

SENATE BILL 375 AND THE SACRAMENTO REGION: WILL TRANSIT FUNDING
CHALLENGES DERAILED PLANS FOR SMART GROWTH?

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THESIS

Submitted in partial satisfaction of
the requirements for the degree of

MASTER OF PUBLIC POLICY AND ADMINISTRATION

at

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

SPRING
2009

SENATE BILL 375 AND THE SACRAMENTO REGION: WILL TRANSIT FUNDING
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Abstract

of

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Statement of Problem

Senate Bill (SB) 375 plans to reduce greenhouse gas emissions in California by creating high-density, transit oriented development based communities that emphasize transit as a preferred mode of transportation. With a focus on the Sacramento region, it is uncertain as to whether the issue of transit funding will be a significant challenge facing the region's ability to meet the goals of SB 375.

Conclusions Reached

Case study analyses revealed that transit funding will be an important factor in the Sacramento region's ability to reduce greenhouse gas emissions in response to SB 375. However, the region will need increased levels of funding to expand its transit system beyond its current state. Thus, future policies will need to address options for generating additional transit revenue.

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Chapter 1

INTRODUCTION

While the transportation sector is a vital component of daily activity, it is also one of the nation's largest contributors of Carbon Dioxide (CO₂), a greenhouse gas (GHG) scientists believe is linked to the modern phenomenon known as Global Warming (Ewing, Bartholomew, Winkelman, Walters, and Chen, 2008). Reducing the amount of vehicle miles traveled (VMT) by cars and light trucks is one strategy to curtail transportation related GHG emissions. Further, "smart-growth" proponents believe that the development of high-density, compact communities is a means to accomplish a reduction in VMT, as opposed to communities characterized by high levels of VMT and a built environment located far away from daily destinations such as work or school (Ewing, et al., 2008, p. 2).

Senate Bill (SB) 375, signed into law on September 30, 2008, is the first government regulatory act in California that attempts to reduce GHG emissions through encouraging lower levels of VMT. As a successor to Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, this bill attempts to reduce GHG emissions from cars and light trucks by tying together land use and transportation planning into one process, with a major emphasis on creating high-density compact development. A key element in this process of shifting development from low to high density involves the use of public transit services, whereby people forgo the automobile and switch to using the bus, light rail, or passenger rail as the primary modes of transportation. This type of development is also known as transit-oriented development (TOD).

With transit playing such a vital role in meeting the ultimate goals of SB 375, it is fundamental to consider the issue of transit funding. Specifically, it is important to examine whether any restrictions or constraints on sustainable funding will inhibit TOD, VMT reduction, and ultimately the success of SB 375. From a regional perspective, I am interested in analyzing how such challenges will affect the Sacramento, California region. This thesis focuses on analyzing the effect of sustainable funding challenges on the TOD landscape that SB 375 envisions for the Sacramento metropolitan area. This first chapter offers an introduction to the issue in the form of sections discussing SB 375 and transit funding in California.

What is Senate Bill 375?

In 2006, California Governor Arnold Schwarzenegger signed into law, AB 32, the California Global Warming Solutions Act (authored by Assembly Members Fabian Nuñez and Fran Pavley). This landmark bill was the first law in the nation to set GHG emission limits at the state level, and it aims to bring the State's emissions back down to 1990 levels by 2020 (a 25 percent reduction) through mandatory emission reporting for significant sources (Environment California, 2006). The California Air Resources Board (ARB) is the state agency responsible for monitoring GHG emissions sources under AB 32, which established specific milestones en route to the goal of a 25 percent GHG reduction.

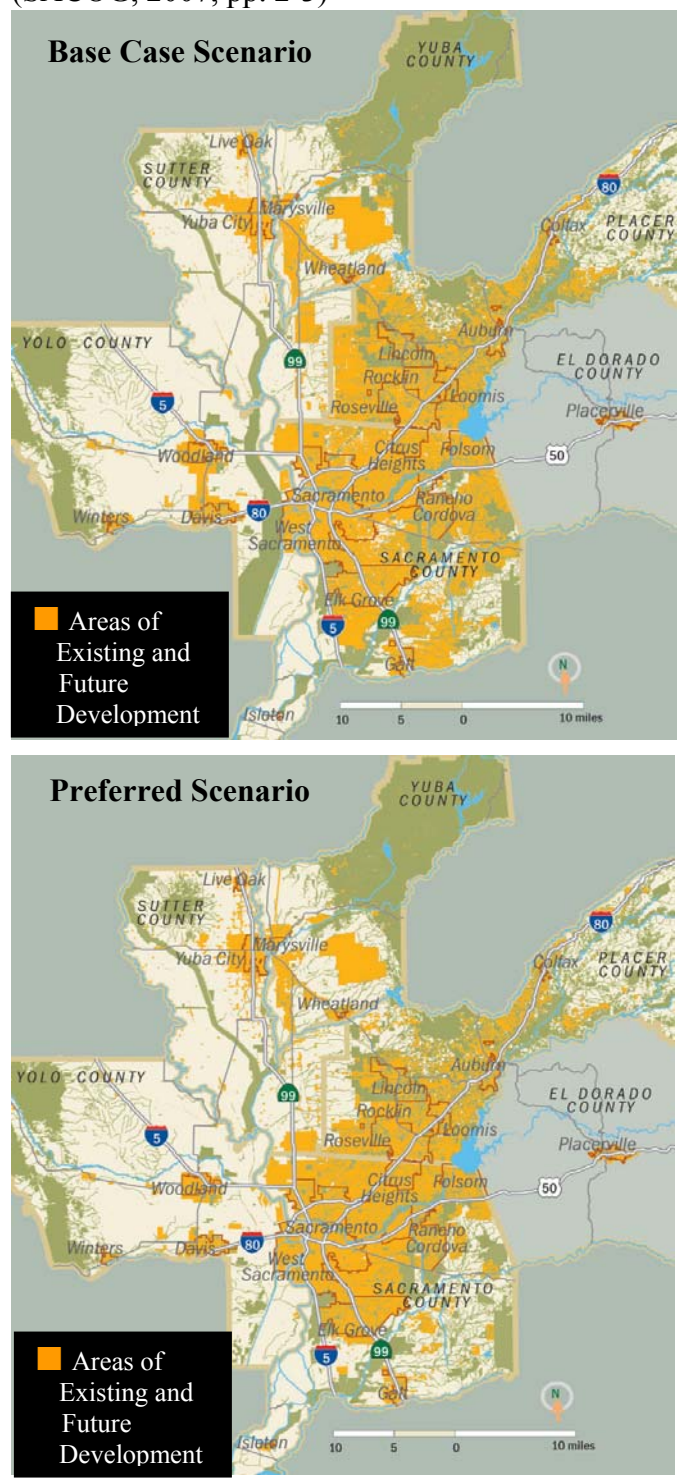
Following the lead of AB 32, Governor Schwarzenegger signed SB 375 into law on September 30, 2008, to focus on the transportation and land use sectors as significant sources of GHG emissions. This bill, authored by California State Senator Darrell

Steinberg, plans to enhance the state's ability to reach the GHG reduction goals set forth by AB 32 by targeting land use and transportation planning together as a major reduction strategy (Office of the Governor, 2008).

SB 375's development goals focus on controlling "urban sprawl," a consequence of land use characterized by "leapfrog" or scattered development and large expanses of low-density or single-use developments (Ewing, et. al., 2008, p. 20). In a general sense, urban sprawl involves "metropolitan decentralization" or "suburbanization" that occurs over time as a larger share of a metropolitan area's residential and/or business activity moves outside of its central location (Wassmer, 2000, p. 2). Urban sprawl communities typically depend on the automobile as the primary means of transportation, and thus, represent a major source of GHG emissions (via long automobile commutes).

To combat urban sprawl, SB 375 plans to link land use decisions and transportation planning in one regional-level process and emphasize sustainable, compact development resulting in fewer VMT, and thus fewer GHG emissions from cars and light trucks. In this type of smart-growth development, one of the major strategies is to create higher density communities that result in reduced VMT through utilizing a close proximity to transit services, as well as biking and walking, as preferred modes of transportation. Figure 1 is a visual example from the Sacramento Area Council of Governments (SACOG) of how development in the Sacramento region might look in the year 2050 using existing patterns (Base Case Scenario) versus high-density, compact patterns (Preferred Scenario).

Figure 1
SACOG Base Case and Preferred Scenarios for Growth in 2050
(SACOG, 2007, pp. 2-3)



The SB 375 process involves ARB setting region-specific GHG reduction targets (for specific years such as 2020) for cars and light trucks, followed by each region adding a “Sustainable Communities Strategy (SCS)” into their long-term regional transportation plans (RTPs) to use the best development and transportation solutions to achieve the emission targets. RTPs are already products of California’s 18 Metropolitan Planning Organizations (MPOs), so each respective SCS will be an add-on to RTPs and offer a forecasted development pattern and the corresponding transportation network that best suits this pattern (Walker and Badgley, 2008). If an SCS does not meet the ARB target, SB 375 requires an MPO to develop a second plan, an Alternative Planning Strategy, which is separate from the RTP but lays out an alternative plan to meet the target.

Further, as incentives for compliance, transportation projects must be consistent with a region’s SCS to be eligible to receive federal, state, and local transportation funding. In this sense, transportation funding acts as a carrot dangled in front of cities and counties to conform general plans to the SCS (Walker and Badgley, 2008). As an additional incentive, SB 375 offers a California Environmental Quality Act (CEQA) exemption for “transit priority projects” that meet certain criteria such as a minimum net density of at least 20 dwelling units per acre or proximity within one-half mile of a major transit stop or high quality transit corridor (Walker and Badgley, 2008).

The Role of Public Transit in SB 375

CEQA exemptions aside, SB 375’s major impact on transit in California is the emphasis on TOD and a shift in thought by California lawmakers that transit services, not traditional highways, are vital to meeting the state’s future growth and air quality

demands. By tying land use and transportation planning together with an interest in building high-density compact developments, SB 375 emphasizes the development of communities around transit stations and services such as bus and light-rail travel, as opposed to automobile dominated sprawl communities that are predominant today.

Furthermore, SB 375 offers the potential for California transit agencies to receive a major benefit from the transportation funding elements inherent within the SCS provisions. Decisions made by MPOs about the allocation of transportation funds must be consistent with that region's SCS, land use plan, and transportation policies; and transportation funding will be dependent on the synchronization of these plans.

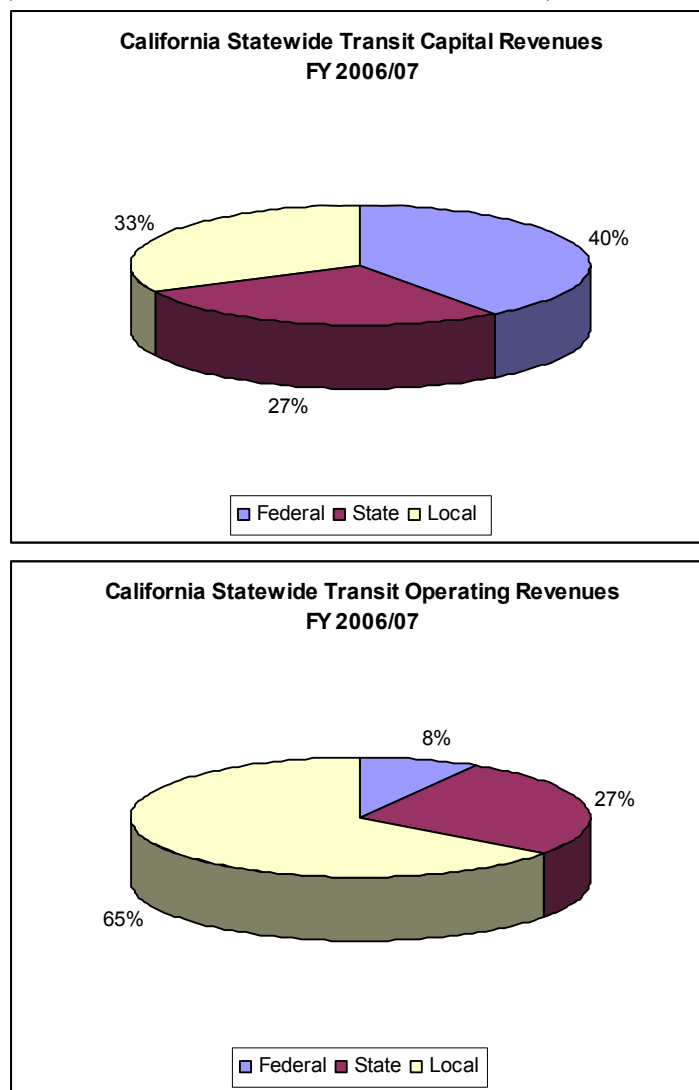
Therefore, if compact TODs become a popular development type en route to achieving a SCS's GHG reduction target, there is potential for the priority of transportation funds to flow to transit related projects over highways. However, before making this conclusion, it is imperative to understand the current state of transit funding in California, and the major obstacles its sources face with regard to sustainability. The next sub-sections will provide a brief overview of how California funds transit, followed by a discussion of the major challenges the system presently faces.

Transit Funding in California

At a time when transit ridership is increasing and legislation such as SB 375 has promoted transit as a crucial component of California's future growth, it is helpful to understand how California funds its public transit systems. Whether from federal, state, or local sources, the manner in which transit agencies raise and spend funds has a dramatic effect on the look and performance of their transit systems. Although this

section does not provide a complete and thorough explanation of every single source of funding, it describes the major sources of transit funding at the various levels of government. Figure 2 displays a percentage breakdown of California statewide transit capital and operating revenues by federal, local, and state sources.

Figure 2
Breakdown of California Statewide Transit Revenue Sources
(California State Controller's Office, 2008)



Federal Transit Funding

Federal transit revenues result mostly in part from the federal per-gallon excise tax on motor vehicle fuels (18.4 cents for gasoline, 24.4 cents for diesel), deposited in the Federal Highway Trust Fund (FHTF). For each gallon of motor vehicle fuel sold, the Mass Transit Account (MTA) within the FHTF dedicates 2.86 cents to transit, representing approximately 20 percent of total federal revenues apportioned to states (California Budget Project, 2006). The Federal Transit Administration (FTA) administers the disbursement of federal transit funds through several major assistance grant programs outlined for eligible activities.

The FTA identifies grant programs by name or its corresponding section number in Title 49 of the United States Code. For example, the "Non-Urbanized Area Formula Program" and the "Section 5311" grant program refer to the same FTA program. California receives funding for 14 different FTA grant programs (via 12 different FTA sections), but the 5307 – Urbanized Area Formula Program and 5309 – Capital Investment Programs (for Fixed Guideways, Bus & Bus Facilities, and New Starts), receive the predominant share of funding.

The 5307 program provides funding for transit capital and operating assistance to incorporated urbanized areas with populations of 50,000 or more and apportions funding based on legislative formulas. Depending on an area's population, formulas are either population based, or calculated using a combination of population and bus revenue vehicle miles; bus passenger miles; fixed guideway revenue vehicle miles; and fixed guideway route miles (FTA, 2008a). For larger urbanized areas with a population of

200,000 or more, these areas can only use 5307 grants for capital purposes, whereas smaller urbanized areas can use 5307 grant funds for both capital and operating expenses. In addition, larger urbanized areas must dedicate at least one percent of funding for transit enhancements such as historic preservation or landscaping.

Section 5309 grants fund three separate capital investment programs. The Fixed Guideway Modernization Program provides funds for capital purposes on fixed guideway transit services such as rail, ferry, cable cars, and buses operating in exclusive rights of way (Metropolitan Transportation Commission, 2008). The Bus and Bus Facilities Program provides capital assistance for new and replacement buses, and related equipment and facilities. Eligible capital projects include the replacement or expansion of buses or bus facilities. The New Starts Program provides funding for building new rail, bus rapid transit, and ferry systems, or extensions to existing systems. The non 5307 and 5309 programs, to name a few, provide funding for purposes such as metropolitan and statewide planning (5303, 5304), transportation for the elderly and persons with disabilities (5310), and assistance to non-urban rural areas (5311).

With regard to funding levels, FTA administers its financial assistance through a federal transportation “authorization.” The current authorization is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law in August 2005, and set to expire on September 30, 2009. SAFETEA-LU authorizes specific dollar amounts for each program, and each year, Congress provides an annual appropriation to fund the programs specified in SAFETEA-LU. The FTA, upon receipt of this appropriation, apportions and allocates funds through

legislative formulas or discretionary authority on an 80/20 federal/local funding match basis, unless otherwise specified (FTA, 2008a). Of the \$1.202 billion apportioned to California in Federal Fiscal Year 2008, Section 5307 and 5309 grants made up \$1.115 billion (\$696 million for 5307, \$419 million for 5309) of this total (FTA, 2008b). Federal funds are the largest source (approximately 50 percent) of transit capital revenues, but the smallest source (approximately 10 percent) of transit operating revenues (California Transit Association, 2008).

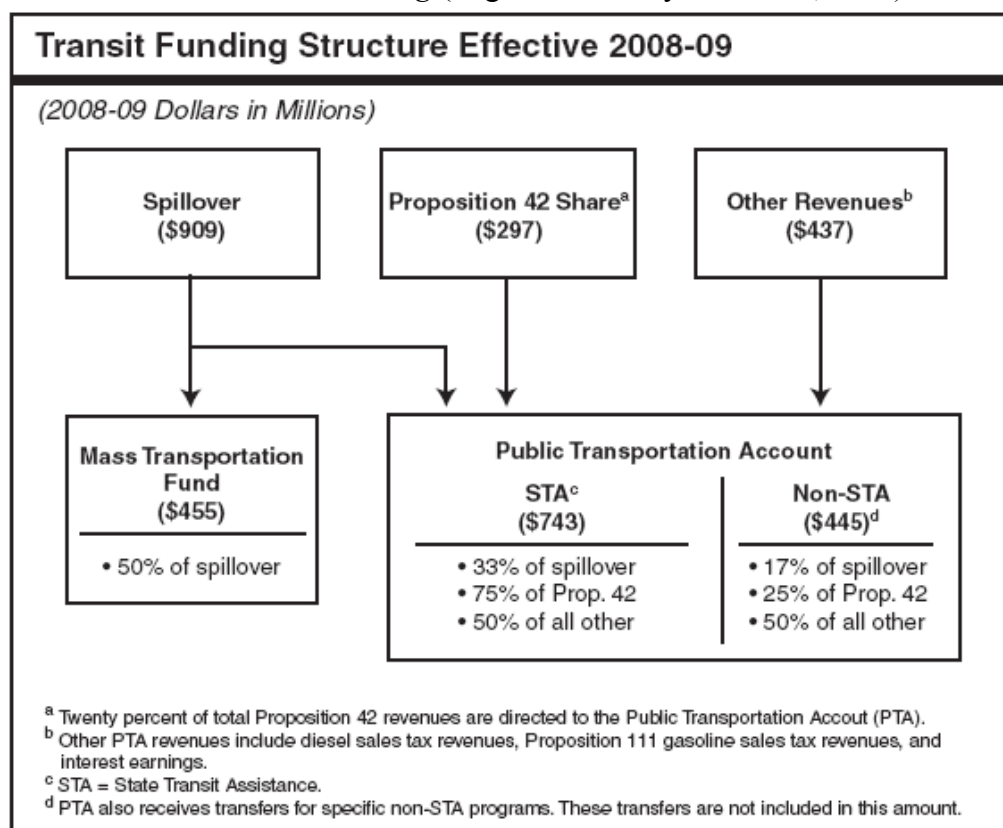
State Transit Funding

Like federal funding, state transit funding also comes from a multitude of programs. The Transportation Development Act (TDA), created in 1971, provides two major sources of funding for transit: the Local Transportation Fund (LTF) and State Transit Assistance (STA). The LTF receives revenues derived from $\frac{1}{4}$ cent of the $8\frac{1}{4}$ cent (as of April 1, 2009) general sales tax collected statewide. The State Board of Equalization, based on sales tax collected in each county, returns revenues to each county's LTF (California Department of Transportation, 2005). In the most recent State Controller's Office (SCO) *Transit Operators and Non-Transit Claimants Annual Report* for the Fiscal Year (FY) 2006/07, LTF revenues totaled approximately \$1.3 billion in FY 2006/07 with the majority (approximately 95 percent) dedicated to transit operations and a small portion dedicated to capital (SCO, 2008).

The STA has historically received all of its funding from formulated distributions of the statewide sales tax on gasoline and diesel, deposited in the Public Transportation Account (PTA). Prior to 2007, STA funding was modest, averaging roughly \$100

million per year over a 10-year period. However, because of General Fund loan repayments and high gasoline prices, STA funding reached \$624 million in FY 2007/08, and \$306 million (prior to the February 2009 revision) in FY 2008/09 (Legislative Analyst's Office, 2007; California Department of Finance, 2008). The FY 2009/10 Budget, passed in February 2009, dealt a devastating blow to STA by eliminating sales tax funding over the next 5 years, which the next sub-section will discuss further. Figure 3 exhibits the statutory flow of funding from the PTA to the STA.

Figure 3
State Transit Assistance Funding (Legislative Analyst's Office, 2008)



One of the largest, yet most volatile sources of STA revenues has been Spillover, established by the TDA in 1971, and separate from Proposition 42 despite calculated

from the same source of gasoline sales tax revenues. Spillover to the PTA occurs when revenues from the sales tax on 4.75 percent of all taxable goods including gasoline is greater than 5 percent of all taxable goods *except* gasoline. In other words, Spillover occurs when gasoline prices increase at a faster rate than all other taxable goods. As the California Constitution does not protect Spillover, it has been a regular source of diversion to the General Fund, and since FY 2007/08 (SB 79); the state skims 50 percent of all Spillover off the top for General Fund relief each year.

The SCO allocates STA funds to recipient Regional Transportation Planning Agencies (RTPAs) and county transportation commissions through a combination of population and fare revenue (Public Utilities Code sections 99313 and 99314). Like LTF funding, STA funds are eligible for both transit operations and capital, but the majority has historically been dedicated to operations.

A new source of STA capital funding is the Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA) transit grant program created as part of the Proposition 1B – Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 (Prop 1B). Prop 1B authorized a total of \$3.6 billion in general obligation bond proceeds over a ten-year period for transit capital projects including rehabilitation and safety improvements, capital service enhancements and expansions, and new capital projects. The SCO allocates funds to eligible agencies using the same formulas as the PTA distributions. The SCO allocated a total of \$530 million in PTMISEA funds in FY 2007/08 and the 2008/09 Budget Act appropriated another \$350 million for allocation in FY 2008/09 (California Department of Finance, 2008).

A traditional state source of transit capital funding over the years has been the State Transportation Improvement Program (STIP). PTA funds remaining after funding all existing operations and capital commitments flow to the STIP for transit and rail capital projects. However, with the recent PTA cash flow problems stemming mostly from General Fund diversions and additional funding burdens, the STIP has not been a reliable or adequate source of revenues for transit capital improvements because of the lack of available PTA funds. The 2008 STIP did not include any funding for new STIP transit projects (California Transit Association, 2008).

Local Transit Funding

At the local level, the two largest sources of transit funding are passenger fares and local sales taxes. In addition to being a source of revenue, passenger fares are an important component for transit because the TDA funding source requires a standard 20 percent farebox recovery ratio on existing transit service (City of Folsom, 2005). The SCO (2007) reported that passenger fare revenues totaled approximately \$1.3 billion in FY 2006/07. It is important to note though that a standard farebox recovery ratio of 20 percent infers that that the other 80 percent of transit agency operating costs rely on subsidized grants (e.g., federal and state).

Local sales tax revenues include two categories: sales taxes that certain special district transit operators such as the Bay Area Rapid Transit District (BART) may impose directly, and locally generated taxes allocated to the transit operator by another governmental agency (local sales tax) (SCO, 2008). An example of the latter is the ½-cent “Measure A” sales tax revenue that the Sacramento Regional Transit District (RT)

receives through the Sacramento County Transportation Authority (RT, 2008a).

Statewide total operating revenue from these two categories was approximately \$1.5 billion in FY 2006/07 (SCO, 2008).

According to the *SCO Transit Operators and Non-Transit Claimants Annual Report* for FY 2006/07, two other major sources of local transit funding are “general operating assistance” with revenues of approximately \$400 million for transit operations and “other local provisions” with revenues of approximately \$260 million for transit capital. However, the report does not include any specific descriptions or explanations of what comprises these revenue sources, although a portion is likely from local agency general fund allocations.

Challenges to Sustainable Transit Funding

The potential obstacles or hurdles that lie in the way of a sustained level of transit funding most notably reside at the federal and state level, where funding sources are the most volatile. As mentioned, the bulk of federal revenues come from the federal excise tax on gasoline and diesel. However, the condition of federal transportation revenues is experiencing a drop in VMT, as well as erosion in the purchasing power of excise tax revenues due to inflation (U.S. Government Accountability Office, 2009). The drop in VMT has resulted in a corresponding drop in federal excise tax revenues, including the 20 percent share dedicated to transit.

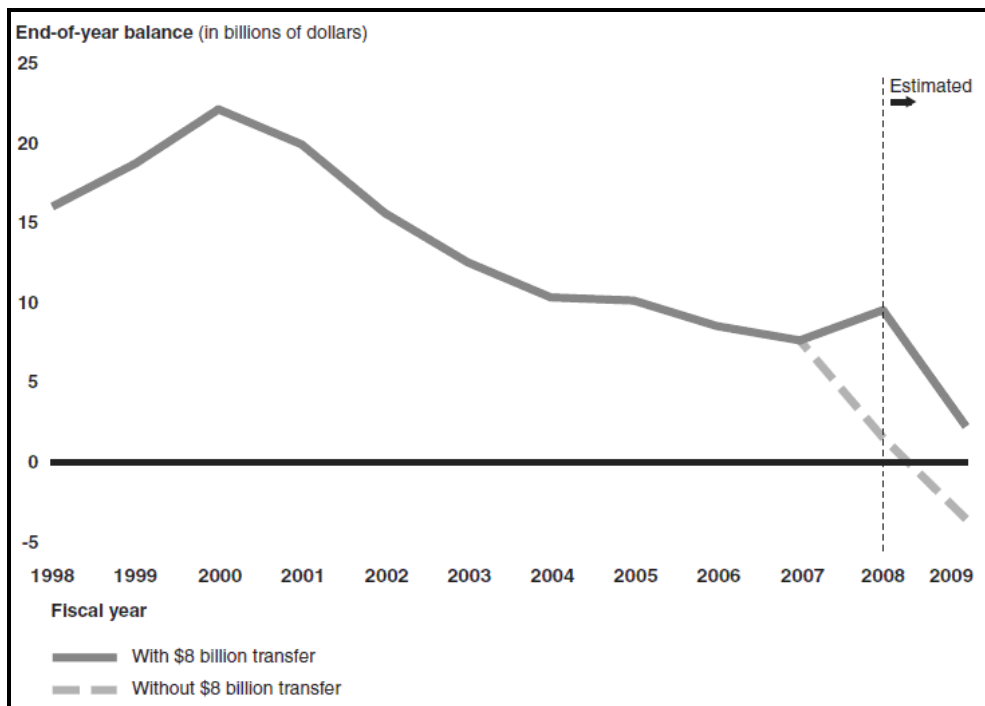
With regard to the inflationary factors, because the federal government has not increased the federal excise rate on gasoline and diesel since 1993, actual revenues over the years have not kept pace with increasing costs such as those for capital projects and

general costs of doing business. These concerns over the solvency of the FHTF led the American Association of State Highway Officials (AASHTO) in September 2007 to predict that the FHTF would be bankrupt by 2009 (AASHTO, 2007). In response to this concern, former President George W. Bush signed into law, House of Representatives (HR) Bill 6352, which transferred \$8 billion from the U.S. Treasury General Fund into the FHTF to help keep the fund solvent (Berman, 2008; Republican Caucus, 2008).

In addition to HR 6352, the recently enacted American Recovery and Reinvestment Act (ARRA), signed by President Barack Obama on February 17, 2009, is another one-time infusion of federal transportation funding. Tabbed as an economic stimulus package, ARRA commits a total of \$47 billion in transportation funding nationwide, with \$7.55 billion dedicated to transit. Of this \$7.55 billion nationwide total, California's transit share is just over \$1 billion, with regions and local operators receiving funding directly.

The ARRA transit funds contain a timely use restriction, however, and regions must obligate funding within one year by March 2010 or the federal government will withdraw any funds that have not been obligated by this date (Legislative Analyst's Office, 2009a). Within the Sacramento region, the Sacramento Area Council of Governments (SACOG) is currently discussing the allocation of \$38 million in ARRA funds for transit (Bizjak, 2009a). Although HR 6352 and ARRA provide a much-needed boost to transportation funding, they offer a short-term solution and do not address the issue over the inflationary erosion of purchasing power, which may only be resolved with an increase to the federal excise tax.

Figure 4
Federal Highway Trust Fund Balances 1998 – 2009 (U.S. Government Accountability Office, 2009)



One final federal issue to note is the expiration of SAFETEA-LU at the end of the 2009 Federal Fiscal Year and the subsequent adoption of a new authorization. However, with concerns over revenue woes aside, the adoption of a new federal transportation authorization may pose a significant opportunity for the tide to turn towards a shift in priority away from highways and towards transit. One of the advantages of having to reauthorize transportation statutes is that the new authorization has the potential to match the needs of the nation at that particular time (Ewing, et al., 2008, p. 130). Conversely, despite the possible benefit to transit via a new federal transportation act, the uncertainty

over what the new version will contain is still a concern, since it will be a vital source of transit revenues over the next several years.

At the state level, the current California State Budget crisis and the annual General Fund diversion of motor vehicle fuel sales tax revenues comprise the major obstacles and hurdles to sustainable transit funding. Prior to the passing of the FY 2009/10 State Budget in February 2009, the State's budget deficit projected to reach \$40 billion by the middle of 2010 if the State could not initiate new means to close the gap between revenues and spending (Yi, 2008). As the recent past has shown, the State has used the sales tax (on gasoline and diesel fuel) driven PTA as a pot of money to dip into to help mitigate these General Fund shortfalls, thus reducing a significant share of transit funding. In addition, the current economic downturn has stalled the state's ability to sell bonds and thus delaying funding allocations from the Prop 1B PTMISEA program.

The largest source of state funding the General Fund has diverted away from transit is Spillover. The 2008/09 Budget Act reported that these revenues have now exceeded over \$1 billion given the spike in gas prices over the past fiscal year (California Department of Finance, 2008). However, whereas in the past, transit via STA would receive half of these revenues, it now only receives a quarter since SB 79, passed in FY 2007/08, allows the General Fund to skim half of total revenues off the top before even reaching the PTA.

Another state transit funding challenge that occurs on an annual basis is the potential for the General Fund to withhold Proposition 42 sales tax on gasoline revenues (\$1.4 billion in the 2008/09 Budget), of which transit normally receives a 20 percent

share. Although Proposition 1A, passed in 2006, allows the General Fund to only borrow twice in a ten-year period, this threat persists annually given the state's dire fiscal condition. Lastly, while this thesis was being written, the Governor's amendments to the 2008/09 State Budget cut current year STA funding in half (down to \$153 million) and the preliminary 2009/10 State Budget eliminated STA funding altogether for next five years, a move the CTA referred to as "Armageddon" (California Transit Association, 2009). It remains to be seen whether any Spring 2009 amendments to the 2009/10 State Budget address this elimination of PTA funding to the STA.

Summary and Research Questions

SB 375 proposes the combination of land use decisions and transportation planning as a strategy to curb GHG emissions and the associated threat of Global Warming. Therefore, plans for dense development represent only one side of the puzzle; a means of transportation is still required to move people to and from their destinations within this environment. With SB 375's emphasis of building new development in settings centered on public transit stations, it follows regions will require a sustainable level of funding throughout this process to fund the transit capital and operating needs that TOD communities require. However, is the current level of funding enough for TODs to thrive, or will additional funding be needed? In addition, how will future funding cuts or inadequate levels of funding affect the level of service that transit agencies can successfully provide?

In connecting transit funding to the ultimate GHG emission reduction goals of SB 375, it is possible that a potential "domino effect" if funding becomes insufficient.

Without adequate transit funding, transit services and TODs in general may suffer, which may affect people's willingness to move into a high-density TOD community.

Consequently, if people continue to choose sprawl over high-density due to a lack of viable transit options; ultimately, VMT will not decrease to the levels that SB 375 desires to meet its GHG reduction goals. One of the objectives of this thesis is to either reinforce or contradict this argument.

Although this chapter has provided a broad overview of SB 375 and transit funding, this thesis actually focuses on the regional level, specifically the Sacramento, California region under the jurisdiction of SACOG. As one of the 18 MPOs in California, SACOG will be the agency leading the Sacramento region's smart-growth efforts, in addition to preparing the SCSs required under SB 375. The purpose of this thesis is to examine how transit funding challenges will affect the Sacramento region's ability to meet the goals of SB 375. Will these funding challenges "derail" SB 375's aspirations for the Sacramento region? The rest of this thesis will attempt to answer this question. The analysis first begins with a review of the available academic literature on this topic.

Chapter 2

REVIEW OF THE LITERATURE

This chapter includes a review of the academic literature available regarding the pertinent topics of this study. Specifically, I categorize the review into five sections: 1) Smart Growth and Transit Oriented Development, 2) the Smart Growth Strategy to reduce Greenhouse Gas Emissions, 3) Transit Oriented Development in California, 4) Regional Planning and the Transportation – Land Use Connection, and 5) Transit Funding Challenges. The intent of a thorough literature review is to provide a general knowledge base on the issues as well as identify any areas that the existing literature has not yet covered.

Smart Growth and Transit-Oriented Development

In response to concerns over urban sprawl, environmental degradation, and the preservation of natural lands, the concept of smart growth offers a planning strategy that emphasizes centralized high-density development on existing or redeveloped land, and promotes neighborhoods with transportation choices (U.S. EPA, 2008). However, smart growth is not strictly confined to infill or brownfield development. Heid (2004) states that smart growth can have positive results on a greenfield site, so long as development meets three prerequisites: 1) a pre-established regional system of sustainable open space available for recreational use, 2) options to reduce automobile trips, and 3) and a diverse mix of housing types, sizes, and prices (p. 1).

According to Handy (2005), smart growth proponents offer four general propositions with regard to the concept's connection between transportation and land

use: (1) building more highways will contribute to more sprawl, (2) building more highways will lead to more driving, (3) investing in light rail transit systems will increase densities, and (4) adopting new urbanism design strategies will reduce automobile use. These four propositions have yet to be resolved, however, and the ability to predict the ultimate impact of smart growth policies is evolving and remains a work in progress (Handy, 2005, abstract).

The concept of transit-oriented development (TOD) lies within the general principles of smart growth and the connection between transportation and land use. As such, TOD has gained popularity as a means of promoting smart growth and addressing urban problems such as traffic congestion, affordable housing shortages, air pollution, and incessant sprawl (Cervero, Ferrell, and Murphy, 2002, p. 2). In terms of defining TOD, the literature suggests that there is no universally accepted definition, given that certain concepts (e.g., density and transit supportive development) differ depending on the location and size of a particular region (Arrington and Faulkner, 2002, p. 12; Cervero, Murphy, Ferrell, Goguts, Tsai, Arrington et al, 2004, p. 5; Renne, Wells, and Voorhees, 2005, p. 2). However, the California Department of Transportation (Caltrans), in a statewide TOD study conducted in 2002, developed the following definition of TOD:

Moderate to higher density development, located within an easy walk [approximately 1/2 mile] of a major transit stop, generally with a mix of residential, employment and shopping opportunities designed for pedestrians without excluding the auto. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use. (Arrington and Faulkner, 2002, p. 12)

Evans, Pratt, Stryker, and Kuzmyak (2007), offer an abbreviated TOD definition, classifying it as “higher-density development, with pedestrian priority, located within

easy walking distance of a major public transit station or stop” (p. 17-1).

With regards to TOD benefits, Boroski, Arrington, Seskin, Parker, and Mayer (2002), in the Caltrans TOD study, developed a list of potential TOD benefits based upon an extensive literature review of over three dozen documents including academic studies, trade journal articles, consultant reports, and agency studies (p. 22). The benefits noted by the authors were:

- Enhanced quality of life for community residents,
- Increased options for mobility,
- Reduced rates of vehicle trip-making and fewer vehicle miles households travel by automobile,
- Improved air quality and reduced energy consumption,
- Preservation of prime farmland and other resource lands,
- Reduced infrastructure costs for government, developers, and property owners,
- Increased safety for pedestrian and bicyclists, and helping to reduce aggressive driving injuries and deaths.

While literature over the years has discussed the potential benefits of TOD such as the ones mentioned by Caltrans above, Renne, Wells, and Voorhees (2005) note that “few studies have looked holistically at the outcomes of TOD to measure its success” (p. 3). Also, Cervero, Murphy, Ferrell, et al, (2004) add that relatively little empirical research exists that documents the economic benefits of TOD beyond studies showing developments near rail stations boost ridership and increase land values (p. 453).

The Smart Growth Strategy to Reduce Greenhouse Gas Emissions

One particular TOD outcome of interest, which lies at the heart of this study, is the proposed benefit of reducing greenhouse gas (GHG) emissions through TOD’s ability to decrease the amount of vehicles miles traveled (VMT) by automobiles. GHGs,

primarily Carbon Dioxide (CO₂), are heat-trapping gases which scientists consider to be the main culprit of the phenomenon known as Global Warming (Boroski et al, 2002, pp. 42-43). According to the American Public Transportation Association (2008), the transportation sector produces one-third of all GHG emissions in the U.S., and total emissions increased more than 25 percent from the period between 1990 and 2006 (p. 1).

Ewing, Bartholomew, Winkelman, Walters, and Chen (2008) describe GHG emissions from the transportation sector as a “three-legged stool,” with one leg related to fuel economy, the second leg related to the fuel’s carbon content, and the third leg related to VMT (p. 2). The authors also add, however, that technological improvements in vehicle fuels (to address the first two legs) are likely to be offset by growth in VMT. Compact development by itself (as opposed to continuing sprawl), the authors claim, reduces VMT and has the potential to reduce total U.S. transportation CO₂ emissions by 7 to 10 percent by 2050 compared to 2007 emissions (Ewing et al, 2008, p. 35).

In a study on compact growth and air quality, Stone, Mednick, Holloway, and Spak (2007) found a 10 percent increase in population density to be associated with a 3.5 percent reduction in household vehicle travel and emissions, signifying that land use change can play a measurable role in improving regional air quality. In addition, the authors found increasing urban density to be more than twice as effective in reducing VMT and emissions as increasing suburban density, suggesting that compact growth is a better fit for air quality than historical patterns of growth (p. 416). As a critique to the Stone et al. study, however, Winkelman (2007) notes that the authors limited their focus to just density and VMT rather than the synergy of factors that make up smart growth

(e.g., mixed use developments, transit frequency). Therefore, this study only tells “part of the story of potential VMT reductions” albeit still a valuable contribution to the density and VMT literature (p. 419).

As a follow-up to their 2007 study, Stone et al. (2008) conducted another study, this time focusing on an analysis of both vehicle fleet hybridization and compact development on reducing VMT. As part of their results and findings, the authors noted that even though emission reductions under their smart growth scenarios were lower than fleet hybridization as independent strategies, their findings suggest “urban densification” has the potential to surpass the benefits of hybrid technologies if region-wide densities can be increased from the assumed levels in their study. Further, they note that strategies emphasizing both land use and technology hold the potential to “achieve the greatest offsets in mobile source emissions” (Stone et al., 2008, pp. E-F).

Expanding further on how GHG emissions may be best combated by the synergy of various elements within smart growth (rather than just one), Boroski et al. (2002) states that no single technology, method of land use planning, or national policy can serve as a solution to global warming. TOD (and smart growth) can, however, potentially help reduce auto dependence, and thus VMT, and become one contributor in a larger effort towards averting global warming (p. 43). Greene and Shafer (2003), like Stone et al., assert that fuel efficiency improvements may offer the largest single source potential for reducing transportation GHG emissions, but that the ultimate solution will require a “combination of meaningful policies and technological progress.” In addition, the authors note that although transportation and land use policies may not have an

immediate effect on GHG emissions now, they may have a significant effect in the long run (pp.47-55).

Not all of the literature on smart growth's effect on reducing VMT and GHG emissions has been positive. In a report titled *The Folly of Smart Growth*, O'Toole (2001) claims that the "real effects" of Portland's smart growth policies appear to be "increases in traffic congestion, air pollution, consumer costs, taxes, and just about every other impediment to urban livability (p. 20). According to O'Toole (2001), traffic congestion will actually lead to increases in air pollution due to drivers' unwillingness to give up their cars and use public transportation (p.22), which is contrary to the Portland success example discussed in the next section. Cox (2005), citing his own past work, notes that compact urban areas have "more intense traffic congestion" than less compact areas, and thus "more intense air pollution" (p. 57). Further, Cox refers to the 2003 Greene and Shafer finding that fuel efficiency, not smart growth, appears to be the most effective GHG reduction strategy available (p. 57).

Transit Oriented Development in California

With respect to TOD in California, Lund, Cervero, and Wilson (2004) assert that rapid growth in urbanized areas present transportation and land use challenges for local and regional policy makers. Therefore, the authors deem TOD as a way for California to respond through supporting transit use and providing housing and other forms of development (p. iii). The TOD concept is not new to California, as can be seen from past literature and policies. Although Leinberger (2007) states that the "built environment pendulum" has shifted away from "drivable suburbanism" to "walkable urbanism" only

as recent as the mid 1990s (p. 5), one of the earliest urban development strategies in California dates back to the Governor Jerry Brown era of the late 1970s.

The Governor's Office of Planning and Research (OPR) published in 1978, *An Urban Strategy for California*. As a strategy to address potential problems from growth in California's urban areas, OPR (1978) included among others, priorities to curb wasteful urban sprawl and provide an "adequate transportation system" including public-transportation (p. 9). However, the fiscal fallout following Proposition 13, California's property tax limitation measure from 1978, thwarted the implementation of the Urban Strategy. (Jonas and Pincetl, 2006, p. 485).

Another momentous step in California's urban development history was in 1991, when the Local Government Commission (LGC) assembled a group of leading "new urbanists" to develop a set of guiding principles on how communities could return to traditional planning techniques of compact, walkable, mixed-use communities centered around transit nodes (Emerson, 2006, pp. 646-647). The result of this collaboration was the adoption of the "Ahwahnee Principles," named after the Ahwahnee Hotel in Yosemite where the LGC held its conference.

The Ahwahnee Principles offer a set of community, regional, and implementation new urbanist guidelines, of which the first regional principle involves a regional land-use planning structure that is "integrated within a larger transportation network built around transit rather than freeways" (LGC, 1991). In September 2008, the LGC (2008) adopted a new set of community, regional, and implementation principles titled "Ahwahnee

Principles for Climate Change,” specific to assisting local governments in meeting the demands of climate change policies such as AB 32 (p. 1).

Arrington, Faulkner, Parker, and Mayer (2002) indicate that the California Transit Villages Act of 1994 (AB 3152) has been the most important step at the state policy level to promote TOD (p. 75). The California Legislature passed this act in 1994 to promote the adoption of transit village plans, which would include such elements as mixed housing types centered near transit stations and mixed land uses that provide retail sites oriented to the transit station and civic uses (Cervero et al., 2002, p. 33). However, because the act did not include financing, its effectiveness in facilitating TOD in California has been limited (Arrington, Faulkner, Parker, and Mayer, 2002, p. 75; Cervero et al., 2002, p. 33).

The latest state-level policy in California involving TOD is SB 375, which follows in the footsteps of its predecessor AB 32, and focuses on GHG emission reduction from cars and light trucks. Because this legislation is new (signed into law on September 30, 2008) and its details are uncertain, there are few scholarly evaluations presently available. A thorough search for SB 375 related journal articles, books, and research reports on Google Scholar and the library search databases at California State University, Sacramento, and Caltrans produced no significant results. However, there are numerous news articles, internet editorials, and analyses of the bill’s basic features; but these are cited in this study’s introduction rather than the literature review, due to their non-academic nature.

Regional Planning and the Transportation – Land Use Connection

At the heart of regional smart growth planning efforts in metropolitan areas across the U.S. are Metropolitan Planning Organizations (MPOs). MPOs annually funnel billions of federal and state transportation dollars for regional transportation, and guide transportation investments through using regional transportation plans. Because these investments shape land use patterns, MPO decisions have important implications for regional land use patterns (Nelson, Sanchez, Wolf, and Farquhar, 2004, abstract). The State of California currently has 18 MPOs, with the Sacramento Area Council of Governments (SACOG) designated as the MPO for the six-county Sacramento region. Each MPO is responsible for the Sustainable Communities Strategies under SB 375.

According to Waddell, Ulfarrson, Franklin, and Lobb (2007), very few MPOs currently attempt to capture the effects of transportation system changes on land use, and the resulting feedback effects on transportation system performance (p. 383). Rodier (2008) adds that most planning models currently used by state, regional, and local governments in California have limited ability to represent the effects of transit, land use, and auto pricing strategies, although the major MPOs are currently developing advanced models (p. 3). Many of these large MPOs are developing integrated land use and transportation models for the first time (Johnston, Gao, and Clay, 2005, p. 2).

Of the “major” MPOs Rodier discusses, is SACOG and its well-known Blueprint planning process. Rodier (2008) identifies SACOG’s Blueprint as the pioneer of transportation – land use blueprints in California, and “ideally accompanied by high-quality modeling of travel, environmental, and economic impacts (p. 7). Johnston et al.

(2005) endorse the Sacramento region as being a leader in developing urban models and note that in 2002, SACOG became one of the first MPOs in the United States to adopt a fully integrated land use and transportation model for policy purposes (p. 2). Further, the California Energy Commission (2007) noted that elected leaders in the Sacramento region will use the detailed data developed in the study to make decisions on how growth will happen now and in years to come, and also to make choices about the transportation projects that will best serve the region as it changes (p. 35).

Although transportation and land use regional planning efforts may be relatively new in California, there are a few case studies from other states available for analysis. One such effort that preceded SACOG's Blueprint was from Salt Lake City, Utah, and its "Envision Utah" planning process from the late 1990s. Crow and Matheson (2006) assert that Envision Utah is one of the country's most successful efforts to involve the public in regional visioning, and the recipient of many of the nation's most prestigious planning awards (p. 1). Since Envision Utah began its regional visioning process, the region has built two light-rail lines, broken ground for 44 miles of commuter rail, and planned approximately 250 miles of additional rapid transit (Crow and Matheson, 2006, p. 1). Further, the California Energy Commission (2007) notes that stakeholder developed land use scenarios to generate better land use plans in Salt Lake City are already showing reductions in VMT (p. 2).

Another popular regional planning success story is the Metro 2040 Growth Concept from Portland, Oregon, adopted in 1995. This concept defines regional growth and development in the Portland metropolitan region and emphasizes efficient use of

existing urban land, protecting natural resources and ensuring a balanced transportation system (California Energy Commission, 2007, p. 44). In addition, the 2040 Growth Concept is also known for its urban growth boundary and its plan for controlling growth within that boundary (Knaap, Song, and Nedovic-Budic, 2007, p. 7). In December 2002, Portland Metro adopted the Centers Program to further the 2040 Growth Concept by creating compact, mixed-use areas of high-density housing, employment, and retail that are pedestrian oriented and well served by public transportation and roads. Ultimately, Portland has funded 26 programs as part of its TOD efforts since 1998 (Binger, Lee, Rivasplata, Lynch, and Subhashini, 2008, p. 100).

I also reviewed literature regarding the implementation of regional transportation plans by MPOs. In a case study analysis of smart growth initiative implementation among five selected regions, Porter, ten Siethoff, and Smith (2005) noted that both state departments of transportation and MPOs face implementation challenges such as defining performance measures, updating data, and tying performance measures to regional policy initiatives (p. 96). More importantly though, the authors found that the ability of agencies to shape land use patterns have been limited due to few regions being willing to take a voluntary regulatory approach to local land use planning. Regions have also faced difficulties with proactively working with local jurisdictions and counteracting market forces that drive development (Porter et al, 2005, p. 96). Focusing on transportation, the authors note that transportation and land use “concurrency” has been ineffective from a regional perspective, and that in order for land use policies to achieve

significant transportation benefits, they must be applied on a large scale, which makes these policies difficult to implement (Porter et al, 2005, p. 97).

Sanchez and Wolf (2005) cite potential MPO voting bias and equity concerns as a major challenge in regional plan implementation, noting the challenge of coordinating local government competition while maintaining fairness and equity relative to transportation investments (p. 3). Additionally, in an examination of selected MPOs and their current regional transportation planning processes, Handy (2008) states that the “new philosophy of transportation policy” requires changes in the planning process to incorporate improvements such as better public involvement in the development of plans, and changes to technical aspects such as performance measures and forecasting (p. 125).

Transit Funding Challenges

Given that this study focuses on the effect of transit funding challenges on TOD and its assumed connection to reducing GHG emissions, I analyzed the literature on transit funding. With regard to federal transit funding, the literature appears to emphasize a highway versus transit funding allocation dilemma. According to Beimborn and Puentes (2003), federal transportation policy has become an unfair competition between highways and transit, and that this unlevel playing field has profound impacts on metropolitan areas and on how cities grow and develop (p. 257). Further, the authors state that a level playing field between transit and highways, based on the best mix of both programs can truly empower localities to do what is best for their metropolitan areas (Beimborn and Puentes, 2003, p. 282).

Ewing et al. (2008) suggest that with the current federal transportation act, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), expiring on September 30, 2009, the next act be more suited towards shifting funding priorities towards multi-modal transportation. As priorities, the authors suggest creating funding formulas with incentives for reducing VMT, eliminating procedural inequalities between highways and transit, and providing direct project funding for MPOs rather than routing federal funds through state departments of transportation (p. 130-134). However, as a commentary on giving MPOs more funding control, Nelson et al., (2003) suggest that because federal law does not require MPOs to have balanced voting, the potential exists for MPO decisions to be biased towards certain investments in particular metropolitan areas at the expense of others (p. 4-5).

With regard to state transit funding challenges, a search on Google Scholar and the library databases at California State University, Sacramento, and Caltrans surprisingly produced no significant sources of academic literature. Much like SB 375, the predominant share of literature on current state transit funding issues consists of news articles and internet editorials; mostly concerning the recent actions of the State of California to eliminate all transit funding from state resources.

One recent analysis of state transit funding issues to note, however, is the latest analysis of the California State Budget from the California Legislative Analyst's Office. In its report titled *2009-10 Budget Analysis Series: Transportation*, the LAO (2009b) recommends that due to the state's dire fiscal condition, the Legislature cut State Transit Assistance (STA) funding, the largest share of state funding for transit, in half in 2008-09

and in full in 2009-10. In addition, the LAO asserts that public transit services are primarily a local and regional responsibility (p. TR-31).

Gaps in the Literature

I categorize the review of the existing literature for this study into five major themes: 1) Smart Growth and Transit Oriented Development (TOD), 2) the Smart Growth Strategy to reduce GHG Emissions, 3) Transit Oriented Development in California, 4) Regional Planning and the Transportation – Land Use Connection, and 5) Transit Funding Challenges. As was noted in the reviews for these themes, significant academic literature could not be located for SB 375 and state funding challenges in California.

However, the most vital gap in the existing literature is the link between transit funding challenges and TOD implementation, and transit funding and regional planning efforts in general. It looks as though the relatively recent intersection of these two issues in California may explain the lack of significant academic research available. With this study's central focus on whether state and federal transit funding challenges will hinder the TOD and GHG reduction goals of SB 375 within the Sacramento region, it may have the potential to break new ground and become a valuable contribution to the literature, considering the lack of resources currently available. The next chapter discusses the research methodology that I followed in conducting this thesis.

Chapter 3

METHODOLOGY

This thesis attempts to analyze how transit funding challenges will affect future high density, transit-oriented development (TOD) in the Sacramento region, as envisioned by Senate Bill (SB) 375. From a research perspective, I use the case study method to evaluate this relationship. The case studies in this thesis involve an analysis of the Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan (MTP) 2035 and personal interviews with key staff from SACOG, the Sacramento Regional Transit District (RT), the California Department of Transportation (Caltrans), and the California State Association of Counties (CSAC).

Background on the Case Study Method

The case study method is a means to explore subjects and issues with ambiguous or uncertain relationships, and useful when attempting to discover a “relationship between a phenomenon and the context in which it is occurring.” In addition, this method is useful when asking a “how” or “why” question (Gray, 2004, pp. 123-124). Yin (2008) in describing three general characteristics of case studies, includes a “how and why” criterion as well, but also states that case studies are suitable when a researcher has little or no possibility to control behavior, and when focusing on contemporary events (p. 8). Given the recent “how and why” nature of the impact of transit funding on TOD, in which I have little or no control, the case study method offers the most appropriate research approach for this study.

Sampling and Procedures

Consistent with Yin's four main types of case study design, this thesis uses a "single case, embedded" design with multiple units of analysis (Gray, 2004, p. 132). The perspectives from California transportation agencies as a whole make up the single case, and the perspectives from local, regional, and state levels of government comprise the multiple units of analysis. I chose the multiple units of analysis design because of the required coordination that will be necessary between these levels of government throughout the SB 375 process. The next sub-section will discuss background information on the selected agencies.

I will collect information via two sources: documentation and interviews. The first source to analyze is specific to SACOG only, its MTP 2035 document. As the designated Metropolitan Planning Organization (MPO) for the Sacramento region, SACOG is the agency assigned to build the Sustainable Communities Strategies (SCS) required under SB 375 into future long-term regional transportation plans (RTPs). Further, because SCS development will not begin until after the California Air Resources Board (ARB) sets its emission targets on (or before) September 30, 2010, no completed SCS is currently available or ready to analyze.

Therefore, because SACOG recently completed its MTP 2035 in 2008 and based it upon its Blueprint planning principles, the plan represents a valuable and readily available resource in which to analyze SACOG's current long-term transportation goals. In addition, SACOG Executive Director Mike McKeever in a November 2008 article in the *Sacramento Business Journal*, stated that it is "highly likely" that SACOG's current

efforts via the Blueprint and MTP “or something close,” will meet ARB’s requirements (Lamb, 2008). Specifically, MTP 2035’s proposed transit investments and transit funding assumptions will be the focus of examination. In order to project transit investments out into the future, SACOG makes certain assumptions in MTP 2035 regarding its revenues through the year 2035. I will examine the revenues specific to transit (e.g., state sales tax on gasoline, federal transit grants) and make a comparison to current laws.

The key source of information collected, however, will be through interviews with executive staff from SACOG, Sacramento RT, Caltrans, and CSAC. Questions asked of the participants will be open-ended to avoid limiting responses and to allow for discussion or elaboration as needed. The actual questions will focus on two primary areas: using current RTPs as a resource tool for examining future TOD plans, and the perceived impacts of transit funding challenges on future TOD implementation.

Provided below is the interview protocol used for each participant:

1. The Sustainable Communities Strategies (SCS) required under SB 375 will not officially be developed and adopted until a future date. Therefore, for purposes of this project, I will use SACOG’s Metropolitan Transportation Plan (MTP) 2035 as a research tool for examining the level of transit investments that SACOG may pursue to meet transit oriented development (TOD) goals for SB 375.
 - a. Although the SB 375 emissions targets have not yet been established, do you envision the SCS plans to be consistent with what is proposed in MTP 2035?
 - b. How do the transit projects proposed in these long-term plans relate to planned TOD in the Sacramento region? In other words, is future TOD dependent on the transit improvements included in these long-term plans?

- c. How did MTP 2035 determine what is needed for transit operations?
 - d. One of the elements in long-range planning is to make certain assumptions about future revenues. If the funding assumptions used in a long-term plan does not materialize as projected, what does this mean for the plan's ultimate success?
2. A multitude of transit funding challenges currently exists at the federal, state, and local levels. This thesis focuses primarily on the federal and state challenges.
 - a. Can you describe the major effects that transit funding challenges will have on Sacramento's transit system, for both capital improvements and transit operations?
 - b. Further, how will these funding challenges affect TOD implementation in the Sacramento region?
 - c. Ultimately, how do you feel funding challenges will affect the goals of SB 375?
 - d. Is your agency currently taking any steps to address these funding challenges?

In terms of coding the data collected, I will analyze all participant responses for common, identifiable themes, and compare the themed responses for each agency. However, because this thesis focuses on the issue of transit funding, I will base my multi-agency analysis solely on the funding questions (2a – 2d). I have included the RTP questions (1a – 1d) in my interview protocol to gain a general understanding of how long-term transportation plans incorporate transit, but these questions are primarily specific to SACOG only. I will interpret and evaluate the interview results based on similarities, differences, and any unforeseen or surprising responses. The Results and Findings chapter will include a discussion of the interview results and outcomes.

Selected agencies

I selected four agencies for analysis in this thesis, because of their relevant relationship to SB 375, transportation planning, and public transportation in the Sacramento region. I also selected these agencies because of accessibility and availability of information. I discuss below the characteristics of each agency and the justification for their selection in this thesis.

SACOG

As the designated MPO and regional transportation-planning agency for the Sacramento area, SACOG coordinates transportation planning and project funding across six counties and twenty-two cities. In addition, SACOG serves as a forum for the study and resolution of regional issues in the Sacramento area. Specific to SB 375, SACOG will create the SCS required by ARB via SB 375 to best lay out the region's plans to meet emission targets through reducing vehicle miles traveled. Therefore, SACOG is the agency that will be directly involved in developing the transportation and land use planning strategies to meet ARB's SB 375 emissions targets, and is one of the key agencies of analysis in this thesis. For my research, I will interview an executive staff member from SACOG's Transportation Planning division, who possesses both a high-level and detailed knowledge of SACOG's regional planning processes and TOD.

Sacramento RT

Given this thesis's focus on transit, it is imperative to include the local transit agency perspective, as these agencies will be providing the expanded transit services in conjunction with SB 375. RT is the largest of 11 transit agencies in the SACOG area,

and accounts for roughly 70 percent of the region's transit operating expenditures and 80 percent of its 36 million annual transit rides. In addition, RT operations consume 90 percent of the region's available revenue for operations (SACOG, 2008, p. 1). Therefore, although SB 375 will affect multiple transit agencies, RT is the agency that I will focus on in this thesis due to its significant role as the region's largest transit operator. I will interview a RT Executive Management Team member for this analysis.

Caltrans

As the State of California's transportation department, Caltrans' mission is to improve mobility across the state. In addition to managing California's state highway system, Caltrans has dedicated programs for Transportation Planning and Mass Transportation. Through these programs, Caltrans works directly with both regional transportation planning agencies (including MPOs) and local transit agencies in developing RTPs and administering state and federal grant programs that provide funding for operating assistance and capital improvements.

In addition, under Government Code Section 14522.1, Caltrans is directly involved with SB 375, as a consultant to the California Transportation Commission in the development of RTP guidelines. Consequently, Caltrans possesses the ability to offer a state level perspective on the key issues in this thesis, as well as offer valuable insights on regional planning and transit funding via its role as the state's dedicated transportation organization. I will interview executive staff members from the Caltrans Director's Office and the Division of Mass Transportation for this analysis.

CSAC

The mission of CSAC is to represent county governments “before the California Legislature, U.S. Congress, state and federal agencies and other entities, while educating the public about the value and need for county programs and services” (CSAC, 2009). As part of several focus areas, CSAC has staff dedicated to Housing, Land Use, and Transportation legislation. CSAC played a major role in constructing SB 375, and worked directly with counties, cities, environmental organizations, homebuilders, and low-income housing advocates, while working to ensure that the bill contained significant local government and public input processes (CSAC, 2008a). CSAC will also be part of the ARB Regional Targets Advisory Committee, which will make recommendations on the development of regional GHG reduction targets for SB 375. I will interview a CSAC Housing, Land Use, and Transportation legislative staff member for this analysis for background information on SB 375 and CSAC’s perspective on the key focus areas of TOD and transit funding challenges.

Summary

The agencies selected for the case studies offer perspectives from local, regional, and state levels of government; with SACOG and RT providing analysis from two of the practitioners directly involved with SB 375 implementation in the Sacramento region. Personal interviews from executive staff members within all four agencies, as well as analysis of SACOG’s MTP 2035 documents, will provide two sources of case study information to be analyzed in this thesis. The subsequent chapter will discuss the results and findings of these case study analyses.

Chapter 4

RESULTS AND FINDINGS

The case studies that I conducted in this thesis involved an analysis of the Sacramento Area Council of Governments' (SAGOG) Metropolitan Transportation Plan (MTP) 2035, the Sacramento Regional Transit District's (RT) TransitAction plan, and interviews with staff from pertinent government agencies and the California State Legislature. This chapter summarizes the results of these case studies and my findings of what the results mean for assessing the affect of transit funding challenges on Senate Bill (SB) 375 in the Sacramento region.

I categorize the results by agency, beginning with SACOG, followed by RT, the California Department of Transportation (Caltrans), the California State Association of Counties (CSAC), and two additional case studies I conducted based on interviews with staff from the California State Legislature. I also include a brief discussion of one key issue that developed from interviews with anonymous sources. The last part of this chapter includes an analysis and discussion of my interpretive findings.

Case Study Results

SACOG

I successfully interviewed a SACOG executive management staff member, who provided answers to my interview questions and guided me to key sections of MTP 2035. According to the representative that I interviewed, SACOG expects its first Sustainable Communities Strategy (SCS) to be part of its next MTP effort in 2012. Although this next plan is still a few years away, SACOG expects it to follow along the same path as

MTP 2035; given that the foundation for SACOG’s long-range planning relies upon its Blueprint planning principles and existing land use and transportation models.

Consistent with federal law, MTP 2035 is “financially constrained,” meaning that the plan only includes projects supported by revenues that SACOG can reasonably expect to be available during the 28-year period (2008-2035). Therefore, although MTP 2035 dedicates \$14.3 billion to transit capital investments and operations, SACOG notes that this is still not enough to provide the level of transit service needed in a region that expects to grow rapidly over the next three decades (SACOG, 2008b, p. 9).

Further, while MTP 2035 is financially constrained, SACOG still makes assumptions on certain revenue increases that it believes have a reasonable likelihood of occurring over the plan’s 28-year horizon. Specific to transit revenues, SACOG (2008) makes the following key assumptions in MTP 2035 (Appendix B1-2 – B1-3):

- Increase federal transit (formula) revenues by five percent every year and an extra five percent every sixth year (in 2010, 2016, 2022, 2028, and 2034) corresponding to reauthorization of federal surface transportation acts.
- Increase state transit funding programs such as State Transit Assistance (STA) and the State Transportation Improvement Program (STIP).
- Assume availability of Proposition 1B state transportation bond funds.
- Increase sales tax measure and Transportation Development Act revenues at the rate of growth in general economic activity, assumed to average six percent per year.
- Assume a new “Measure B” sales tax measure of ¼ percent in Sacramento County starting in 2012.
- Increase transit fare revenues based on projected ridership increases, and assume periodic modest fare increases in line with historical practice (at 2015, 2020, and 2025).

In making these assumptions, SACOG (2008b) notes that funding for transit operations is both a constraint and challenge in the early years of the plan, but assumes

that sales tax based revenue sources expand with the economy in later years. In addition, SACOG notes that ways to fund transit service expansion in earlier years to match Blueprint land uses remains an issue (Appendix B1-4).

Because SB 375 involves both land use and transportation, the SACOG representative commented that it is premature to identify transit funding as *the* primary challenge to SB 375's ultimate success. It is SACOG's goal to implement land development and transportation investments hand and hand at the same time, and therefore, transit funding is one piece of a coordinated puzzle. However, the representative did acknowledge that transit funding is a significant challenge in developing any long-range transportation plan, and thus, I interpreted this response to mean that transit funding will be a significant challenge for SB 375 as well.

With regard to the transit funding challenges the Sacramento region is currently facing, MTP 2035 states that the fundamental challenge for transit service and expansion centers on operating funds. The Sacramento region will need a significantly higher level of transit operations funding for the expansion envisioned in MTP 2035. In addition, MTP 2035 must deal with major transit vehicle replacement and maintenance costs that are growing faster than inflation. SACOG estimates these costs to be \$600 million over the next 25 years and is absent a dedicated funding source to cover these costs (SACOG, 2008b, p. 170). Further challenges noted by SACOG are a conflict between geographic coverage or frequency of service in the face of limited transit funds, and a possible need for additional paratransit services to accommodate an aging population. However, despite all challenges noted, SACOG remains optimistic that the region will accomplish

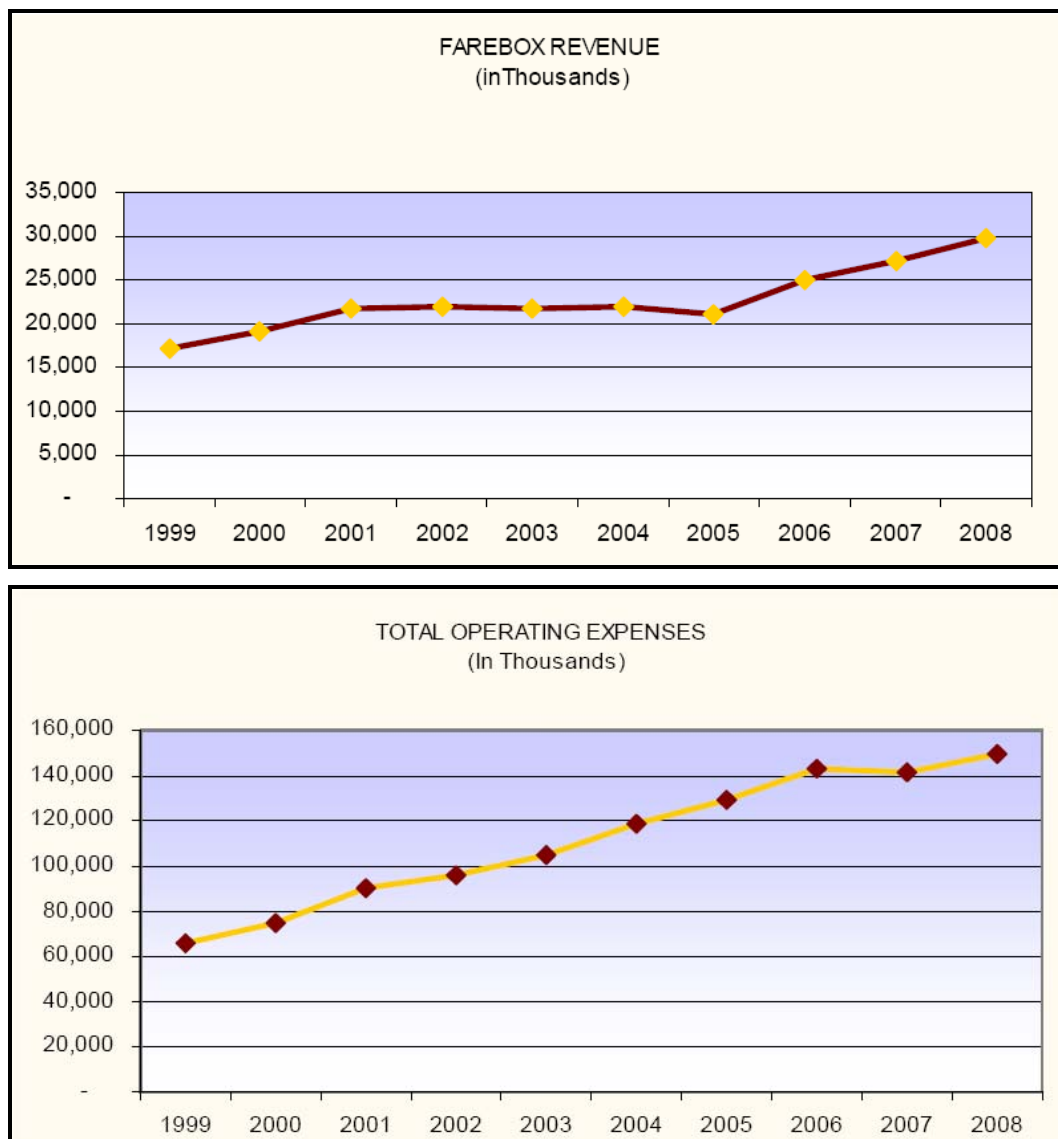
its long-term vision, including meeting the future expansion need of the region's transit system to facilitate the goals of SB 375. Further discussion of transit funding in the Sacramento region is included in my case study analysis of RT below.

Sacramento RT

I based my case study analysis of RT on an interview that I conducted with a member of RT's Executive Management Team, as well as an analysis of its recently released transit master plan, "TransitAction." In addition, I also reviewed secondary information provided by SACOG, RT, and recent news articles written about RT's current funding and service challenges. This combination of primary and secondary information presents a thorough depiction of the current state of RT's operations and its future service and funding challenges.

As the largest transit agency in the Sacramento region, RT serves a metropolitan population of 2.1 million people and covers a service area of 418 square miles (RT, 2008b). RT's ridership in 2008 was 32.6 million boarding passengers, a total that has steadily increased annually since 2002, when ridership was 26.6 million boarding passengers (RT, 2008c, p. 67). While farebox revenues increased from \$21.8 million to \$29.9 million over this seven-year period (2002-2008), operating expenses also increased from \$95.4 million to \$149.3 million (RT, 2008c, p. 66). Therefore, increases in operating expenses have offset any fare revenue increases RT has seen over the past several years. Figure 5 represents a visual illustration of this relationship.

Figure 5
RT Farebox Revenue and Operating Expenses 1999-2008 (RT, 2008c, p. 66)



On April 24, 2009, RT released its first draft of TransitAction, which outlines the agency’s vision for the development, financing, and management of transit through the year 2035. According to RT, TransitAction “presents an integrated package of transit investments and increased service frequencies designed to make transit a real transportation choice for everybody in the Sacramento region.” Further, RT affirms that

the plan addresses land issues as well as transit, and places an emphasis on attracting new choice riders to grow its current market share (RT, 2009, Executive Summary, p. 1).

Consistent with SACOG's MTP 2035, RT developed TransitAction in conformity with the SACOG Blueprint principles and with a focus on transit oriented development (TOD). RT presented to the public over the past year, three scenarios of TransitAction through an online survey: 1) a base-case scenario under existing resources, 2) the SACOG Blueprint and MTP 2035 scenario, and 3) an "integrated transit solution" scenario that goes beyond what SACOG have proposed. RT notes that the overwhelming support from the survey has for been Scenario C, to the tune of 61 percent (RT, 2009, Executive Summary, p. 9).

However, like MTP 2035, RT is aware that a critical component to TransitAction's (Scenarios B and C) success is a sustainable level of funding. Chapter 9 of the Draft TransitAction report titled "Finding the Funding," identifies a funding gap of \$8.2 billion (or \$290 million per year) between the plan's needs and current levels of funding. Therefore, RT states that it will need increased levels of funding both to build and to operate the expanded transit system, and lists a "menu" of revenue options to consider in meeting TransitAction's funding needs. As such, RT states that implementation of the entire TransitAction plan will require a "new approach to funding transit in Sacramento" (RT, 2009, Ch. 9, p. 9). I will discuss RT's proposed revenue options in more detail towards the end of this section.

According to SACOG, RT operations already consume about 90 percent of the region's transit operations funding, so current funding levels have effectively capped

RT's ability to expand its operations. Given that RT covers only around 25 percent of its operating costs from fares, it relies heavily on sales tax driven revenues and grants to cover its operating costs (SACOG, 2008a, p. 2). RT covers about one-third of its operating costs with Measure A funds and another one-third with Transportation Development Act (TDA) funds. SACOG also notes that while Measure A and TDA revenues expand with the economy, RT's operating costs expand as well, such that "anything beyond a modest and gradual expansion of service" requires additional operating funds (SACOG, 2008a, p. 2).

Moreover, because of the elimination of STA funding to California transit agencies, RT publicly stated it would face an \$18.3 million funding shortfall in Fiscal Year (FY) 2009 without either cutting service or raising fares (RT, 2008d). Consequently, on November 5, 2008, RT announced that it would raise its bus, light rail, and paratransit fares effective January 1, 2009. RT increased basic bus and light rail fares from \$2.00 to \$2.25, and basic paratransit fares from \$4.00 to \$4.50. RT General Manager/Chief Executive Officer Michael Wiley noted in the press release that although RT would be able to avoid service reductions with the increased fares, the "raid" of state funds essentially forced RT to ask its riders to pay more for service (RT, 2008d). The *Sacramento News and Review* recently reported that the "immediate picture is ugly" for RT, and the state's financial woes and the local economy's declining sales-tax revenues have RT in a state of crisis (Garvin, 2008).

On February 25, 2009, the *Sacramento Bee* reported that in a further search for operating revenues, RT was revisiting a proposal to charge a \$1 a day fee at each of RT's

19 park and ride light rail lots. RT board member Steve Cohn was quoted in the article as saying that these are “desperate times” (Bizjak, 2009b). However, on April 14, 2009, RT rejected this proposal, which would have raised up to \$1.5 million annually. Several board members argued that the charge would be a tax on suburban riders and could drive users away from transit (Bizjak, 2009c).

In response to RT’s current state of funding, RT officials, including the one that I interviewed, are convinced that the agency will need to seek alternative funding sources in order to break free from unpredictable state funding and assert more control over its revenue base. Therefore, as one of its TransitAction proposals, RT is hoping to ask Sacramento voters in November 2010 to approve a new ¼-cent “Measure B” sales tax to allow the agency to stabilize its annual revenues and help it expand into the future. This tax could have the potential to generate up to \$50 million annually (roughly one-third of its current operating expense budget), and \$1.5 billion over the TransitAction period (RT, 2009, Ch. 9, p. 7).

In addition to the proposed Measure B sales tax, Chapter 9 of the Draft TransitAction report includes an assortment of revenue options that could enable RT to meet its additional funding needs. A summary of the options that RT deems “suitable to pursue as funding mechanisms” for the TransitAction plan are presented in Figure 6. Of the list of items included in Figure 6, the three largest revenue generating sources RT identifies aside from a sales tax, are fare increases, a vehicle levy (license fee), and a transit-specific property tax (listed as “special tax” in Figure 6).

Figure 6
RT Potential Options for New Revenues (RT, 2009)

Revenue Source	Example of Charge / Increase	Annual \$m Generated	Ease of Implementation/ Administration
Fares	Double the average fare	\$75m	Within Regional Transit authority - increase existing charge
Sales Tax	Additional ¼%	\$100m	Moderate/Hard - Process established (requires 2/3 public support) - increase existing charge
Regional Gas Tax	\$0.05 per gallon	\$30m	Moderate - increase existing charge, but need voter approval for new application of revenue
Vehicle Levy	\$50 on licensing fee per vehicle	\$60m	Difficult - increase existing charge, but likely need legislation for new application of revenue
Parking Charges	50% increase	\$5m	Difficult - increase existing charge, but likely need legislation for new application of revenue
Special Tax	\$100 per household	\$95m	Moderate - institute special tax, but need voter approval for new application of revenue
Rental Car Tax	5%	TBD	Moderate - increase existing charge
Hotel Tax	5%	TBD	Moderate - increase existing charge
Developer Charges & Access Fee	Project specific	TBD	Possible, but requires Partner support - increase existing charge on communities

RT believes that it can increase the average fare per passenger through several strategies including implementing a “zone-system” with distance-based fares, fares based on peak and off-peak hours, and increasing the quality of its service to command higher fare prices. RT states that doubling its average fares could generate approximately \$75 million per year or \$2.1 billion over the TransitAction period (RT, 2009, Ch. 9, p. 6). However, RT offers this notion irrespective of the fact that it just increased its fares on January 1, 2009, as well as any concerns over the possibility of reduced ridership because of higher fares.

The vehicle levy would consist of a fixed fee on each vehicle in the region at the time of annual licensing, which could be variable based on size or fuel efficiency of the car. RT states that because of the large number of cars in Sacramento County, a \$50 fee

per vehicle could generate approximately \$60 million per year (RT, 2009, Ch. 9, p.7). RT believes it has the authority to levy a special tax for transit purposes as long as the cities and/or counties approve such a proposal and voters approve it with a two-thirds vote. According to RT's estimates, an increase in the average property tax by \$100 per residence would generate approximately \$95 million per year (RT, 2009, Ch. 9, p. 7).

My interview with the representative from RT's Executive Management Team provided the link between RT's current and future funding issues and SB 375. The key connection according to the RT representative is the dependence on increased levels of funding in order to expand and improve Sacramento's transit system from where it stands today. So regardless of whether the Sacramento region is ultimately successful in meeting its SB 375 emission targets, in order to have a fighting chance, the region will need an enhanced transit system, both in terms of infrastructure and services provided. While RT developed TransitAction and its lofty vision of the region's future transit system independent of any specific GHG emission goals, its Blueprint inspired strategies equivalently address SB 375 and its emphasis on increasing transit ridership to reduce VMT. The RT representative asserted that the region needs an effective transit system in order to "make it all work."

As further commentary regarding transit funding, the RT representative expressed deep disappointment with the state, which he described as being "absolutely disconnected" in its policies. As the primary example of this disconnect, the RT representative cited the state's approval of policies to reduce GHG emissions at the same time it has eliminated state funding for transit, one of the key options to carrying out a

reduction in GHG emissions. To diminish a reliance on state funding, the RT representative reiterated TransitAction's intention to seek new and alternative sources of revenues to fund Sacramento's transit system.

Caltrans

I successfully interviewed key executives from the Caltrans Division of Mass Transportation (DMT) and Director's Office. Like SACOG, the DMT representative noted that SB 375 involves a complex combination of land use development decisions, local general plans, and long-range transportation plans. Therefore, funding is a significant challenge to SB 375, but it is difficult to identify it now as *the* biggest or only challenge to SB 375. The DMT representative pointed out that a better picture of the transit funding situation will likely be apparent following the upcoming federal transportation reauthorization. This next reauthorization will have a "major impact" on the future of transit in California as well as how successful regions will be in implementing SB 375.

The major point the DMT representative addressed regarding state level funding was the apparent disconnect between state policies on climate change and transportation funding, which was also touched upon in my interview with RT. For example, on one hand, the state passes an ambitious policy like SB 375 that aims to tackle global warming through getting people out of cars; while on the other hand, it eliminates a major funding source for one of the principal alternatives to automobile travel. The DMT representative emphasized that the two policies display an obvious inconsistency.

Also with regard to funding, the DMT representative noted that SB 375 does not include any new funding, but is solely incentive based, using current practices. The state will not directly disburse transportation funds to local agencies based on the success of their greenhouse gas emission reduction efforts. Instead, local agencies will receive funds through the existing system of regional funding, where Metropolitan Transportation Organizations (MPOs) hold most of the authority for transportation funding decisions. Therefore, local officials sitting on MPO boards remain the primary decision makers.

The Director's Office representative whom I interviewed provided a broader context, and stated that the issue of funding woes extends beyond just transit but involves the system of state funding in its entirety. The representative painted the picture of "one pot" of funds that the state must distribute for specified purposes. Because of current budget shortfalls, the Legislature has had to reprioritize how to spend limited dollars, which has resulted in the shifting of state funds away from transit. In addition, the representative added that in this time of fiscal constraint, a question is whether the state should continue to subsidize transit operations, or let it become strictly a local and regional responsibility. However, the representative did state that there is indeed a legitimate need for transit operations funding, and the Legislature should at least attempt to address the issue.

Further, the representative emphasized focusing on transportation funding as a whole, and not just transit funding. When looking at the larger picture of transportation, the status of highway funding is in dire condition as well. A key example is the State

Highway Operation and Protection Program (SHOPP), which is the state's multi-year program to repair and rehabilitate the state highway system. While the state funds the SHOPP primarily from the state excise tax on gasoline and diesel, declining purchasing power of revenues (consistent with the trend of federal excise tax revenues) has decimated SHOPP funding to roughly one-third of its actual needs (approximately \$2 billion per year compared to \$5.5 billion in needs). As such, a significant portion of California's state highway rehabilitation needs remain unfunded each year.

The Director's Office representative also added an interesting point regarding the source of state and federal transit revenues. Because motor vehicle fuel consumption generates the majority of state and federal revenues for highways and transit, the emphasis on reducing vehicle miles traveled (VMT) translates directly to a reduction in overall revenues. If SB 375's goal were to reduce VMT and get people out of their cars, it would seem to be counterproductive to transit, because a major portion of its revenues depends on people actually driving their cars. Therefore, the representative suggests that to be a truly "fair" transportation system, transit revenues should move toward being user-based, such as through some combination of user based taxes and fees.

Ultimately, when asked whether SB 375 will achieve success both regionally and statewide, the Director's Office representative was pessimistic on SB 375's success. As reasons for this pessimism, the representative reinforced the issue of transportation funding, but also cited the overall state budget, public choice regarding low versus high density, and TOD related issues of affordable housing and transit security, as potential roadblocks. However, the representative complimented SB 375's overall intentions,

calling the bill a good first step towards creating an effective strategy for better decision-making in regional planning.

CSAC

I was unsuccessful in securing an interview with a representative from CSAC. In addition to scheduling conflicts, the representative that I contacted acknowledged that my questions on regional transportation plans and transit funding challenges were outside of CSAC's domain, despite the fact that the agency was integral in SB 375's development. In order to replace the viewpoint of CSAC in my analysis, I proceeded with interviewing two separate staff members from the California State Legislature. I selected the staff members based on their knowledge and experience with regard to SB 375 and transportation, and upon recommendation from sources close to my thesis. I discuss the results from these two case study analyses below.

California State Legislature, Staff Member A

My discussion with the first legislative staff member, whom I will refer to as Staff Member A, began with a statement that the public and the media have in a sense, made SB 375 out to be more than it really is. Staff Member A calls SB 375 a good incremental step towards achieving a collaborative framework on how our state grows, but does not believe that the bill single handedly transforms California's land use and transportation landscape. In addition, Staff Member A added that the Legislature had to weaken the final version of SB 375 in order to provide a compromise to the assortment of interests involved. As a result, the version that we see today is less powerful than

what Senator Steinberg had initially planned. In general, Staff Member A noted two key challenges facing SB 375.

The first key challenge addressed by Staff Member A involves the regional greenhouse gas (GHG) emission targets that the California Air Resources Board (ARB) will release in 2010. Staff Member A noted that if the ARB sets targets too high, the more difficult it would be for regions to implement sufficient measures to reach these targets. Although not stated specifically by Staff Member A, I interpreted unrealistic targets as also being harmful politically, given that certain regions' failure to meet targets may shine a negative light on the state's ability to act as a model for other states to follow for addressing GHG reduction. On the contrary, if targets are set too low, then what will be the incentive to change things from the way they are now? Low targets that regions can easily achieve may be good for political purposes, but such low standards would likely mean business as usual continues, and regions may not necessarily need to make significant changes to their land use and transportation practices.

The second key challenge addressed by Staff Member A involves the overall issue of regional implementation. One of Staff Member A's major implementation concerns has to do with local compliance and enforcement. While SB 375 focuses on regional level planning, it does not supersede local government land use authority, meaning that city and county governments still make all land use decisions and essentially do not have to conform their general plans to the region's SCS. Therefore, nothing stops local officials from continuing to approve sprawl development.

What SB 375 does require is that an MPO's regional transportation plan (RTP), such as SACOG's MTP 2035, be "internally consistent" with the SCS. However, SB 375 does not hold regions accountable for emission targets, and MPO boards, composed of elected local government officials, still make all of the funding decisions. In addition, if regions feel that their current RTP planning assumptions cannot meet emission targets through a SCS, they can present an Alternate Planning Strategy (APS), which offers an alternate plan on how regions *may* achieve targets outside of current assumptions. An APS does not have to be consistent with a region's RTP, meaning that there is no direct tie between an APS and transportation funding restrictions.

Regarding the issue of transit funding and SB 375 implementation, Staff Member A does not view transit funding as being a significant threat to SB 375. Based on Staff Member A's concerns over the ARB's emission targets and local government compliance, my interpretation was that this individual views transit funding to be less vital than other issues such as the two mentioned. Staff Member A did state that transit will be important in helping regions achieve their respective GHG emission targets, and that SB 375 will be beneficial in elevating the importance of transit in the political and public eye. However, Staff Member A followed this statement by noting that high-density development does not automatically translate into substituting cars for transit. Technically, shorter driving distances could also reduce VMT, so SB 375 could still see results even in the absence of expanded levels of transit service.

California State Legislature, Staff Member B

The second staff member from the California State Legislature whom I interviewed, whom I will refer to as Staff Member B, offered a bold and contentious assessment of SB 375, even going as far as questioning the bill's true intent. Staff Member B directly stated that SB 375's true agenda is not about reducing GHG emissions as the bill advertises, but rather, it is about a select group of legislators attempting to control how they want the state to grow and where its residents should live. In other words, the reduction of GHG emissions is a "secondary agenda," that these legislators are using to mask their true plan to try to steer the state's future growth towards dense urban settings.

Referencing public statements from former State Senator Tom McClintock on SB 375, Staff Member B stated that while high-density living makes sense in cities such as those on the East Coast that are limited by space, Californians live in California because of the ability to actually choose where want to live. People like having the option to live in either a dense environment such as San Francisco, or a suburban setting such as Sacramento that allows the amenities of large lots and spacious yards for their kids to play in. Accordingly, Staff Member B does not believe that it is government's role to restrict people's choices by forcing them towards only one development scenario for growth, when in fact, "most people" actually prefer to live in spacious suburbs when provided a choice of where to live.

On the topic of transit, as a subsidized light rail commuter himself, Staff Member B admits that transit makes sense only to the extent that it is "convenient and user-

friendly.” However, there is a fine line between what people consider convenient.

Without transit subsidies provided by employers, Staff Member B questions how many transit riders would continue to use transit as opposed to driving. Further, Staff Member B mentioned that it is just as easy for many people to get back into their cars considering the price of transit fares, and inconvenient bus routes and schedules. In other words, what is the incentive to use transit when the freedom of using one’s automobile may cost about the same?

While Staff Member B did not appear to be in opposition of transit per se, he did reinforce the common state-level theme that transit operations funding should be a local responsibility, and not subsidized by the state. Reinforcing this point, Staff Member B argued that under formula based distributions of STA funds, revenues generated in regions such as Los Angeles essentially subsidize operations in other regions such as Sacramento, which he does not consider fair.

Although my interview with Staff Member B included the above mentioned discussion on transit, the heart of the interview still centered on Staff Member B’s argument that SB 375 is truly about a certain group of legislators trying to direct how *they* want California to grow and where Californians should live. One final interesting point to note was Staff Member B’s questioning of how many actual legislators live in dense urban environments themselves, and how many of them actually take public transit to work. Staff Member B assumes the answer is very few, if any.

Additional Information from Anonymous Sources

In addition to the above-mentioned sources, I also had discussions with other pertinent individuals, who requested that I keep their identities and organizational affiliations anonymous. Therefore, in respect of confidentiality, I will not give details of my discussions with these individuals, but just want to touch on one key point that surfaced during these discussions that I feel is useful to this analysis. The interesting point that two separate sources mentioned, was with regard to whether the elimination of STA funding is as dramatic as the media and transit advocates make it seem. For example, in Chapter 1, I referenced a quote from the California Transit Association (CTA), where CTA Executive Director Josh Shaw referred to the elimination of STA funding as “Armageddon.”

Although CTA has a strong case in arguing against the elimination of funding (regardless of the level) that should technically flow to transit agencies, an analysis of historical STA funding and its proportion to total statewide transit operating revenues, paints a seemingly less severe picture. Prior to jumping to over \$600 million in FY 2006/07, statewide STA revenues averaged a little more than \$100 million annually over the preceding decade. Therefore, STA funding as a major source of transit operating revenues is a relatively new phenomenon.

Of greater consideration, however, is the proportionate share of STA revenues to total statewide transit operating revenues. The State Controller’s Office (SCO) reported that in FY 2006/07, total statewide STA revenues represented only 5.2 percent of total operating revenues (SCO, 2008). More recently, the Legislative Analyst’s Office (LAO),

in its analysis of the FY 2009/10 State Budget, cited that STA revenues (prior to elimination) are closer to three percent of total statewide transit operating revenues (LAO, 2009). Consequently, even though the elimination of any source of operating revenues is likely to cause a hurt on transit agencies, the magnitude of the level of STA funding presents a question of whether this is truly Armageddon, or a temporary problem that transit agencies or the state can fix with the right funding decisions.

Case Study Findings

My case study analyses of SACOG, RT, Caltrans, and staff from the California State Legislature, resulted in a variety of candid assessments of SB 375, covering a multitude of issues beyond just transit funding. In fact, my discussions with the legislative staff opened my eyes to arguments that I had not previously even considered. While such diversity in responses typically allows for a richer and more comprehensive analysis, the challenge for me as a researcher was to incorporate all ideas into unifying themes still relevant to my general thesis topic. Although I entered my research with a focus on transit funding, my interviews spawned a variety of issues over SB 375 that transcended my initial scope. However, even with the assortment of viewpoints that I received, I was able to summarize my findings down into two themes: transit funding challenges to SB 375, and non-transit related challenges to SB 375. I start first with a discussion of my findings on the non-transit related challenges.

Non-Transit Funding Challenges to SB 375.

My findings with regard to SB 375 challenges that do not involve the issue of transit funding stem mostly from my interviews with legislative staff. The challenges

brought up by Staff Member A involving GHG emission targets being too high or too low, and the lack of any local enforcement over SB 375 compliance, are particularly intriguing. While the ARB is still a year away from releasing its first round of GHG emission targets, it makes sense to assume that unreachably high targets could in itself, disrupt SB 375, as well as damage the state's hopes of becoming a GHG reduction model for the rest of the nation. On the other hand, targets set too low may result in a false sense of accomplishment, where in the bigger scheme of things, SB 375 targets may not have any real impact in the overall success of AB 32.

The lack of enforcement over local non-compliance and the inability to meet GHG emission targets is equally important. With local land use authority unscathed by SB 375's provisions, cities and counties do not have to match their respective general plans to the region's SCS. So, even though the City of Sacramento recently adopted its 2030 General Plan compliant with SB 375 standards of urban infill and intensified development near transit, two of my interview sources noted that other cities within the region have generally opposed the Blueprint agenda of SB 375. As a result, can SACOG still achieve its GHG emission targets without all cities in the region on board? More importantly, as Staff Member A noted, will cities in the region still be motivated to put forth a dedicated effort to reduce GHG emissions, when there is essentially no penalty for failing to meet the targets? Although SACOG may not know the answer to these questions now, they pose additional challenges to add to its list.

The most important non-transit challenge in my opinion, however, pertains to a key point made by Staff Member B regarding public choice. While Staff Member B's

argument that SB 375 is all about control and not climate change is debatable, his point about allowing consumers the freedom to choose where they want to live makes a lot of sense. As such, SB 375 may truly come down to whether or not there is adequate consumer demand for compact high-density housing to accommodate a dramatic shift away from sprawling suburban living. Even with successful coordination between regions and developers in developing a high-density urban landscape, complete with a fully funded and robust transit system, is not the decision still up to consumers as to where they prefer to live? From an economic perspective though, this question needs to address a crucial concern over negative externalities and market failure.

A negative externality results when the costs to society from an action are greater than the private costs incurred by an individual or business (Wessels, 1997, p. 203). In this case, a negative externality may result from the inability of the private costs of low-density living (and long commutes) not matching the greater social costs of emitting GHGs into the air and increasing the threat of global warming catastrophe. Consequently, if global warming were indeed a legitimate societal threat, market failure occurs unless the market can hold low-density inhabitants accountable for the full global warming costs they are bearing on the rest of society.

And while SB 375 may indeed be a form of government intervention in favor of preventing market failure, a true Pigouvian form of intervention would involve charging low-density developers and occupants a higher price than they currently pay, in order to bring the private and social costs more in line. By paying higher prices for sprawl, developers and occupants become fully aware of the costs they are imposing on the

general populace by continuing to choose the spacious (but sprawling) suburb over the more compact, carbon friendly alternative. However, because SB 375 does not represent a firm Pigouvian method of government intervention, and because suburban homes currently still tend to be more affordable than urban ones, it is questionable whether there is an identifiable concern over the alignment of private and social costs. Therefore, like current land use law, SB 375 still faces an issue of choice. Even with the development of a harmonious blend of high-density, transit-oriented development, will consumers choose to live here? It appears that the philosophy underlying SB 375 is “build it and they will come.” Consequently, the consumer-driven decision over spacious suburbs and long commutes versus urban locales closer to daily destinations will likely be one of the key challenges underlying SB 375.

Transit Funding Challenges to SB 375

As I stated in this thesis’s introduction, my primary research purpose was to analyze the link between transit funding and SB 375. Therefore, while there are other factors influencing the Sacramento region’s ability to meet its SB 375 GHG emission targets, my contribution to the literature has always focused solely on investigating the issue of transit funding. Whereas each case study analysis presented a differing magnitude of the affect of transit funding on SB 375, nearly all regarded transit as being an important factor for each of California’s metropolitan regions in implementing SB 375. With regard to the Sacramento region, my analyses of SACOG and RT noticeably point to the same theme, that the region will need additional funding to successfully

expand and operate its transit system, if MTP 2035 and TransitAction are any indication of what SB 375 will necessitate.

In the case of RT, its recent fare increases and the proposal to charge a daily parking fee demonstrate that it is struggling to maintain its current operations and level of service, notwithstanding concerns over operational needs for future expansion. With RT's current funding troubles in mind, it raises an obvious question as to whether TransitAction Scenario C (which goes beyond MTP 2035 and Scenario B) has any realistic chance of ever occurring. Further, in addition to its January 2009 fare increases, RT is also looking at additional fare increases in the future as being one of its primary options to generate additional revenues, as noted from my analysis of TransitAction.

Therefore, RT's fare increases and parking fees point out an interesting dilemma. With declining local sales tax revenues and volatility from state and federal revenue sources, RT is focusing on raising fares and considering parking fees in order to generate necessary operating revenues. However, will future fare and fee increases affect the willingness of RT's riders to continue using transit? In economic terms, although RT may already be concerned about the elasticity of its fares and fees, it should continue to keep a watchful eye on this elasticity to determine the extent by which some riders actually consider getting back into their cars due to higher costs.

As Staff Member B stated, using transit only makes sense to the extent that it is convenient and cost-efficient. In addition, SACOG (2008b) stated in MTP 2035 that higher fare revenues largely depend on attracting more choice-riders, but agencies must offer significantly better service to attract these choice-riders (p. 170). By deciding to

make riders pay more for existing service, RT could potentially harm its ability to attract new riders, in addition to turning away existing riders. However, RT may be on the right track in addressing this issue with its consideration of varying fares based on distance traveled and peak versus off-peak hours of service.

With regard to SACOG's MTP 2035, significant issues are apparent with both its financial constraint restriction and revenue assumptions. SACOG directly acknowledges that its MTP 2035 transit investments are not sufficient to meet the needs of a growing Sacramento region, in addition to requiring additional funding to meet these constrained investments. Although SACOG's first required SCS is still a few years away, will a SCS under a constrained MTP adequately meet ARB's emission targets, or will SACOG need to go the route of an Alternative Planning Strategy? Once ARB releases its first emission targets, SACOG will most likely have a better idea on how to answer this question.

Further, even under constrained circumstances, MTP 2035's revenue assumptions raise feasibility concerns. For example, how likely is it for SACOG to assume increases to State Transit Assistance (STA) and State Transportation Improvement Program (STIP) funding, given that the Legislature recently eliminated STA funding for the next five years (an event that occurred after SACOG's release of MTP 2035), and the fact that the last STIP provided no funding for new projects? In addition, is it safe to assume that Sacramento County voters will approve a Measure B local sales tax measure, considering the current economic conditions and the fact that state just increased its sales tax rate by a whole percent? These questions elicit a concern over whether MTP 2035 is even more constrained than it already acknowledges itself to be.

Similarly, feasibility concerns are highly apparent with regard to RT's alternative revenue options that it proposes in Chapter 9 of the Draft TransitAction report. In addition to fare increases, RT believes that it could generate significant revenues through the Measure B local sales tax, a vehicle license fee, and a special tax, among other sources listed in Chapter 9. While these options could indeed produce large sums of revenues, they also have significant implementation challenges present as well. The figure included in the Table 5 includes an ease of implementation rating for each option listed, and Chapter 9 of the Draft TransitAction report includes a full analysis of each revenue option's implementation challenges.

With Measure B, as mentioned above, the major concern is over asking voters to approve (with two-thirds support) a sales tax, in the midst of a national recession and right after the state already raised the general statewide sales tax by a full one percent. A levy of an additional vehicle license fee is also the victim of bad timing, considering that the state just increased the statewide vehicle license fee from 0.65 to 1.15 percent as part of the 2009/10 State Budget. In addition, RT notes that a major implementation concern for a license fee is that it would likely need legislation for a "new application of revenue." RT's consideration of a transit-specific special tax raises two possible concerns. First, RT notes that the city and/or county would need to be in favor of such a proposal, and second, the proposal would require two-thirds approval by local voters in order to pass. Consequently, as the aftermath of Proposition 13 has taught us, Californians are averse to the idea of tax increases, especially those pertaining to the "third rail" of property taxes.

Other major findings that I encountered were the apparent realization of a disconnect between state level climate change and transportation funding policies, and that funding problems plague more than just transit, but the entire transportation system and State of California in general. The policy disconnect is important to consider, given that the successful implementation of climate change policies seemingly requires the dedication of more funding, not elimination. However, the big-picture state funding outlook described by Caltrans counters this notion, given the dire condition of the state's highway system and overall budget. The idea of "more funding" is difficult to satisfy under current circumstances. Therefore, while my anonymous sources may have questioned the actual magnitude of STA funding, the reality as I see it, is that no source of funding is insignificant in this current period of shortfalls and budget cuts.

Summary

My case study analyses of SACOG, RT, Caltrans, and staff from the California State Legislature provided a diverse blend of insights with regard to both transit and non-transit related challenges to SB 375. Uncertainty over SB 375's emission targets, a lack of enforcement of local non-compliance, and questionable consumer demand for high-density living, highlight three major challenges aside from transit funding, that SB 375 will face heading into the future. With regard to transit, the case study analyses of SACOG and RT point to the realization that current transit funding levels are insufficient to meet the Sacramento region's long-range transit plans heading into the future.

Therefore, if the region, under the lead of its MPO and largest transit agency, is to be successful in expanding transit capital and operations as planned, it will need

additional transit funding, regardless of whether it ultimately reaches the emission targets set by the ARB. The major question then becomes over how the region will receive this additional funding. The common state-level view of transit funding being a local responsibility combined with major implementation challenges facing any new sources of revenue, add to the complexity in answering this question. The next and final chapter will attempt to address this challenge, and will conclude with policy options for the region and state to consider going forward.

Chapter 5

CONCLUSION

As I explained in Chapter 4, transit funding may not be the only challenge to Senate Bill (SB) 375, but it is nonetheless an important component of the SB 375 equation, as validated by my case study analyses. SB 375 involves a synchronization of land development and transportation, with an emphasis on high-density, transit oriented development (TOD) to reduce vehicle miles traveled (VMT) in California. As a result, transit will play an integral role in both the land development and transportation aspects of SB 375, and will be a key piece in facilitating the bill's goal in getting people out of their cars and into alternate modes of transportation. With this integral role, it is crucial to understand the link between the Sacramento region's transit funding challenges and its ability to deliver the necessary investments required by SB 375.

Transit funding could still theoretically be a contributing factor to the "domino effect," mentioned in Chapter 1, for the Sacramento region's SB 375 efforts. If the long-range plans from the Sacramento Area Council of Governments (SACOG), and its main transit agency, the Sacramento Regional Transit District (RT), are akin to what the region will present in response to SB 375, then the transit funding challenges addressed in this thesis could be what initially sets off the SB 375 domino chain. Inadequate funding levels to expand transit capital and operations will disrupt the land use and transportation synchronization, seeing as a prominent piece of SB 375's land use goals involve TOD and the substitution of automobiles in favor of buses and light rail.

Further, if the inability to expand and improve transit services stalls the region's TOD and compact growth plans, it seems reasonable to assume that the migration of people from low-density suburbs to high-density urban centers may not materialize to the extent that SB 375 requires. Ultimately, if people do not "internalize" the externalities mentioned earlier, and choose to remain in low-density suburban locales, and more importantly, in their cars, it appears unlikely that the region will be able to reduce VMT to the levels necessary to meet its greenhouse gas (GHG) emission targets under SB 375.

However, before arriving at this conclusion, one should remember that factors other than transit funding, such as those mentioned in Chapter 4, may also contribute to SB 375's potential demise. For example, the major non-transit challenge that I identified was consumer demand for high-density products. If Sacramento area residents ultimately prefer low-density suburban living to TOD, and do not have to pay the full social costs for this choice, it will be extremely difficult for the region to reduce VMT to desired levels, even with an expanded transit system. I recommend that a future study examine in detail, this relationship between consumer demand and SB 375.

Now that is apparent that transit funding in the Sacramento region is an identifiable challenge facing SB 375, what steps can the region or state take to avert the potential tipping of the SB 375 domino chain? As both SACOG and RT have stated, the answer lies with seeking new ways to generate transit revenues. As I explained in Chapter 4, some of the options that RT is considering at the local level involve seeking voter approval of taxes and fees such as a local sales tax (Measure B), vehicle license fee, and a transit-specific special tax. While these options could indeed generate significant

amounts of revenue for transit in Sacramento, they also face firm implementation challenges, the largest being two-thirds voter approval.

Although transit funding has reached public awareness (as evidenced by the recent *Sacramento Bee* articles referenced in Chapter 4), it is questionable whether there is presently an adequate policy window open for any additional sales tax increases, considering that the state just increased its rate by a full one percent on April 1, 2009. In addition, the fact that the region, state, and nation are in the midst of a recession is a further impediment to an open policy window. Whether or not the policy environment is conducive to promote additional sales taxes on the coattails of these factors will depend on how strongly the region's voters feel towards transit.

While it is good idea for RT to look internally within the region to find a solution to its search for additional transit revenues, I believe the ultimate solution will involve a combination of local, state, and federal sources. At the federal level, since the lion's share of subsidies for transit come from federal excise taxes on motor vehicle fuels, any additional funding for transit will likely need to involve an increase in the federal excise tax rate, as well as flexibility in the restrictions of funds, given that federal transit revenues primarily fund capital improvements and not operations. With the current federal authorization near expiration, it will be interesting to see how the next reauthorization rates transit programs in terms of priority.

Despite the elimination of State Transit Assistance (STA) funding, and the common state-level view that transit funding is a local responsibility, there is still potential for a restoration of state funding for transit. Senator Darrell Steinberg has

recently affirmed his commitment to restoring transit operating funds, and announced in March 2009, the creation of a Senate working group headed by Senator Alan Lowenthal, Chair of the Senate Transportation and Housing Committee. The goal of the working group is to focus solely on securing long-term, sustainable transit funding. While the working group has not officially identified any specific options at this point, there is a variety of alternatives for the state to consider.

Two transit-related legislative bills transit that the Senate is considering in the 2009/10 Legislative Session are SB 205 and SB 518. Although technically a local revenue option, SB 205 is the equivalent of the vehicle license fee that RT listed as an option in its TransitAction plan. SB 205 would allow a countywide transportation agency to place on the ballot, a majority vote measure to impose up to a \$10 fee on each vehicle, for purposes of funding congestion mitigation, including transit service. The primary obstacle to this bill is voter approval, as was discussed in response to RT's consideration of a vehicle license fee. However, one source that I interviewed mentioned that a fee such as this one likely has a better shot than a tax increase because of only needing a majority vote of the electorate.

SB 518, authored by the Senator Lowenthal, is one of the more interesting bills the Senate is considering in the current session. The bill seeks to reduce traffic congestion and its associated greenhouse gas (GHG) emissions, by eliminating state subsidies for parking. The intent is to make known the true market cost of parking, to promote the freeing up of land for infill development, and to make transit a more competitive option (Newton, 2009). In addition, the bill includes a proposal to dedicate a

portion of parking revenues to programs that reduce parking demand such as public transit. As a result, while the bill would likely boost transit ridership, it would also help fund transit operations through this dedication of parking revenues.

With regard to the feasibility of this bill, two concerns come to mind. Given the large number of automobile commuters that travel to and from government offices daily, there is likely to be a fair share of pro-automobile opposition. Also, unlikely to help the bill's outlook is the fact that many government workers are currently dealing with furloughs and reduced levels of compensation. Further, such an increased cost burden could potentially be regressive in nature, dealing a devastating blow to lower-income government workers without adequate access to transit services, who essentially need to drive and park each day.

Though it is not being considered in the current legislative session, one potential revenue option at the state level would be to revisit two pieces of legislation proposed by the Legislature back in 2005: AB 2873 (Wolk) and SB 1020 (Midgen). These two bills proposed authorizing a city or county to increase its Transportation Development Act (TDA) sales tax authority from $\frac{1}{4}$ to $\frac{1}{2}$ percent, with revenues deposited into the Local Transportation Fund (LTF). Given that LTF revenues currently provide a major source of transit operating revenues, revisiting AB 2873 and SB 1020 would essentially double the state's revenues from this share. For RT, it would mean doubling the source that currently makes up one-third of its current revenue base.

One final state-level revenue option to note is the recurrent proposal to increase the state excise tax on motor vehicle fuels (i.e., the gas tax), currently set at 18 cents for

both gasoline and diesel. The gas tax has traditionally been the primary funding mechanism for transportation, and transportation agencies frequently target it as a source for increasing revenues because of its relatively easy mode of collection (charged per gallon of gas). In addition, transportation funding advocates value the gas tax for its constitutional protection towards guaranteeing that its proceeds are restricted to transportation. Although the state has not raised the gas tax rate since 1994, it nearly increased the rate by 12 cents per gallon in the 2009/10 Budget Act, prior to removing it in the final budget negotiations.

Because Article XIX of the California Constitution restricts gas tax revenues deposited in the State Highway Account to highway purposes, a change to shift a portion of revenues towards transit would be difficult, involving a two-thirds vote in each house of the Legislature, followed by majority-voter approval at a statewide election. However, given the significant amount of revenues that the gas tax generates, such a proposal remains an attractive option. A Caltrans source noted that each one-cent increase to the gas tax could generate approximately \$180 million per year. Therefore, even directing a one-cent increase towards transit would backfill more than half of 2007-08 STA funding. However, such a transit subsidy would conflict with the thinking of those who believe that it is not in the state's interest to subsidize transit operations, especially when the state could use these funds to repair its deteriorating state highways.

The most daunting challenge for both TDA and gas tax increase proposals, again lies with the condition that voters must approve these measures with a two-thirds vote. Moreover, as I discussed with the Measure B sales tax, the current policy environment

may not be conducive to promote additional taxes, considering the state's recent sales tax increase and sagging economic conditions. In addition to the options that I have mentioned here, the state can consider multiple other alternatives as well including taxes on carbon and development, and climate impact fees. Therefore, I recommend a full analysis of these options be a subject for future research.

One method that I would recommend for this future research would be a Criteria Alternatives Matrix (CAM), a decision analysis tool that can systematically organize the process of comparing different revenue alternatives. However, given that most of the popular alternatives involve taxes and fees, a CAM analysis will likely rate many of alternatives low in terms of political and administrative feasibility because of aforementioned political and constitutional problems with new taxes and fees. Therefore, a future CAM analysis may need to be creative in looking outside of taxes and fees as potential revenue sources.

In conclusion, SB 375 is only at the beginning of what will be a complex, long-term process for the State of California and its 18 affected Metropolitan Planning Organizations (MPOs). As the MPO for the Sacramento region, SACOG, along with its largest transit agency RT, will likely face a multitude of challenges in meeting the future GHG emission targets imposed by SB 375. As a result, I have written this thesis in order to raise awareness of transit funding as one of these significant challenges. From my case study analyses, it is clearly apparent that transit funding challenges are already on the radar of key agencies in the region. In order to address these challenges, it is likely that policy makers will need to make important decisions regarding how to provide a

sustainable level of funding now and into the future. Otherwise, transit funding may indeed become one of the underlying causes that ultimately derail SB 375's plans for smart growth in the Sacramento region.

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