Review of the Growth and Transportation Efficiency Center Program, with Recommendations for Increasing Benefits to Suburban Cities

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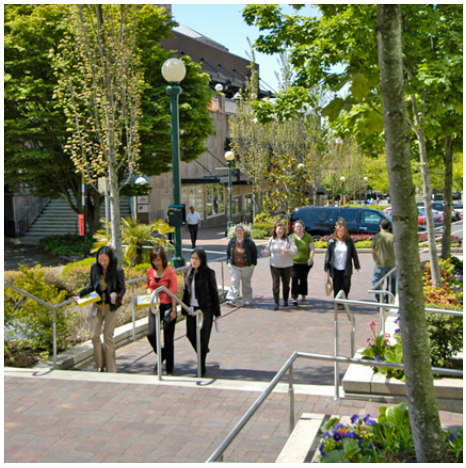
May 2011



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Research Report
Agreement T4118, Task 64
GTEC

Review of the Growth and Transportation Efficiency Center Program, with Recommendations for Increasing Benefits to Suburban Cities

by

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16. ABSTRACT

This report provides guidance to the Washington State Department of Transportation (WSDOT) in creating, supporting, and enhancing Growth and Transportation Efficiency Centers (GTECs), especially those centers located within suburban cities. The report examines the goals of the GTEC program and makes a variety of recommendations for growing the program and expanding its effectiveness in reducing peak period SOV use under a variety of different budgetary scenarios.

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INTRODUCTION

This is the final report for work performed for the South King County Travel Demand Management (TDM)/Growth and Transportation Efficiency Center (GTEC) research project. The project was developed in response to the outcome of the initial round of GTEC project selections. The seven GTECs selected in the initial round of funding were all in the state's larger cities. Give that result, WSDOT decided to investigate why growing suburban cities had not competed successfully and to look for ways to encourage the formation of GTECs in suburban cities that could successfully compete for funding with GTECs in larger urban areas.

This report's primary objective is to provide guidance to the Washington State Department of Transportation (WSDOT) in creating and operating Growth and Transportation Efficiency Centers (GTECs), especially those within suburban cities.

The report is structured as follows. The first section provides an introduction to the project and to GTECs. The next section summarizes the research findings relevant to the GTEC program. This includes a brief review of the literature and summaries of the project team's findings when it worked with city and state staff to examine 1) cities' expectations and plans regarding the GTEC program, 2) the outcomes from the initial round of GTEC funding and the reasons for those outcomes, and 3) potential ways in which the GTEC program could be improved. The final section of the report presents the project team's ideas on how WSDOT could modify the current approach to GTECs given different levels of funding. This last section includes input from a variety of interest groups that support the basic policy goals of the GTEC program, in addition to city staff from cities of various sizes and WSDOT staff.

DEFINITION OF A GTEC AND THE LEGISLATIVE GTEC GOAL

A Growth and Transportation Efficiency Center is defined in the Washington Administrative Code (WAC) as "a defined boundary of dense mixed development with major employers, small businesses and residential units, within an established urban growth area."

The WAC also defines the goal of the GTEC program: "The goal of the GTEC program is to provide greater access to *employment and residential* centers while decreasing the proportion of commuters driving alone during peak periods on the state highway system… The state intends to focus state program resources provided for GTECs in those urban areas that can provide the greatest current or future benefits for highway system efficiency… Emphasis is on those areas that have the greatest potential to reduce single-occupant vehicle commute trips on the state highway system in the future."[1]

BACKGROUND FOR, AND POLICY CONTEXT OF, GTEC LEGISLATION

Proposed by the Commute Trip Reduction (CTR) Board and approved and funded by the Washington State Legislature in 2007, GTEC is a new designation that reaches beyond the previously defined CTR boundaries of employers with more than 100 full-time workers to include all kinds and sizes of businesses and institutions in an effort to reduce single occupancy vehicle (SOV) work trips. The designation also makes a connection between land use and transportation and rewards municipalities that design their urban form to reduce dependence on the automobile.

The GTEC concepts appear to result from three intersecting state policy concerns:

1) the need to improve air quality and reduce greenhouse gas (GHG) emissions
2) growth management implementation (determining where to direct expected growth in population and employment while providing access and mobility to new residents and businesses, as well as protecting environmental quality)
3) the fiscal limitations of state and local governments to supply transportation and other public infrastructure improvements to meet that growth.

The GTEC program further encourages growth to occur in dense, mixed-use development patterns that incorporate employers, small businesses, and residential units within established urban growth areas. Published research[2] has shown that GTEC-compatible geographic areas demonstrate lower personal motor vehicle use than less dense, segregated land uses. They thus produce lower emissions per person, create less

[1] WAC 468-63-060

[2] See the section "Findings in the Literature Concerning Land Use Mix and Travel Behavior" later in this report.

demand for peak period highway capacity, and limit growth pressure on the state's remaining open lands.

GTEC FUNDING HISTORY

The state legislature provided a one-time $2.4 million allocation for GTEC in the 2007-2009 transportation budget. To distribute those funds, the WSDOT solicited GTEC proposals from municipalities. The agency rated these proposals by using criteria that emphasized the number of SOV trips removed, the presence of mixed-use locations, the institutional capacity to implement and support the GTEC, and the sustainability of the program being implemented. The seven funded GTECs were all in larger cities: Bellevue, Olympia, Redmond, Seattle, Spokane, Tacoma, and Vancouver.

As a result of budget cut backs, additional funding for GTECs was not included in the 2009-2011 biennial transportation budget. However, because GTECs have significant potential to significantly reduce future state transportation funding needs, there is considerable interest in funding GTECs in the upcoming biennium.

RESEARCH FINDINGS RELEVANT TO THE GTEC PROGRAM

This section of the report summarizes findings from the literature that describe the travel behavior expected to be found with GTEC-compatible land uses. It then summarizes the findings from the project team's review of how various suburban cities approached the GTEC program, discusses how their approach was shaped by the forces guiding the development of their cities, and describes how those practical realities interacted with the application guidelines used in the first phase of GTEC funding, which in turn explains the outcome of that competition. The final subsection outlines various ways in which suburban cities can more successfully participate in future GTEC activities.

FINDINGS IN THE LITERATURE CONCERNING LAND-USE MIX AND TRAVEL BEHAVIOR

The Effects of Land Use on Travel Behavior

The Victoria Transportation Policy Institute (VTPI) provided a very complete summary of research describing the effects of land use on travel behavior. The following three paragraphs and figure come from the "Land Use Impacts on Transport" chapter of the *VTPI TDM Encyclopedia*.[3]

> Increased density and clustering tend to reduce per capita automobile ownership and use, and increase use of alternative modes (Ewing, Pendall and Chen, 2002;[4] Kuzmyak and Pratt, 2003;[5] TRL, 2004;[6] Turcotte, 2008;[7] TRB

[3] http://www.vtpi.org/tdm/tdm20.htm
[4] Reid Ewing, Rolf Pendall and Don Chen (2002), Measuring Sprawl and Its Impacts, Smart Growth America (www.smartgrowthamerica.org).
[5] Richard J. Kuzmyak and Richard H. Pratt (2003), Land Use and Site Design: Traveler Response to Transport System Changes, Chapter 15, Transit Cooperative Research Program Report 95, Transportation Research Board (www.trb.org).
[6] TRL (2004), The Demand for Public Transit: A Practical Guide, Transportation Research Laboratory, Report TRL 593 (www.trl.co.uk). This 240-page document is a detailed analysis of factors that affect transit demand, including demographic and geographic factors.
[7] Martin Turcotte (2008), "Dependence on Cars in Urban Neighbourhoods: Life in Metropolitan Areas," Canadian Social Trends, Statistics Canada (www.statcan.ca); at www.statcan.ca/english/freepub/11-008-XIE/2008001/article/10503-en.htm.

2009[8]). Bento, et al (2004)[9] conclude that residents reduce their automobile travel by about 25% if they shift from a dispersed, automobile-dependent city such as Atlanta to a more centralized, multi-modal city such as Boston, holding other economic and demographic factors constant. Lui (2003)[10] finds that higher density infill development can reduce per capita vehicle travel by up to 27% compared with conventional residential development.

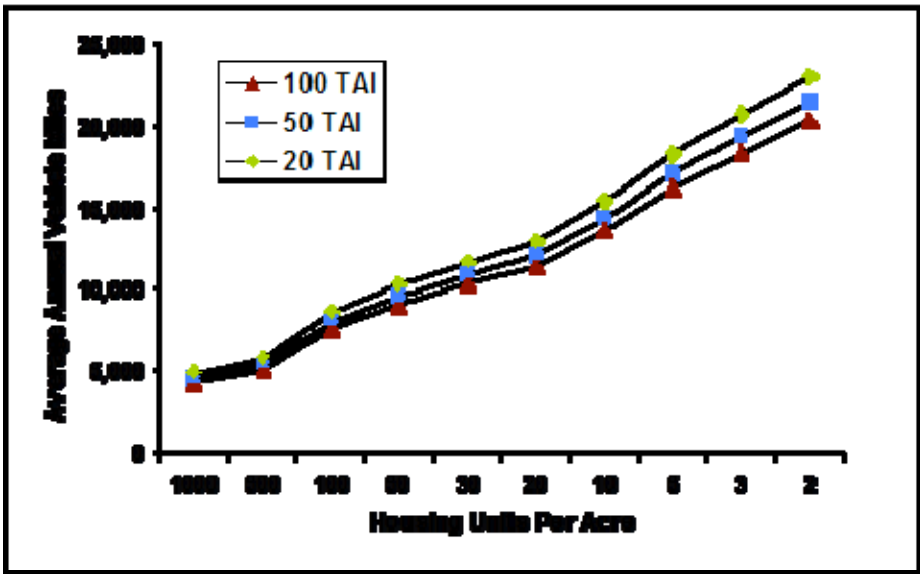

Figure 1: Annual VMT Per Household[11]

Holtzclaw (1994)[11] finds that average vehicle ownership, vehicle travel, and vehicle expenditure per household decline with increasing residential densities and proximity to public transit, holding constant other demographic factors such as household size and income. Density at both origins and destinations affect travel behavior. One study found that increasing urban

[8] TRB (2009), Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions, Special Report 298, Transportation Research Board (www.trb.org); at http://onlinepubs.trb.org/Onlinepubs/sr/sr298prepub.pdf.
[9] Antonio M. Bento, Maureen L. Cropper, Ahmed Mushfiq Mobarak and Katja Vinha (2003), The Impact of Urban Spatial Structure on Travel Demand in the United States, World Bank Group Working Paper 2007, World Bank (http://econ.worldbank.org/files/24989_wps3007.pdf).
[10] Feng Liu (2003), Quantifying Travel and Air Quality Benefits of Smart Growth in the State Implementation Plan, Transportation Research Board Annual Meeting, TRB (www.trb.org).
[11] John Holtzclaw (1994), Using Residential Patterns and Transit to Decrease Auto Dependence and Costs, National Resources Defense Council www.nrdc.org, funded by the California Home Energy Efficiency Rating Systems. (Transit Accessibility Index (TAI) indicates daily transit service nearby)

residential population density to 40 people per acre increased transit use from about 2% to 7%, while increasing densities in commercial centers to 100 employees per acre resulted in an additional 4% increase in transit use, to an 11% total mode share (Frank and Pivo, 1995[12]). Both work trips and shopping trips are affected by population and employment densities.

Increased land use mix tends to reduce the distances that residents must travel for errands and allows more use of walking and cycling for such trips. It can reduce commute distances (some residents may obtain jobs in nearby businesses), and employees who work in a mixed-use commercial area are more likely to commute by alternative modes (Kuzmyak and Pratt, 2003[13]). That same research also indicates that a jobs/housing balance of about 1.0 tends to reduce average commute distance and per capita vehicle travel. However, in some situations, suburban dispersion of employment can reduce average commute distance, although it tends to increase total per-capita vehicle travel. Crane and Chatman (2003[14]) find that a 5% increase in the amount of employment in a metropolitan area's outlying counties will lead to a 1.5% reduction in the average commute distance, with significant differences by industry. The suburbanization of construction, wholesale, and service employment is associated with shorter commutes, while dispersing manufacturing and finance explain (weakly) longer commutes. However, this may be offset by increased non-work vehicle mileage.

While the "C" in GTEC stands for *center*, it is important to realize that centers do not exist in isolation. They are connected by transportation corridors. In their book *Pedestrian Pockets*[15], Kelbaugh and Calthorpe illustrated how high capacity rail—today's Sounder commuter service—could reinforce traditional town centers like Kent

[12] Lawrence Frank and Gary Pivo (1995), "Impacts of Mixed Use and Density on Utilization of Three Modes of Travel: SOV, Transit and Walking," Transportation Research Record 1466, TRB (www.trb.org), pp. 44-55.
[13] Richard J. Kuzmyak and Richard H. Pratt (2003), Land Use and Site Design: Traveler Response to Transport System Changes, Chapter 15, Transit Cooperative Research Program Report 95, Transportation Research Board (www.trb.org).
[14] Randall Crane and Daniel G. Chatman (2003), "Traffic and Sprawl: Evidence from U.S. Commuting, 1985 To 1997," Planning and Markets, Volume 6, Issue 1 (www-pam.usc.edu), Sept. 2003.
[15] Doug Kelbaugh and Peter Calthorpe, "The Pedestrian Pocket", 1989

and Auburn in the Duwamish Valley, turning traditional town centers into transit-oriented developments (TODs). In a similar vein, Pivo referred to the clustered urban development along Toronto's rail line as a "string of pearls," emphasizing the importance of both centers and corridors. Twentieth century history suggests that highway corridors engender much more auto-oriented sprawl than do rail corridors, largely because access to land is controlled and limited to station areas in the latter, whereas auto-strip commercial development dominates along routes such as SR 99/Aurora in Seattle or SR 167 in Puyallup's South Hill.

Consequently, because corridors can also be growth and transportation efficient, "C" could also stand for *corridor*. Montgomery County, Maryland, led the way with a pioneering growth management comprehensive plan in 1969 called On Wedges and Corridors, which called for intense development along two major highway corridors and protection of farmland and open space between them (Porter[16]). Internationally, Curatiba, Brazil, represents a model of turning several urban arterials into bus rapid transit ways and intensifying building heights and densities along the corridors. The cities of Bothell and Puyallup are examples of GTECs focused on corridors.

Transforming Land-Use Patterns and Travel Behavior

One problem with looking toward land-use mix and density as the mechanisms for generating changes in travel behavior is that land use changes slowly, especially in a slow economy. Changes in land use occur slowly because there are many steps in the land development process, each of which adds time to the process,[17] and many of those steps can be delayed for a variety of political and technical reasons. Even after a city adopts the basic idea that a change in land-use mix is desired and appropriate, a number of steps must be performed to convert one land-use mix/density to another. These include the following:

- the formation and interpretation of market signals (prices and vacancy rates) that encourage a developer to actually begin the development process (i.e., a developer must be convinced there is money to be made)

[16] Douglas Porter, Managing Growth in America's Communities, Second Edition, 2008
[17] Paul Waddell, Drivers of Land Use Change, http://www.urbansim.org/Documentation/Classroom/WebHome

- the identification and purchasing of those sites for development
- the design of the development
- the permitting and review of those plans
- the need for zoning changes (whether the adoption of changes in current zoning or the processing of subdivision applications) (also note that when a city is working very pro-actively, this step may occur as the first step in the process or as a result of the city reacting to market signals)
- actual site development/construction
- sales or leasing of developed properties.

Because conversion of less dense, segregated land uses to dense, mixed-use environments generally requires multiple developments to occur, many of these steps must occur several times.

For each step, for each developer (let alone the adoption of the initial change in zoning/city plan), local communities may cause delays in the process. In some cases, the local communities (current residents or businesses) simply do not want change in land-use mix or density. Suburban city residents often fight increases in land density and the addition of non-residential land uses to currently residentially zoned properties. In some cases, current residents, even in depressed areas, often "like their neighborhood" as it is currently zoned and distrust change. In other cases, change implies a loss to those living or working in the area. For example, redevelopment of economically depressed areas may be viewed as excellent for a city as a whole, bringing in new residents and businesses and improving the quality of life for those in the city, but it may also represent a loss of affordable (if poor quality) housing for those currently living in the area to be redeveloped or the loss of low cost space for current businesses.

Individuals who will end up worse off (or even fear they will) commonly fight changes in zoning, density, and land-use mix. This occurs even if they support the basic idea.[18] This idea of "liking the concept, but not the execution" resulting in active

[18] A ready example can be seen in the planning associated with increased density the City of Seattle would like to permit in association with the planned light rail station in the Roosevelt District north of the University of Washington. The neighborhood supports the station. In concept, residents accept the increase in density. However, considerable conflict has occurred once the details of development proposals have been brought forward. For example, see: http://activerain.com/blogsview/1601012/roosevelt-development-group-takes-a-new-tack-in-seattle, or

resistance to projects and plans, is so common in transportation planning it has its own famous acronym, NIMBY—"Not in My Back Yard."

As a result of this combination of many possible steps for conflict and delay, and the need for enough change in density/mix to happen for significant changes in travel behavior to take place, significant changes in actual travel behavior (i.e., significant changes in mode split) occur only slowly. But they do occur.

A somewhat extreme, but highly descriptive, example of the "ultimate" in GTEC development can be seen in Arlington County, Virginia, which sits across the Potomac River from Washington, DC. In the 1970s this area consisted of car-oriented, low density development. The vast majority of travel was by car. The county government realized that Washington, DC, would continue to grow and decided to take advantage of the construction of the area's Metrorail system to concentrate that growth in dense, mixed-use, transit friendly development to limit the need for new highways, and protect the quality of life of the existing single family neighborhoods. All planned increases in density were designed to occur within 5 percent of the county land.

The plan succeeded. It took more than 25 years from start to finish. The "GTEC" portion of the county changed from 73,800 jobs in 1980 (51 percent of the county total) to 128,500 jobs in 2000 (67 percent), with plans for 190,000 jobs (69 percent) by 2020. The results have been tremendous increases in transit use and mode share. In 2000, the four subway stations in the Arlington section of the Metrorail corridor served an average of 35,000 people (70,000 trips) each day. More than 64 percent of those accessing the subway stations walked to the station. Others took buses and/or walked to work. Less than 17 percent drove.

The county has transformed land around the subway stations from low density, auto-oriented development (Figure 2), to high density, mixed-use, transit-oriented development (Figure 3).[19] Thus, this area changed from an almost exclusively auto-oriented, strip mall-based land-use pattern in which most people drove to their destinations, to a mixed-use, moderate to high density corridor (surrounded by low

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http://www.ci.seattle.wa.us/transportation/SAP/Roosevelt_DDWS_Report.pdf, or
http://www.ci.seattle.wa.us/transportation/SAP/2000_Northgate_Roosevelt_Newsletter.pdf, or
http://www.glennaroberts.com/ravenna-park-north/2010/04/roosevelt-development-group-tr.html

[19] Jay Fisette, Arlington County Board, "A National Model of Smart Growth, Arlington County's Experience with Transit Related Development, September 2004.

density single family residential) in which very high proportions of travel occur in non-auto modes.

Figure 2: Arlington County in the 1980s

Figure 3: Arlington County in 2000

Key aspects for making this shift from car-oriented to transit- and pedestrian-oriented development patterns were as follows:

- a shared vision of the future shape of the county from the political, business, and development communities
- protection of existing single family neighborhoods
- an underlying climate of population and employment growth in the region
- a transportation network (the subway lines plus pedestrian amenities built in concert with the new density) that supported the desired modes of travel
- a firm (in concept and vision) but flexible (in design detail) implementation of the growth and density plan.

All of these topics were mentioned by city staff in the project team's discussions with those staff about their experiences with the development and implementation of GTEC plans. In some cases these topics were raised as reasons why they were succeeding. In other cases the inability to address aspects of one or more of these specific topic areas were reasons why little success was occurring to date.

FINDINGS FROM INTERVIEWS WITH CITY AND WSDOT STAFF

This section summarizes information obtained by the project team from extensive interviews with WSDOT staff and staff from a variety of cities. Findings are summarized with respect to 1) the GTEC program in general, 2) how various cities approached the initial GTEC application (what they proposed and why), and 3) how the WSDOT's approach to the GTEC program might be altered in the future to the benefit of the state and its constituent cities.

General GTEC Findings

GTEC is a new program, interpreted differently by various parties. These differences stem in part from the complex set of problems the GTEC legislation tries to address, in part from the way that WSDOT (which has been given the task of implementing GTEC) rolled out the program, and in part from different cities' views of how the GTEC program can meet their needs.

The concept behind GTECs is to encourage cities and counties to direct growth to those places (centers) where new development is desired and where large portions of the travel generated to/from/within those centers can and will take place in modes other than

single occupant automobiles. The intent is to encourage economic development and growth in areas that require the lowest levels of public expenditure to increase state highway system capacity while still providing the mobility necessary to make growth in these areas attractive. Ideally, growth will occur in places and in forms that require no increase in state highway capacity because the mobility needs of those new developments will be served by means other than using the state highway system.

The general consensus about the GTEC program was that it is an excellent program that serves two different markets for changing travel behavior.

The first, smaller, market is based on expansion of the current commute trip reduction program. That is, by providing additional services and funding to those areas with existing GTEC-compatible land uses, measurable shifts in commute behavior (from SOV to other modes) can be achieved. This market provides the greatest potential for short-term achievement of the goal to reduce peak period demand for state highway capacity. However, the size of this market is constrained by the fact that much of the state is not currently built in land forms that are conducive to shared ride and non-motorized transportation options.

This constraint is evidenced by the relatively small changes in travel behavior that have occurred in the past decade even when the cost of car travel has increased substantially as a result of changes in the price of gasoline (Figure 4). For example, gas consumption (a surrogate for VMT) dropped less than 4 percent in the first six months of 2007, even though gas prices jumped over 23 percent (from an average of $2.91 to $3.59 per gallon). Even fairly substantial changes in the cost of driving do not overcome the inherent time savings, flexibility, and general convenience level provided by SOV use.

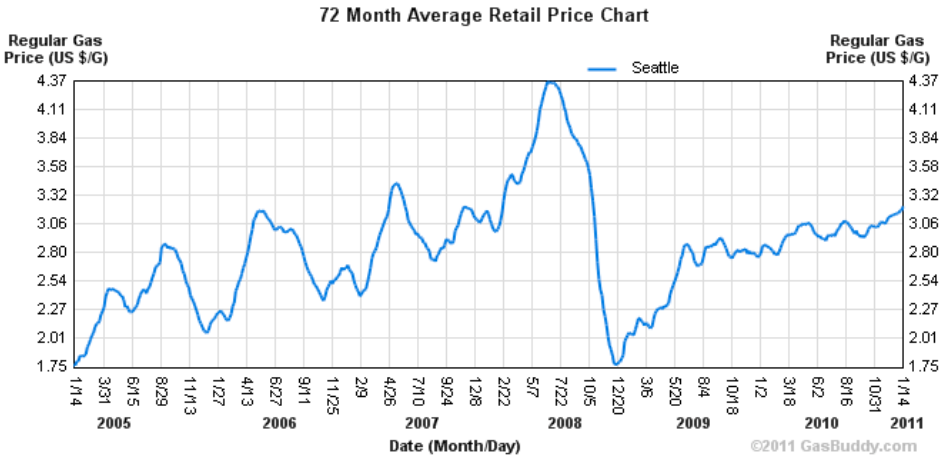

Figure 4: Changes in the Price of Gas in Seattle[20]

Figure 5 helps illustrate why the non-SOV modes have not proved competitive for many travelers. It shows that the current auto-oriented land forms typically found in suburban areas simply make taking non-SOV modes difficult for a large percentage of travelers. These difficulties result from the following factors:

- Lack of density makes high frequency transit service financially infeasible.
- Cul-de-sac oriented residential development makes transit service in residential areas slow and inefficient, as well as making walking distances to transit stops long.
- Distributed land uses and segregated landscape designs (i.e., fenced backyards in suburban single family neighborhoods, and landscaped parking lots that limit "through the parking lot" movements from one commercial office park to another) make the network distance between locations too long for walking.

[20] Source: GasBuddy.Com, http://www.gasbuddy.com/gb_retail_price_chart.aspx?time=24

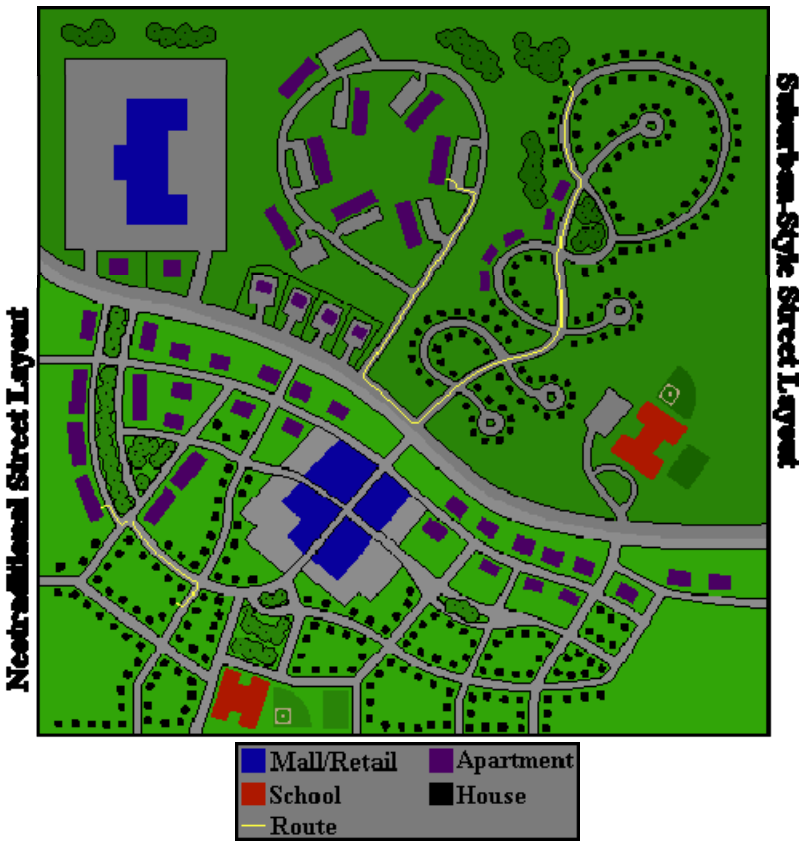

Figure 5: Example Network Travel Distances in Neotraditional, Mixed-Use Environments versus Suburban Style, Segregated-Use Environments[21]

The second, and larger, market for GTEC funding comes from growth occurring in the dense, mixed-use, well connected areas that are defined as GTECs. This aspect of the GTEC program is considered "long term" because the actual shift in mode choice does not occur until after the growth has occurred, and that growth is dependent on the many steps needed to envision, permit, develop, construct, and sell the dense, mixed-use development that encourages/allows much higher levels of non-SOV travel. This market is much larger than the expansion of the current CTR market because it includes essentially unlimited numbers of people.

This dichotomy of markets, combined with the language of RCW 70.94.528, which "requires transit agencies, local governments, and RTPOs to identify certified GTECs as priority areas for new service and facility investments in their respective

[21] Source: From Duany, A., and E. Plater-Zyberk. 1991. Towns and town-making principles

investment plans," has led different cities to have different expectations for GTEC program.

- Some see GTEC as a way to expand their CTR program.
- Some see GTEC as a way get funding to enhance re-development of old downtown cores.
- Some see GTEC as a way to get funding to "fix" transportation problems occurring in overly congested, auto-dependent areas (i.e., make transportation fixes that produce shifts in mode split that will allow further growth in badly congested areas).
- Some see GTEC as a way to fund the transportation infrastructure needed to make a developing area more attractive to development (and functional in transportation terms as that development happens).
- Some see GTEC simply as key legislative support for the implementation of policies and plans they want to implement (that is, the name means as much as the money).

The following subsection describes some of the different GTECs that were proposed, as well as some that could have been proposed but were not because of the limited availability of city staff time to put together the necessary GTEC plan.

Examples of Cities' Experiences with GTEC

Kent

The City of Kent has significant interest in the program but did not submit a formal GTEC application. This was partly the result of a lack of staff to perform the planning work necessary to develop a competitive GTEC application. It was also partly due to the need to address other priorities within the city while being uncertain as to whether the time invested in a GTEC application would provide good "value for the effort" in terms of direct benefit to the city. Kent has two separate geographic areas that it considered submitting as GTECs.

The Kent Manufacturing/Industrial Center (MIC) (see Figure 6) is the City of Kent's preferred GTEC focus. The MIC represents a prime underserved Commute Trip Reduction market. It is a designated "center," albeit an employment center as opposed to

a mixed-use residential urban center. It generates many peak period trips. It has some employers large enough to participate in the CTR program but also has a number of other employers that are too small to be included in the CTR program. Unlike most areas considered for GTEC designation, the Kent MIC has almost no residential land and very limited commercial activity, and the City of Kent wishes to maintain its super block structure and current land-use pattern to encourage the location of future employment that needs larger parcel and block sizes. The result is that this geographic area is eligible as a GTEC but does not "fit the mold" in terms of being a mixed-use, walkable urban center.

Figure 6: Kent Manufacturing Industrial Center

The MIC does incorporate two excellent north-south bicycle trails that encourage considerable bike commute travel. The city is activity looking for funding to complete missing east/west bike trail connections that will make the bike trails even more attractive transportation facilities. The city has partnered with King County Metro Transit to fund circulator transit services to connect MIC employment sites with the Sounder Rail station in downtown Kent, as well as to provide additional transit services between the MIC, Kent residential areas, and other regional destinations.

Given those base conditions, Kent would likely achieve further significant peak period SOV trip reductions if given GTEC funding. Kent views the funding of SOV trip reduction in this location very positively, not only because of the transportation and environmental improvements that reduction of SOVs provides, but because CTR-style programs are viewed as beneficial in attracting and retaining businesses that provide family wage jobs to Kent residents. However, because the MIC contains essentially no residential development and Kent has no interest in changing the zoning, GTEC funds applied in Kent would not result in creation of the *land-use/transportation interactions* that could reduce per person VMT or greenhouse gas emissions by significantly reducing motor vehicle use. Instead, the reduced trips would almost all come from traditional, peak period commute trips.

In contrast to the Kent MIC, the Kent Downtown area (see Figure 7) more closely fits the "visual" definition of a GTEC. Kent's traditional downtown core is walkable and contains retail, commercial, and residential uses surrounding a train station. Land is available for development, and the city has zoned the area for mixed-use high density development. However, because both residential activity and employment activity in this nascent center are currently limited, there are currently relatively few peak period SOV trips to be removed.

While the City of Kent has planned for and welcomes development in this area, politically, the city's primary concentration is on the MIC, where current infrastructure allows more rapid (employment) growth. Forces well beyond the GTEC program will be required before significant development occurs in downtown Kent; the development community must buy in-to the GTEC vision and agree to build these kinds of developments, and the market for mixed-use communities must emerge as forecast. But if the forecast demand for dense, mixed-use development does emerge, Kent's downtown has many of the attributes (modest land cost, excellent transportation access to the rest of the region, excellent access to a variety of retail stores, and excellent access to entertainment e.g., the ShoWare Center) that could bring significant GTEC style growth to Kent, with the corresponding shift in mode choice.

Figure 7: Kent Downtown

Renton

Similarly to Kent, the City of Renton did not submit a GTEC application. And like to Kent, downtown Renton has many of the intrinsic attributes of a successful GTEC. It is walkable; serves a mix of land uses, including residential, commercial, and office; has on-street parking restrictions (2- and 4-hour); and is well served by the new downtown parking garage (which currently is at about 80 percent capacity as a park-and-ride). However, unlike Kent, downtown Renton is not a growth location in the city, is not a place where change is likely to occur if the economy picks up, and while favoring

GTEC-style developments, is not a location where city politics have focused on promoting growth.

Instead, much of Renton's recent growth has been in the urban center and residential areas located north of downtown. That urban center, a mixed-use development called The Landing (see Figure 8), contains primarily auto-oriented commercial uses but with some high density residential units on the northeast corner of the development. Additional high density residential areas are located further north. There are also major employment sites, including both large Boeing and PACCAR facilities, located on the border of the urban center. The Landing was early in its construction phase when the initial GTEC applications were due, and since the employers in the northern section of the city were already in the CTR program, the city did not feel that a GTEC application for the area was the best place to put its limited resources.

There is reasonable transit service between The Landing and the downtown transit center (which provides good regional bus connections), but no significant transit service to the larger residential areas north of the Landing. Renton has an agreement with King County Metro to provide transit service to these areas using Transit Now funding matched by city funds. This service is currently scheduled to begin in roughly two years. The large employment sites are served by large vanpool fleets and have good transit service. (Some vanpools are used to shuttle commuters from Sound Transit rail stations to the area's employment sites because those sites are not well connected to the train stations.)

Figure 8: Renton, Area Surrounding The Landing

The other areas in Renton that generate considerable peak period traffic and that could benefit from GTEC funded improvements are its corporate office parks. Renton has considerable density of employment in corporate office parks, which are generally served by ample free parking and are geographically segregated from residential and commercial land uses. Most of these are located south of I-405 and west of SR 167. These locations house employers such as the Puget Sound Educational Service District and WSU Extension offices. These areas are "classic suburban developments" that often encourage/require access via private auto because the transit options are limited and free parking is provided. These sites are not within walking distance of either the downtown transit center or the Sounder train station. Consequently, trips are difficult to convert to non-SOV travel modes without major, politically inspired changes (i.e., charging for parking), which the city is uninterested in pursuing.

The one exception where a GTEC designation might be considered in this area dominated by corporate office parks is the geographic area surrounding the Valley Medical Center and including the entire S 180th St. / SW 43rd St. corridor. Renton staff indicated that this area has attributes that make it attractive as a place where conversion from a conventional office park to a GTEC is saleable. This area attracts a lot of people (employees, patients, visitors), which creates a high demand for parking relative to the amount of available parking. Parking expansion by the land owners will be expensive because there is little available land, meaning that additional parking must come from the construction of parking structures. Furthermore, there is no funding for major street improvements to serve additional demand, and current demand already creates visible levels of congestion. Transit service exists but is not great, and a CTR program already exists (Valley Medical) in the area. Given these conditions, local employers and land owners in the area might see the benefit of CTR improvements and would likely support the GTEC designation if that designation would result in noticeable transportation improvements and options.

Tukwila

The City of Tukwila has many of the same geographic/land-use features as Renton. However, unlike Renton and Kent, the City of Tukwila took advantage of the availability of a planning grant to develop an Urban Center Plan for Tukwila. It used that planning process to obtain the political buy-in for its "urban center" designation. Much of the plan was based on the redevelopment of land near the Sounder Commuter Rail station, located just east of the Southcenter Mall and its surrounding commercial areas. The urban center plan calls for transit-oriented development around the station, with a pedestrian friendly, walkable connection to the Southcenter Mall.

This center plan was proposed for GTEC funding and was graded highly, but fell just below the funding cut-off. The TOD-based urban center plan itself is an excellent example of the land-use changes envisioned by the GTEC legislation. Unfortunately, its implementation (or more accurately, its lack of implementation) is also an excellent example of the challenges of converting an existing, built-up, auto-oriented suburban area into a mixed-use, walkable GTEC environment (see Figure 9). While the City of

Tukwila embraced the plan and long-range vision the plan presented, it did not embrace the idea of paying for its implementation. Neither did the development community jump at the chance to fund the developments that would bring about that land-use vision. Both developers and current land owners have an understanding of the value of the current auto-oriented, primarily commercial, development pattern. While they see the potential in the long-range GTEC vision, they do not see financial certainty in investments in the early mixed-use developments that are part of that vision. That is, until they see other developers find financial success in this new style of development, they will be reluctant to spend their own development dollars in that way; they would rather spend those same dollars in more traditional suburban developments with more confidence in their expected financial returns.

Figure 9: Planned Change in Land Use under Tukwila Urban Center/GTEC Plan

Similarly, the city is unwilling to spend its limited resources to finance that redevelopment or even to reduce the financial risk of others performing that redevelopment. As with most cities, Tukwila has more funding needs than funding, and

little political interest exists to fund/subsidize the redevelopment of the urban center plan given the existing number of high priority projects.

Neither is the city likely to adopt transportation measures, such as reducing the availability of free parking, that will increase the incentives for adopting non-SOV modes of travel. Free parking is viewed as a key aspect of the attractiveness of the urban center's commercial activity. Without ample free parking, the fear is that Southcenter will lose its competitive regional position, and the urban center plan does not call for a reduction in commercial activity. It attempts to grow that activity by increasing the population that can access the commercial land uses.

At the same time, the city and land owners understand the growth limitations that the area's auto dependency enforces. Therefore, there is a desire for growth in non-auto-oriented travel (if for no other reason than getting employees to their jobs without their using cars frees up parking spaces for more customers), but there is little enthusiasm for the policies and land-use changes that would force those mode changes to occur. Instead, city staff view the best near-term plan as being modest funding that will allow them to spend the staff time necessary to expand on the current CTR program while building a more politically active constituency for GTEC-style land-use changes. After that, the next stage in GTEC adoption will occur when developers see TOD succeed elsewhere, or when financial incentives grow large enough to make the financial risk small enough to encourage their own entry into TOD.

Several of the people interviewed for this project expressed the opinion that both political decision makers and the development community, while interested in GTEC-style development plans, are not convinced that "the money will come" – for either the transportation improvements needed to support the GTEC-style development, or the market for GTEC-style development. This makes both groups interested in the concept but reluctant to accept the financial risks necessary to move in that direction. Several individuals brought up the example of the financial difficulties that occurred when Burien tried to redevelop its downtown core. The financial outcome of that redevelopment effort (which occurred in part because development was undertaken just prior to the economic downturn) is likely to create further hesitation on the part of cities and developers to adopt significant GTEC development patterns, despite successes apparent in other

downtown areas such as Kirkland and Redmond. This hesitation is also likely due to the fact that over 50 years of history support the "success" behind the marketability of traditional development patterns—given the national trend toward suburbanization over that time frame—and there is comparatively little history behind GTEC development.

Bothell

The project team also reviewed the City of Bothell's GTEC application. This application proposed GTEC funding for the Canyon Park subarea (near the intersection of I-405 and SR 527) of Bothell. The area right now contains a mix of light industrial, commercial, and residential land uses, with considerable room for additional development. However, those land uses exist in a fairly segregated development pattern. (see Figure 10) The area is bisected by I-405 and is served by several large, high speed arterials with often incomplete sidewalk systems. It contains a large park-and-ride, located next to I-405, but has limited transit service along the arterials. Several bike trails exist, along with planned extensions of those trails, but the bike trails do not effectively interconnect the subarea in a way that significantly reduces automobile use.

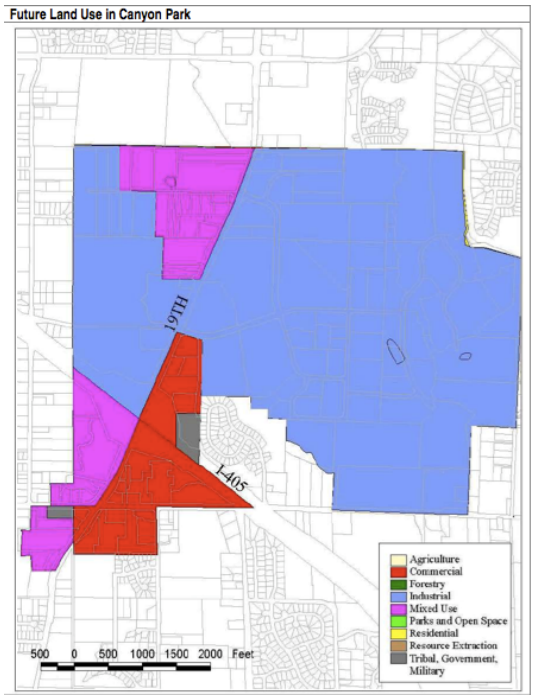

Figure 10: Canyon Park Zoning Showing Segregated Land Uses

The vast majority of the employment in the area is located in office/industrial parks. Like Renton's office parks, these generally have poor direct transit access and contain ample free parking (see Figure 11), and there is no desire on the part of the land owners to change that parking condition.

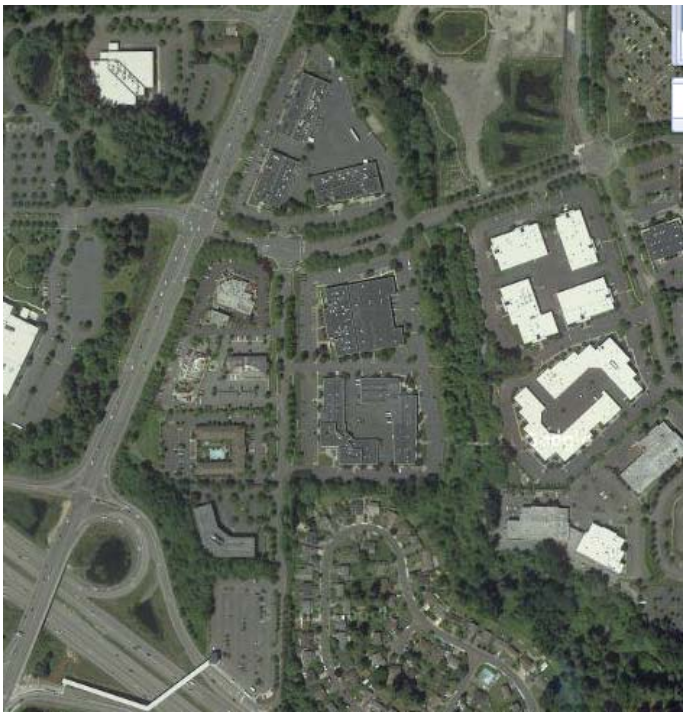

Figure 11: Canyon Park Office Park Developments with Extensive Free Parking[22]

The retail developments are highly auto-oriented and not well connected (other than by large arterial) to the office parks and residential areas. The result is that the emphasis of their GTEC application is on the following:

- completion of the trail and sidewalk systems in order to promote non-motorized movement between the segregated land uses
- inclusion of non-motorized mode friendly attributes (e.g., shower facilities, bike racks) in new developments to further promote non-motorized commute travel

[22] Image from Google Maps, ©2011 Digital Globe, GeoEye, U.S. Geological Survey

- provision of circulator bus services to move people from the well served park-and-ride to the employment sites inside the GTEC and to provide lunch period services that eliminate the need for a personal car at work,
- expansion and refinement of the current carpool and vanpool programs
- expansion of the current CTR outreach program.

These planned and proposed changes are designed to keep the area competitive with other suburban employment growth locations while limiting the increase in traffic as the area accepts the planned growth. What is not included in this plan is a dramatic shift from segregated land uses to a more mixed, walkable, integrated land-use environment. (The general land-use plan does call for a modest amount of mixed-use development, but that development is unlikely to change the overall character of the proposed GTEC.)

Interestingly, Bothell could have submitted its downtown as a GTEC. Bothell's downtown is currently undergoing significant redevelopment, has a significant mix of land uses in an already walkable environment, and has excellent multi-modal transportation connections, including good transit service, a bike trail that connects to both sides of Lake Washington (the Burke Gillman/Sammamish River trail), and reasonably good pedestrian facilities. The major arterials through town are currently being reconstructed and realigned to not only provide better traffic flow but to provide a more pedestrian friendly environment that promotes the desired mixed-use environment.

The Outcomes from the First Round of GTEC Funding

In the first round of GTEC funding, larger, denser cities with strong CTR programs were the successful competitors for the awarded GTEC funding. Big cities with dense employment and effective CTR programs have the greatest ability to reduce current peak period SOV travel by extending their current CTR programs to willing companies that previously did not qualify for CTR assistance. Since the criteria used for selection favored GTEC plans that could show large peak period SOV reductions, these larger, denser geographic areas had a natural advantage over the less dense suburban areas.

Unless they had very unusual situations (such as Redmond, in which Microsoft helps fund and motivate the Greater Redmond TMA), most suburban cities were at a

competitive disadvantage under the first round GTEC criteria. This is because suburban cities tend to be in one of two situations[23].

1) They have geographic areas of modest employment/residential density served by modest levels of transit service which—given moderate additional resources—could produce measurable, but modest, reductions in work-related SOV travel.
2) They have geographic areas that (either currently or in the planned future) produce large SOV travel movements to/from population/employment centers, but current land-use patterns and transportation networks limit the use of non-SOV modes of travel.

In the first of these cases, not only do suburban cities not have the combination of employment density and street networks needed to provide good transit alternatives to SOV travel, they may not have the staff time and other resources needed to prepare competitive proposals/submittals, especially if the potential return on that time investment is low. That same lack of staff time limits their ability to network with smaller employers to educate them about the benefits of CTR programs, sell the GTEC vision, and create self supporting working groups—further limiting their competitive position. (That is, in a heavily budget-constrained world, it can be difficult for cities to justify expending limited staff time on long-term planning efforts when there are insufficient resources to meet other pressing issues of current importance to city residents and businesses.) Essentially, many suburban cities need GTEC funds in order to attain a position at which they can compete for GTEC funds.

In the second case, the potential for short-term reductions in peak period SOV travel is modest at best. However, given fairly substantial funding to allow significant transportation system improvements and/or land form changes that result from planned growth, substantial mode shifts would be possible to/from these areas. These mode shifts would result in very substantial reductions in the demand for new state highway capacity—especially given the growth expected/desired in population and employment—thus saving far more public funding than the cost of the needed improvements. However, because of the time required before these mode shifts could take place, these geographic

[23] Some cities fall into both categories.

areas did not compete effectively (or were not submitted for funding) under the first round GTEC funding criteria, with their emphasis on measurable SOV reductions.

In addition, even when cities have adopted plans calling for these changes, the development community has yet to routinely buy in to these land-use visions. Mixed use development in suburban areas is still not the "norm," and many developers and land owners remain unconvinced that mixed-use development in suburban areas will "sell." When combined with the slow economy, this belief further slows the potential speed (and certainty) with which planned land-use changes are likely to result in measurable changes in peak period SOV travel.

Consequently, the consensus of the project team and those interviewed for this project is that the criteria used for the first round of GTEC funding were both well thought out and effective—especially given the level of funding provided.

Nevertheless, in the long term, suburban areas are the most likely places where substantial population and employment growth will occur. Encouraging that growth to occur where the proper transportation and land-use investments will have the greatest long-term benefits in terms of reducing overall demand for peak period state highway capacity is good policy. Good examples of these kinds of outcomes can be found in the revitalized downtown cores of Kirkland and Redmond, which both have accepted considerable amounts of population and employment growth in the last ten years while also providing for a variety of activities (land uses), high levels of transit use, and considerable pedestrian activity. Consequently, more needs to be done to foster the provision of GTEC funds to suburban areas.

MOVING FORWARD WITH THE GTEC PROGRAM

On the basis of our discussions with WSDOT staff, local agency staff, and a variety of other interested people, the project team developed a number of potential courses of action for the GTEC program. These actions can be grouped into three basic categories:

- increasing support for the accomplishment of GTEC goals through non-GTEC funding mechanisms
- funding GTEC efforts directly
- refining the way in which the performance of GTEC programs can be measured to get the best out of the program.

Each of these topics areas is discussed in more detail below.

SUPPORT FOR DESIRED GTEC OUTCOMES OUTSIDE OF GTEC FUNDING

One of the key findings of this project was that many of the influential decision makers in the land development/land-use process have mixed reactions to GTEC's land-use goals and plans. An over-simplification of the view of GTEC development that the research team heard is, "Show me the money and I'll be happy to participate." That is, many suburban city officials are reluctant to push policies, plans, and financial incentives that encourage and support GTEC development at the expense of other political objectives/financial needs because they are not convinced of the financial/political payback for those actions. Similarly, developers are not convinced that GTEC-style development will give them a return on investment equal to what they can make from traditional, suburban, segregated development. Their combined concerns can be expressed as, "Will GTEC development sell? Will the conversion to a GTEC-style development actually encourage more development (and tax base) within my city? Are GTEC-style developments going to be financially sustainable for my city in the long term? If the GTEC development is successful, will my city receive the transportation improvements (transit service, infrastructure improvements) necessary to handle the dense travel demand created by that growth?"

The answer to these concerns—and perhaps the best way forward for GTEC—is to change the financial incentives, and thus the financial uncertainty, for development. When it is clear that "the money will come" for GTEC as certainly as for traditional developments, GTECs will grow. One problem is that although the state currently maintains a variety of funding sources ("pots of money") for economic development and transportation infrastructure improvement and operation (for example, just a very short list of groups that control or influence transportation or economic development funding includes; the Community Economic Revitalization Board, the Transportation Investment Board, the County Road Administration Board, the Economic Development Commission, the PSRC's Regional Project Evaluation Committee), the majority of these programs are not directly aware of the GTEC program, and their current funding priorities can produce outcomes that are contradictory to the goals of the GTEC program. Consequently, adjusting the prioritization processes of existing funding programs to include consideration of GTEC goals may achieve a considerable shift in the incentive/disincentive system in support of GTEC goals.

With such a shift, "funding" for GTEC-style land-use changes can become available without being strictly allocated by the legislature through the GTEC legislation. That is, the GTEC program does not have to specifically provide "the money"; rather, it can make that funding available by influencing how a variety of other funding decisions are made. For example, if the adoption of GTEC development patterns decreased the cost/risk of development (on the private side), or if adoption of GTEC plans increased the potential for regional/state transportation/development assistance funding allocated to a given city (on the public side), these groups would have financial incentives to act in ways that support GTEC goals.

One way to achieve this desired outcome is to change the funding prioritization process used by a variety of funding sources so that projects supportive of GTECs receive priority over projects serving non-GTEC areas. A good example of this concept was recently described by the King County Regional Transit Task Force, which—in response to significant budget limitations—recommended re-prioritizing county transit service to areas that offer the best productivity.[24] GTECs would be an excellent example of places

[24] http://seattletimes.nwsource.com/html/opinion/2013442238_guest16cooke.html

likely to result in highly productive transit service and would therefore rank highly in such a prioritization system.

Note that transit funding is entirely separate from current GTEC funding. It is normally controlled at the county level, not by specific cities. It is not a state revenue source. Yet, transit funding (and transit service) is key to the success and attractiveness of GTECs. Changing transit service allocation priorities to favor GTECs would in turn encourage cities to adopt GTEC development (because they would be assured of increased transit service levels.)

Similar changes at other levels of government that fund infrastructure and services would encourage cities to adopt GTEC policies and plans that would help them successfully compete for the funds that would provide the improvements that, in turn, would convince the private sector to invest in those cities.

In other cases, existing regulations and incentives conflict with the goals and objectives of GTECs. Often these conflicts are not intentional but are simply a function of a program's specific goals and/or implementation guidance. Revising these regulations to encourage GTEC-style development would further increase the incentives to adopt GTEC-compatible land uses.

An example of how one current process, well intentioned as it is, can result in actions contrary to GTEC goals comes from the state's concurrency regulations. One of the concerns with early outcomes from the state's transportation concurrency law is that many city/county concurrency regulations actually produce incentives for sprawl, rather than encouraging the dense, GTEC-compatible development the law was intended to support. Many cities/counties have adopted congestion-based concurrency systems in which developers have to pay for transportation improvements in the dense areas where congestion exists, but not in low density, outlying areas where local congestion has yet to form. However, these same low density, outlying areas contribute disproportionately large amounts of SOV traffic to state routes, which then congest and require expansion. That expense is then passed along to the state. The cost savings of development in those low density areas are passed along to buyers, who receive "more for their money" in the sprawling new exurban developments, increasing demand for similar development,

extending the sprawl, and further increasing demand for state route capacity—but not interest in increasing the tax revenue needed to pay for that capacity.[25]

Interviews done for this project with groups interested in promoting sustainable growth, supported the idea of creating more integration and cooperation to align agency intentions. It was pointed out that in relation to GTEC, at the state level, most smart growth and growth management functions are primarily the responsibility of growth management and local government service sections of the State Department of Commerce, not WSDOT. However, by linking GTEC to that and other agencies' efforts, the programs would leverage each others' intentions and increase the funding incentives available to cities and developers.

Similarly, significant benefit could be gained by working with regional transportation planning organizations (RTPOs), the Transportation Improvement Board (TIB), and the County Road Administration Board (CRAB) to change their project selection process so that projects that directly benefit GTECs are prioritized higher than projects that do not support GTECs. For example, roadway improvement projects, or funding for operational improvements, that directly served designated GTECs and that included attributes that supported non-SOV travel would receive a scoring boost in the project selection process over projects that did not contain those attributes. (Specifically, the rules for evaluating CRAB projects might be changed slightly so that projects within, or partially within, GTEC boundaries would receive additional points in the Pavement Condition, Sustainability, and Local Support categories. This would be done on the grounds that GTECs are more sustainable for the state as a whole, that pavement condition in those areas is important for directing growth to those areas, and that the GTEC designation indicates that other local resources are being directed to that geographic area. In this manner, arterials directly serving GTECs would score higher than other, similar projects in not only the Mobility category but other categories.)

Similarly, in non-transportation funding areas supported by the state, criteria used to determine funding awards (such as job creation funding) might be changed so that locations that fell within GTECs would be favored over those not located in GTECs, all

[25] Options for Making Concurrency More Multimodal, by Hallenbeck, M. E., D. Carlson, K. Ganey, A. Vernez Moudon, L. de Montigny, R. Steiner, Washington State Transportation Center (TRAC), December 2006

other criteria being equal. The result would provide financial incentive to cities and counties to identify and support GTEC development, and that financial incentive would not be dependent on the legislature directly allocating "GTEC funding."

The reasoning behind pursuing these changes is the same as that followed by King County's Transit Task Force. In an era of limited funding, the funding available should be spent on projects that provide the most return on investment. GTECs are designed specifically to limit the impact of growth and development on the state transportation system. Therefore projects that support GTECs *should* receive priority consideration for available transportation funding.

In addition to working cooperatively with other agencies to find ways to change prioritization strategies to support jointly desired outcomes, WSDOT can pursue specific changes in legislation/regulations that provide incentives for GTEC-style development or that remove limitations in the current concurrency legislation. Examples of specific actions include the following:

- Tax incentives can be provided to employers that locate within a half mile of high capacity transit stations (offsetting the higher land costs associated with dense development to encourage development in areas easily served by existing high capacity transit services).
- WSDOT can partner with other state or regional agencies with authority for GMA/land-use decisions that complement WSDOT's transportation responsibilities in order to effectively provide concurrency-style incentives/disincentives for new development based on a development's anticipated impacts on state highways.
- The state can provide economic incentives for smart growth/compact land development through other comprehensive measures, such as Maryland's *priority funding areas.*[26]

The advantage of more effectively integrating GTEC goals into the programs of existing, non-GTEC-specific funding sources is that these changes could significantly increase the financial incentives to participate in the GTEC program, even if the GTEC program received little or no direct funding from the state legislature. The disadvantage

[26] http://planning.maryland.gov/ourproducts/pfamap.shtml

is that even if successful, GTEC goals would, by definition, only be part of the prioritization process for these other programs.

DIRECT GTEC FUNDING

Although a benefit of the approach described above is that it would take advantage of a wide variety of existing programs to assist in the achievement of GTEC goals, a drawback is that those goals would most likely be of secondary consideration to those programs. Therefore, it is important to consider how WSDOT could most effectively move forward if given specific GTEC funding in the current legislative session. GTEC funding will allow WSDOT to advance GTEC goals directly. Therefore, the project team's recommendations about how best to use such dedicated funding are a function of the amount of funding available. We propose two simple funding levels:

- limited (equivalent to the first round funds)
- moderate to extensive.

With both levels of funding (as well as with a scenario in which no new GTEC funding is provided), we recommend that WSDOT pursue work with other state and local agencies to coordinate their project prioritization and selection procedures to more effectively integrate statewide programs to their mutual benefit, as described in the previous section.

Limited Direct GTEC Funding Support

Under this scenario, WSDOT is assumed to receive another round of GTEC funding similar in size to that received under the first round. Under this scenario, there is not enough GTEC-specific funding to dramatically change the direct financial benefit that cities can obtain from adopting GTEC land-use plans. However, there is sufficient funding to obtain significant SOV reduction benefits through the expansion of the existing CTR program, the "low hanging fruit" for the GTEC program.

Various GTEC and CTR participants expressed a variety of good ideas about how minor modifications to the approach of the first round of GTEC funding could make it more effective. WSDOT can pursue several of these ideas at the legislative level; these will result in reductions in SOV travel even if GTEC funding is not provided as part of

the current legislative session. Ideas that should be considered for low and no-funding scenarios are the following:

- Change the CTR regulations to allow smaller employers within GTECs to be eligible for inclusion in CTR funded activities.
- Change the CTR/GTEC rules to encourage multi-jurisdictional agreements so that CTR/GTEC employer commute trip reduction programs can more effectively work across jurisdictional boundaries.
- Expand the definition of GTEC-eligible geographic areas to include corridors and, especially multi-jurisdictional corridors.
- Expand the definition of GTEC eligible geographic areas to include high density employment centers in addition to mixed-use, dense urban areas,

During discussions held as part of this project, several CTR coordinators indicated that the current CTR regulations prevented them from working with employers that would eagerly participate in commute trip reduction activities but that were not eligible for the CTR program. Jurisdictions that received first round GTEC funding were able to overcome those restrictions. Many small companies are located in suburban areas, and CTR activities can be beneficial in recruiting and retaining employees in these firms. Consequently, these firms will be enthusiastic CTR participants, but their smaller size limits their ability to participate in those activities. Adding them to existing CTR programs will increase CTR participation at very modest cost. Similarly, the project team consistently heard requests for changes in the CTR and GTEC programs that will encourage multi-jurisdictional agreements/coordination. The project team agrees that, with or without the availability of new GTEC funds, a modest relaxation of current CTR rules so that CTR programs can incorporate interested employer sites that are not already part of eligible CTR sites will result in measurable decreases in single occupant vehicle use during commute periods.

The geographic/land-use features that encourage multi-modal travel options are present in corridors that pass through multiple jurisdictions as much as through dense, single jurisdiction centers. This is especially true along the emerging Bus Rapid Transit and Light Rail corridors in the Puget Sound region. If multiple cities can be encouraged to work together along these corridors, it is likely that larger trip reduction benefits will

be obtained than if jurisdictions work independently. It is also likely that some economies of scale will occur if GTECs/CTR activities are shared across multiple jurisdictions, thus increasing the benefits gained from each CTR/GTEC dollar spent.

Several other good ideas were expressed by project participants to improve the GTEC program if it is funded at levels similar to those in the first round of funding. These ideas include the following:

- Simplify the application process, making the applications smaller, less time consuming, with a greater emphasis on actions to be taken and outcomes expected.
- Explicitly state that the GTEC program is a liberalization of the basic CTR program.
- Reduce the 100 percent local match requirement.
- Provide GTEC funding for more expanded, more flexible CTR programs, where cities demonstrate progress toward adoption of GTEC land uses, such as
  - adoption of new GTEC friendly policies and plans
  - permitting of under-represented but compatible land uses
  - recent construction of under-represented land uses
  - the addition of new multi-modal transportation infrastructure.

Moderate to Extensive Direct GTEC Funding Support

If direct funding for GTEC support is available, a variety of options for WSDOT action will be possible. The first of these actions is expanding the reach and effectiveness of the current CTR program. As funding grows, WSDOT can consider using that money to directly fund/influence the provision of transportation services that support GTEC land uses, as well as to leverage even larger funding amounts from other agencies that support GTEC development and CTR goals.

The amount of funding available will determine whether the best use of GTEC-specific funding will be to concentrate on very specific GTEC projects or to leverage larger funding sources.

At funding levels that are not much greater than the initial round of GTEC funds, a logical course of action will be to simply expand the current process while adopting some of the suggested modifications listed above. With additional flexibility in how CTR funds can be spent and consideration for multi-jurisdictional programs and/or multi-jurisdictional corridor-based programs, more GTEC funding may not only expand on the current GTEC funding programs but also expand those programs into suburban geographic areas that are likely to both provide reasonable commute period SOV reductions and serve as centers for GTEC land-use changes. For example, GTEC funding might be used to further enhance or promote multi-modal travel options within the new bus rapid transit (BRT) corridors being developed in various parts of the state.

While using GTEC funds to expand and enhance current CTR funding will be the best mechanism for achieving short-term reductions in commute period SOV use, larger mode shifts will occur in the long term if the land-use changes envisioned by the GTEC legislation occur.

Unfortunately, as noted in earlier sections of this report, actual land-use changes—and the mode shifts that result from them—will occur more slowly than direct CTR-based changes. In addition, given the current state of the economy and the difficulties that several suburban cities have described in encouraging GTEC-friendly development within current suburban landscapes, more substantial direct funding assistance may be required to get these developments built.

Therefore, if fairly large GTEC funding allocations were provided, they could be applied to directly support these land-use changes. This could be accomplished in several ways. GTEC funding could be used to

- provide a direct subsidy/contribution toward transit-oriented development within a GTEC
- provide a (partial) funding or loan guarantee toward such development, reducing the financial risk of developers and, consequently, providing the necessary financial incentive to build these developments
- construct or otherwise support provision of transportation infrastructure within GTECs that complete/provide necessary transportation links as part of a package of funded mixed use developments within a GTEC.

In each of these cases, the key to success will be that GTEC funding is part of a larger partnership among transit agencies, cities, government agencies, and private developers. A number of TOD (and other kinds of government supported) developments are already funded by various public agencies. For example, the downtown Redmond transit center and TOD were jointly developed by King County DOT, the City of Redmond, and Sound Transit.[27] The project converted an existing surface level park-and-ride and transit center into a multi-story parking garage with adjacent transit center and adjacent transit-oriented development (see Figure 12). The TOD is a key piece, but only a piece, of Redmond's redevelopment effort, which is converting its traditional downtown into a mixed-use, walkable, multi-modal center.

Figure 12: Redmond's Transit-Oriented Development

As an example, GTEC funds could be used, along with some combination of government housing agency grants, local city support, transit agency support, economic development assistance, and private investment, to help construct mixed-use developments around Sound Transit rail stations (either Sounder or Link stations) or other major transit centers. Sound transit rail stations and many larger transit centers have the potential to serve as superb "multi-modal nodes," much like the Metrorail stations served as keys to redevelopment in Arlington County (see page 9).

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27 http://www.kingcounty.gov/transportation/kcdot/PlanningAndPolicy/RegionalTransportationPlanning/TransitOrientedDevelopment/Projects/Redmond.aspx

Alternatively, the state legislature could use GTEC funds similarly to the way the U.S.DOT has used funding set aside by Congress under the Transportation Infrastructure Finance and Innovation Act (TIFIA). TIFIA funds are commonly used to provide credit assistance to private developers of transportation infrastructure—especially for "risky" projects, which in the TIFIA case means "new transportation ideas" such as Managed Lanes that do not have a long operating history to provide the credit markets with confidence that investments in those projects will perform as expected financially. As stated on the TIFIA website, "The TIFIA credit program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital. Each dollar of Federal funds can provide up to $10 in TIFIA credit assistance and support up to $30 in transportation infrastructure investment."[28]

This financial situation is similar to that of GTEC-style land-use redevelopment. That is, many market signs indicate that mixed-use, walkable development in appropriate locations should be very successful. However, the "non-traditional" nature of these developments makes them appear risky to developers and financial institutions. This increases the perceived risk associated with their development and, consequently, the interest rates available for development funding and thus the actual cost of (and actual risk associated with) those investments.

Consequently, if the goal were to spur GTEC-style land-use changes, then applying at least a portion of the available GTEC funding to support private sector investment in GTEC land development could be an excellent expenditure of state funds in that they would spur private development, boost the local economy, highly leverage state funds, and encourage development in locations that would minimize that development's impact on the need for other state resources. Combining this credit assistance with other government agency economic development plans in GTEC-designated areas would maximize the transformational power applied to these areas, maximize the development occurring, and thus maximize the achievement of GTEC's mode shift goals. It would also provide powerful economic and financial incentives for urban areas to adopt GTEC plans.

TIFIA funding is available in three forms:

[28] http://www.fhwa.dot.gov/ipd/tifia/defined/index.htm

- secured (direct) loan
- loan guarantee
- standby line of credit.

In addition to these mechanisms, the legislature could consider using GTEC funds as direct investment in the project (with a possible financial return on that investment), or as a direct grant, depending on the desire/intention of the legislature. In all cases, it would be important that the GTEC funds be only part of a larger, multi-agency effort to spur development in geographic areas that are well served by multi-modal transportation networks and that the development be built in ways that facilitate the use of all modes of travel.

Assuming that the staff support and direction for GTEC remained WSDOT's responsibility, adopting some form of the TIFIA model to promote land-use changes that result in lower traffic volume demand would be a huge change in direction for the Department. Currently, WSDOT plays no significant role in land-use decisions. Under the TIFIA-style GTEC model, the Department would still not have a direct role in *land-use planning*; however, it would have the ability to financially influence those decisions, at least at a modest level. While this would be a significant departure for the Department, it would allow the Department to influence the factors that most directly result in "unfunded demand" for roadway capacity, thus, allowing the Department to more effectively address future state travel demand.

Finally, this study has not examined the legal changes needed to allow these different types of TIFIA programs to be implemented. Additional work is needed in that area if this is an area WSDOT or the legislature wishes to pursue. If the WSDOT and the legislature adopted a version of the TIFIA model, they should also adopt the stringent TIFIA project review process. This is because although financial incentives are good, those incentives should not be so strong that they result in poor business decisions. Instead, such a program should allow projects with a high potential of success to move forward because the available GTEC funding reduces the risk, not because it removes all risk from the private sector's decision making. The selected projects should be either key to the development of a GTEC (such as the Redmond TOD, which included the redesign of the downtown transit center—a key transportation link for the GTEC) or likely to

cause the GTEC to reach "critical mass." That is, it would support both enough density and land-use mix to provide good intra-GTEC travel and thus prove the viability of the GTEC concept in that location, encouraging other development to then proceed in the area without direct state support.

Another mechanism for providing financial support to GTEC-style development would be to modify the state's approach to tax increment financing, so that local tax revenues created by dense new development could be more effectively captured and directed back to the support of the GTEC.

MEASUREMENT OF GTEC "SUCCESS"

The final set of recommendations from the project team involves the performance measures used to judge the attainment of GTEC goals. These measures should be used both to select among alternative projects to fund and to measure the outcomes of the program.

The appropriate program measures will vary, depending on how the legislature and WSDOT choose to move forward with the GTEC program. The adopted performance measures need to reflect the goals of the program. As the program goals become defined more broadly than just reducing the amount of peak period SOV on state roadways, a variety of other measures may become important to track.

If no additional GTEC funding becomes available, or if only very minor sums of GTEC funding become available, no significant changes in performance measures are recommended unless the state believes it is in the state's interest to promote changes in suburban land use at the expense of further current peak period SOV reduction, as the current performance measures do select the programs most likely to produce near-term SOV use. Because most suburban areas lack the density of larger central cities, they are unlikely to compete effectively with those larger, denser areas in terms of near-term SOV reductions due to expanded CTR programs.

However, if the GTEC program decides that a more long-term view is warranted, some revision to current guidelines will be warranted. A long-term view suggests that because considerable growth is expected in suburban areas, and because suburban areas have traditionally high SOV commute mode split, it is in the interest of the state to

promote more multi-modal growth in suburban areas. To achieve this end, WSDOT will need to change the GTEC performance criteria—and consequently its performance measures—in order to identify the best suburban locations for GTEC assistance and the changes needed in those areas. This will entail measuring the land-use changes that could or should be occurring and even policy and plan changes that will promote or enable those land-use changes.

Finally, if larger, direct GTEC funding becomes available and more direct financial assistance to encourage land-use change becomes possible, then even more land-use-oriented performance measures will be needed. For example, if GTEC funds are used either directly or indirectly to affect land-use policies and plans, it will be important to track those outcomes.

Consequently, in addition to the direct measurement of changing mode split, the project team suggests the measurement of at least seven types of actions to indicate important progress toward meeting overarching GTEC goals. Some of these measures will track outcomes of agency actions. Some measures will track the fact that specific actions have been taken (but the outcomes from those actions will be too far in the future to be observable). Some will track funding expenditures by various groups/agencies in order to understand the general support for the desired actions undertaken to aid GTEC development. This combination of different types of measures is needed to describe the types of progress being made in both short-term and long-term activities that reduce peak period single occupant vehicle use. That is, in some cases GTEC supportive actions taken now will directly reduce peak period SOV use. In other cases, actions taken by cities (such as changes in policy or the adoption of new land-use plans) “set the table” for future land-use changes that will enable these SOV reductions to occur. It is important to measure these changes in order to show the level of support GTEC is receiving, even when these plans or changes in policy—by themselves—do not result in reductions in peak period vehicle traffic.

Which combination of these measures is used in addition to the SOV reduction measures will depend on the amount of GTEC funding, how WSDOT and the legislature plan to allocate GTEC resources, and the relative priorities of those in charge of GTEC.

The basic categories of actions and outcomes that may be measured to describe the performance of the GTEC program are as follows:

1) creation or expansion of programs that reduce the use of SOV travel while promoting other modes of travel (e.g., CTR)
2) adoption of the policies/plans that are required to achieve changes in land use
3) physical construction of new transportation infrastructure that can be expected to reduce SOV use (bike/walking paths, transit facilities)
4) physical construction of new mixed-use development built within GTEC designated areas
5) adoption of joint development plans or guidelines by multiple agencies that support GTEC development
6) the value of GTEC-supported development
7) the size (number of housing units, square footage of retail, number of jobs provided) of GTEC-supported development.

The first set of measures is intended to track the expansion of existing CTR programs. These will be particularly appropriate if only limited GTEC funding becomes available and the primary intent of the GTEC program remains the cost-effective expansion of the CTR program. They will measure specific factors such as the number of employers covered by a program, the number of employees covered by the program, the number and size of private groups or companies supporting the commute trip reduction effort, and the number of cities involved in the effort.

The second set of measures will track actual changes in land-use policies at the local level. Because land development takes time and is subject to market conditions, these measures can be used to help determine whether local agencies are doing what is within their power in the short term. That is, are they adjusting their land-use policies and comprehensive plans in a manner that will support the long-term land-use changes that encourage and support more multi-modal travel? These measures can be used to track both the intent and performance of local jurisdictions. As cities adopt plans and policies to support GTEC goals, a city's "GTEC rating" will improve. A "good score" will identify a city that has created land-use policies and plans that encourage and support

multi-modal travel, and that ensures that specific, valid land-use plans are in place to produce an eventual land development pattern encouraging low SOV use. A "very good" rating will indicate not only that a city has created the plans/conditions necessary for good multi-modal transportation but has also coordinated those plans with other local cities and agencies to provide the conditions necessary for multi-modal travel on both ends of a commute trip.

The third set of criteria will measure actual changes in land use at the local level. This set of measures will specifically measure whether the existing or funded transportation network is attractive to multi-modal travel. If the network is not complete, it will indicate whether funds have been set aside and feasible plans exist for completing the network.

The fourth set of measures is intended to track the physical changes in land use that will occur as new, less developed GTECs grow. These measures will not only examine the amount of new development occurring but will also ensure that the mix of development and its design is conducive to multi-modal travel alternatives. This set of measures will be particularly important if the GTEC program wishes to adopt TIFIA-style funding for land-use changes. Under that scenario, this set of measures will be a good indicator of the number of new developments built with GTEC support. Even without the need to account for the effects of direct GTEC funding, tracking the extent of development (square footage of commercial space, number of residential units or populations, number of employees within a GTEC) will serve as a good indicator of the multi-modal travel potential of that center.

The fifth set of measures is intended to track the effectiveness of the integration of GTEC goals and objectives into other agency efforts. As noted early in this report, one good way to expand the effectiveness of the GTEC program will be to make sure its core objectives are more directly included in the prioritization and project selection processes of other agencies. This set of measures will identify those changes in process and identify how those changes result in either land uses that have lower impacts on state highways or project selection that directs additional transportation funding to GTEC areas, thus supporting further GTEC development. In addition, if direct GTEC financial support of land-use changes becomes possible, measures within this category will be used

to track both the level of interagency cooperation and the economic impact (development) being supported with GTEC funding.

The sixth set of measures is intended to track the financial leverage of GTEC funding achieved if a TIFIA style system is implemented. These measures will then track the financial (leveraged) activity made possible by GTEC.

The final set of measures is intended to convert these same measures into estimates of the number of people that benefit from direct GTEC funding. This will include all of the people working/living in new developments supported by the GTEC program.

PROJECT SUMMARY AND RECOMMENDATIONS

Key findings from this report are the following:

- To date, GTEC has effectively concentrated its available funding on those cities and locations which can produce the greatest near term reduction in commute period SOV traffic, this results in most GTEC funding being awarded to larger urban areas.
- Different cities have different expectations for GTEC program ranging from a simple expansion of their CTR efforts, to seeing the program as a potential source of transportation improvement funds, to a policy process that supports redevelopment of their traditional city centers.
- GTEC-style land use development often involves a higher level of risk and uncertainty for municipalities and private developers than more traditional development patterns, especially in suburban city environments.
- GTEC is a small, new program which incorporates a significant land use and behavior-change component that is positioned the public transportation division of the Department of Transportation, an agency that is not responsible for local land-use decisions.

To increase the opportunity for GTEC influence and success, the report makes several broad recommendations supported by specific action alternatives that are discussed in the main text. We recommend that the state does the following:

- Increase the amount of flexibility afforded to local jurisdictions under the current CTR program, to allow existing CTR programs to incorporate "willing participants" that currently do not qualify for those programs.
- Simplify and shorten future GTEC funding applications.
- Revise and align funding priorities from all state sources (e.g., CRAB, DOE, Commerce etc.) to increase the priority ranking of projects within GTEC areas because development within GTECs will provide overall efficiencies for each of those agencies.

- Provide a variety of direct and indirect financial incentives and a greater level of certainty that local investments in GTECs will be supported by state and regional funding decisions.
- Align WSDOT's GTEC efforts with growth management services in the Department of Commerce.
- Consider use of credit guarantees similar to those used by the federal TIFIA program and tax increment financing as tools to support municipalities looking to create GTECs or attract development to existing designated GTEC locations.