green light in Southeast Seattle. Daily Journal of Commerce. Retrieved May 18th, 2009 from <http://www.djc.com/news/co/12006008.html>

Bertolet discusses the absence of new development along the Southeast Seattle Link corridor. He offers the following four policy strategies for enabling successful TOD: Upzones, developer incentives, enhancement of the public realm, and public assistance for assembling large parcels.

The Center for Livable Communities. (1995). Building Livable Communities: The Transit Stop Opportunity A Resource Guidebook for Local Officials. Designing TODs, Land Use Policies. Sacramento.

The guide identifies the following land use objectives: mixed-uses, density supportive of transit, a grid street-network, pedestrian-friendly design, and limited parking. The guide lists ten principles for developing TOD communities: 1) Create a pedestrian-friendly environment; 2) Make pedestrian facilities a priority; 3) Design building sites to serve many users; 4) Encourage a mixture of land uses; 5) Provide appropriate densities; 6) Interconnect the street system; 7) Narrow the neighborhood street; 8) Be cautious of major streets; 9) Integrate transit into the community; 10) Consider transit linkage in advance.

* *This report is available in the College of Built Environments library under call number: HE148 .B84 1995*

Cervero, Robert. (1998). *The Transit Metropolis A Global Inquiry: Chapter 3: Public Policies and the Sustainable Transit Metropolis.* Washington DC: Island Press.

Chapter three reviews demand-side and supply-side approaches that are consonant with the broader objectives of what Cervero defines as, "the sustainable transit metropolis." Demand-side approaches offered are: 1) Transportation demand management; 2) Restraints on automotive use; 3) Regulation of automobile performance; and 4) Pricing. Supply-side approaches offered are: Advanced technologies; 2) Telecommunications; and 3) Nonmotorized transportation. Case studies from Toronto and The Bay Area follow; and offer comparisons of fundamentally different approaches to public-sector involvement at the regional level.

Cervero, R. (2005). *Accessible Cities and Regions: A Framework for Sustainable Transport and Urbanism in the 21st Century.* UC Berkley Center for Future Urban Transport. Retrieved May 31st, 2009 from University of California Berkeley Institute of Transportation Studies Publications Database.

Cervero writes transit's struggle in competing with the automobile stems from the inferior job accessibility level transit provides versus the automobile. He defines accessibility as a product of mobility and proximity. He argues compact, mixed-use development, as embodied in New Urbanist communities and Transit Oriented Development (TOD), can substitute for physical movement by both shortening travel distances and prompting travelers to walk in lieu of driving (Ewing and Cervero, 2002). Some observers refer to this as "trip de-generation" (Whitelegg, 1993).

Daisa, J. (2004). Chapter 6 Traffic, Parking, and Transit-Oriented Development. Dittmar, H., and Ohland, G. (Eds.), *The New Transit Town – Best Practices in Transit-Oriented Development* (pp.114-129). Washington DC: Island Press.

Chapter six discusses factors impeding the effectiveness of TOD including: Free and excessive parking; a poor pedestrian environment; poor-quality transit service; an incorrect mix of land uses; a lack of transit link between housing and jobs; and current zoning practice.

Dunphy, R., Cevero, R., Dock, F., McAvey, M., Porter, D., Swenson, C. (2004). *Developing Around Transit Strategies and Solutions that Work: Chapter Three Planning the Transit District*. Washington DC: Urban Land Institute Press.

Chapter Three includes a basic discussion of elements of transit-oriented planning. It is followed by a brief overview of TOD-related resources for planners, including TOD implementation assistance.

Chapter Four provides an overview of urban infill development opportunities, gives several case studies of successful infill projects, and offers a discussion of public policy and programs to help promote successful infill.

Ewing, R. (n.d.). *Pedestrian and Transit-Friendly Design: A Primer for Smart Growth*. Retrieved May 31st, 2009 from www.epa.gov/piedpage/pdf/ptfd_primer.pdf

This checklist of Pedestrian and transit-friendly features is divided into “essential”, “highly desirable”, and “nice additional” features. Essential features include: Medium to high densities; Mix of land uses; Short-to-Medium Length Blocks; Transit Routes Every Half Mile; Two or four-lane streets; Continuous sidewalks wide enough for couples; Safe crossings; Appropriate buffering from traffic; Street-oriented buildings; and Comfortable and safe places to wait.

Grenberg, E. (2004). Chapter 4 *Regulations Shape Reality: Zoning for Transit-Oriented Development*. Dittmar, H., and Ohland, G. (Eds.), *The New Transit Town – Best Practices in Transit-Oriented Development* (pp.58-80). Washington DC: Island Press.

Chapter four focuses on regulatory tools available to local governments that can promote: active, walkable streets; building intensity and scale supportive of transit; and careful transit integration.

Lowry, S. (2008). *Delivering on TOD*. *Planning*, 74 (4), 18-19.

This Planning article reports on the success of the Portland's TOD program, the recipient of the American Planning Association's 2008 National Planning Excellence Award for Best Practice. According to councilor Robert Liberty, Metro's representative to the TOD steering committee, the projects demonstrate that land use can be used to determine how people travel. It is said that the projects will create 3,139 induced riders per day on the public TriMet transit system due to Metro's careful metrics.

Owen, J. (1987). *A Successful Street Design Process*. Moudon, A.V. (Ed.), *Public Streets for Public Use* (267-275). New York: Columbia University Press.

The author discusses his firm's experience with street improvement projects in business and residential areas. He gives an overview of the role of the urban designer, emphasizes focusing on the impetus for design improvements and working within a conceptual framework directly tied to project objectives. He also discusses viewing project constraints as opportunities, not restrictions.

Puget Sound Regional Council. (1999). Creating Transit Station Communities in the Central Puget Sound Region: A Transit-Oriented Development Workbook. Retrieved May 26th, 2009, from:

<http://psrc.org/projects/tod/workbook.htm>

Part 1, Guiding Principles for Creating Transit Station Communities, offers a discussion of compact, mixed use development, pedestrian friendly design, and parking access and management.

Sound Transit. (2008). Capitol Hill Station TOD Sites Baseline Report Appendix 4 – TOD Best Practices. Retrieved May 1st, 2009, from:

http://www.soundtransit.org/Documents/pdf/projects/link/north/Capitol_Hill/CH_TODSitesRpt12-12-08.pdf

- Supportive Land Uses are Typified: Concentrations and mixtures of uses provide the best opportunity to generate multi-trip, high pedestrian volumes and transit riders.
- Adequate Densities to Provide Ridership Base/Compact Development: Densities in immediate location of the station, with diminishing density further from transit access. Residential densities > 50 units/acre; employment centers (in lieu of or in combo) help provide jobs/housing balance.
- Convenient, Attractive Pedestrian Facilities: scale and amenity are important; variety and quality of retail contribute to pedestrian activity and amenity.
- Urban Design: Residents highly value place making and streetscape; quality urban design and land use mix may influence TOD as a residential and destination choice.
- Managed Parking: Free or low-cost parking is a major deterrent to transit ridership, and antithetical to TOD. Broadway will benefit in the long run from reduced auto dependency brought about by new residents dependent on improved transit and TOD.

Transit Cooperative Research Program (1997). Transit and Urban Form: Volumes 1 and 2. (TCRP Report 16). Washington DC: Transportation Research Board.

- Volume 1: Part 1 Transit, Urban Form, and the Built Environment: A Summary of Knowledge; Part II Commuter and Light Rail Transit Corridors: The Land Use Connection
- Volume 2: Part III A Guidebook for Practitioners; Part IV Public Policy and Transit-Oriented Development: Six International Case Studies (Houston, D.C., Portland, Vancouver, Ottawa, and Curitiba).

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Washington DC: Transportation Research Board. Section IV.3 Land-Based Initiatives; and Section IV.4 Zoning and Regulations; and Section IV.5 Complementary Infrastructure (p.54-61). Retrieved May 26th, 2009, from:

http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

- Section IV.3 reviews four land-based approaches: assembly, swaps, banking, and sale/leases.
- Section IV.4 reviews experiences with zoning, Planned Urban Development (PUD) classifications, specific-plan initiatives, and transfer of development rights (TDR).
- Section IV.5 Upfront public investments are especially critical in inner-city areas; they demonstrate a public commitment to turning an area around.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Washington DC: Transportation Research Board. Section V Urban Design (p.75-87). Retrieved May 26th, 2009, from:

http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

- Density and mix of land uses is arguably the most important design element in creating a successful TOD. Design quality is also emphasized, with the following principles: create pedestrian streets; orient buildings to the street; set minimum floor-area ratios; use grid-like street-networks; use traffic-calming measures; use short blocks; provide a continuous network of sidewalks; ensure safe, convenient and frequent street crossings; use landscaping, weather protection, public art, street furniture, lighting, and public phones; and require all developments to provide for pedestrian and cyclist needs.
- TODs borrow heavily from European community design and town planning principles. In Europe a transit station functions as a centerpiece for community building and rebuilding – an organizing platform for creating a compact, mixed-use community, centered around the transit station.
- Common features of many European transit villages include: stations functioning as community hubs; tapering of densities with distance from the station; a mix of land uses; the presence of a major public amenity like a civic square; accommodation of intermodalism, with care given to allowing efficient connections between transit and access; and parking management with market-rate pricing and siting of parking facilities on the periphery.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 4 TOD Implementation Tools. (pp.61-82). Washington DC: Transportation Research Board.

Chapter Four suggests the following tools for implementing TOD: Visioning and Planning; Zoning/Overlays; Land Uses; Densities; and Parking Codes. The chapter offers a discussion of obstacles to TOD-related zoning, and provides ratings of implementation tools from transit agencies across the U.S.

Transit Cooperative Research Program. (2004). *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. (TCRP Report 102). Chapter 6 Barriers to TOD (pp.99-115). Washington DC: Transportation Research Board.

Chapter 6: Stakeholders consistently ranked the automobile-dependent landscapes of many U.S. cities as the biggest obstacle to TOD. A rank-order list of impediments to TOD among five stakeholder groups is shown in figure 6.1. Many of the cited obstacles fall within the public sector's sphere of influence.

Transit Cooperative Research Program (2008). *Effects of TOD on Housing, Parking, and Travel*. (TCRP Report 128). Washington DC: Transportation Research Board.

This report builds on the work of TCRP Research Results Digest 52, and TCRP Report 102. TCRP Report 128 addresses the following questions: 1) What are the demographic profiles of TOD residents and employers; 2) What motivates residents or employers to locate in TODs; 3) What are the travel characteristics of people who live or work in a TOD; 4) What was the travel pattern of the TOD resident prior to moving to the TOD; 5) What levels of transit connectivity are required to promote transit ridership at TODs; 6) What motivates or impedes transit ridership in a TOD; 7) Which strategies have been effective in increasing transit ridership at TODs; 8) What steps should transit agencies take in supporting TODs to maximize transit ridership; 9) What TOD land use and design features have had an effect on travel patterns, transit ridership, or the decision to locate in a TOD?

Tumlin, J., and Millard-Ball, A. (2003). How to make transit-oriented development work: Number One: Put the Transit Back. *Planning*, 69, 14-19.

- Cervero proposes “3-D’s”: density, design and diversity.
- Affordable housing is an important component of TOD because low income households tend to own fewer cars; its inclusion can add transit riders and further other public policy objectives.

Untermann, R. (1987). Can We Pedestrianize the Suburbs? Moudon, A.V. (Ed.), *Public Streets for Public Use* (123-131). New York: Columbia University Press.

This chapter explores challenges and opportunities to pedestrianize areas with suburban land use patterns.

Untermann, R. (1987). Changing Design Standards for Streets and Roads. Moudon, A.V. (Ed.), *Public Streets for Public Use* (255-260). New York: Columbia University Press.

Techniques to lure pedestrians back to areas invaded by cars are offered. They include altering: arterial road width; speed of travel; intersection radius; sidewalks; pedestrian islands; traffic signals; and parking and driveways.

Fiscal Barriers – Public and Private

The Center for Livable Communities. (1995). Building Livable Communities: The Transit Stop Opportunity A Resource Guidebook for Local Officials. Financing Mechanisms. Sacramento.

Cost-Saving Methods to Help the Developer: Zone Appropriate Properties “By Right”; Streamline the Permit Process for Desired Projects; Reduce or Delay Development Fees; Adjust Level of Service Requirements; Reduce Parking Requirements; Establish Enterprise Zones in Older Activity Centers; Help Address Public Opposition Through Education and Public Involvement; Educate Banks and provide Loan Guarantees; Conduct Market Studies and Marketing; Seek Free/Low-Cost Technical or Material Assistance.

* *This report is available in the College of Built Environments library under call number: HE148 .B84 1995*

Parzen, J., Sigal, A.J. (2004). Chapter 5 Financing Transit-Oriented Development. Dittmar, H., and Ohland, G. (Eds.), *The New Transit Town – Best Practices in Transit-Oriented Development* (83-111). Washington DC: Island Press.

Parzen, J., Sigal, A.J. (2004). Chapter 5 - Financing Transit-Oriented Development. Dittmar, H., and Ohland, G. (Eds.), *The New Transit Town – Best Practices in Transit-Oriented Development* (pp.83-111).

Washington DC: Island Press.

Chapter five describes challenges to financing TOD, strategies people are using to succeed in spite of the challenges, and ideas people have about how to make it easier to finance TODs in the future. Many of the strategies described are replicable, especially where there is strong public and private leadership. The chapter is organized into four sections: Increasing certainty; Enabling public investors to capture the value of public investment; Structuring the deal; and Addressing place and node: financing TOD's distinctive components.

PSRC. Infrastructure Funding Project Overview. Accessed July 12th 2009 from: <http://www.psrc.org/projects/infrastructure/index.htm>

This page gives an overview of PSRC's infrastructure funding project. The project was defined as researching past efforts, monitoring and participating in ongoing efforts, and seeking to make this body of work relevant for the local government members of PSRC. The primary focus of the research is on city and county funding options. The report seeks to put data and the studies' findings and recommendations, into context for cities and counties in the central Puget Sound region. Key tasks in the project's scope of work are: (1) research funding programs currently available the extent of usage; (2) research potential funding sources; and (3) research data and information on municipal funding and capital needs.

PSRC. Infrastructure Funding Resources. Accessed July 12th 2009 from:
<http://www.psrc.org/projects/infrastructure/resources.htm>

Resources relevant to PSRC's infrastructure funding project are provided on this page.
Highlights include:

- June 2009, infrastructure funding legislative update:
http://www.psrc.org/projects/infrastructure/Infra_LegUpdate-June09.pdf
- February 2009, Public Infrastructure Funding Project Status Report, Part I and Part II: <http://www.psrc.org/projects/infrastructure/GMPB09pres.pdf> ; and <http://www.psrc.org/projects/infrastructure/GMPB09pres-part2.pdf>
- Office of Financial Management - Infrastructure Assistance Programs Review & Implementation Plan: <http://www.ofm.wa.gov/study/default.asp>
- December 2008, Office of Financial Management - Restructuring State Public Infrastructure Programs Analysis for the Washington Legislature:
http://www.ofm.wa.gov/study/01_Report.pdf
- December 2005, Office of Financial Management – Inventory and Evaluation of the State's Public Infrastructure Programs and Funds:
<http://www.psrc.org/projects/infrastructure/OFM-Berk05.pdf>
- January 2008, Study Committee on Public Infrastructure Programs and Funding Structures Final Report: <http://www.psrc.org/projects/infrastructure/PIPFS08.pdf>

The Center for Livable Communities. (1995). Building Livable Communities: The Transit Stop Opportunity A Resource Guidebook for Local Officials. Financing Mechanisms. Sacramento.

The Financing Mechanisms section offers the following options for local government: Use Housing and Community Development Funds; When the Transit Stop is on Main Street, Establish a Main Street Program; Apply for Historic Preservation Tax Credits; Use Motor Vehicle Registration Fee Surcharge Funds; Establish a Redevelopment Area Around Transit Stops; Set Up a Public-Private Partnership; Build on Public and Tax-Delinquent Land or Swap Key Parcels; Establish Special Assessment Districts Establish Mello-Roos Special Tax Districts; Use the General Fund; Issue Bonds; Subsidize the Retail Component; Pursue Grants and/or Local Donations; Apply Through Your MPO for "ISTEA" Funding

** This report is available in the College of Built Environments library under call number: HE148 .B84 1995*

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Section IV.2 Supportive Public Policies: Finance and Tax Policies. (pp.46-54). Washington DC: Transportation Research Board. Retrieved May 26th, 2009, from:
http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

Section IV.2 reviews experiences with grants; sliding-scale impact fees; tax abatement; creative financing; direct public sector financial participation; benefit assessment districts enterprise zones; tax increment financing; and loans.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Section IV.7 Use of Value Capture. (p.66-68). Washington DC: Transportation Research Board. Retrieved May 26th, 2009, from:

http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

Section IV.7 suggests the use of value capture to help the public sector finance the many upfront improvements (like infrastructure) that can be essential to implementing TOD.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Section IV.9 Barriers and Constraints – Fiscal Barriers. (pp.71-72).

Washington DC: Transportation Research Board. Retrieved May 26th, 2009, from: http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

An overview of common fiscal barriers is presented in this section. Barriers discussed include: zoning that promotes office and retail use at the expense of housing stock; the high costs of needed infrastructure; the questionable financial viability of TODs; and challenges of developing in economically stagnant areas.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 4 TOD Implementation Tools. (pp.61-82). Washington DC: Transportation Research Board.

Chapter Four concludes with a discussion of the public perspective of funding TOD. Funding tools and finance issues are discussed from the perspective of four public stakeholders: transit agencies, municipalities, redevelopment agencies, and MPOs.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 5 Building and Bankrolling TOD: A Private-Sector Perspective. (pp.83-97). Washington DC: Transportation Research Board.

Chapter five draws on input from the development and lending community to probe a host of TOD implementation issues mainly related to project financing.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 6 Barriers to TOD: What They Are and How to Overcome Them. (pp.99-115). Washington DC: Transportation Research Board.

Chapter six offers a discussion of public and private fiscal barriers to TOD, including an overview of the development community's perspective in overcoming financial barriers to TOD. Suggestions from developers include assistance with land assembly and

infrastructure, streamlining the development review process, offering subsidies, tax incentives, and below-market-rate loans.

Organizational Barriers

Belzer, D., Autler, G., Espinosa, J., Feigon, S., Ohland, G. (2004). Chapter 3 The Transit-Oriented Development Drama and its Actors. Dittmar, H., and Ohland, G. (Eds.). *The New Transit Town – Best Practices in Transit-Oriented Development* (pp.41-54). Washington DC: Island Press.

The chapter says actors tend to have disparate views about what projects should accomplish; with each actor bringing different goals, priorities, and interests to the table. The authors say this lack of congruency can cause actors to think too small when it comes to setting TOD policy. Place-making can suffer from over emphasizing TOD's function as a node.

Bullard, Robert. (Eds.). (2007). *Growing Smarter Achieving Livable Communities, Environmental Justice, and Regional Equity*. Cambridge: Massachusetts Institute of Technology Press.

The book focuses on creating equitable opportunity for all segments of the urban population. Chapter twelve calls for a more integrated approach to generate more equitable access for low-income communities, with a focus on equally bringing opportunities into low-income areas, not just ensuring that low-wage workers can access faraway jobs. The author points out those responsible for overseeing the implementation of transportation, land use, and economic development efforts have typically worked in isolation from one another. Chapter 13 discusses the importance of regional coalitions and fiscal equity programs. Chapter 14 lists tools and strategies to link smart growth to disadvantages communities.

MacDonald, D. (2005, June 25th). Transit train wreck: Here's how to do buses right. Crosscut. Retrieved from:

<http://crosscut.com/2008/06/25/sound-transit/15327/>

MacDonald emphasizes the opportunity for increased cooperation among the Puget Sound region's four major transportation agencies. He also discusses the importance of goal setting, visioning and leadership in transportation and land use planning.

MacDonald, D. (2009, January 26th). We have a Viaduct plan, not an overall transportation plan. Crosscut. Retrieved from:

<http://crosscut.com/2009/01/26/alaskan-way-viaduct/18802/>

MacDonald focuses on what he calls "piecemeal" transportation project planning in the Puget Sound region. He argues piecemeal project planning and steering by consensus causes costs to skyrocket. He emphasizes the need for a regional transportation plan.

Peirce, N. (2009, April 16th). The HUD-DOT collaboration. Citiwire.net. Retrieved May 20th, 2009, from: <http://citiwire.net/post/875/>

Peirce provides a conceptual overview of the Federal Department of Housing and Urban Development and Department of Transportation plans to:

- Make the bureaucracies work together in crafting programs as they impact communities nationwide.
- Launch a “Sustainable Communities Initiative” with a joint fund to encourage metro regions to develop integrated housing, land use and transportation plans, focused also on energy savings and greenhouse gas reduction.

Puget Sound Regional Council. (1996). Developing Your Center: A Step by Step Approach (Urban Center Incremental Development Study).

This document discusses strategies for developing an organization to plan and develop an urban center. A resource appendix includes tools and resources for planners and governments developing centers.

Puget Sound Regional Council. (1999). Creating Transit Station Communities in the Central Puget Sound Region: A Transit-Oriented Development Workbook. Retrieved May 26th, 2009 from <http://psrc.org/projects/tod/workbook.htm>

- Part 1 - Guiding Principles: compact, mixed use development, pedestrian friendly design, and parking access and management.
- Part 2 - Assessing the market for TOD
- Part 3 - Implementing TOD in station communities. This section includes a discussion of Washington State, regional and local funding sources.

Puget Sound Regional Council. (2003). The Development Toolkit Success Stories from the Regional Growth Centers. Retrieved May 26th, 2009 from: <http://draft.psrc.org/assets/227/toolkit.pdf>

The Development Toolkit looks at regulatory themes and strategies from Bellevue, Bremerton, Everett, Kent and Renton that could be replicable to other jurisdictions in the region.

Smart Growth America, and The Transportation Choices Coalition. (2009). The States and the Stimulus. Retrieved July 12th 2009 from: http://www.transportationchoices.org/stimulus_120days.pdf

This report criticizes Washington lawmakers for under investing in urban areas, spending too much economic stimulus money on new roads and infrastructure, and neglecting repairs to existing roads and transit. According to the report, Washington invested only 4 percent of funding into non-motorized transportation and no money on transit.

Transit Cooperative Research Program. (1996). Institutional Barriers to Intermodal Transportation Policies and Planning in Metropolitan Areas. (TCRP Report 14).

Washington DC: Transportation Research Board.

TCRP Report 14 categorizes institutional barriers to intermodal transportation into organizational, interjurisdictional, and resource barriers.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Section IV.9 Barriers and Constraints – Organizational Barriers. (pp.73-74).

This section gives a brief discussion of the organizational disadvantage public agencies sometimes have in negotiating with savvy private parties for real estate projects.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 6 Barriers to TOD: What They Are and How to Overcome Them. (pp.102-103).

Washington DC: Transportation Research Board.

The chief organizational barriers discussed in this chapter are:

- TOD coordination between transit agencies and localities. This can be especially difficult in areas with strong tradition of small, independent governments.
- Lack of technical expertise, particularly in case of public-private partnerships

United States Department of Transportation Office of Public Affairs. (n.d.). HUD and DOT Partnership: Sustainable Communities. Retrieved May 26th, 2009, from: <http://www.dot.gov/affairs/dot3209.htm>

The Secretaries of the U.S. Department of Housing and Urban Development (HUD) and U.S. Department of Transportation (DOT) have formed a new partnership to help families gain better access to affordable housing, and lower transportation costs. The task force will set a goal to have every major metropolitan area in the country conduct integrated housing, transportation, and land use planning and investment in the next four years. To facilitate integrated planning, HUD and DOT propose to make planning grants available to metropolitan areas, and create mechanisms to ensure those plans are carried through to localities. DOT will encourage MPOs to conduct this integrated planning as a part of their next long range transportation plan update and will provide technical assistance on scenario planning. The departments will create a new task force that will identify strategies to: 1) Provide more choices for affordable housing near employment opportunities; 2) Provide more transportation options to lower transportation costs, shorten travel times, and improve the environment; 3) Give families the ability to combine several errands into one trip though better coordination of transportation and land uses; and 4) Encourage the development of safe, livable, and healthy communities.

Political Barriers

Brewster, David. Light rail at last: What took us forever?. July 21, 2009. Accessed July 21, 2009 from: <http://crosscut.com/2009/07/21/sound-transit/19122/>

Political barriers to Seattle region offered by Brewster include:

1. Dispersed power.
2. Passive-aggressive style.
3. The University of Washington
4. Boeing.
5. Culture lag.
6. Affluence.
7. Complacency.
8. City of commerce.
9. A reluctant metropolis.
10. Secession of business leadership.
11. Hills and lakes.
12. We're spoiled.
13. Inactive government.

Diers, Jim. (2004). *Neighborhood Power: Building Community The Seattle Way*. Seattle: University of Washington Press.

Jim Diers served Seattle under three mayors and was the first director of the former Department of Neighborhoods. *Neighborhood Power* chronicles his involvement with community development in Seattle and offers real-life examples of how to build active, creative neighborhoods and enjoy the rich results of community empowerment. The stories and programs outlined can help government officials embrace citizen activists as true partners.

Dunphy, R., Cevero, R., Dock, F., McAvey, M., Porter, D., Swenson, C., (2004). *Developing Around Transit Strategies and Solutions that Work*. Washington DC: Urban Land Institute Press.

Chapter Three Planning the Transit District offers examples of regional policy support tools to help promote urban centers and TOD.

Morrish, W., Brown, C. (1994). *Planning to Stay*. Minneapolis: Milkweed Editions.

Planning to Stay offers a practical guide for members of a community to assess the place they live and take control of its development. Doug Kelbaugh, the former chair of the University of Washington Department of Architecture and Dean of the University of Michigan College of Architecture and Urban Planning, recommends *Planning to Stay* as a particularly good guide on involving residents in planning and designing their neighborhoods.

Transit Cooperative Research Program. (2004). Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (TCRP Report 102). Chapter 6 Political Barriers. (pp.102). Washington DC: Transportation Research Board.
NIMBY opposition is the only political barrier offered here.

Transit Cooperative Research Program. (2002). Transit-Oriented Development and Joint Development in the United States: A Literature Review. (Research Results Digest, Number 52). Washington DC: Transportation Research Board. Section IV.9 Political Barriers. (pp.72-73). Retrieved May 26th, 2009, from:
http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

This brief section gives an overview of political barriers stemming from: NIMBY opposition; metropolitan regions with numerous small, independent governments; and fractions within the transit-riding population (specifically supports of park-and-ride lots).

Transit Service Supply and Demand

Cervero, Robert. (1998). The Transit Metropolis A Global Inquiry: Chapter 3: Public Policies and the Sustainable Transit Metropolis. Washington DC: Island Press.

Chapter three reviews demand-side and supply-side approaches that are consonant with the broader objectives of what Cervero defines as, "the sustainable transit metropolis." Demand-side approaches offered are: 1) Transportation demand management; 2) Restraints on automotive use; 3) Regulation of automobile performance; and 4) Pricing. Supply-side approaches offered are: 1) Advanced technologies; 2) Telecommunications; and 3) Nonmotorized transportation.

Lowry, S. (2008). Delivering on TOD. *Planning*, 74 (4), 18-19.

This Planning article reports on the success of the Portland's TOD program, the recipient of the American Planning Association's 2008 National Planning Excellence Award for Best Practice. According to councilor Robert Liberty, Metro's representative to the TOD steering committee, the projects demonstrate that land use can be used to determine how people travel. It is said that the projects will create 3,139 induced riders per day on the public TriMet transit system due to Metro's careful metrics.

Transit Cooperative Research Program (2008). Effects of TOD on Housing, Parking, and Travel. (TCRP Report 128). Washington DC: Transportation Research Board.

This report builds on the work of TCRP Research Results Digest 52, and TCRP Report 102. TCRP Report 128 addresses the following questions: 1) What are the demographic profiles of TOD residents and employers; 2) What motivates residents or employers to

locate in TODs; 3) What are the travel characteristics of people who live or work in a TOD; 4) What was the travel pattern of the TOD resident prior to moving to the TOD; 5) What levels of transit connectivity are required to promote transit ridership at TODs; 6) What motivates or impedes transit ridership in a TOD; 7) Which strategies have been effective in increasing transit ridership at TODs; 8) What steps should transit agencies take in supporting TODs to maximize transit ridership; 9) What TOD land use and design features have had an effect on travel patterns, transit ridership, or the decision to locate in a TOD?

Urban Centers and Livability

Bullard, Robert. (Eds.). (2007). *Growing Smarter Achieving Livable Communities, Environmental Justice, and Regional Equity*. Cambridge: Massachusetts Institute of Technology Press.

The book focuses on creating equitable opportunity for all segments of the urban population. Chapter 12 calls for a more integrated approach to generate more equitable access for low-income communities, with a focus on equally bringing opportunities into low-income areas, not just ensuring that low-wage workers can access faraway jobs. The author points out those responsible for overseeing the implementation of transportation, land use, and economic development efforts have typically worked in isolation from one another. Chapter 13 discusses the importance of regional coalitions and fiscal equity programs. Chapter 14 lists tools and strategies to link smart growth to disadvantaged communities.

Transit Cooperative Research Program (1997). *The Role of Transit in Creating Livable Metropolitan Communities*. (TCRP Report 22). New York: National Academy Press.

The text takes a place-making approach to livability. The book is unique in that it takes a “positive” approach to transit and the potential role it can play in people’s everyday lives (rather than another “negative” discussion of barriers). Chapter 2 offers a brief discussion on three transportation strategies impacting livability: transit strategies, design-oriented strategies, and service-oriented strategies. The heart of the report revolves around livability issues presented in terms of case studies emphasizing the following livability themes: “creating places for community life”, “serving as a catalyst for downtown and neighborhood revival”, “creating opportunity for entrepreneurship and economic development”, “improving safety and amenity,” “making communities accessible and convenient,” and “shaping community growth.”

Transit Cooperative Research Program (2008). *Effects of TOD on Housing, Parking, and Travel*. (TCRP Report 128). Washington DC: Transportation Research Board.

This report builds on the work of TCRP Research Results Digest 52, and TCRP Report 102. TCRP Report 128 addresses the following questions: 1) What are the demographic profiles of TOD residents and employers; 2) What motivates residents or employers to locate in TODs; 3) What are the travel characteristics of people who live or work in a TOD; 4) What was the travel pattern of the TOD resident prior to moving to the TOD; 5) What levels of transit connectivity are required to promote transit ridership at TODs; 6) What motivates or impedes transit ridership in a TOD; 7) Which strategies have been effective in increasing transit ridership at TODs; 8) What steps should transit agencies take in supporting TODs to maximize transit ridership; 9) What TOD land use and design features have had an effect on travel patterns, transit ridership, or the decision to locate in a TOD?

Appendix A: Professional Association Bookstore Resources

Urban Land Institute (ULI): <http://www.uli.org/Books.aspx>

- Multifamily housing:
[http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured Items In Housing%2C Multifamily&ListTitle=All Items In Housing%2C Multifamily&ListType=Topic&Criteria=20](http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured%20Items%20In%20Housing&ListTitle=All%20Items%20In%20Housing&ListType=Topic&Criteria=20)
- Mixed-Use development:
[http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured Items In Mixed-Use and Multi-Use Development&ListTitle=All Items In Mixed-Use and Multi-Use Development&ListType=Topic&Criteria=34](http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured%20Items%20In%20Mixed-Use%20and%20Multi-Use%20Development&ListTitle=All%20Items%20In%20Mixed-Use%20and%20Multi-Use%20Development&ListType=Topic&Criteria=34)
- Urban Regeneration:
[http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured Items In Mixed-Use and Multi-Use Development&ListTitle=All Items In Mixed-Use and Multi-Use Development&ListType=Topic&Criteria=34](http://commerce.uli.org/AM/Ecommerce/ProductFeaturedList.cfm?FeaturedTitle=Featured%20Items%20In%20Mixed-Use%20and%20Multi-Use%20Development&ListTitle=All%20Items%20In%20Mixed-Use%20and%20Multi-Use%20Development&ListType=Topic&Criteria=34)

American Planning Association (APA): <http://myapa.planning.org/apastore/>

- Places & Place Making, Transit-Oriented Development:
<http://myapa.planning.org/APAStore/Search/Default.aspx?a=1163,1180>
- Transit Planning:
<http://myapa.planning.org/APAStore/Search/Default.aspx?a=1150,1160>

Commercial Real Estate Development Association (NAIOP):

<http://portal.naiop.org/WIPCS/Commerce/Home.aspx>

- Mixed-Use Development:
[http://portal.naiop.org/WIPCS/commerce/category.aspx?cat=Mixed-Use Development](http://portal.naiop.org/WIPCS/commerce/category.aspx?cat=Mixed-Use%20Development)
- Finance/Investment:
[http://portal.naiop.org/WIPCS/commerce/category.aspx?cat=Mixed-Use Development](http://portal.naiop.org/WIPCS/commerce/category.aspx?cat=Mixed-Use%20Development)

Appendix B: Other TOD-Related Bibliographies

Municipal Research and Services Center of Washington. Transit-Oriented Development. Accessed May 26th, 2009, from:

<http://www.mrsc.org/Subjects/Transpo/transitdev.aspx>

- Guides, Studies, and Articles
- TOD and Market Forces
- TOD Plan and Ordinance Examples

Transit Cooperative Research Program (TCRP). Research Results Digest 52: Transit-Oriented Development and Joint Development in the United States: A Literature Review. October 2002. Accessed May 26th, 2009, from: http://trb.org/publications/tcrp/tcrp_rrd_52.pdf

This TCRP document includes an extensive literature review, divided into four main sections: Institutional Issues; Evaluation of Impacts and Benefits; Implementation; and Urban Design. An annotated bibliography thought by the authors to be representative of much of the scholarly and analytical literature on TOD follows. The annotated bibliography is organized into the same sections as the literature review.

Appendix C: Ready Accessible Online Resources:

Arlington Virginia Network. Arlington's Smart Growth Journey. Accessed May 18th, 2009, from:

http://arlington.granicus.com/MediaPlayer.php?view_id=4&clip_id=1206

This Arlington Virginia Network documentary gives an overview of the Roslyn-Ballston corridor's transformation to a transit-oriented community. The video discusses planning for Metrorail service, and reviews political battles over rail service, station location, and freeway expansion.

City of Bellevue. Bel-Red Area Transformation. Accessed May 26th, 2009, from: http://www.bellevuewa.gov/bel-red_intro.htm

The Bel-Red corridor is the first area in Washington that will be redeveloped with TOD specifically in mind. Many of the industrial-related businesses that formerly used the corridor are relocating. Between 1995 and 2003 employment dropped 6% in the corridor while increasing 18% in Bellevue as a whole. Bellevue is now wrapping up a three-year planning effort that will initiate redevelopment for the corridor.

- Overview of the vision for Bel-Red: [Bel-Red project brochure](#)
- Documentation of current review drafts, planning commission recommendations, the Bel-Red land use incentive system, and capital project funding strategy: http://www.bellevuewa.gov/bel-red_intro.htm

PSRC. The Development Toolkit Success Stories from the Regional Growth Centers. August 2003. Accessed May 26th, 2009, from: <http://draft.psrc.org/assets/227/toolkit.pdf>

The Development Toolkit looks at regulatory infrastructure funding themes and strategies from Bellevue, Bremerton, Everett, Kent and Renton that could be replicable to other jurisdictions in the region.

PSRC. Infrastructure Funding Project Overview. Accessed July 12th 2009 from: <http://www.psrc.org/projects/infrastructure/index.htm>

This page gives an overview of PSRC's infrastructure funding project. The project was defined as researching past efforts, monitoring and participating in ongoing efforts, and seeking to make this body of work relevant for the local government members of PSRC. The primary focus of the research is on city and county funding options. The report seeks to put data and the studies' findings and recommendations, into context for cities and counties in the central Puget Sound region. Key tasks in the project's scope of work are: (1) research funding programs currently available the extent of usage; (2) research potential funding sources; and (3) research data and information on municipal funding and capital needs.

PSRC. Infrastructure Funding Resources. Accessed July 12th 2009 from: <http://www.psrc.org/projects/infrastructure/resources.htm>

Resources relevant to PSRC's infrastructure funding project are provided on this page. Highlights include:

- June 2009, infrastructure funding legislative update: http://www.psrc.org/projects/infrastructure/Infra_LegUpdate-June09.pdf
- February 2009, Public Infrastructure Funding Project Status Report, Part I and Part II: <http://www.psrc.org/projects/infrastructure/GMPB09pres.pdf> ; and <http://www.psrc.org/projects/infrastructure/GMPB09pres-part2.pdf>
- Office of Financial Management - Infrastructure Assistance Programs Review & Implementation Plan: <http://www.ofm.wa.gov/study/default.asp>
- December 2008, Office of Financial Management - Restructuring State Public Infrastructure Programs Analysis for the Washington Legislature: http://www.ofm.wa.gov/study/01_Report.pdf
- December 2005, Office of Financial Management – Inventory and Evaluation of the State's Public Infrastructure Programs and Funds: <http://www.psrc.org/projects/infrastructure/OFM-Berk05.pdf>
- January 2008, Study Committee on Public Infrastructure Programs and Funding Structures Final Report: <http://www.psrc.org/projects/infrastructure/PIPF08.pdf>

Sound Transit. Capitol Hill Station TOD Sites Baseline Report. December 2008. Appendix 4 – TOD Best Practices. Accessed May 2009, from: http://www.soundtransit.org/Documents/pdf/projects/link/north/Capitol_Hill/CH_TODSitesRpt12-12-08.pdf

- Supportive Land Uses are Typified: Concentrations and mixtures of uses provide the best opportunity to generate multi-trip, high pedestrian volumes and transit riders.

- Adequate Densities to Provide Ridership Base/Compact Development: Densities in immediate location of the station, with diminishing density further from transit access. Residential densities > 50 units/acre; employment centers (in lieu of or in combo) help provide jobs/housing balance.
- Convenient, Attractive Pedestrian Facilities: scale and amenity are important; variety and quality of retail contribute to pedestrian activity and amenity.
- Urban Design: Residents highly value place making and streetscape; quality urban design and land use mix may influence TOD as a residential and destination choice.
- Managed Parking: Free or low-cost parking is a major deterrent to transit ridership, and antithetical to TOD. Broadway will benefit in the long run from reduced auto dependency brought about by new residents dependent on improved transit and TOD.

Stiles, M. 'Get ready to plan for projects' in Eastside's Bel-Red corridor. Daily Journal of Commerce. May 29th, 2009. Accessed May 30th, 2009, from: <http://www.djc.com/news/re/12006540.html>

This DJC article gives an overview of the buzz surrounding the Bellevue-Redmond corridor. Light rail is identified as the primary driver of planned development for the corridor. Dan Stroh, Bellevue Director of Planning, is quoted as saying, "Its all about transit-oriented development." The corridor is expected to add 4.5 million square feet of commercial development and 5,000 residents by 2030. Stroh said there is a tremendous amount of interest in opportunities afforded by transfer-of-development rights programs. Bellevue officials estimate it will take \$600 million to fund the transportation, open space, stream enhancements and other projects needed to transform the corridor.

Appendix D: Stephanie Parkins. ULI Reality Check Seminar White Paper

Parkins, Stephanie. Overcoming Barriers of Transit Oriented Developments Through Transit-Oriented Districts. ULI Reality Check Seminar White Paper. University of Washington Department of Urban Design and Planning. March 17th, 2008.

**Overcoming Barriers of Transit Oriented Developments Through Transit
Oriented Districts**

Stephanie Parkins
University of Washington
Department of Urban Planning and Design
March 17, 2008
ULI Reality Check Seminar White Paper

Introduction

As an estimated 1 million new residents move in the Puget Sound region by 2025, local roadway infrastructure will not accommodate the travel demand if the majority of the population drive in single occupancy vehicles. If new roadways were built to accommodate increased demand, negative environmental impacts would be severe. Therefore, planners, policy makers and politicians need to investigate ways to encourage more travelers to use high capacity transportation, such as the bus or light rail, in lieu of driving private automobiles. One method could be closing the gap between different land uses and transit stations/routes through transit oriented developments, which are commonly referred to as TODs. These developments strive to incorporate a mix of land uses surrounding a transit station, providing transit, retail, residential and employment opportunities that are accessible via non-motorized modes. Although TODs would shift travel demand from automobile to transit, their development is challenging due to political opposition, lack of financial resources, and challenges created through private and public entities with different goals trying to develop one project together. This paper aims to help readers better understand the components of TODs, what barriers government agencies and developers face when trying to implement a TOD and various approaches to lessen these barriers to make TOD developments a feasible solution for the Puget Sound region.

What is a TOD?

A TOD is a mix of land uses, at various densities, typically within a district with a half-mile radius around a transit station.¹ This type of development strives to achieve a functional integration of land use and transit, making it a type of Smart Growth that encourages compact, mixed-use development and discourages dispersed, automobile dependent development at urban

¹ Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 5-6.

fringes. At the center of a TOD is a rail or bus station surrounded by higher density developments, with progressively lower-density spreading outwards. Typically, a TOD requires at least six residential units per acre and 25 employees per acre. If premium quality transit, such as rail service, were offered, required densities would double. Without density, there would not be enough ridership to justify the service, nor to attract supportive commercial activities to locate within walking distance of the station areas.² With this in mind, if TODs are to effectively shift people towards using transit or other non-motorized alternatives in lieu of driving a private automobile, they must have three key components: location efficiency, increased levels of value recapture, and the ability to create a place that is a destination in itself, versus being a transfer point to other places.³

Location Efficiency From Development of a TOD District

Location efficiency, identified as the strategic placement of new residential and retail developments within a district that centers around transit services, is important for growing regions because it ensures mobility for all socio-economic groups.⁴ Auto-oriented developments and districts that lack a transit emphasis force people to own a vehicle, which is typically the second highest personal expense next to housing costs.⁵ Location efficiency from creating TOD Districts, on the other hand, makes owning an automobile optional because high levels of density provide a customer base for high quality transit service. It also provides pockets of populations that can support residential, retail and transit options that are within walking distance of each other and the transit service.⁶

² Litman, Todd. Transit Oriented Development: Using Public Transit to Create More Accessible and Livable Neighborhoods. *Victoria Transportation Institute*. Retrieved on December 5 2007. Website: <http://www.vtpi.org/tdm/tdm45.htm>

³ Ditmar, H. and Poticha, S. (2004). Defining Transit-Oriented Development: The New Regional Building Block. *The New Transit Town*:22.

⁴ Ditmar, H. and Poticha, S. (2004). Defining Transit-Oriented Development: The New Regional Building Block. *The New Transit Town*:23.

⁵ Ditmar, H. and Poticha, S. (2004). Defining Transit-Oriented Development: The New Regional Building Block. *The New Transit Town*:26.

⁶ Goodwill, J. Hendricks, S. (2002). Building Transit Oriented Development in Established Communities. *Center for Urban Transportation Research – Public Transportation Syntheses Series*: 11.

Increased Levels of Value Recapture

One benefit of location efficiency via a TOD District is increased value recapture by both local and regional stakeholders. Through offering high quality transit service and enhanced connections between the transit and community amenities, local stakeholders can recapture value by decreasing levels of car ownership. Stakeholders can then shift income they would have spent on automobile or parking expenses towards other living costs. For example, households can allocate this recaptured income towards their housing budgets, allowing a wider variety of income groups to have more diverse housing options. This would be of greatest benefit to low and middle-income households. Savings would also be realized on a regional level, through lowering the need to build fewer roads, parking facilities and other infrastructure related to private automobiles due to significant increases in transit ridership.⁷

Creating a Destination versus a Transit Transfer Point/Node

When planning transit stations, transit agencies often plan for them to be a node where multiple transportation modes converge on one area to get travelers to their final destinations. TODs, on the other hand, view the importance of making the station itself a destination, which will attract new transit consumers and new developments within a ½ of the station. To do this, it requires close attention to the scale and design of the transit center, ensuring it is friendly to bicyclists and pedestrians, as well as being attractive to potential businesses and residential developments. Specifically, locating the station within the center of a neighborhood, creating a design that reflects the culture and values of the community, and the including engaging public spaces will encourage people to congregate around the station and use its services.⁸

⁷ Goodwill, J. Hendricks, S. (2002). Building Transit Oriented Development in Established Communities. *Center for Urban Transportation Research – Public Transportation Syntheses Series*: 10-12.

⁸ Dunphy, R., Myerson, D., and Pawlukiewicz, M. (2006). *Ten Principles for Successful Development Around Transit*. Washington DC: Urban Land Institute Press: 12.

History of Transit Oriented Developments

Though TOD appears to be a new concept within the development world, they actually originated in the United States during the industrial revolution. As streetcar lines were developed, new residential and community developments formed around streetcar stations, providing ridership to employment in the inner city.⁹ However, as automobile ownership and bus transit became less expensive, streetcars lines started to close and were replaced by bus lines because buses could travel anywhere since they were not dependent on an established rail line. This allowed for a significant amount of greenfield suburban development that created uses to sprawl in more rural lands and an urban form that was auto-oriented. As population continues to increase and the resources to support additional auto travel decrease, more people are seeking urban lifestyles that offer a variety of transportation options. Local planners and community groups have found that urban infill redevelopment around station areas is a sufficient method to accommodate additional growth, while discouraging travel via personal automobile.

Benefits of Transit Oriented Development

The benefits of TODs are heavily debated within academic and professional literature. Studies conducted in California found that residents who live near a rail station are 5 times more likely to use transit, while those working near rail stations were about 2.7 times as likely to use rail. Transit ridership, however, was also shown to decrease for both residents and employees if free parking is provided at their final destination and if they have access to a private vehicle.¹⁰ Some research also touts that TODs are responsible for revitalizing neighborhoods, increasing land values and rents, creating affordable housing opportunities and decreasing traffic congestion. On the other hand, other research claims that literature is laced with TOD platitudes,

⁹ Vuchic, Vukan. (2007). *Urban Transit: Systems and Technology*. New Jersey: John Wiley and Sons: 11-44.

¹⁰ Lund, H. Cervero, R. and Willson, R. Travel Characteristics of Transit Oriented Development in California. *Statewide Planning Studies*: 6-7.

whose sole purpose is to promote it as a viable land use tool. Thus, it fails to provide solid, quantifiable benefits of TODs. The only two impacts that have been measured quantitatively include the increase of ridership and property value gains. The other benefits, such as lessening traffic congestion and improving air quality, have been challenging to measure because it is hard to separate benefits directly related to the TOD from those benefits resulting from other factors.¹¹

Barriers of TOD Development

TOD development requires the participation of many stakeholders and occurs in a fragmented regulatory environment. This adds to the complexity, time, cost and risk associated with developing a project. Although high capacity transit service enhances the mobility, accessibility and value to a location, these benefits alone do not overcome the following challenges associated with these developments.

Financial Barriers

Financing TODs can prove challenging due to higher construction costs and increased risks of developing mid-rise multi-story structures within redeveloping neighborhoods. Mid-rise multi-story structures require strong foundations, underground parking, elevators and other elements to make them accessible to persons with disabilities – all that can add cost and cut down on net rentable space.¹² Added to this are site clearance and potential environmental clean-up costs, making developing a transit oriented development a more risky investment compared to developing within greenfields that typically have less site problems, fewer social issues and higher land values. Thus, developers tend to lean towards the greenfield projects, unless there are

¹¹ Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 120.

¹² Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 100.

significant public partnership dollars to lessen their risk and ensure their investment will have rates of return that meet the goals of their investors.

Another challenge is lining up financing in areas that are economically stagnant. While a host of public-private financing programs are available to build affordable housing units and transit stations, there is a lack of such funding for commercial developments. This leaves the developers searching for an anchor commercial tenant to cover financing costs once the development is built. If this anchor tenant is not obtained, the project's return on investment will appear weak, making financial institutions less likely to finance it.¹³

High Community Costs and Political Barriers

Though TODs can take advantage of existing infrastructure, especially those happening as urban infill projects, they may still require significant infrastructure upgrades.¹⁴ Older infrastructure may not be able to handle the wear and tear heavy buses inflicts on asphalt pavement, rail lines may require the re-alignment of existing roadways or the current water/sewer systems cannot accommodate the increased use by denser developments. Since transit oriented developments complete with other municipal infrastructure projects, there is no guarantee that the necessary support services and funding will be earmarked so the transit oriented development to move forward.

Established residents near a potential transit oriented development sometimes protest the development due to the perceived impacts it may have on their interests and investments. Many times residents equate transit-oriented housing and infill office development with more traffic, crowded schools, and increased drain on scarce public resources. Residents also fear how

¹³ Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 100.

¹⁴ Goodwill, J. Hendricks, S. (2002). Building Transit Oriented Development in Established Communities. *Center for Urban Transportation Research – Public Transportation Syntheses Series*: 12.

implementing transit near their homes will socially impact the neighborhood, which is especially true for development includes affordable housing. For example, when the Bay Area Rapid Transit (BART) District proposed to include affordable housing units in conjunction with a new station in the San Francisco suburb of Castro Valley, the community was quick to protest the development. Residents were skeptical of what impacts affordable units that are close to transit would bring to their community's social atmosphere. They perceived that the units would increase crime and other externalities, significantly lowering their property values. These fears often lead to lawsuits and other actions from residents aimed to delay or halt the TODs.¹⁵

Organizational Barriers

Another challenge for TODs is that they require the coordination of many stakeholders, many who lack expertise regarding the various elements development projects. In a typical TOD project, transit agencies plan for the TODs transit service, while local jurisdictions try to control how the parcel(s) are developed, and developers aim to make a profitable development. Other stakeholders, such as neighbors, transit riders and the public at large, advocate for what they envision the project to accomplish. Trying to coordinate these interests and create one vision for a project often makes TOD projects fall short and fail to provide the benefits discussed above.

Also, since many stakeholders within the public sector lack technical development expertise, transit agencies sometime get the short end of the stick when dealing with savvy developers who know how to negotiate a deal. On the other hand, developers sometimes feel that the local jurisdictions implement zoning or regulations that are required for an effective TOD add unreasonable costs to the project and make the development financially infeasible.¹⁶ Many times jurisdictional decision makers keep non-TOD supportive government policies, such as lot

¹⁵ Knack, Ruth E. (2007). Hayward Uses Public Transit Villages to Stimulate Urban Redevelopment. *Cities and Cars – A Handbook of Best Practices*: 94-98.

¹⁶ Daisa, J. M. (2004). Traffic, Parking and Transit-Oriented Development. *The New Transit Town*: 113-131.

size restrictions and auto-oriented building codes, to appease skeptical community stakeholders. This further prevents the optimal mix of uses, density and parking standards necessary to make TODs vibrant, economically viable destinations that are highly accessible by transit and non-motorized modes.

Recommendations on Overcoming Barriers

Lessening Financial Barriers

To alleviate fiscal barriers, public agencies can support the private development of TODs and TOD Districts through the provision of subsidies and tax breaks. Subsidies and tax breaks can be used to attract retailers to the TOD District. The guaranteed occupation of the retail space within the district will provide the income needed for developers to cover loan costs. It will also encourage more people to move within the TOD District due to the nearby retail making not owning a car actually feasible, which allow potential residents to be eligible for Location Efficient Mortgages (LEM). LEMs combine a low down payment requirements, competitive interest rates, and flexible criteria for financial qualification to allow a wider variety of income groups to purchase a home. Since location efficiency of living within a TOD can help residents save money by not owning a car, and LEMs make home ownership a reality for a wider range of income groups, there will be a greater market for the housing opportunities in the TOD. Both of these factors decrease the developments' risk and make financial investor groups more willing to provide funding.¹⁷ The subsidies and tax breaks can also be used to allow developers to offer affordable housing within their new developments without facing a severe loss.¹⁸

¹⁷ Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 113-114.

¹⁸ Goodwill, J. Hendricks, S. (2002). Building Transit Oriented Development in Established Communities. *Center for Urban Transportation Research – Public Transportation Syntheses Series*: 14.

Another mechanism to offset risk and attract developers to a TOD is to create public-private partnerships. Public-private partnerships provide opportunities for both the private developer and public entity to share risks, costs and rewards of developing a TOD.¹⁹ For instance, public agencies can invest in necessary public infrastructure improvements to support a TOD, such as new roads, parks and recreational facilities. Developers then agree to sign a 99-year land lease to allow transit services at the site as a form of commitment to re-develop the land as a TOD.²⁰ Since a TOD District spreads a ½ mile from the actual transit station, public agencies can also use public funds to redevelop public goods in the area, increasing property values and making it more attractive for development, even with the 99-year land lease commitment only relating to the transit center. Though this cost sharing does decrease risk, developers may be hesitant to create a cost-sharing partnership with public agencies because the savings are sometimes not enough to offset the development delays caused by government regulations. Also, another challenge of this type of partnership is to do this in a manner that it does not violate laws that work to prevent public dollars from directly benefiting private industry.

Educating and Empowering the Community to Convince Decision Makers

To convince community stakeholders and decision makers that TODs and TOD Districts will provide a balanced amount of benefits per the project costs, the community needs to be involved in the entire TOD District planning process. The first step is to educate the community of economic, environmental and social benefits of a TODs. Once they are convinced that a TOD District should be developed, they can help guide the urban design of the area. Though

¹⁹ Dunphy, R., Myerson, D., and Pawlukiewicz, M. (2006). Ten Principles for Successful Development Around Transit. Washington DC: Urban Land Institute Press: 6-7.

²⁰ Dumbaugh, Eric. (2004). Overcoming Financial Barriers and Institutional Barriers to TOD: Lindbergh Station Case Study. *Journal of Public Transportation*. 7.3: 51.

community participation of this nature can delay TOD development, causing potential financial losses by developers, community involvement enhances the mutual learning necessary to create a TOD design that everyone can live with. Since the community is the best and most important source of knowledge regarding the TOD area, they are best equipped to ensure the TOD has a sense of place, location efficiency and that it fits well into the community. Likewise, community wants and desires sway the opinion of decision makers and/or politicians, allowing the community to play an influential role in creating the essential zoning and regulatory changes that will make a TOD most beneficial to the community.²¹

Help Developers, Local Jurisdictions, and Transit Agencies to Work Together

A key to lessening organizational barriers is to have all the stakeholders understand their role and how their role can help the work of other stakeholders when creating TODs and TOD Districts. To help developers sell their projects to lenders, government and transit agencies can take an active role in laying the groundwork for TODs and TOD Districts. For example, governments can create zoning overlays for proposed transit oriented developments prior to developers acquiring land and financing to ensure re-zones and other land use matters do not delay development schedules. Local jurisdictions can also work towards streamlining design review and fast track permitting processes to ensure projects do not accrue unnecessary financing costs due to slow approval periods. Private developers, on the other hand, can work with the community to create a transit-oriented design that fits well within their community. Finally, transit agencies can work with both the local jurisdictions and developers to communicate what design elements are essential for ensuring a transit station provide reliable and frequent service,

²¹ Belzer, D. Autler, D. Espinosa, J. Feigon, S. and Ohland, G. (2004). The Transit-Oriented Development Drama and Its Actors. *The New Transit Town*: 41-57.

as well as what they can do to help create a transit system that will attract more ridership and create a transit focused community.²²

Conclusion

TODs and TOD Districts can enhance a community through creating better connections between transit and residential, employment and retail land uses. Potential TOD benefits include increased transit ridership, additional fare box revenue to support high quality transit services and economic revitalization of declining neighborhoods. However, the success of a TOD development is dependent on lessening the financial risks, community opposition and organizational barriers that can delay or halt a TOD development from moving forward. To do this, tax breaks, incentives and partnerships will lower financial risk, ensuring lenders and developers can gain sufficient return on a TOD investment. Community education about TODs and participation in the design process can create community buy-in for a TOD project. Lastly, collaborative efforts will help stakeholders with different visions and goals develop an overarching TOD vision and goal that fulfills the majority of stakeholder needs and interests. Through taking these steps, more TODs can be developed within growing regions, which will help accommodate travel demand without the potential negative impacts of building new roadways.

²² Cervero, R., Murphy, S., Ferrell, C., Goguts, N., Tasi, Y., Arrington, G.B., et.al. (2004). Transit-Oriented Development in the United States: Experiences, Challenges and Prospects: 112-113.

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