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San Rafael's Downtown District: A Review of Land Use and Traffic Policies that Can Effectively Limit The Increase of Off-Street Commercial Parking Spaces

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SAN RAFAEL'S DOWNTOWN DISTRICT: A REVIEW OF LAND USE AND TRAFFIC POLICIES THAT CAN EFFECTIVELY LIMIT THE INCREASE OF OFF-STREET COMMERICIAL PARKING SPACES

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Finally, a big thank you to the interviewees who were so kind to add input regarding public transportation planning. parking policies and best practices that can be applied to the City of San Rafael: Jeffery Tumlin, Nelson Nygaard, Rebecca Woodbury, City of San Rafael Community of Development, Z. Wayne Johnson, Golden Gate Transit, Katie Korzun City of San Rafael Redevelopment Agency, Joanne Webster, Downtown Business Improvement District and Vince Guarino, Department of Parking Services.

Executive Summary

Parking policies such as minimum parking requirements were created by urban planners with the help of existing traffic generating reports from the Institute of Traffic Engineers (ITE) and parking policies from neighboring communities. The reports were created in order to provide more off-street parking that would decrease traffic congestion, reduce vehicular exhaust emissions and ultimately make cities more competitive.[1] Yet, minimum parking requirements create an excess of parking supply and contribute to the loss of developable land when parking demand falls short.

The City of San Rafael has made great strides towards creating a pedestrian-friendly, vibrant downtown district. In spite of this effort, there is a continued disconnect amongst the city's transit center, newly formed multi-use pathways and designated zoning districts. Consequently, the underlying problem is how to restrain the City of San Rafael from constructing additional off-street commercial parking within the downtown district.

The proposition of eliminating minimum parking requirements, or implementing parking maximums for the entire downtown should address the excessive designation of land allocations for parking and dissuade residents from traveling by single-occupancy vehicle. Opportunities such as shared parking, carsharing, and transportation demand management (TDM) programs will allow business owners and employees to understand the true cost of maintaining and supplying parking, and consequently to choose options that best fit their business model or budget. In order to firmly recommend such strategies the report reviewed San Rafael's General Plan, Parking Studies, and zoning ordinances. Marin County' transportation system was reviewed, interviews with government officials and planning consultants took place, and field observations and employer surveys were conducted throughout downtown San Rafael.

The final recommendations provide a link between eliminating and maximizing parking requirements, managing parking demand and fulfilling the vision to increase pedestrian and bicycle mode shares.

[1] Adam.Millard-Ball, "Putting on Their Parking Caps," *Planning* 68, no.4 (April 2002): 17.

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Chapter 1: Introduction to the Research Project

"The more downtown is broken up and interspersed with parking lots and garages, the duller and deader it becomes… and there is nothing more repellant than a dead downtown." – Jane Jacobs, 1961 The Death and Life of Great American Cities

1.1. Project Overview

Anyone who has driven to a suburban or urban downtown at some point in their life will expect off-street parking to be available and oftentimes free of charge. Historically, demands for vehicle parking spiked after World War II and in its wake minimum parking requirements were created for every type of land use, including the building's square footage of gross floor area. [2] Little would one realize that minimum parking requirements affects every community's planning and design practice from thereafter.

Urban planners required more off-street parking spaces in order to decrease traffic congestion, reduce vehicular exhaust emissions, and ultimately make cities more competitive.

To respond to this need, parking policies (such as minimum parking requirements) were developed by urban planners with the help of existing traffic generating models from the Institute of Traffic Engineers (ITE) and parking policies created by neighboring municipalities. [3]

Unfortunately, the ITE analysis of peak parking demand for land uses sets unrealistic increases in the supply of parking that ultimately increases congestion, decreases the stock of affordable housing, spreads development away from public transit, and reduces density.[4] Minimum parking requirements ultimately reduce a city's economic competitive edge because parking consumes so much land that it precludes opportunities for other uses such as residential or office development. Moreover, downtown parking is usually expensive to build compared to parking in other parts of the city. This further inhibits development. As a result, many cities produce "dead downtowns" that empty after daytime business hours.[5]
In fact, a 1994 study analyzing the opportunities to reduce minimum parking

[2] Donald C. Shoup, "An Opportunity to reduce minimum parking requirements," *The Journal of the American Planning Association* 61, no. 1 (Winter 1995): 14.

[3] Todd Litman, "Pavement Busters Guide: Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities," Victoria Transport Policy Institute, January 5, 2000, http://www.vtpi.org/pavbust.pdf (accessed July 31, 2010), 3-6.

[4] Ibid.

[5] Michael, Manville and Donald C. Shoup. " Parking, People and Cities." *Journal of Urban Planning and Development* 131, no.4 (December 2005): 242.

requirements highlighted a case study of typical office parking. When factoring employee and visitors' needs for on-site parking, the maximum number of off-street parking spaces were estimated to be 3.1 spaces per 1,000 square feet for employer paid parking and 2.4 parking spaces for employee paid parking.[6] The parking requirements are well below ITE's 85th percentile of peak parking demand represented in Table 1.

Table 1 Institute of Traffic Engineers' Analysis of Peak Period Parking Demand v. 1,000 sq. ft. Gross Floor Area [a] for Off-Street Parking

Building Use	Average Peak Period Parking Demand [b]
Neighborhood Commercial	4.70
Community Commercial	4.90
Regional Commercial	5.50
Office Building (Suburban)	3.45
High Turnover (sit-down restaurant in suburban setting) [c]	20.60
General Light Industrial	1.13

Source: American Planning Association, Planning and Urban Design Standards (2006).
Notes:

a) Gross Floor Area is defined as the total gross floor area of a building, or structure, including the exterior walls of all floors. Gross Floor Area is also referred to as gross square feet, or GSE.

Source: ITE Parking Generation, 3rd Edition (2004).
Notes:

b) Typically, cities use the 85th percentile of peak parking demand due to case studies' different buildings square footage of gross floor area, location, and employee size.
c) 85th percentile peak parking demand is presented on a Saturday, which is the busiest day of the week.

Similarly, a utilization survey conducted in 1991 for suburban areas in the Seattle region found that the average parking supply for office use was 36% greater than the average peak demand.[7] Thus, auto-centric cities devote up to three times as much land as necessary to transportation.[8]

1.2. Case Study

Located 19 miles north of San Francisco City and County,[9] the City of San Rafael has

[6] Donald C. Shoup, "An Opportunity to reduce minimum parking requirements," *The Journal of the American Planning Association* 61, no. 1 (Winter 1995): 17-18.

[7] Richard W. Willson, "Suburban parking Requirement: A Tacit Policy for American Automobile Use and Sprawl," Journal of the American Planning Association 61, no. 1 (Winter 1995): 30.

[8] Todd Litman, "Pavement Busters Guide: Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities," Victoria Transport Policy Institute, January 5, 2000, http://www.vtpi.org/pavbust.pdf (accessed July 31, 2010), 8.

[9] California Department of Finance, "Demographic Research Data Files," http://www.dof.ca.gov/research/demographic/data/ (accessed September 1, 2010).

made great strides to create a pedestrian-friendly, vibrant downtown district. In spite of this effort, there is a continued disconnect amongst the city's transit center, newly formed multi-use pathways and designated zoning districts. The existing parking supply inhibits pedestrian and bicyclist activity, further reducing public transit use in favor of private vehicle ownership. This creates unnecessary congestion and poor urban design.

Thus, the underlying problem is: *How best to restrain the City of San Rafael from constructing additional off-street parking within the downtown?*

1.3. Why Should San Rafael Limit Additional Off-Street Commercial Parking?

The Parking Assessment District (shown as light blue in Figure 1-1), located within the Fourth Street Retail Core District of downtown San Rafael, was formed to construct and finance public parking for the Fourth Street Retail Core area where on-street parking spaces are limited. Essentially, the district attempted to regulate the oversupply of off-street private parking over a fixed supply of land by providing parking entitlements within the public parking structures based on the business' floor area ratio (FAR).[10] Given the fact that only a small portion of the downtown falls within the Parking Assessment, the downtown district lacks a cohesive parking layout for its residents, visitors and businesses.

Therefore, the research question posed for this project is: *How can the City of San Rafael's Downtown District restrain from constructing additional off-street commercial parking spaces?*

Eliminating minimum parking requirements or implementing parking maximums for the entire downtown should address the act of oversupplying land strictly for parking and dissuade commuters and visitors from traveling by single-occupant vehicle. Opportunities such as shared parking, carsharing, and transportation demand management (TDM) programs will allow business owners and employees to understand the true cost of maintaining and supplying parking. They can then choose options that best fit their business model or budget.

Therefore, the research question posed for this project is: *How can the City of San Rafael's Downtown District restrain from constructing additional off-street commercial parking spaces?*

[10] City of San Rafael, Redevelopment Agency, Parking Subcommittee Report and Recommendation, for Downtown District, 1994, San Rafael California, 5.

Figure 1-1. City of San Rafael Parking Assessment District
Source: City of San Rafael, Planning Department

Eliminating minimum parking requirements or implementing parking maximums for the entire downtown should address the act of oversupplying land strictly for parking and dissuade commuters and visitors from traveling by single-occupant vehicle. Opportunities such as shared parking, carsharing, and transportation demand management (TDM) programs will allow business owners and employees to understand the true cost of maintaining and supplying parking. They can then choose options that best fit their business model or budget.

In order to firmly recommend such strategies the following methods were used for this planning report:

- **Literature review**: An examination of available literature was conducted from academic journals, popular magazines, newspapers, government documents and credible online resource banks.

- **Literature review of the City of San Rafael's planning documents**: An examination of San Rafael's current zoning map, general plan and municipal code. Additional documents such as the city's downtown parking utilization studies and parking requirements were identified and evaluated in order to understand the current land use and parking policies implemented throughout the city and within the downtown.

- **Review of Marin County and the City of San Rafael's transportation system**: An examination of Marin County and the City of San Rafael's current transportation system and proposed transportation projects were examined to understand whether the city encourages public transit and nonmotorized activities.

- **Interviews with staff from the City of San Rafael and professional planners**: Interviews were conducted with principal city employees from the San Rafael Planning Department, Golden Gate Transit, San Rafael Redevelopment Agency and San Rafael Parking Services in order to gain perspective on various factors impacting parking demand.

- **Field observations**: Field observations were conducted in the seven neighborhoods within the downtown district to collect qualitative information on the activity of each district.

- **Employer-based surveys**: Surveys were distributed to downtown employers. The data collected from the survey includes employers' view of the downtown parking system and employee commute characteristics.

1.4. Contents of the Report

Chapter 1 (this chapter) begins with an introduction. It defines minimum parking requirements and explains how they have impacted the urban form throughout the nation.

Relevant literature is discussed in Chapter 2. The literature supports the paper's hypothesis by outlining the impacts of minimum, maximum and the elimination of parking requirements. This chapter also discusses discoveries from the literature review, delving into a number of themes such as the connection of automobile use and urban form, and the benefits of pedestrian and automobile way-finding signage.

Chapter 3 focuses on the significance of Marin County and the City of San Rafael to the research question. The chapter delves into local demographics, and discusses the economic and commuting patterns for both the county and city.

Marin County's public transportation funding and operation system are discussed in Chapter 4. San Rafael's public transit, bicycle, and pedestrian objectives are covered in this chapter as well.
Chapter 5 focuses on San Rafael's zoning characteristics within the downtown.

San Rafael's downtown parking policy and the history of the Parking Assessment District is examined in Chapter 6.

Case studies of cities that have similar demographic characteristics to San Rafael are presented in Chapter 7. The case studies outline effective incentive strategies and parking policies that can be utilized by the City of San Rafael to reduce future parking demand.

Chapter 8 presents the results of a set of observations conducted during peak-hours over a three-day period within downtown San Rafael. Nine elements, such as pedestrian activity and parking demand were recorded throughout the seven neighborhoods to understand the layout of each district. Findings from all the observed elements are presented.

Chapter 9 profiles an employer-based survey conducted within the downtown district. The objective was to understand employee travel habits, employee commute benefits, perceptions of downtown parking amenities, and the benefits of locating one of the proposed Sonoma Marin Area Rail Transit (SMART) stations in the downtown.

Chapter 10 synthesizes all the information presented in this planning report, and drafts long- and short-term recommendations to reduce parking demand and spur public transit, bicycle, and pedestrian activities within the downtown.

1.5. Project Limitations

This report is unable to address all the facets of off-street commercial parking demand and improvements in the downtown, including exact locations where employees and visitors park, and how far drivers are willing to park to get to a destination. Also not addressed is the element of security of specific parking facilities. Specifically at the 3rd and Lootens parking lot, where few drivers park on the 2nd Floor, which is designated as "All Day" parking . The 2nd floor feels isolated from the rest of the parking structure due to limited eyes on the 2nd floor, and indirect access to downtown amenities.

It is important to note that elements that encourage reduced parking demand are loosely addressed in the respective Neighborhood and Circulation Elements section of the *San Rafael 2020 General Plan* and in the *San Rafael Pedestrian and Bicycle 2011 Master Plan*. Given the current economic downturn, the observed level of parking vacancy rates may be a result of lower parking demand. However, San Rafael may be able to take advantage of this lower demand to implement progressive parking policies within the downtown.

Chapter 2: Literature Review

2.1. Overview of Literature That Supports the Need to Manage Parking Demand that affect the reliance of Off-street parking

Commercial off-street parking within the downtown district has become a major issue for metropolitan cities across the United States. Parking structures and parking lots lure automobiles to the downtown, adding to congestion. This inadvertent prioritizing of automobile usage results in pedestrian degradation of the streetscape around the downtown. Furthermore, the amount of land dedicated for automobile parking fails to invigorate the downtown, due to the missed opportunity costs to develop the land for other uses. Still, the status quo approach compels cities to use minimum parking requirements that satisfy businesses' peak parking demand.

Nevertheless, cities such as Portland, Oregon; Cambridge, Massachusetts; and San Francisco, California have taken steps to create parking policies that incorporate placing maximum parking requirements in their parking ordinances. On top of that, some of the cities require that parking structures include bicycle facilities near visible locations, and encourage high-density development near transit stations.

Each section within the chapter explores the main themes and debates related to establishing a comprehensive parking management strategy while promoting alternative modes of transportation. Additionally, the information provides important concepts from the themes and debates and identifies areas for additional research.

2.2. Impacts of Minimum Parking Requirements on the Urban Fabric

An extensive amount of literature finds that minimum parking requirements promotes excess parking supply. Minimum parking requirements essentially require a developer to supply a certain amount of parking based on the amount of land and the use of the land regardless of whether the location is accessible by public transportation, bicycling or walking.[11] According to an analysis of office parking in New York and Los Angeles conducted by Donald Shoup:

[11] Todd Litman, "Pavement Busters Guide: Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities," Victoria Transport Policy Institute, January 5, 2000, http://www.vtpi.org/pavbust.pdf (accessed July 31, 2010), 2-3.

> *One should not assume that the size of a facility provided will influence the demand for the facility. Minimum parking requirements slowly increase the citywide density of off-street parking spaces and of cars.*[12]

A report in New York City conducted by McDonnell et al. surveyed parcels in five boroughs lying within a ½-mile radius of transit. Their findings indicate that Manhattan has zero parking requirements due to the area's density and availability of ample mass transportation. Still, the average required parking ratio for transit-proximate lots is actually higher than lots farther from transit. The parking requirements in New York City highlight a disconnect between neighborhood-level planning demands and citywide development goals.[13]

An analysis on Australian policies by Christian Seibert notes that the province of Victoria set office and retail minimum parking requirements beyond ITE's parking ratios of 3.45 parking spaces per 1,000 square feet of gross floor area for office use and 4.7 parking spaces per 1,000 square feet of gross floor area for neighborhood commercial use.[14] The average office in Victoria requires 3.5 parking spaces per 1,076 square feet of leasable floor area, and the average retail store requires 8.0 parking spaces per 1,076 square feet of leasable floor area.[15] Citing a 1995 study on the parking utilization for five office sites in Oxnard, Ventura County, Cerritos, Irvine and Orange County, California, revealed that all jurisdictions have a requirement of 4.1 parking spaces per 1,000 gross square feet. The average parking supply for the typical site was 3.8 spaces per 1,000 gross square feet, slightly shy of the required city ordinance.[16] When comparing minimum parking requirements for office use from Seibert's analysis of the province of Victoria and the 1995 study of Southern California communities, the findings revealed that although minimum parking requirements in Southern California are slightly higher than the province of Victoria, all minimum parking requirements overstate the actual parking needs. In the first edition of the Urban Land Institute Shared Parking (1983) handbook, parking demand for suburban office buildings throughout the United States found that peak demand ratios ranged from 1.6 to 3.4 parking spaces per 1,000 feet of occupied floor area, again illustrating that office developments are oversupplying parking. [17]

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[12] Donald C Shoup, "An Opportunity to Reduce Minimum Parking Requirements," *Journal of the American Planning Association* 61, no. 1 (Winter 1995): 19.

[13] Simon McDonnell, Josiah Madar and Vicki Been, "Minimum Parking Requirements, Transit Proximity and Development in Washington D.C.," Transportation Research Board, Annual Meeting, 2010, Paper # 10-1644, Furman Center for Real Estate and Urban Policy, New York University, http://furmancenter.org/files/publications/Parking_Requirements_Submitted_TRB_resubmit_withref-1.pdf (accessed July 25, 2010), 11-18.

[14] Christian Seibert, "There's no such Thing as a free Parking Space," *Policy* 24, no. 2 (Winter 2008): 7-13.

[15] Ibid, 8.

[16] Richard W. Willson, "Suburban parking Requirement: A Tacit Policy for American Automobile Use and Sprawl," *Journal of the American Planning Association* 61, no. 1 (Winter 1995): 31.

[17] Urban Land Institute, Shared Parking. (Washington D.C.: The Urban Land Institute, 1983), 24.

Lastly, Willson's 1995 study acknowledged that peak parking utilization for all land uses was well below the parking supply. The average parking utilization for the typical site was 56%.[18] The finding is similar to a 2008 case study conducted in Edinburgh, United Kingdom. While many commuters traveled within the city center, a number of on-street spaces were left unoccupied in the downtown because survey respondents were either unaware of available parking spaces or preferred to seek parking space closer to their destination.[19]

2.3. How Maximizing and Eliminating Parking Requirements Impact Parking Supplies

While minimum parking requirements set the designated number of required parking spaces allowed for a specified use, maximum parking control the total amount of parking within an area, compelling developers to build just enough parking spaces the building may need. The basic premise of the maximum parking requirement is to promote higher density developments, walkable downtown areas, promotion of mass transit and other modes to reduce congestion. In the City of Portland, maximum parking requirements are set at a level to be compatible with available mass transit around the area.[20]

One study reviewed for this report analyzes the effects of a variety of parking requirements for such cities as Gainseville, Florida and Portland, Oregon. These cities implemented maximum parking requirements, and encouraged carpooling, public transit usage, walking, and bicycling. The City of Portland, in particular, brought multiple government and non-government departments to the table in the discussion of implementing maximum parking requirements.[21]

When referring to Portland's pro-transit and bicycling model, the city implemented restrictive caps within the central business district, but supported this measure with increased public transit service and carpooling practices. Therefore, with implemented public transit malls, including synchronized service, public transit ridership increased by 43% in 1988. Carpool rates increased to 17%, and both public transit and carpool rates continued to hover around 40% and 18%, respectively.[22]

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[18] Ibid, 32.

[19] Tom Rye, Kim Hunton, Stephen Ison and Nazan Kocak, "The Role of market research and consultation in developing parking policy," *Transport Policy* 15 (2008): 391.

[20] Rachel Weingberger, John Kaehny and Matthew Rufo. "U.S. Parking Policies: An Overview of Management Strategies." The Institute of Transportation and Development Policy, February 2010, http://www.itdp.org/documents/ITDP_US_Parking_Report.pdf (accessed July 25, 2010), 18-15.

[21] Adam Millard-Ball, "Putting on Their Parking Caps," *Planning* 68, no.4 (April 2002): 18-19.

[22] The Transit Cooperative Research Program, "Parking Management and Supply: Traveler Response to Transportation System Changes," 2003, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c18.pdf (accessed July 25, 2010), 18-15.

The elimination of minimum parking requirements is not greatly discussed in the literature, but those who did speak about the strategy believe the practice should include mass transportation, carpooling and alternative travel mode options so developers can accurately estimate the amount of parking that is needed without creating an oversupply of parking.[23]

2.4. Impacts of Shared Parking on the Parking Supply

Shared parking encourages land uses that normally operate during different hours of the day to develop together, share parking infrastructure, and consequently create land density. The Transit Cooperative Research Program (TCRP), using 1990 National Public Transportation Survey (NPTS) data for 20 metropolitan areas, found that shared parking has a significant effect on denser development as compatible firms cluster together to take advantage of shared infrastructure construction and maintenance costs.[24] The Urban Land Institute's Shared Parking (1983) handbook delves into the potential of shared parking by stating that combined parking charges increase the ability to finance parking and reduce costs of developing and maintaining parking areas.[25] Todd Litman also refers to the handbook explaining that shared parking policies typically execute 30-50% reductions in parking spaces.[26]

The cities of Portland, Oregon; Cambridge, Massachusetts; Boulder, Colorado; and Arlington County, Virginia, impose stringent shared parking policies in their codes that outline a contract for buildings that choose to engage in a shared parking agreement. Ultimately, the objective for implementing shared parking policies is to efficiently manage the parking supply mobility while enhancing urban form.[27]

2.5. Impacts of Urban Form on Automobile Usage

Poor urban design creates barriers to mobility for residents and visitors. A San Francisco Bay Area survey conducted by Handy et al. analyzed four Bay Area neighborhoods and two neighborhoods in each of the cities of Sacramento and Modesto. The results indicate that vehicle miles traveled (VMT) by respondents per

[23] Ibid, 18-10.

[24] The Transit Cooperative Research Program, "Strategies to Attract Auto Users to Public Transportation," 1998, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_40.pdf (accessed October 1, 2010), 120.

[25] Urban Land Institute, Shared Parking. (Washington D.C.: The Urban Land Institute, 1983), 4.

[26] Todd Litman, "Pavement Busters Guide: Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities," Victoria Transport Policy Institute, January 5, 2000, http://www.vtpi.org/pavbust.pdf (accessed July 31, 2010), 14.

[27] Rachel Weinberger, John Kaehny and Matthew Rufo, "U.S. Parking Policies: An Overview of Management Strategies," The Institute of Transportation and Development Policy, February 2010, http://www.itdp.org/documents/ITDP_US_Parking_Report.pdf (accessed July 25, 2010), 42-43.

week were 18% higher for residents of suburban neighborhoods than for traditionally designed neighborhoods that contain connected sidewalks and street networks. [28] Survey respondents stated that traditional neighborhoods are good for accessibility, socializing and attractiveness, but lower in safety due to their closer proximity to business traffic, as well as the perception of increased automobile traffic, overall.[29] Also, traditional neighborhoods scored higher on bicycling, walking, and public transit accessibility than non-traditional neighborhoods.[30]

A study that encompasses data throughout the United States, Australian, Asian, European and Canadian Standard Metropolitan Statistical Area (SMSA) states that driving patterns are strongly related to land use patterns. [31] Auto dependency has declined in dense municipalities throughout Australia, Canada, Europe and wealthier areas of Asia. Yet, automobile dependency has significantly increased in developing Asian cities. The United States remains the highest automobile-centric country.

The City of Edinburgh in the United Kingdom, bears off and on-street parking shortages within the city center due to the city's physical layout of narrow streets with dense multi-family dwellings within two to three miles of the city center. [32]. About 70% of drivers commuting into Edinburgh from outside of the city are single occupant drivers, and 55% of Edinburgh's residents commute by personal vehicle, even when traveling across the city. The result of so many single occupancy drivers commuting into Edinburgh and within the city may be due to a limited presence of public transit service for commuters.

Another international perspective of car usage analyzed the United States and Great Britain's travel patterns and discovered completely different behaviors. The average American citizen travels twice as far as his British counterpart. Moreover, British residents' travel habits do not change significantly based on income or urban form. [33] Americans' commute mode, however, was highly influenced by income, but density was a larger indicator of how one will travel.

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[28] Susan Handy, Xinyu Cao and Patricia Mokhtarian, "Neighborhood design and vehicle type choice: Evidence from Northern California, *Transportation Research* 11, 2 Part D (March 2006): 439.

[29] One caveat to the study's findings may reveal that residents who actively bicycle and walk gravitate to residential neighborhoods where such activity is safe and generally available.

[30] Ibid, 439-440.

[31] Jeffery R. Kenworthy and Felix B. Laube. "Patterns of automobile dependence in cities: an international overview of key physical and economic dimensions with some implications for urban policy." *Transportation Research* 33, A (1999): 691-723.

[32] Rye, Tom, Kim Hunton, Stephen Ison and Nazan Kocak, "The Role of market research and consultation in developing parking policy," Transport Policy 15 (2008): 391.

[33] Genevieve Giuliano and Dhiraj Narayan, " Another Look at Travel Patterns and Urban Form: The U.S. and Great Britain," *Urban Studies* 40, 11 (October 2003): 2309.

2.6. Strategies to Spur Public Transit Use

In order to essentially choose to eliminate minimum parking requirements or set parking maximums, the true costs of supplying parking must be presented to developers, businesses, employees and visitors in order to encourage alternative forms of transportation. The results of a Southern California study of five office parking lots indicate none of the case studies have active ridesharing programs and very little mass transit ridership. [34] For all the cases studied, parking is provided free of charge. Thus, for all cases combined, single occupant travel is prevalent at 78% mode share, carpooling or vanpooling hovers at around 18% and public transit ridership is miniscule at 0.5%.

The results of incentivizing alternative commuting are well demonstrated by California's 1992 cash-out legislation. The legislation requires firms to present a cash-out parking option if the firm leases parking and employs 50 people. According to a report detailing the results of the program, employees offered the cash-out soon discover the following options: 1) ridersharing could be a viable alternative to single-occupant commuting; 2) the current supply of parking suddenly becomes an opportunity cost; and 3) the amount received from the cash-out can be used for alternative modes such as a bicycle or transit pass. Over the period of time of the study, the cash-out parking program eventually reduced automobile commuting by 23%.[35]

Ian Savage's extensive research of the Chicago Transit Authority found that maximizing social welfare rather than level of service is the most efficient way to retain ridership[36.] Yet, without slashing particular headways or complete service areas, cash-strapped public transit agencies will continue to suffer. So, the optimal choice for public transit agencies is to introduce Bus Rapid Transit (BRT) service that covers the same corridor with a limited number of transit stops.

The idea that a pedestrian's willingness to walk to transit stops that are typically farther separated than standard bus service is upheld by a 2005-2006 pedestrian walkability analysis commissioned by the Mineta Transportation Institute (MTI). The study involved the distribution of pedestrian walkability surveys in the cities of San Francisco and Portland. The survey responses indicate that pedestrians choose direct routes that do not have barriers to walking rather than routes that have

[34] Richard W. Willson, "Suburban parking Requirement: A Tacit Policy for American Automobile Use and Sprawl," *Journal of the American Planning Association* 61, no. 1 (Winter 1995): 31.

[35] Donald C. Shoup, "An Opportunity to Reduce Minimum Parking Requirements," *Journal of the American Association* 61, no. 1 (Winter 1995): 18.

[36] Ian Savage, "Management Objectives and the causes of mass transit deficit," *Transportation Research* 38, A (2004): 196.

many pedestrian amenities such as benches or wide sidewalks.[37] Consequently, survey respondents indicate that they walk considerably farther to access rail transit than the commonly quoted half-mile distance.[38] The report's findings help assert the feasibility of implementing BRT service in areas where public transportation needs improvement to service.

2.7. Encouraging Bicycling as a Viable Transit Mode

Bicycling in the United States has gradually become a recognized mode of transportation, and many studies have been conducted to see how bicycle facilities and educational programs spur cycling activity. A review on the effects of locating bicycle facilities in the Minnesota University districts of Minneapolis-St. Paul concludes that there is a diminishing rate of returns with respect to providing additional bicycle parking facilities where ridership is already quite high. Yet, both cities displayed an increase in bicycle mode share in areas that did not previously contain bicycle parking. [39]

International research on methods used to encourage bicycle activity includes a cross-sectional study of adult bicycle use for transport in Adelaide, Australia (which has little bicycle ridership), and the Belgian city of Ghent (with higher than normal ridership). The study concludes that advocacy for a change in the local riding environment (in order to make bicycle use an easier choice), encouraging public campaigns (using social marketing or creating initiatives) increase bicycle ridership. [40]

2.8. Carsharing as a Viable Option

Carsharing is a method brought to the United States and Canada from Europe where members pay a fee either per hour or by mile to use a variety of automobiles at certain locations near their home or close to work. A survey and focus group discussion of carshare members across the United States and Canada reported that if carsharing services stopped, the current carsharing members would either revert

[37] Marc Schlossberg, Ph.D., Asha Weinstein Agrawal, Ph.D., Katja Irvin and Vanessa Louise Bekkouche, "How Far By Which Route, and Why? A Spatial Analysis of Pedestrian Preference," Mineta Transportation Institute. 2007, http://transweb.sjsu.edu/mtiportal/research/publications/documents/06-06/MTI-06-06.pdf (accessed September 10, 2011), 2-15.

[38] Ibid, 45.

[39] Kevin J. Krizek, Gary Barnes and Kristin Thompson, "Analyzing the Effect of Bicycle Facilities on Commute Mode Share Over Time," Journal of Urban Planning and Development 135, no. 2 (June, 2009): 73.

[40] Neville Owen, Iise De bourdeaudhuij, Takemi Sugiyama, Eva Leslie, Ester Cerin, Delfien Van Dyck and Adrian Bauman. "Bicycle Use for Transport in an Australian and a Belgian City: Associations with Built-Environment Attributes." Journal of Urban Health: Bulletin of the New York Academy of Medicine 87, no. 2 (2010): 189-191.

to using public transportation, carpooling or using taxis.[41] Parking support by municipalities can be provided in spaces near public transportation stations to assist in the "last mile" for commuter destinations. Marked zones for carsharing, free metered on-street parking and discounts in municipal lots are additional examples.[42] Publicly controlled on-street parking could boost carsharing membership rates due to its visibility, convenience and availability on the streets rather than off-street lots and garages. However, policy needs to be developed to allocate curb parking spaces including the fee structure that carsharing organization would pay to the city (usually based on lost meter rates and maintaining dedicated spaces).[43]

2.9. Benefits to Vanpool and Jitney Service

Vanpools and jitneys are often overlooked services in cities where a large number of employees commute to the same location. An overview of shuttle and jitney services in major metropolitan cities, including New York, Los Angeles and Miami, cite commuters' preferences for door-to-door commuting to rail transit with transfers. Employer-based vanpools are adequate for office parks and large-scale employee centers where a large number of employees head to the same area.[44]

Jitneys in the United States proved to be successful at the time of their inception in Los Angeles in the 1940s. The service continued to be popular by providing access to transportation terminals, as in the case of New York, where the service brought people from residential neighborhoods to both train stations and community centers. Although the jitney services of the early 1980s and 1990s were unlicensed, the Jamaica Association of Van Owner/Operator (JAVO) organized in New York in 1989, operated over 100 vehicles at one point.[45] Klein and Moore also support the benefits of the jitney service by referring to a 1990 study conducted by Takyi that states jitneys rival traditional fixed route bus service by offering personalized and speedy service. [46]

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[41] Adam Millard-Ball, Gail Murray, Jessica Ter Schure and Christine Fox, "Car-Sharing: Where and How It Succeeds," Transit Cooperative Research Program (TCRP) Report 108, October 2004, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_108.pdf (accessed July 25, 2010), 3-10.

[42] Ibid, 4-6.

[43] Andrea Osgood, "On-Street Parking Spaces for shared Cars," The University of California Transportation Center, *Access* 36 (Spring 2010): 10-11.

[44] Park Woodwoth Manager Paratransit/Ridershare Operations King County Metro Transit Seattle Washington, Behnke, Robert Consultant CENTTS, "Incorporated Beaverton, OR, Smart Jitney/Community-Enhanced Transit Systems." www.faculty.washington.edu/jbs/itrans/minerva31.doc.

[45] Robert Poole, "Shuttle Vans: The Overlooked Transit Alternative," Reason Foundation, http://reason.org/files/3be42001e6e0fbf8d4736319d3d82dea.pdf (accessed September 3, 2010), 9.

[46] Takyi report (1990,165) (As cited in Klein, Daniel B. and Adrian T. Moore, "Curb rights," Independent Review 2, no. 1 (Summer97 1997): 29.

2.10. Benefits to Engaging in Transportation demand management Strategies

If employers attempt to cash employees out of parking, they should also engage in creating transportation demand management (TDM) programs that allow employees to access vanpool and carpool programs and jitney service. In order to cast a wider net for public participation in alternative commuting modes, employers can form a transportation management association (TMA), which will encourage ride sharing and public transportation use among its employees. [47] The association can adopt trip reducing policies such as: 1) Allow vanpools priority parking in public and private commercial lots; 2) Provide free parking to carpools; 3) Allow flextime so riders can share rides with others in the same building or district; 4) Review ridesharing arrangements; and 5) Persuade the local public transit agency to re-route service lines closer to businesses that serve a large number of employees. To ensure TMA's remain active within the program, the county's transportation authority or local transportation agency can create a department solely dedicated to overseeing the TMA.

2.11. Impacts on Circulation through Way-finding Signage

The need for simple and clear way-finding is of interest to all communities. Unfortunately, there is not a wide variety of literature that reviews the importance of way-finding signage in fostering efficient parking utilization and improving pedestrian and vehicular circulation in downtown districts. A review of ten tips that promote a friendly "Main Street" in traditional downtown suburban settings explains that way-finding for downtowns is needed to stay competitive with the town's local malls.[48] Informational kiosks and maps allow visitors and residents to navigate throughout the downtown to locate existing amenities.

The first edition of the Urban Land Institute's Shared Parking (1983) handbook briefly discusses the need to provide appropriate way-finding signage within a parking facility to direct drivers to all exiting streets.[49] Yet, the literature does not analyze the impact of installing parking facility way-finding signage towards reducing congestion in parking facilities or how signage could minimize vehicle-pedestrian and bicycle collisions. Rye et al. acknowledge that improving marketing

[47] Anthony Downs, "Transportation Management Association, *Still Stuck in Traffic*. (Washington, D.C.: The Brookings Institution, 2004), 187-188.

[48] Mark Brodeur, "Ten Tips for Designing a Consumer Friendly Downtown," *American Planning Association* 69, no.4 (April 2003): 25-27.

[49] Urban Land Institute, *Shared Parking*, (Washington D.C.: The Urban Land Institute, 1983): 56.

and signage around parking facilities significantly improves automobile circulation, and retailers typically support such parking facility infrastructure.[50]

Signage is especially useful for alternative travel modes. Several cities use orange "Options Zone" poles developed in Portland, Oregon.[51] The poles indicate carsharing spaces, available bicycle racks, and walking paths. The signage allows passers-by the opportunity to become informed about alternative travel options within their community.

2.12. Key Summary: Various Policies Affect Parking Supply and Demand

Understanding the impending negative effects of minimum off-street commercial parking within the downtown will help cities maintain a vibrant and economically stable center for city living. Within the literature review's themes, the findings amongst the literature are generally similar. Yet, a few authors arrive at different conclusions. The TCRF refuted Willson's study on parking by noting that increasing parking prices will increases public transit share, and parking prices decrease carpool share. Willson's study stated if parking costs in downtown Los Angeles increased from $3 to $6 the result would increase carpooling share by 3%.[52]

When discussing travel patterns in the United States, the TCRF failed to include immigrant populations, which tend to have a higher public transit mode share. A report by Webber acknowledges the economic and social benefits that the suburbs have had on the regional community,[53] while Anthony Downs points to the fact that congestion is a sign of economic vitality, but has dire consequences such as high traffic congestion rates compared to less populated cities. [54]

The Urban Land Institute states that Gross Leasable Area (GLA), which excludes spaces used for lobbies, hallways, elevators, and mechanical equipment should be used to calculate parking spaces.[55] In fact, the City of San Francisco, California, uses a GLA, although renamed Occupied Square Footage. No other piece of identified literature acknowledges that GLA should be used to calculate parking spaces. Instead square footage or gross square footage is normally used.

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[50] Tom Rye, Kim Hunton, Stephen Ison and Nazan Kocak, "The Role of market research and consultation in developing parking policy," Transport Policy 15 (2008): 390-392.

[51] Andrea Osgood, "On-Street Parking Spaces for shared Cars," The University of California Transportation Center, *Access* 36 (Spring 2010): 11.

[52] The Transit Cooperative Research Program, "Strategies to Attract Auto Users to Public Transportation," 1998, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_40.pdf (accessed October 1, 2010).

[53] Melvin Webber, " The Marriage of Transit and Autos: How to Make Transit Popular Again," 1998, http://faculty.washington.edu/jbs/itrans/webber.htm

[54] Anthony Downs, "Traffic Congestion and Regional Economic Competitiveness," *Still Stuck in Traffic*, (Washington, D.C.: The Brookings Institution, 2004), 28-29.

[55] Urban Land Institute, *Shared Parking*, (Washington D.C.: The Urban Land Institute, 1983); 6.

When reviewing urban form, city wealth and neighborhood preferences, Handy et al. suggest that the built environment alone does not affect VMT, but attitudes toward transportation and preferences of where individuals would like to live are more significant.[56] Foxworthy and Laube acknowledge that many experts state that transit use declined as societies become wealthier.[57] However, this conclusion is not consistent with the reality in the European city of Zurich, Switzerland. One of the wealthiest cities profiled in their analysis, Zurich has a very high public transportation use per capita.

Thus, further research into the effects of parking and land use policies, as well as into way-finding is needed to understand their effects on commercial off-street parking demand, specifically in downtown districts. Implementing time series analysis will be helpful to understand whether including parking or transportation efficiency policies have a meaningful impact on the downtown's parking demand. City governments that are ready to implement parking policies must also engage with the community to understand local preferences to public transit, carpooling or bicycling activity. There is never an easy mix of modes to completely take single-occupant drivers out of their vehicles and onto other modes; nevertheless, with good urban design, policies, and signage it is quite possible.

[56] Susan Handy, Xinyu Cao and Patricia Mokhtarian, "Neighborhood design and vehicle type choice: Evidence from Northern California, *Transportation Research* 11, 2 Part D (March 2006): 439.

[57] Jeffery R. Kenworthy, Felix B. Laube. "Patterns of automobile dependence in cities: an international overview of key physical and economic dimensions with some implications for urban policy." *Transportation Research* 33, A (1999): 710.

Chapter 3: Economic, Demographic, and Commute to Work Background, Marin County and City of San Rafael

3.1. The Significance of Marin County and City of San Rafael

Marin County is known as a refuge from the hustle and bustle of San Francisco urban living. Residents enjoy the backdrop of untouched hills, the San Pablo Bay[58] and residing in neighborhoods that promote a high quality of life. The City of an Rafael, the county seat for Marin County, has maintained its small town charm while promoting ethnic, economic, cultural and transportation diversity that surpasses all other cities in Marin County.

3.2. Marin County Economic Profile

With a median household income of $88,101,[59] Marin County is one of the most affluent counties in the San Francisco Bay Area. The county is one of the slowest growing in the state. The 2009 estimated population was 250,750 persons (per the U.S. Census, American Community Survey). Marin boasts eleven incorporated cities and towns.[60]

Marin County's top four major revenue producing industries (refer to Table 2) reported by the 2007 United States Economic Census were in retail trade, health care, real estate, and motor vehicle sales.[61]

3.3. Marin County Demographic Profile

Although Marin County encountered a slight population dip between 2000 and 2006, as shown in Table 3, the county is experiencing a steady increase in racial diversity within the county in the past decade.[62] The table clearly indicates that the fastest growing populations (in absolute numbers) are Asians and Hispanics.

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[58] San Rafael Chamber of Commerce, *Business Directory* (City of San Rafael, California, Century Publishing, 2010).

[59] United States Census Bureau, 2006-2008 American Community Survey, "3-Year Estimates Data Profile Highlights: Marin County, CA," http://factfinder.census.gov (accessed September 1, 2010).

[60] United States Census Bureau, American Community Survey, "Data Profile Highlights: Marin County, CA," http://factfinder.census.gov (accessed September 1, 2010).

[61] U.S. Census Bureau, 2007 Economic Census and Surveys, "Geography Quick Reports Marin County, CA, Table 1: Selected Statistics by Economic Sector: 2007 Population: 248,096."

[62] United States Census Bureau, American Community Survey, "Data Profile Highlights: Marin County, CA," http://factfinder.census.gov (accessed September 1, 2010).

Table 2 Top Four Industries in Marin County, 2007

NAICS Industry Classification		Number of	Net combined	Paid
Code	Description	Establishments	Sales ($1,000) [a]	Employees
44-45	Retail trade	1,161	$4,589,300	15,432
62	Health care and social assistance	1,066	$1,595,232	13,958
53	Real estate, rental and leasing	633	$1,148,224	3,122
441	Motor vehicle and parts dealers	80	$1,027,772	2,025

Sources:
U.S. Census Bureau, 2007 Economic Census and Surveys, Geography Quick Reports, Marin County, CA, Table 1: Selected Statistics by Economic Sector: 2007 Population: 248,096.

U.S. Census Bureau, "North American Industry Classification System" [NAICS] (2007), http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007 (accessed April 15, 2011).

Note:
a) Net combine Sales includes the total sales, shipments, receipts, revenue, or business done by domestic establishments (excludes foreign subsidiaries) within the scope of the economic census.

Table 3 Marin County Ethnic Composition, 2000 and 2008

Race[a]	Year 2000[b]	Year 2008[c]	Change 2000 to 2008
White	194,254	185,578	-8,676
Hispanic	27,351	33,569	+6,218
Asian	11,078	13,760	+2,682
Black or African American	6,946	7,588	+642
Two or More Races	5,982	4,748	-1,234
Some Other Race	718	805	+87
American Indian	630	407	-223
Native Hawaiian or Pacific Islander	330	530	+200
Total	**247,289**	**246,985**	**-304**

Source:
a) United States Census Bureau, American Community Survey [ACS], "Race and Ethnicity," http://factfinder.census.gov (accessed September 25, 2010).
b) United States Census Bureau, "Census 2000 Summary File 1 (SF1) 100-Percent Data," Geographic Area: Marin County, California, http://factfinder.census.gov (accessed September 25, 2010).
c) United States Census Bureau, "2006-2008 American Community Survey 3-Year Estimates Data Profile Highlights: Marin County, CA," http://factfinder.census.gov (accessed September 25, 2010).

From 1995 to 2000, 103,641 young, single, and college-educated individuals between the ages of 25-39 years inmigrated[63] into the San Francisco Bay Area. [64] In 2000, this age group accounted for 21.7 % of Marin County's population; the aging baby-boomers who range between 40-54 years old accounted for 27.8% of the population, and residents 65 years or over accounted for 13.5% of the

[63] Inmigrate means to move or settle into a different part of one's county or home territory. The definition is available from www.dictionary.com.

[64] Rachel S. Franklin, United States Census 2000 Special Reports, "Migration of the Young, Single and College Educated: 1995 to 2000," November 2003, http://www.census.gov/prod/2003pubs/censr-12.pdf (accessed September 12, 2010), 8.

population.[65] Currently, one in four (25%) Marin residents is 65 years and older.[66] Although Marin County projects modest growth through the year 2020, the elderly population 65 years and older will adjust to account for 20% of the population.[67]

3.4. City of San Rafael Economic Profile

Marin County has steadily grown to become a strong economic center, and the City of San Rafael is home to two major employers (see Table 4):

Table 4 Top two Employers in San Rafael, 2006

Employer	Industry	Paid Employees
County of Marin	Local Government	2,195
Kaiser Permanente Medical Center	Health Care	1,380

Source:
County of Marin, County of Marin Proposed Budget FY 2007-200*8*, "Community Profile" (2007), http://www.co.marin.ca.us/budgetinfo/bgt07/Community_Profile_07_08.pdf (accessed April 15, 2011), 15.

According to the Transportation Authority of Marin, the county's transportation finance authority, there are 48,690 jobs in Marin, and 38 % of all employment is located within transit planning areas.[68] Although San Rafael's top employers are scattered throughout the city, the connections via public transportation are generally available.

3.5. City of San Rafael Demographic Profile

The City of San Rafael covers 22.4 square miles of land and hosts 22% of Marin County's population. In 2009, the city's population was 55,902 persons[69] and the California Department of Finance forecasts a total of approximately 79,104 residents by 2020. According to *San Rafael General Plan 2020*, the city has very few vacant parcels available and the city expects growth to occur through infill and redevelopment activities. In addition, the community's input on halting commercial development requires less demand for future housing development, resulting in a reduction of 57,000 square feet of commercial space and 2.5 million square feet of

[65] Association of Bay Area Governments, "ABAG Projections (2000): City, County and Census Tract Forecasts 1990-2020," http://www.abag.org/abag/overview/pub/p2000/summary.html (accessed September 1, 2010)

[66] Marin Transit, *Final Short Range Transit Plan*, FY 2008/2009-FY 2017/2018, April 20, 2009, http://www.marintransit.org/short_range.html (accessed September 1, 2010).

[67] United States Census Bureau, "United States Economic Census 2007," http://www.census.gov/econ/census07/ (accessed September 2, 2010).

[68] Transportation Authority of Marin, "Transportation, Current Issues and Trends in Marin," http://www.tam.ca.gov/index.aspx?page=234 (accessed September1, 2010).

[69] United States Census Bureau, "2010 American Community Survey Data Profile Highlights: San Rafael, CA," http://factfinder.census.gov (accessed September 1, 2010).

industrial and office development that was originally projected in the 2000 General Plan.[70]

The city's main land use priorities are creating mixed-use development in the downtown district and along the city's transit corridors, increasing affordable housing and promoting infill opportunities throughout the city. [71] Height bonuses are awarded with a use permit for a development that provides a specific amenity for the neighborhood. In the downtown district, this equates to constructing a public parking garage, develop affordable housing, or ensure public passageways. Additionally, the city promotes commercial and residential parcels 6,000 square feet or less to consolidate in order to improve traffic and pedestrian circulation and boost developmental and design layouts.

According to *San Rafael General Plan 2020*, nearly 50% of housing is rental units. In order to encourage a diversity of housing that assists moderate- to very low-income and senior residents, the city awards height and density bonuses for affordable housing, encourages mixed-use development and reduces minimum parking requirements for downtown residential units. The city also provides opportunities for live/work units and single-room occupancy units.[72]

Marin County is served by a number of transportation services. U.S. Highway 101 and CA Interstate Highway 580 connect the county to economic hubs. The Richmond-San Rafael Bridge connects to the East Bay Area and the Golden Gate Bridge connects to San Francisco and the peninsula. The county is served by local and regional public transit in the forms of bus and ferry service. A large share of San Rafael's development is along the Highway 101 corridor, conveniently providing residents access to citywide amenities.

3.6. Marin County and City of San Rafael Commute Mode Share

As shown in Table 5 and Table 6, Marin County has seen a considerable increase in drive alone (single-occupant vehicle) commuter share from 2000-2008, and a slight decrease in alternative modes of travel such as carpooling, public transportation usage and walking. On the other hand, (see Table 6) San Rafael's carpool and public transportation shares are marginally higher than for Marin County as a whole.

[70] City of San Rafael, *San Rafael General Plan 2020*, "Land Use Element," November 14, 2004, http://www.cityofsanrafael.org/Government/Community_Development/General_Plan_2020.htm (accessed September 1, 2010), 11.

[71] Ibid, 11-12.

[72] City of San Rafael, *San Rafael General Plan 2020*, "Housing Element," November 14, 2004, http://www.cityofsanrafael.org/Government/Community_Development/General_Plan_2020.htm (accessed September 1, 2010), 50.

Table 5 Marin County and San Rafael Commute Mode Share, 2000

Percentage of Commuting Workers

Mode [a]	Marin County	San Rafael	Percentage Difference
Drive Alone	65.5%	63.8%	-1.7%
Carpool	10.7%	11.8%	1.1%
Use Public Transportation	10.1%	12.4%	2.3%
Walk	3.0%	3.2%	0.2%
Bicycle	1.0%	1.2%	0.2%
Other	9.7%	7.7%	-2.0%
Total Mode Share	100%	100%	X

Source:
United States Census Bureau, 2000 Census, "QT-P23. Journey to Work, Census 2000 Summary File 3 (SF3) - Sample Data, Geographic Area: San Rafael city, California," http://factfinder.census.gov (accessed September 25, 2010).
United States Census Bureau, 2000 Census, "QT-P23. Journey to Work, Census 2000 Summary File 3 (SF 3) – Sample, Geographic Area: Marin County, California," http://factfinder.census.gov (accessed September 25, 2010).
Note:
a) Other Modes include motorcycle trips, other means, and worked from home.

The 2000 United States Census Journey To Work data for San Rafael notes that 63.8% of workers drove alone on their commute to and from work.[73] This drive alone data has since decreased to 62.3%, while carpooling has increased by 2.4 percentage points (to a 14.2% share). In the year 2000, those who opted to take public transit accounted for 12.4% of the working population, decreasing to 10.6% by the 2006-2008 period. Walking has increased slightly from 3.2% to 3.9 percent over the reviewed periods.[74]

The Metropolitan Transportation Commission (MTC) reports that in the next twenty years Marin County will experience an influx of employees from San Francisco, Santa Clara, Solano, Napa, Alameda, and Contra Costa Counties.[75] Currently, the Highway 101 corridor is at capacity during peak commute hours, and despite highway improvements and expansions, the problem will only persist. In order to combat this issue, Marin County should require all employers to provide incentives to increase alternative mode shares.

[73] United States Census Bureau, "DP-3. Profile of Selected Economic Characteristics: 2000 San Rafael," http://factfinder.census.gov/ (accessed September 1, 2010).

[74] Ibid.

[75] Metropolitan Transportation Commission, "Travel Forecast Data Summary, Transportation 2035 Plan for San Francisco Bay Area," (December 2008), http://www.mtc.ca.gov/planning/2035_plan/Supplementary/T2035-Travel_Forecast_Data_Summary.pdf (accessed September 1, 2010), 115-120.

Table 6 Marin County and San Rafael Commute Mode Share, 2006-2008

Percentage of Commuting Workers

Mode [a]	Marin County	San Rafael	Percentage Difference
Drive Alone	67.2%	62.3%	-4.9%
Carpool	9.8%	14.2%	4.4%
Use Public Transportation	7.9%	10.6%	2.7%
Walk	2.9%	3.9%	1.0%
Other	12.2%	9.0%	-3.2%
Total Mode Share	100%	100%	X

Source:
United States Census Bureau, 2006-2008 American Community Survey, "3-Year Estimates Data Profile Source: United States Census Bureau, 2006-2008 American Community Survey 3-Year Estimates Data Profile Highlights: San Rafael, CA," http://factfinder.census.gov.
United States Census Bureau, 2006-2008 American Community Survey, "3-Year Estimates Data Profile Highlights: Marin County, CA," http://factfinder.census.gov.
Note:
a) Other Modes include motorcycle trips, other means, and worked from home. The American Community Survey 3-Year Estimate does not include bicycling as a separate mode.

3.7. City of San Rafael Circulation Goals

Despite the availability of alternative commuting options in San Rafael and the city's relatively large commute mode share options, traffic congestion continues to plague the city.

Regardless of the existing conditions, the city was able to implement necessary traffic circulation goals such as the county-wide Safe Routes to School program and the city's bicycle and pedestrian master plan[76] that aided in achieving the circulation goals outlined in *San Rafael's General Plan 2020*.

3.8. City of San Rafael Parking Requirements

The geographical layout of San Rafael provides a multitude of parking options. Regulation of parking is described within Chapter 14.18 (Parking Standards) of the city's municipal code.[77] Regulating instruments include in-lieu fees and shared parking. However, shared parking is only granted through a use permit by the planning director, thus the practice has not been fully implemented within the downtown district.

[76] City of San Rafael, *San Rafael General Plan 2020*, "Circulation Element," November 14, 2004, http://www.cityofsanrafael.org/Government/Community_Development/General_Plan_2020.htm (accessed September 1, 2010), 176.

[77] City of San Rafael, San Rafael Municipal Code, "Chapter 14.18, Parking Standards," http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

Parking requirements within the downtown are slightly lower than the citywide parking requirements; this action illustrates the fact that San Rafael recognizes that this district functions in a way that is unique to the rest of the city. Additionally, a subcommittee recommendation report presented in 1994 reviewed the parking demand for all downtown public garages and lots from 1990-1994. [78] The report's findings concluded that reducing parking requirements within the downtown for office and financial uses was appropriate at that time, given the multiple connections, walkable nature of the area, and public transit presence within the urban environment. The recommendation led to a reduction of parking requirements for financial and office uses, originally set at 1.0 parking space per 250 square feet of gross floor area (GFA), to 1.0 parking space per 300 square feet of GFA.

A comparison of minimum parking requirements between Marin County and the City of San Rafael (shown in Table 7) reveals the differences between the expected parking demands of urban downtown San Rafael compared to Marin County as a whole.

Table 7 Marin County and San Rafael Minimum Commercial Parking Requirements

	Minimum Parking Requirements	
Building Use	**Marin County**[a]	**City of San Rafael**[b]
Retail sales (non-bulky items)	1.0 space per 200 sq. ft. GFA	1.0 space per 250 sq. ft. GFA
Food and beverage service, excluding "fast food" establishments	1.0 space per 50 sq. ft. public area	1.0 space per 50 sq. ft. public area
Financial services and institutions	1.0 space per 250 sq. ft. GFA	1.0 space per 300 sq. ft. GFA
Office, per square feet of building	1.0 space per 250 sq. ft. GFA	1.0 space per 300 sq. ft. GFA

Source:
Municode.com, City of San Rafael, Chapter 14.18, Parking Standards, 14.18.040 Parking requirements.
Notes:
a) Marin Minimum Parking Requirements: Marin County Municipal Code, Chapter 24.04
b) San Rafael Minimum Parking Requirements: San Rafael Municipal Code, Chapter 14.18

3.9. Key Lessons: San Rafael's Master Plan

Marin is an affluent county that is diverse in its economic profile and demographic base. The county's spectrum of residents is changing, where the senior population becomes a significant portion of the population within the next decade. Even though the Transportation Authority of Marin states that public transport is available to 38% of local business sites, the estimated influx of employees that will

[78] City of San Rafael Redevelopment Agency, Parking Subcommittee Report and Recommendation, for Downtown District (1994), San Rafael, California.

enter the City of San Rafael will require an increase in public transportation service to prevent increases in traffic congestion.

The City of San Rafael is unique in its population diversity, and its alternative commute mode shares. San Rafael has recognized the unique position of the downtown and thus addressed the need to reduce parking requirements for specific uses such as office and financial institutions. The city has also embarked on a plan to reduce automobile commuting and discretionary trips by implementing the goals provided in the 2020 General Plan.

Chapter 4: Overview of Alternative Transportation in Marin County and City of San Rafael

4.1. Chapter Overview

Beginning in 1970, Golden Gate Transit began local and regional bus and ferry service in Marin County.[79] For fiscal year 2008-2009 average weekday ridership for combined bus and ferry service was 30,238 passengers[80], making the agency one of the top-seven most highly-used public transportation systems in the Bay Area.[81] This chapter outlines Marin County's public transportation system and the central role that the City of San Rafael plays within the county. Furthermore, the chapter reviews San Rafael's position on alternative modes and their involvement with the SMART Rail project.

4.2. Overview of Transportation Authority of Marin

The Transportation Authority of Marin (TAM) is the congestion management agency and transportation sales tax authority of Marin County.[82] The authority works with Marin County cities in order to implement a cohesive structure of policies and projects that enhance alternative transportation options and reduce congestion. The agency reports that although a large portion of vehicular traffic was induced by drivers commuting into Marin County and residents commuting out of Marin to San Francisco County, 79% of all day trips actually begin and end within the county.[83] Through workshops with the Metropolitan Transportation Commission (MTC), the Bay Area's transportation planning and funding authority, TAM recognizes that funding pedestrian and bicycle regional pathways and constructing infill development within underserved parcels will improve traffic congestion, air quality, and housing inequalities.

4.3. Overview of Marin County Transit District

The Marin County Transit District (Marin Transit) was publically voted into creation in 1964 to oversee responsibilities of planning, public outreach and

[79] Golden Gate Bridge Highway and Transportation District, "Golden Gate Transit, Research Library, Transit History," http://goldengatetransit.org/researchlibrary/history.php (accessed September 1, 2010).

[80] The 2008-2009 ridership for Golden Gate bus and ferry average weekday ridership currently unaudited, but bus and ferry average weekday ridership from 2004-2008 ranged between 30,699 to 31,318.

[81] The Metropolitan Transportation Commission, " Fiscal Years 2004-2005 through 2008-2009: Statistical Summary of Bay Area Transit Operators," May 2010, http://www.mtc.ca.gov/library/statsum/StatSumm_2009.pdf (accessed September 1, 2010), 46-47.

[82] Transportation Authority of Marin, "About Us," http://www.tam.ca.gov/index.aspx?page=234 (accessed September1, 2010).

[83] Transportation Authority of Marin, "Transportation, Current Issues and Trends in Marin," http://www.tam.ca.gov/index.aspx?page=234 (accessed September1, 2010).

management of intra-county and regional transit services for Marin County residents and visitors. [84]

Marin Transit contracts all facilities including buses and drivers through four types of entities: Golden Gate Transit, MV Transportation, Marin Airporter and Whistlestop Wheels, which provides paratransit services:

1. **Golden Gate Transit**: Operates under one of three operating divisions of the Golden Gate Highway and Transportation District (GGHTD), Golden Gate Transit (GGT) operates under a 10-year contract with Marin Transit. GGT provides intra-county fixed bus services that consist of 12 regular routes and 12 school routes. Plus, GGT provides 25 regular and commuter routes to specific transit hubs in San Francisco, Contra Costa and Sonoma counties. GGT transit services also include the operation of five ferries between the Cities of Larkspur and San Francisco. In addition, GGT provides regional paratransit services for Marin residents to San Francisco, Contra Costa, and Sonoma Counties seven days a week.

2. **MV Transportation**: Operates under a five-year contract with Marin Transit under the West Marin Stagecoach brand name. MV Transportation provides rural service totaling three routes that operate throughout the week.

3. **Marin Airporter**: Operates under a contract with Marin Transit to oversee three community shuttle bus routes, and provides limited service in Marin County.

4. **Whistlestop Wheels**: Provides local curb-to-curb paratransit services from 6 a.m. to 1 a.m., seven days a week.[85]

4.4. Overview of C. Paul Bettini Transit Center

The C. Paul Bettini Transit Center (shown in Figure 4-1) is located within the borders of 2nd and 3rd Streets between Tamalpais

Figure 4-1. C. Paul Bettini Transit Center
Source: Author

[84] Marin Transit District, *Final Short Range Transit Pla*n, FY 2008/2009-FY 2017/2018, April 20, 2009, http://www.marintransit.org/short_range.html (accessed September 1, 2010), 1-1 .

[85] Ibid, 1-1, 1-5.

Avenue and Hetherton Street[86] (see location map in Figure 4-2) is a main transfer point for most bus and shuttle services. Over the past decade the transit center has been working with MTC on a pilot Transit Connectivity Plan to install new way-finding signs and transit informational displays in order to improve passenger boarding passenger transfers and attract new customers.

4.5. Overview of San Rafael's Bicycle and Pedestrian Master Plan

In 2007, the County of Marin was one of four jurisdictions to receive funds from the Federal Non-motorized Transportation Pilot Program (NTPP).[87] Marin County's Department of Public Works administered funds to develop a Bicycle Facilities Incentive Program in order to locate bicycle parking within private developments. NTPP funds were also used to construct the Puerto Suello Hill and Mahon Creek Multi-Use Paths.[88]

San Rafael's recently updated Bicycle and Pedestrian Master Plan states that San Rafael intends to become a city that promotes alternative travel modes by striving to increase bicycle and pedestrian mode shares from 5% to 20% by the year 2030. [89]

In order to increase bicycle mode share, the plan aims to build bicycle paths that improve accessibility, construct additional bicycle storage racks at heavily trafficked locations, and address safety concerns. In addition, the bicycle plan requires that the city (when economically feasible) to encourage discretionary bicycle trips by supplying and marketing bicycle parking at major community events.

4.6. Overview of SMART Rail Project

The proposed regional Sonoma Marin Area Rail Transit (SMART) system is made of the SMART Rail District comprised of Sonoma and Marin Counties to oversee the structure and ownership of a passenger rail system within the two counties. In 2008, Sonoma and Marin County residents passed a one-quarter percent sales tax

[86] Golden Gate Transit Bridge and Highway District, "Transit, Services, Maps, San Rafael Transit Center," http://goldengatetransit.org/services/documents/Map_SRTC.pdf (accessed September 1, 2010).

[87] United States Department of Transportation, Federal Highway Administration, "The Nonmotorized Transportation Pilot Program," http://www.fhwa.dot.gov/environment/bikeped/ntpp.htm (accessed September 1, 2010).

[88] City of San Rafael, San Rafael *Bicycle and Pedestrian Master Plan Draft,* 2011, http://www.cityofsanrafael.org/Assets/Public+Works/Traffic/SRBikePlan2011Draft.pdf (accessed March 1, 2011), 2-3.

[89] Ibid.

Figure 4-2. C. Paul Bettini Station Diagram
Source: Golden Gate Transit Bridge and Highway District, "Transit, Services, Maps, San Rafael Transit Center, http://goldengatetransit.org/services/documents/Map_SRTC.pdf (accessed September 1, 2010).

increase, or Measure Q,[90] with the goal of creating a SMART regional rail system to provide weekday and weekend passenger rail service along the publically owned Northwestern Pacific (NWP) rail right-of-way from the Cities of Cloverdale to Larkspur (refer to Figure 4-3).[91]

Fourteen stations are planned, nine in Sonoma County and five in Marin County.[92] One of 14 stations is planned in central San Rafael, across from the C. Paul Bettini

[90] Sonoma-Marin Area Rail Transit District, *SMART Measure Q Strategic Plan,* June 2009, http://www.sonomamarintrain.org/userfiles/file/Strategic%20Plan%20Final%20%2006-17-09.pdf (accessed September 1, 2010), 2.

[91] Ibid, 9.

[92] Ibid, SUMM. 11.

Transit Center (layout shown in Figure 4-3 and Figure 4-4). There are ongoing discussions between Golden Gate Transit and the SMART Rail Planning Department about whether the station's design and technical functionality will allow both systems to move fluidly within the district.[93] Expected weekday, peak commute service will occur in 30-minute intervals, with one midday trip off peak. Four round trips are proposed weekend days. The project will also include a 54-mile long bicycle and pedestrian path paralleling the entire length of the SMART route.

The historic Whistlestop building, which houses the Whistlestop Paratransit, Adult and Disability Educational Services, and LightHouse of Marin will be used as the San Rafael Station along the SMART rail route.[94] Thirty-five (35) off-street parking spaces are planned for the station. Park-and-Ride lots are already available on Hetherton Street and Mission Avenue. Bicycle parking, in the form of six bicycle racks, eight bicycle lockers, and a bike station will be provided. Shuttle bus service to popular destinations such as the downtown district and along Francisco Boulevard is also planned for peak hours.[95]

4.7. Key Lessons: Transportation Goals

Marin County is making progressive efforts to coordinate multimodal activities through highly coordinated undertakings through the Marin Transit District, and through the Transportation Authority of Marin and NTTP funds.

The C. Paul Bettini Transit Center, located in San Rafael's downtown district, is the focal point for regional and intercity travel. Through the updated Pedestrian and Bicycle Master Plan, the City of San Rafael documents planned short-and long-term improvements for pedestrian and bicycle travel by enhancing connections to the transit center and throughout the city. Although the SMART Rail line is still in the design and development phase, the proposed designated train station to be located just north of the transit center will add further public transportation options for the City of San Rafael.

[93] Z. Wayne Johnson. Deputy General Manager, Golden Gate Transit Bridge and Highway District, interview by author, February 12, 2011.

[94] Sonoma-Marin Area Rail Transit, ""Passenger Rail & Pathway Project Description," May 19, 2010, http://www.sonomamarintrain.org/userfiles/file/Project%20Description%20Full%20-%205-19-10.pdf (accessed September 1, 2010), 49.

[95] Sonoma-Marin Area Rail Transit, "SMART Stations Summary Information," September 30, 2009, http://www.sonomamarintrain.org/userfiles/file/Station%20Information%20JN%20Final%20document%20-%20100809.pdf (accessed September 1, 2010), 39.

Figure 4-3: Sonoma Marin Transit Route
Source: Sonoma-Marin SMART Area Rail Transit, "What is SMART?," http://www.sonomamarintrain.org/index.php/what_is_smart/

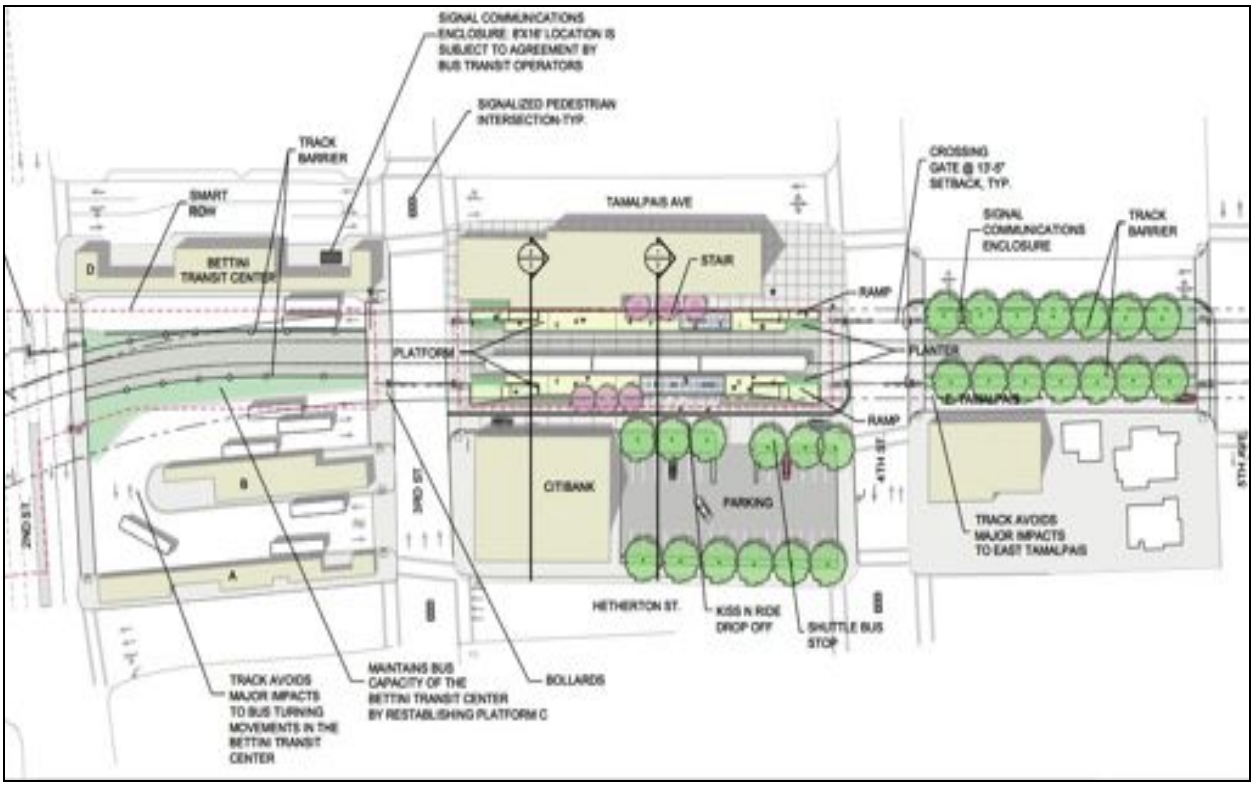

Figure 4-4. Downtown San Rafael SMART Station Design Concept
Source: "Downtown San Rafael Station Area Plan, Existing Conditions Report," November 30, 2010,http://www.cityofsanrafael.org/Assets/CDD/Planning/Downtown+San+Rafael+Station+Area+Plan+Background+Report.pdf.

Chapter 5: Downtown San Rafael

5.1. Downtown San Rafael's Purpose

San Rafael's downtown district is the study area for this research and consists of a boundary starting at Laurel Place to the north, Second Street and parts of Anderson Drive to the south, Hetherton Street to the east and the intersection of 4th Street and West End Avenue to the west (refer to Figure 5-1).

Figure 5-1. Downtown San Rafael Zoning Map
Source: City of San Rafael, 2020 General Plan, "Neighborhood Elements"

Katie Korzun, Economic Development Coordinator for the City of San Rafael Redevelopment Agency states, "The Downtown's mixture of residential, retail and office make this district the only urban area within San Rafael."[96] The downtown was conceived for residents and nearby visitors as a place to shop and dine. Given the recent popularity of the city's outlying shopping malls and online shopping outlets, fewer consumers shop in downtown. Adjusting to this trend, the current

[96] Katie Korzun, Economic Development Coordinator, City of San Rafael Redevelopment Agency, interview by author, March 4, 2011.

focus of the downtown is to establish the area as a business, financial, residential, entertainment, and civic district.[97]

5.2. Downtown Zone Districts

As described in Chapter 14.05, "Commercial and Office Districts" within the San Rafael Municipal Code[98,] the downtown consists of a variety of commercial, retail and residential development. The downtown area consists of the following seven zoning districts (color-coded in Figure 5-1):

1. **Hetherton Office District**: The location is adjacent to U.S. Highway 101, the San Rafael Transit Center and proposed SMART Rail right of way. Current uses include the Whistle Stop Senior Center and medium-sized office and stores. Permitted uses within the district include parking structures, restaurants, and business-supported retail, which will create the entryway into the downtown.

2. **Second/Third Mixed Use East District**: The district is part of a major transportation corridor bordering the southern edge of the downtown from U.S. Highway 101 to Brooks Street. The district is composed of one-way pairs consisting of 2nd and 3rd Streets carrying traffic through the downtown. Currently, there are mixed uses that include the Lindaro Office Development, large and small-scale developments, and residential uses with plans to be intensely developed.

3. **Fourth Street Retail Core**: The district is the hub of commercial activity. It boosts a variety of small- and large-scale retail, food services and financial institutions. The district includes a mixed-use development featuring a 113-unit residential complex known as the Rafael Town Center Apartments complex. The district serves as a cultural and entertainment site and will continue to promote mixed-use office and residential development.[99]

4. **Cross Street Mixed Use**: The district's borders are 1st Street to the south, 3rd Street to the north, B Street to the west and A Street to the east. The area contains a variety of shops, offices, restaurants and residential

[97] Ibid.

[98] City of San Rafael, San Rafael Municipal Code, "Chapter 14.05, Commercial and Office Districts, Section 14.05.010, Specific purposes, " http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

[99] City of San Rafael, San Rafael Municipal Code, "Chapter 14.05, Commercial and Office Districts, Section 14.05.010, Specific purposes," http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

developments along A to C Streets. Currently, a handful of vacant and underutilized parcels could be transformed into retail, restaurant, office, entertainment and cultural uses.

5. **Fifth/Mission Residential/Office District**: The location borders 5th Street to the south, Mission Avenue to the north, H Street to the west and Lincoln Avenue to the east. The district serves as a residential and office district between 4th Street retail and nearby residential areas. Many cultural and civic uses (e.g. San Rafael City Hall, Public Library and the historical San Rafael Mission) are nearby. The area will continue to have residential, office, civic and cultural uses with limited drive up and retail uses to protect the surrounding community.

6. **Second/Third Mixed Use West District**: The district is part of a major transportation corridor bordering the southern edge of downtown from C Street to West End Village. The district is comprised of a one-way east/west corridors consisting of 2nd and 3rd Streets carrying traffic through the downtown. Existing uses consists of small to medium offices and retail shops and residential. The future intent of the district is to provide uses that do not require heavy pedestrian traffic, such as office and office-support retail and retail accessible by car (for instance, grocery stores or drug stores). General residential development is also encouraged throughout the district.

7. **West End Village**: The district is an older commercial community adjacent to several outlying neighborhoods. The district lies along the intersection of West End Avenue and 4th Street. Unique small-scale retail and restaurants along 4th Street service this area. Future development of new parking areas and residential uses is encouraged.

The Downtown San Rafael Business Improvement District (BID) is an Assessment District whose purpose is to promote Downtown San Rafael as a pleasant place to work, eat, and shop.[100] Its members consist of ground level retail businesses along the Fourth Street Retail Core and portions of Cross Street Mixed Use and Fifth and Mission Avenue Districts.[101] Businesses pay membership dues up to 50% of their business license fee. [102]The revenue generated from membership fees is used to

[100] Joanne Webster, Downtown San Rafael Business Improvement Director, Downtown San Rafael Business Improvement District, interview by author, February 18, 2011.

[101] City of San Rafael, "San Rafael Municipal Code, "Chapter 10.08, Downtown Parking and Business Improvement Area, Section10.08.050, Description of boundaries of area," http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

[102] City of San Rafael, "San Rafael Municipal Code, "Chapter 10.08, Downtown Parking and Business Improvement Area, Section 10.08.070, A System of Assessments for Charges Imposed," http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

strengthen retail activity and promote special events within the downtown core district. The BID also acts as an advocate for small businesses. For example, the BID was a champion for developers when their project goes up to the planning board for approval on a parcel that is not zoned for the business need, or where there are issues within the design elements.[103]

5.3. Key Lessons: Downtown San Rafael's Fate

San Rafael's downtown district has a number of different land uses, but a single centralized focal point within the Fourth Street Retail Core. The city has the opportunity to acknowledge the uniqueness of each district by increasing densities surrounding the transit center, attracting new businesses, adding additional retail, and creating a cohesive walkable community that is not dictated solely by automobile use. The Downtown Business Improvement District is also instrumental in encouraging government departments to improve the downtown by advocating for specific businesses to settle within the downtown and promote the area as a cultural and entertainment hotspot.

[103] Joanne Webster, Downtown San Rafael Business Improvement Director, Downtown San Rafael Business Improvement District, interview by author, February 18, 2011.

Chapter 6: Current Parking Policy in Downtown San Rafael

6.1. Chapter Overview

Downtown San Rafael is envisioned as an urban destination. In order to fulfill this vision, The Department of Planning and Redevelopment conducted annual parking studies (until the year 1998) throughout the downtown to gauge the utilization of on-street and off-street parking. The establishment of a Parking Assessment District fulfilled the requirement for off-street parking that surrounds the retail corridor of the downtown. A graduated parking fee system was implemented to distribute parking demand throughout the public parking structures.

6.2. San Rafael's Parking Assessment District

The Downtown Parking Assessment District was formed in 1958 (see the blue portion of Figure 1-1 in Chapter 1) to provide public parking within the area.[104] The Parking Assessment District provided off-street parking within the downtown district by constructing public parking facilities.

In-lieu fees for public off-street parking are required on a case-by-case basis. Normally in-lieu fees consists of the fair market value of the land that would have been used for off-street parking and additional infrastructure costs required to provide public parking within the district.[105]

Public off-street parking is now calculated according to a building's Floor Area Ratio (FAR). The municipal code for the city defines a Floor Area Ratio as a total building square footage or gross floor area divided by the land area. That means a lot size of 5,000 square feet over a building size of 5,000 square feet will have a FAR of 1.0. The city provides adequate parking spaces for all buildings up to 1.0 FAR.[106] A building larger than 1.0 FAR must provide additional private off-street parking that is consistent with the city's current parking requirements. This building could have more than one business leasing the space with possibly 2 different uses, but the city will provide public parking spaces equal to 1.0 FAR. During the development of the Parking Assessment District (ca. 1958), the city controlled 20

[104] City of San Rafael Redevelopment Agency, Parking Subcommittee Report and Recommendation, for Downtown District (1994), San Rafael, California, 5.

[105] Donald C. Shoup, "In Lieu of Required Parking," *Journal of Planning Education and Research* 18 (1999): 14, http://www.mrsc.org/ArtDocMisc/Shoup_Pkg_InLieu_Fees.pdf (accessed November 2010).

[106] City of San Rafael, San Rafael Municipal Code, "Chapter 14.18, Parking Standards, Section 14.18.060, Downtown parking assessment district," http://library.municode.com/index.aspx?clientId=16610&stateId=5&stateName=California (accessed September 1, 2010).

off-street and 1,900 on-street parking spaces containing timed meters with 1 and 2 hour limits.[107]

Within the downtown district, public parking is provided and financed by the San Rafael Department of Parking Services, an Enterprise Fund that solely pays for the maintenance and operation of parking within the city. None of the parking revenues goes to city services or the Downtown Business Improvement District with the exception of payment for city services such as Information Technology, Accounting and Human Resource support.[108]

The remaining downtown adheres to the city's parking requirements with the exception of office and financial uses. Parking requirement reduction for only a few uses shows a disconnection of the downtown vision with the rest of the city.

Table 8 displays San Rafael's current parking requirements for the top five uses in the downtown district:

Table 8 San Rafael Parking Requirements for the Most Visible Uses

Building Use	Parking Requirements City of San Rafael
Retail sales (non-bulky items)	1.0 space per 250 sq. ft. GFA
Food and beverage service, excluding "fast food" establishments	1.0 space per 50 sq. ft. public area
Barber, beauty shop, nail salon	2.0 spaces per 1 chair or workstation.
Financial services and institutions	1.0 space per 300 sq. ft. GFA
Offices	1.0 space per 300 sq. ft. GFA

Source: City of San Rafael, *San Rafael Municipal Code*, Chapter 14.18.040, "Parking Standards

The insatiable demand for off-street parking within the city's designated Parking Assessment District and the eventual parking demand shift from weekend afternoons (surveyed in 1962) to weekday afternoons (surveyed 1968) induced creation of 10 short- and long-term parking garages and lots scattered between 5th Avenue to the north, 2nd Street to the south, Lincoln Avenue to the east and D Street to the west.[109]

The last parking demand survey conducted in 1998 noted that parking demand was highest near dense and popular uses, where most drivers tend to park close to their destinations, while other parking lots located further from the Fourth Street

[107] City of San Rafael Redevelopment Agency, "Downtown Parking Report" (1999), San Rafael, California, 3.

[108] Vince Guarino, San Rafael Parking Services Manager, San Rafael Parking Services Department, interview by author, March 24, 2011.

[109] Ibid.

Retail Core District are left underutilized.[110] The final recommendation echoed the same resolution as past downtown parking surveys by continuing to state that more off-street public parking was needed within the district to satisfy parking demand. Yet, alternative recommendations, such as attempting to introduce transportation demand management schemes, develop shared parking opportunities, or develop campaigns to increase bicycle usage were never addressed.

6.3. San Rafael's Parking Lot System

The downtown district contains a total of ten off-street public lots and two public garages, shown in Figure 6-2. The city applies graduated parking rates within the downtown where on-street spaces located on 4th Street and both parking garages are priced at $1.00 per hour while all other parking lots and on-street spaces are priced at $0.75 per hour.

Figure 6-2: Downtown San Rafael Parking Guide
Source: City of San Rafael, Planning Services, City of San Rafael Downtown
http://www.cityofsanrafael.org/Government/Parking_Services/City_of_San_Rafael_Downtown_Parking.htm

110 City of San Rafael Redevelopment Agency, "Downtown Parking Report" (1999), San Rafael, California, 3.

The majority of the public facilities use parking meters that accept coins only as payment. The exceptions are the following facilities:[111]

3rd at Lootens Place Lot: Includes a total of 187 parking spaces, 2-hour parking meters on the ground level with a change machine located at the exit near Court Street. The second floor, designated as marked, "All Day," 10-hour parking, contains a payment station that allows credit card and cash payments.

3rd at A Street Public Garage: Includes a total of 371 parking spaces and 2-hour parking on the ground-level. The upper floors are designated as long-term parking or permit parking. The garage contains a payment station that allows drivers to pay by credit card or cash. The garage accepts 1-hour parking validations from participating downtown businesses. Monthly parking permits are available at $73 per month or a Frequent Parker Card can be purchased for $25 that allows drivers 250 parking uses over a 12- month period. The program assists in stabilizing the facility's parking supply and managing employee parking within the downtown .

3rd at C Street Parking Garage: Includes a total of 390 parking spaces and 2-hour parking on the ground level where pay stations are available. The upper-levels are designated as long-term or permit parking. Monthly parking permits are available at $73 per month or a Frequent Parker Card can be purchased for $25 that allows drivers 250 parking uses over a 12- month period. The program assists in stabilizing the facility's parking supply and managing employee parking within the downtown.

5th Avenue at Lootens Place Surface Lot: Includes a total of 30 short-and long-parking spaces where a pay station is the sole payment option for drivers.

5th Avenue at C Street Lot: Includes a total of 96 parking spaces with 2-hour parking on the ground level and marked, "All Day," 10-hour parking on the second floor. Marked spaces allow drivers to pay at the designated pay station.

5th Avenue at D Street Lot: Includes a total of 37 public parking spaces and 6 reserved parking spaces. Short- and long-term marked spaces are available where a pay station is the sole payment option for drivers.

The city also provides "All Day" (10-hour, long-term) on-street metered parking in the following key locations, close to office and retail sites:

- Lindaro Street (between 2nd and 3rd Streets)
- Hetherton Street (along the west side of the street)

[111] City of San Rafael, Parking Services, "Parking Information," http://www.cityofsanrafael.org/Government/Parking_Services/Parking_Information.htm, San Rafael, California, (accessed September 10, 2010).

- Tamalpais Street (along the west side of the railroad tracks)
- Via Sessi (adjacent to the San Rafael Parking Services Department)
- Ritter Street (between 2nd and 3rd Streets)
- E Street (between 2nd and 3rd Streets)

6.4. Key Summary: Parking Assessment District Revisited

In 2007, the Metropolitan Transportation Commission (MTC), the local metropolitan planning organization (MPO) responsible for funding transportation programs and policies within the nine County San Francisco Bay Area, authorized a study with WilburSmith and Associates. [112] The objective was to locate underutilized public garages and lots within the parking assessment district for potential conversion to infill development. Within San Rafael, the study area consisted of 11 off-street public parking facilities within the boundaries of 4th Street to the north, 2nd Street to the south, Tampalais Avenue to the east and D Street to the west. The study conducted on Friday and Saturday evening produced a limited snapshot, showing a maximum occupancy rate of 85% for the majority of public parking garages and lots.

A companion survey, commissioned by MTC and executed by Wilbur Smith, in 2010 was distributed to staff members of 67 municipalities in the Bay Area. San Rafael participated in this survey. The goal of the survey was to gather views on issues of parking reform, smart parking, and its challenges.[113] The survey's findings indicate that San Rafael is interested in parking reform policies that promote a well-managed parking system, but the city does not have the funds to implement capital improvements. Nor does their zoning language currently support creating incentives such as reduced parking options with unbundled parking schemes and carsharing opportunities. However, San Rafael did respond that it is receptive to grants or educational trainings that MTC may provide.

[112] WilburSmith and Associates, "Infill Analysis and Policy Recommendations for the City of San Rafael," Metropolitan Transportation Commission (June 29, 2007), http://www.mtc.ca.gov/planning/smart_growth/parking_seminar/case_studies/SanRafael.pdf (accessed September 1, 2010).

[113] Metropolitan Transportation Commission, "Smart Parking Training: Parking Survey and Training Assessment Summary Report" (December 1, 2010).

Chapter 7: Case Studies

7.1. Case Study Overview

Four cities similar to the economic and demographic characteristics of Downtown San Rafael were chosen for their successful and progressive implementation of policies and tools that ultimately reduce parking demand. The first objective was to gather information on the current parking system established by the case study cities. Next, current and prospective policies that helped manage parking demand were compiled. Finally, strategies that were used to incentivize alternative mode activity were recorded and the conclusive parking demand results from the strategies were documented where available. A detailed outline of each case study's parking policy is available in Appendix B.

7.2. City of Boulder, Colorado

The city of Boulder, Colorado, has a vibrant downtown district that includes the Pearl Street Pedestrian Mall (refer to Figure 7-1). Similar to the City of San Rafael, the Pearl Mall contains over 30% retail businesses. By abolishing minimum parking requirements throughout the designated downtown district, the city instilled a "Park Once" mantra in order to create a walkable neighborhood.[114]

The downtown contains 11 public parking garages and lots, which are electronically metered and accepts various payment methods (shown in Figure 7-2). All public parking facilities are managed by The Central Area General Improvement District (CAGID).

Figure 7-1. Downtown Boulder, Colorado
Source: City of Boulder, Colorado, Downtown Boulder and Pearl Street Mall http://www.bouldercolorado.gov/

[114] Nelson Nygaard Consulting Associates, "City of San Marcos University District Specific Plan Traffic Reduction: A Toolkit of Strategies, " August 2008, http://www.ci.san-marcos.ca.us/Modules/ShowDocument.aspx?documentid=989 (accessed September 1, 2010).

The CAGID was created in 1970 and operated by the Downtown and University Hill Management Division and Parking Services. The agency provides parking and visible improvements to the downtown district. The CAGID provides downtown city employees annual Eco Passes; provides Guaranteed Rides Home, ride matching, and bicycle parking as part of their transportation demand management (TDM) program. The result is to make alternative modes of transportation more attractive and public parking more expensive.[115] The consequence of issuing transit passes to employees reduced drive alone rates from 56% to 36% in 2005[116] and reduced commuter parking by 850 spaces.[117]

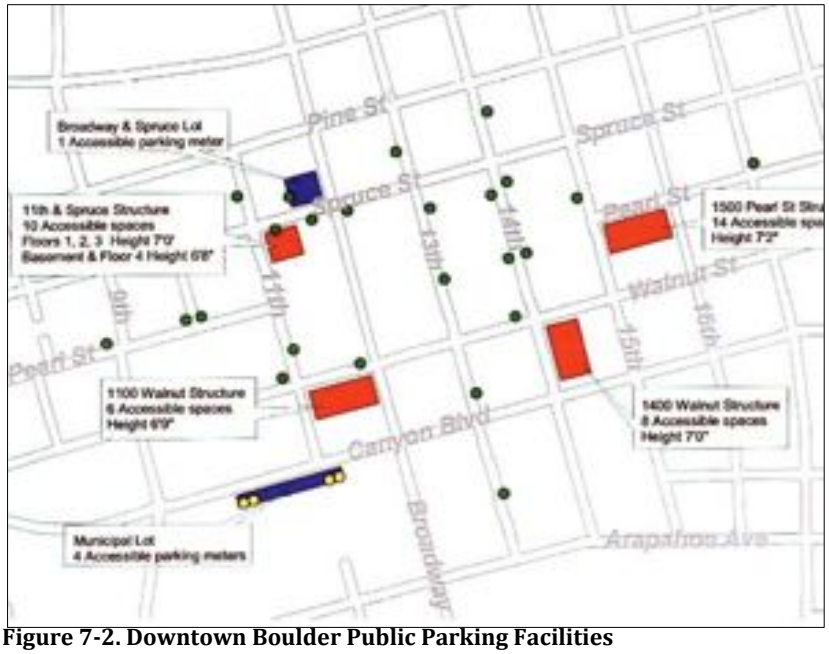

Figure 7-2. Downtown Boulder Public Parking Facilities
Source: City of Boulder, Downtown Parking, http://www.bouldercolorado.gov

7.3. City of Walnut Creek, California

The downtown district's (shown in Figure 7-3) objectives are for the retail concentrated zone, and the surrounding areas are to provide adequate, but not surplus parking. The Pedestrian Retail Zone is designed for intensely developed downtown retail where public parking lots are centrally located.[118] Retail is placed on ground

[115] Rachel Weinberger, John Kaehny and Matthew Rufo,. "U.S. Parking Policies: An Overview of Management Strategies." The Institute of Transportation and Development Policy, February 2010, http://www.itdp.org/documents/ITDP_US_Parking_Report.pdf (accessed July 25, 2010), 2.

[116] Nelson Nygaard Consulting Associates, "City of San Marcos University District Specific Plan Traffic Reduction: A Toolkit of Strategies, " August 2008, http://www.ci.san-marcos.ca.us/Modules/ShowDocument.aspx?documentid=989 (accessed September 1, 2010).

[117] Rachel Weinberger, John Kaehny and Matthew Rufo,. "U.S. Parking Policies: An Overview of Management Strategies." The Institute of Transportation and Development Policy, February 2010, http://www.itdp.org/documents/ITDP_US_Parking_Report.pdf (accessed July 25, 2010), 56-59.

[118] TJKM Transportation Consultants, "Downtown Walnut Creek Parking Study," 2005, http://www.walnut-creek.org/civica/filebank/blobdload.asp?BlobID=2814 (accessed September 1, 2010).

level while office, retail, and other uses are set on the upper floors of a development.

Although Walnut Creek's parking requirements are the 2nd highest amongst the case studies at 4.0 to 4.05 per 1,000 square feet for retail and commercial uses, parking can be reduced or eliminated for ground floor retail and may be reduced for upper floor businesses.[119]

Figure 7-3. Downtown Walnut Creek
Source: Flickr.com, author, JerryInWC

The Central Retail District Zone surrounds the Pedestrian Retail Zone and serves the same function, but in most cases, each business has its own parking lot.[120]

The downtown provides 12 public parking facilities: three downtown parking garages, nine metered parking lots and eight private parking garages (refer to Figure 7-4).[121] Electronic payment methods are accepted in public parking garages and key street parking sites.

Figure 7-4. Walnut Creek Downtown Map
Source: City of Walnut Creek, Getting Around, http://www.walnutcreekdowntown.com

[119] WilburSmith and Associates, "Existing Bay Area Parking Policies," April 2007, http://www.mtc.ca.gov/planning/smart_growth/parking_seminar/Summary_Existing_Parking_Policy_Paper.pdf (accessed September 1, 2010).

[120] Code Publishing, City of Walnut Creek, "Purpose and Intent 10-2.2.701," www.codepublishing.com/ca

[121] City of Walnut Creek, "Parking in Walnut Creek," http://www.walnut-creek.org/ (accessed September 1, 2010).

Since the early 1980s, the city has adopted a transportation demand management program in order to reduce single- occupant vehicle (SOV) trips that produce congestion and harm air quality. The TDM programs include transportation system enhancements such as a free shuttle service from the Walnut Creek BART station to the downtown (Route 4) seven days a week for residents, employees and visitors.[122] Also, the TDM program requires large employers to supply bicycle facilities and develop a trip-reduction program.[123] According to a passenger check and subsequent survey conducted in 2005, 60% of shuttle riders take the free shuttle more than 3 times a week. The same year, shuttle service from the Walnut Creek BART to downtown reduced 418 vehicle trips per week or 21,736 vehicle trips per year.[124]

7.4. Union City, California

Union City does not have a defined downtown within its jurisdiction. In order to remedy the problem, Union City began constructing the Intermodal Station at the Union City BART Station (refer to Figure 7-5) in November 13, 2007. The station will coordinate regional and local services with pedestrian and bicycle activity and will contain retail, office, transit-oriented and mixed use development.[125]

Although Union City's parking requirements are the highest amongst the case studies at 5.0-5.7 per 1,000 square foot for retail and commercial uses, the city's municipal code requires reduced parking requirements for residential development within the Union BART Station area.

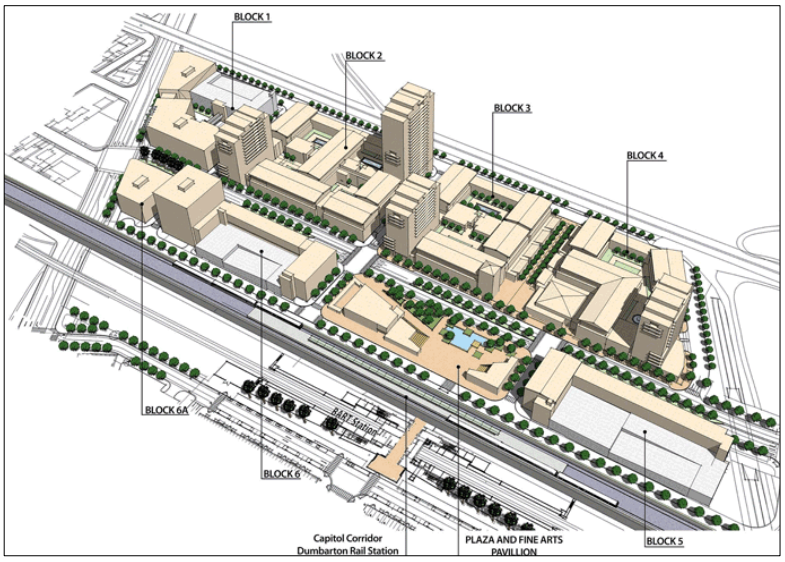

Figure 7-5. Union City Intermodal Station Plan
Source: Union City, Economic and Community Development, http://www.union-city.ca.us/commdev/redev_intermodal.htm

[122] Ibid.

[123] City of Walnut Creek, *Walnut Creek General Plan 2025,* "Transportation Element," April 2006, ttp://webcache.googleusercontent.com/search?q=cache:IDY_DsUTgkwJ:www.walnut-creek.org/civica/filebank/blobdload.asp%3FBlobID%3D2814+downtown+walnut+creek+parking+study+2005+tjkm&cd=2&hl=en&ct=clnk&gl=us&client=safari (accessed September 1, 2010).

[124] City of Walnut Creek, "Downtown Parking Final Report," 2005, http://www.walnut-creek.org/civica/filebank/blobdload.asp?BlobID=4036 (accessed November 1, 2010).

[125] Union City, "Economic and Community Development," http://www.union-city.ca.us/commdev/redev_intermodal.htm (accessed September 1, 2010).

Therefore, there is potential to reduce commercial and retail parking within the BART Station District and allow new developments to pay in-lieu fees to construct central public parking garages within the intermodal station.[126] The proposed transit-oriented development (TOD) and downtown district currently has two paid parking lots (shown in Figure 7-6) within the Union City BART Station , and free off-street parking for patrons of El Mercardo Center and Marketplace Shopping Center.

Figure 7-6. Union City BART Parking Map
Source: Union City, Station District Parking, http://www.union-city.ca.us/parking.html

7.5. City of Redmond, Washington

The City of Redmond's Town Center (shown in Figure 7-7) is the main core of commercial activity. The center boasts 121 unique shops and businesses, and contains a mixed-use office park.[127]

Figure 7-7. Downtown Redmond, Washington
Source: Incolo Real Estate, http://www.incolo.com/redmond/downtown-redmond/

The city is focused on attaining 36% of citywide commute trips to be made by bicycle, walking, carpooling, or public transportation within the city. Thus, the city is embarking on a specific parking and transportation policy update for the downtown district that best fits within the city's transportation demand management strategies. The city incorporated minimum and maximum parking

[126] Ibid.

[127] City of Redmond, Chamber of Commerce, "Things to Do and See in Redmond," http://www.redmondchamber.org/index.php?page=thingstodo (accessed November 2010).

requirements that average 2.0 to 5.5 per 1,000 square feet of commercial and retail space.[128]

Parking garages are not available within the district, but the parking policy proposes in-lieu to be levied from businesses in order to pay for centralized parking.[129] Currently drivers can pay for permits averaging $50 per month at designated areas through a third party contractor, Diamond Parking Services.[130]

In order to enforce adequate parking turnover, a parking limit of 15 minutes, 1 hour and 2-hour maximums are enforced throughout the downtown (refer to Figure 7-8). [131]

Figure 7-8. Red Zone of Time Limits within Downtown Redmond
Source: Redmond Creating Choice, Connecting Community, Downtown Parking, http://www.mrsc.org/govdocs/R42ParkingBrochure.pdf

The city also launched Redmond Trip Resource and Incentive Program or R-Trip, an online citywide transportation demand management program. In 2008, R-Trip logged 16,000 employees and reduced vehicle trips by 1.3 million.[132] R-Trip allows users to login to a dedicated website and report their alternative commute modes to acquire incentives such as a $50 Amazon gift card.[133] The online resource also allows employees to sign up for a free three-month Orca Transit Pass, $300 vanpool subsidy, downtown employer resources, and ride matching.[134] The City of Redmond Business Tax Transportation Improvements and King County, and the Washington State Department of Transportation Grants fund the program.[135]

[128] City of Redmond, "Downtown Parking Study," May 2, 2002, http://www.redmond.gov/cms/One.aspx?portalId=169&pageId=31633 (accessed November 2010).
[129] Ibid.
[130] Diamond Parking Services, "Find Parking and Locations Details, "https://secure.diamondparking.com/monthlyParking/location.aspx?id=807 (accessed November 2010).
[131] Redmond Creating Choice, "Connecting Community, Downtown Redmond Parking," http://www.mrsc.org/govdocs/R42ParkingBrochure.pdf (accessed November 2010).
[132] City of Redmond, Washington, Business and Development, "Project Highlights," http://www.redmond.gov/cms/One.aspx?portalId=169&pageId=27801 (accessed November 2010).
[133] R-Trip, Redmond Trip Resource and Incentive Program, "How it Works," https://www.gortrip.com/home/howitworks.aspx (accessed November 2010).
[134] Ibid.
[135] Ibid.

7.6. Key Lessons: What Strategies are Best for San Rafael?

Table 9 presents a summary of the peer reviewed cities presented in Chapter 7.

Table 9 Case Study Summary				
Case Study	**Current Parking Policy**	**Parking Strategy**	**Future Parking Strategy**	**Outcome**
Boulder, CO	Abolished minimum parking requirements in the downtown.	CAGID-Manages parking and TDM program such as Eco Bus Passes.	NA	TDM program reduced drive alone rates from 56% to 36% in 2005 and freed up public parking spaces.
	Contains 11 public garages and lots.			
	Uses electronic payment system to pay for parking.			
Walnut Creek, CA	Minimum parking requirements range from 4.0 to 4.05 for retail and commercial.	Public parking concentrated around the Pedestrian Retail Zone.	NA	2005 study found that the free shuttle service reduced 418 vehicle trips per week or 21,736 trips per year.
	Contains 12 public parking facilities.	TDM program includes free shuttle service from Walnut Creek BART Station.		
	Electronic pay stations available for parking.			

Union City, CA	No downtown present.	The BART station allows new developments to pay in-lieu fees to construct public parking	The Union City BART Station is being converted to an intermodal station that will contain TOD and mixed-use development.	The intent is to setup a public parking structure and new downtown to encourage public transit use.
	Union City BART Station has 2 paid parking lots. There is free on-street parking near the BART station.			
Redmond, WA	Minimum parking requirements range between 2.0 to 5.5 for retail and commercial use.	Established an alternative mode shift goal of 36% for all trips made throughout the city.	Proposes in-lieu fees levied to provide and pay for public parking.	In 2008, the R-Trip Incentive Program logged 16,000 members and reduced trips by 1.3 million.
	Drivers can pay for parking permits at designated areas.	Implemented a TDM program called Redmond Trip Resource and Incentive Program or "R-Trip."		
	The city contracts out their parking services.			

It is apparent that as Downtown San Rafael grows, so too will demand for parking. The following lessons learned from the case studies can assist San Rafael with incorporating some of their strategies in order to manage parking demand:

- Include a TDM program within the city's zoning ordinance for medium and large employers.

- Issue Eco Passes in collaboration with the Metropolitan Transportation Commission (MTC) and the Transportation Authority of Marin (TAM).

- Work with SMART Rail and Marin Transit District to run a shuttle from the C. Paul Bettini Transit Center to popular locations within the downtown.

- Work with Golden Gate Transit, Marin Transit District, San Rafael Planning and Redevelopment Departments to implement and draft a specific TOD plan around the current transit center and proposed SMART Rail Station.

As the City moves toward its adopted goals for a pedestrian and bicycle mode share shift from 5% to 20%, the minimum parking ratios for parking should be capped or eliminated outside of the Parking Assessment District to assure that commuter parking is not adversely affecting the city's ability to meet this objective.

Chapter 8: Analysis of Field Observations

8.1. Observation Methodology

A reconnaissance of every district within the downtown was conducted to gauge the behaviors of pedestrians, bicyclists, and drivers within the area. The conditions outlined below will be used to assess the downtown districts, beginning with the Hetherton Office District from the east, to the West End Village District, where the downtown district terminates from the west. The following conditions were assessed within the downtown study area (shown within the blue box in Figure 8-1) during the months of January to March from Tuesday to Thursday and during the periods of 8 a.m. to 12 p.m., 2 p.m. to 4 p.m., and 4 p.m. to 6 p.m.

- **Pedestrian Activity:** The typical measurement was identified as low, medium or heavy. Low pedestrian activity consists of only a handful of pedestrians present during the observed periods.

- **Pedestrian-Vehicle Conflict:** The typical measurement was not identified, but was noted by measure of occurrence.

- **Bicycle Presence and Activity:** The typical measure was identified as low, medium, or heavy. Low bicycle activity consists of only a few bicyclists present during the observed periods.

- **Bicycle Facility Opportunities:** Consists of downtown businesses and public spaces without bicycle parking, but encountered bicycle activity around the sites were observed and noted.

- **Public Transit Activity:** The typical measurement was identified as low, medium, or heavy. Low public transit activity consists of only a handful of public transit riders during the observed periods.

- **Parking Demand:** The measurement was identified by a general visual count of on-street and off-street parking.

- **Remote Parking Opportunities:** Consists of a general visual count of downtown businesses with excess private parking spaces.

- **Presence of Way-finding Signage:** The quantity of way-finding signage along the district corridors was observed and noted.

- **Traffic Conditions:** The presence of automobiles along a corridor was identified as being light, or heavy during the observation periods.

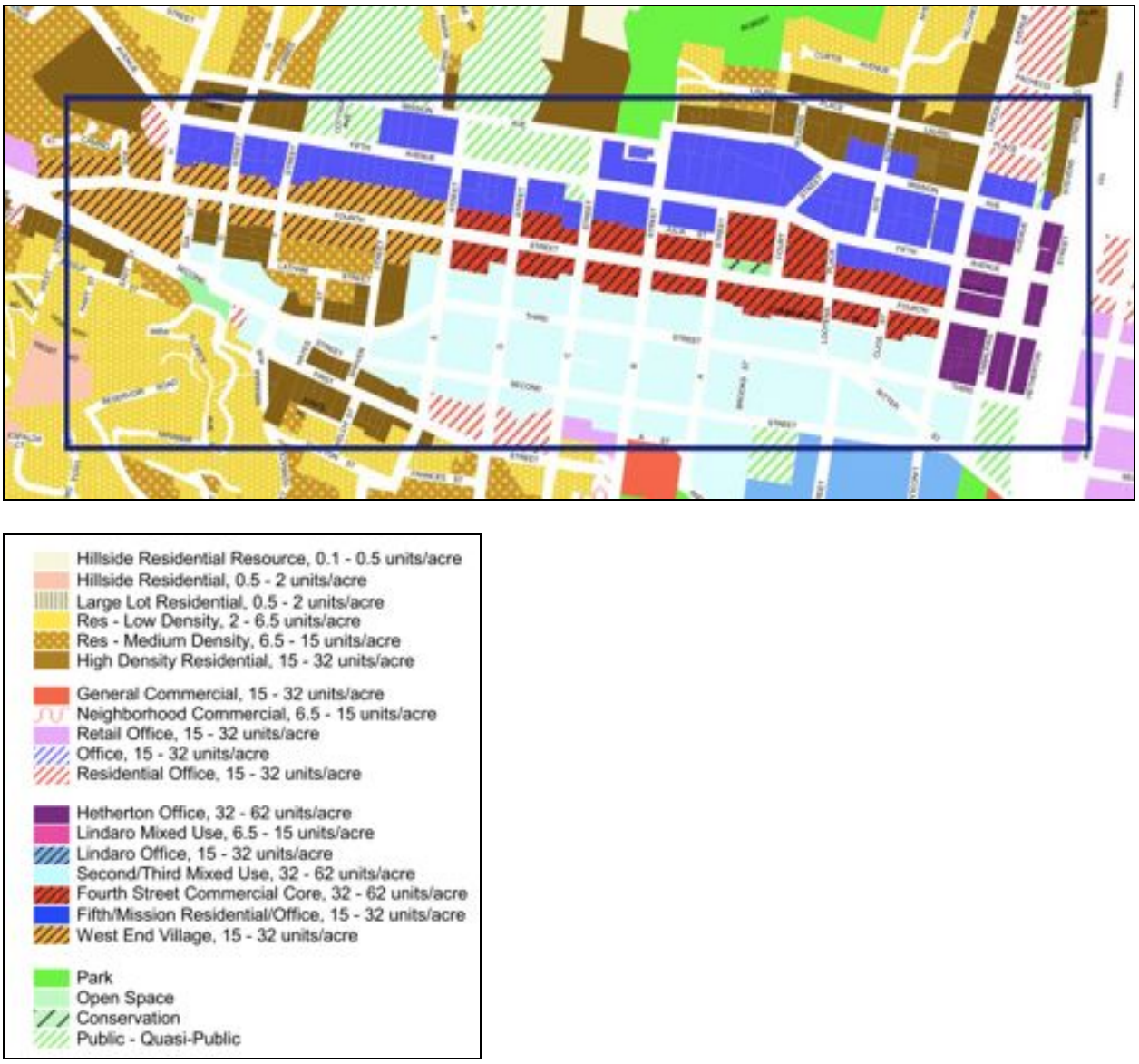

Figure 8-1. Downtown San Rafael Land Uses
Source: City of San Rafael, *San Rafael General Plan 2020*, November 14, 2004, "Exhibit 12 Land Use Map, 11X17," http://www.cityofsanrafael.org/Assets/CDD/2.a+Exhibit+12+Land+Use+Map+11x+17.pdf

8.2. Key Findings

Existing conditions reveal that:

- Parking demand peaks during the afternoon hours until 5 p.m.
- The public parking facilities at 3rd at Lootens, 3rd at A Street, and 3rd at C Street do not reach full capacity.

- If parking demand exceeds available on-street and off-street supply, there are available private off-street parking spaces within the downtown that could be leased to other businesses.

- Sidewalk retrofit and ongoing maintenance are needed along the Second/Third Mixed Use West District and along Fifth and Mission Avenues .

- Pedestrian countdown devices are needed along 3rd Street, especially around the C. Paul Bettini Transit Center.

- Midblock crossings on 3rd Street and East Street pose as a potential pedestrian hazard.

- Bicycle facilities are needed along heavily bicycled corridors, mainly within 3rd and 4th Streets.

- There are opportunities to engage private businesses to install Class III bicycle racks.

- Public transit ridership along 4th Street and Lincoln Avenue are low.

- Public transit stops along 4th Street lack consistent amenities such as seating and schedules.

- Way-finding signage in the downtown display information on one side of the sign, which solely assists vehicular traffic.

- Installing signage within the four major parking garages will help to direct the drivers who are not familiar with the downtown to the exiting streets.

8.3. Hetherton Office District

The Hetherton Office District contains multifamily residences, small to medium office buildings, retail, restaurants, beauty, and entertainment services.

Pedestrian Activity

Few pedestrians were traveling in the early morning hours, but during the peak afternoon timeframe, pedestrians were visible and heading along 3rd and 4th Streets, or directly to the transit center (refer to Figure 8-2). A handful of women with children in strollers were seen at the transit center. Only one pedestrian accessed Puerto Suello Multi-use Pathway during the observation timeframe. However, there were at least three pedestrians, who were seen using the rail tracks adjacent to Puerto Suello Path.

Pedestrian-Vehicle Conflict

Although pedestrian activity is quite heavy within this district and around the transit center, pedestrian-vehicle conflicts were not present during the observation. Yet, the opportunity for this type of conflict to occur is quite high given three major traffic volume corridors (Hetherton, 2nd and 3rd Streets) exist within the district. Furthermore, four major Park and Ride lots exist along Hetherton Street.[136]

Figure 8-2. Pedestrians on 3rd Street Near the Transit Center
Source: Author

Bicycle Presence and Activity

Cyclists were consistently seen throughout the district and especially along 3rd and 4th Streets, and Tamalpais Avenue. The peak number of bicyclists could be seen during the afternoon to evening hours. Only a small number of bicyclists were seen exiting and entering Puerto Suello Path throughout the day.

Bicycle Facility Opportunities

Class III[137] bicycle racks are located at the transit center (refer to Figure 8-3). The racks can hold 40

Figure 8-3. Bicycle Parking at the San Rafael Transit Center
Source: Author

[136] 511.org. "Park and Ride Lots Marin County," http://www.goldengatetransit.org/services/parkride.php (accessed February 17, 2011).

[137] Class III Bicycle racks are the most commonly seen racks on public streets. They come in a variety of shapes and sizes. The definition was taken from the City of Minneapolis, "Bicycle Facility Design Guidelines, Chapter 5-Bicycle Parking," http://www.ci.minneapolis.mn.us/bicycles/Ch5BicycleParking.pdf (accessed March 1, 2011).

bicycles[138] and throughout the observation period, the estimated utilization rate for the bicycle rack ranged between 80-100%. This year, the City of San Rafael updated its Bicycle and Pedestrian Master Plan to reflect the varying mobility habits of its residents. As part of the policy, the city will establish appropriate bicycle facilities where necessary and encourage Golden Gate Transit District to add more bicycle parking at the transit center and install racks near transit stops.[139]

Although the SMART Rail project will establish more bicycle parking facilities, the City of San Rafael should attempt to establish a intent to work with a number of private businesses within the Hetherton Office District to establish on-street bicycle parking including:

- Citibank Office Complex- 666 3rd Street
- Bayside Marin- 718 4th Street
- Sol Food Puerto Rican Cuisine- 901 Lincoln
- Marin Check Cashing- 638 4th Street

In addition, 15 Caltrans bicycle-parking lockers are located within the Park and Ride lots between 3rd, 4th, and Hetherton Streets (refer to Figure 8-4).[140] Linda Tong, Caltrans District 4 Traffic Systems Division representative, states that 5 out of the 15 bicycle-parking lockers are currently assigned. [141]

Figure 8-4. Park and Ride Bicycle Lockers on 3rd at Hetherton Streets
Source: Author

[138] City of San Rafael. "*San Rafael Bicycle/Pedestrian Master Plan Draft,* 2011, http://www.cityofsanrafael.org/Assets/Public+Works/Traffic/SRBikePlan2011Draft.pdf (accessed March 1, 2011), 30.

[139] Ibid.

[140] Caltrans, "Caltrans District 4, Park and Ride Lots," http://www.dot.ca.gov/dist4/highwayops/parkandride/documents/park_ride_lots_master_list_12_14_09.pdf (accessed February 27, 2011).

[141] Linda Tong, Caltrans System Department, Caltrans District 4, interview by author, March 9, 2011.

Public Transit Activity

The C. Paul Bettini Transit Center sits between the Hetherton Office and 2nd and 3rd Mixed Use East Districts. Regional and intercity passenger activity was high in the afternoon periods. During the evening peak hours, all platforms were bustling with passenger activity. Passenger bus transfers were observed on the Golden Gate Transit route 45K heading northbound to Northgate.

The County Connection Shuttle (refer to Figure 8-5) picks up passengers near the transit center platform facing Tamalpais Avenue and 2nd Street. The shuttle service runs from 8:30 a.m. to 11:15 a.m. and then 12:15 p.m. to 3:15 p.m.[142] Based upon the three instances observing the shuttle pick up of passengers, the estimated ridership demand was between 30-40%.

Figure 8-5. County Connection Shuttle
Source: Author

Parking Demand

On-street Parking

Throughout the day, parking demand ranged between medium and high along Tamalpais Street (especially near the railroad tracks) between 3rd Street and 5th Avenue. Otherwise, parking on 5th Avenue and Hetherton were generally available. Only one vehicle was observed within the "All Day" 10-hour spaces on Hetherton Street during the entire three-day observation.

Off-street Parking

Private off-street parking demand was near capacity for over 50% of the businesses in the Hetherton District. Therefore, there are few opportunities for remote parking within the area. The only available off-street public parking

[142] Marin Health and Human Services,"County Shuttle Connection," http://www.co.marin.ca.us/depts/HH/Main/County%20Shuttle%20Connection%20Rev102008.pdf (accessed February 27, 2011).

facilities are provided outside of the downtown district under Highway 101, which is operated by Caltrans as Park and Ride lots.

Remote Parking Opportunities

During the observation, the following private lot has the opportunity to lease their parking spaces to residents or business owners within the area:

- Nieto Advanced Salon and Vincent and Murphy shared lot- 1010 Tamalpais Avenue

Presence of Way-finding Signage

Figure 8-6. Signage along 4th Street at Hetherton Street
Source: Author

Although there is no evidence of signage outside of the transit center leading to the downtown, there are two landmark signs on Hetherton Street directing drivers embarking from Highway 101 north into the City of San Rafael and towards the downtown area. There is also one sign directing drivers to the Christopher B. Smith Rafael Film Center (refer to Figure 8-6). Way-finding signage is not present at the transit center. However, Z. Wayne Johnson, the Deputy General Manager of Golden Gate Transportation District, states that Golden Gate Transit is working with the Metropolitan Transportation Commission (MTC) on the final proposal stages for thematic signage within the transit center.[143] The city should be included on the Golden Gate Transit and MTC signage discussions and proposals (with possible funding from MTC) to develop signage along Puerto Suello and Mahon Paths and at 3rd and Hetherton Streets.

[143] Z. Wayne Johnson, Deputy General Manager, Golden Gate Transit Bridge and Highway District, interview by author, February 12, 2011.

Traffic Conditions

Traffic Conditions along Mission Avenue, Hetherton and 3rd Streets are lighter than expected given that all the streets have access to Highway 101 during the early morning hours, but by the late evening periods traffic becomes quite heavy especially on Mission Avenue heading to Highway 101 north.

8.4. Second/Third Mixed Use East District

The Second/Third Mixed Use East District encompasses the San Rafael Corporate Center, PG&E industrial site, small to medium office buildings, retail, restaurants and beauty services. The area contains the most heavily used corridors (2nd and 3rd Streets) where vehicle traffic travels to and from Highway 101.

Pedestrian Activity

Generally, 3rd Street receives more pedestrian activity than 2nd Street, partly due to the fact that 2nd Street lacks sufficient pedestrian amenities such as street trees, mixed land uses and sidewalk connections (refer to Figure 8-7). The San Rafael Corporate Center at 2nd and Lincoln did not have many pedestrians present, but bicycle activity was present around the area. Pedestrians that were seen around the San Rafael Corporate Center during the day were walking northbound on Lincoln Avenue and in the evening northbound on Lincoln Avenue and eastbound on 2nd Street. Pedestrian countdown devices are needed around the transit center to the San Rafael Corporate Center along 2nd and 3rd Streets. It is also important to note that Ritter Street does not connect well to Lincoln Avenue and 2nd Street and this observation was affirmed with public comments to fix Ritter Street to better serve pedestrians and cars at the Downtown San Rafael Station Area Plan Workshop.[144]

Figure 8-7. Pedestrian Activity on 3rd Street
Source: Author

[144] Downtown San Rafael Station Area Plan, Community Visioning Workshop, Workshop Summary Report," November 9, 2010, San Rafael Corporate Center.

Pedestrian Vehicle Conflict

There are two midblock crossing points within the district: 1) 3rd and Cijos Streets and 2) 3rd and Brooks Streets (refer to Figure 8-8). From the observations, conducted midblock crossings are the greatest of concerns within the district because pedestrians appeared intimated by the traffic and their usual reaction was to wave their hand or looked directly at the driver before proceeding to cross. The behavior maybe due to the driver's speed or lack of visibility. In the case of bicyclists, they simply zipped through the midblock.

Figure 8-8. Midblock crossing, 3rd at Cijos Streets
Source: Author

Bicycle Presence and Activity

Beginning after 9 a.m., bicycle activity began to increase and bicyclists were more apt to ride on 3rd Street rather than 2nd Street. A mixture of cyclists rode on the sidewalk and the street. The areas encompassing Lincoln and Tamalpais Avenues, Ritter and Cijos Streets and Lootens Place were the highest trafficked destinations from 2nd and 3rd Streets.

Bicycle Facility Opportunities

Bicyclists riding in the downtown have access to the bicycle parking facility at the transit center, otherwise parking facilities are not available and many bicycles were tied along 3rd Street against available trees and poles (refer to Figure 8-9). Potential private and public sites for bicycle parking include:

Figure 8-9. Bicycle Parking along 3rd Street
Source: Author

- San Rafael Corporate Complex- Directly facing 2nd Street and Lincoln Avenue

- San Rafael Public Parking Garage (Ground Level) - 3rd Street at Lootens Place

Public Transit Activity

The C. Paul Bettini Transit Center is centrally located within the district and during the observations, many pedestrians and cyclists could be seen leaving the center. Golden Gate Transit and Marin Transit buses heading back to the transit center were seen on 2nd and 3rd Streets. Two bus stops exist on 2nd Street at Lindaro Street that serve the San Rafael Corporate Complex. The bus stops (for both northeast and southeast directions) do not contain transit amenities such as shelters with seating or schedules. Furthermore, the trees that are planted near the stop block the actual bus sign, so it would be difficult for pedestrians or bicyclists to see that a bus stop exists on the street.

Parking Demand

On-street Parking

Lincoln Avenue and 3rd Street, Cijos and 3rd Streets and Cijos and Brooks Streets receive the highest parking demand given the proximity to popular destinations along 3rd and 4th Streets. Demand generally peaks during the afternoon and remains relatively constant throughout the rest of the day.

Off-street Parking

Off-street parking around the area is linked to the San Rafael Corporate Complex, which has two parking lots on Lincoln Avenue and 2nd Street, and one multi-level garage on 2nd and Lindaro Street. One of the two lots did not reach capacity during the observed periods, but the 2nd lot became full quite early and was at the point of full capacity. The multi-level garage demand was not observed given that the door was locked to the public. There is also a private off-street lot on Lindaro Street between 3rd and 2nd Streets that received medium levels of parking demand during the observation period.

There are three available public off-street parking options for drivers; two parking lots and one garage along 3rd Avenue:

1. **3rd Street at Cijos Street**: The surface lot holds 58-metered parking spaces (refer to Figure 8-10).[145] Observed utilization rates for this parking lot fluctuated throughout the day, peaking around noon and reached full capacity around 1 p.m. The observed rates contrast those observed during a 2007 study taken on a Friday and Saturday evening where parking capacity ranged between 30-35%.[146] When comparing the utilization rates with San Rafael's 1998 parking study this particular lot remains in high demand since 1995.[147]

Figure 8-10. 3rd at Cijos Streets Public Parking Lot
Source: Author

2. **3rd Street at Lootens Place**: The surface lot holds 33 parking spaces[148] and resides next to a 24-hour Walgreens. Parking utilization peaks during 11 a.m. and remains occupied with medium level of turnover throughout the day. The results are much higher than San Rafael's 1998 parking study, where the utilization rate was 65% during peak hours.[149]

3. **3rd at Lootens Place**: The utilization rates for this 2-story, area containing 187 space garage peaks during the afternoon lunch time hours (between 12-2 p.m.) within the first floor. The 2nd level (designated as "All Day" parking) does not. The observation is consistent with the 1998 city study, which states that the 2nd level is hardly used. The city assumes that there are security issues involved with the 2nd floor where drivers may feel insecure.[150]

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[145] WilburSmith and Associates, "Infill Analysis and Policy Recommendations for the City of San Rafael," Metropolitan Transportation Commission, June 29, 2007, http://www.mtc.ca.gov/planning/smart_growth/parking_seminar/case_studies/SanRafael.pdf (accessed September 1, 2010).

[146] Ibid.

[147] City of San Rafael Redevelopment Agency, Downtown Parking Report (1999), San Rafael, California, 5.

[148] Ibid.

[149] Ibid.

[150] Ibid.

Remote Parking Opportunities

Throughout the observation, only one reasonable location seemed adequate for remote parking:

- Klein TV- 835 3rd Street (refer to Figure 8-11)

Figure 8-11. Klein TV Off-street Private Lot
Source: Author

Presence of Way-finding Signage

There is neither signage along 2nd or 3rd Streets nor signage available near the San Rafael Corporate Center (750 Lindaro Street) or any indication of amenities nearby such as the Mahon Creek Path.

Traffic Conditions

The main arterials of 2nd and 3rd Streets leading to and from Highway 101 have a steady volume of vehicles throughout the day. During the evening hours, traffic volume becomes noticeably heavy and intimidating.

8.5. Fourth Street Retail Core District

The Fourth Street Retail Core is the densest and tallest land use activity in the entire downtown. Various business activities such as retail, beauty, restaurant and entertainment services; small to large offices; and multi-family residential developments thrive within the neighborhood.

Pedestrian Activity

During the morning hours, pedestrian traffic is barely visible. As the afternoon hours approach, pedestrian traffic is high and concentrated between Lincoln Avenue and C Street. Senior citizens are particularly present at the downtown's courtyard, which is located at 4th and Court Street. Illegal mid-block crossings were common on this street and especially where food services exist.

Pedestrian-Vehicle Conflict

One pedestrian and vehicle incident was present on 4th at A Streets. One vehicle traveling down 4th Street made a right-hand turn onto A Street and barely missed a pedestrian entering into the crosswalk. The pedestrian did not seem aware of the incident and the driver sped away.

Bicycle Presence and Activity

Bicycle activity was seen throughout the 4th Street corridor. However, cyclists were highly concentrated within the Fourth Street Retail Core District. There were an equal number of cyclists seen on the sidewalk as well as on the street

Bicycle Facility Opportunities

Although there are a high number of bicyclists in the area, only two bicycle options exist. One Class III standard bicycle rack can be found in front of the Meridian Gym at 4th Street and one Class III rack is available on 4th Street at Court Street. Bicycles are also visibly parked along trees and posts (shown in Figure 8-12).

Potential private and public sites for bicycle parking include:

- Office Complex- 1050 4th Street
- Rafael-Smith Film Center- 1118 4th Street[151]

- Max Muscle- 1401 4th Street

Figure 8-12. Bikes along 4th Street at Lootens Place
Source: Author

[151] City of San Rafael, San *Rafael Bicycle/Pedestrian Master Plan Draft,* 2011, http://www.cityofsanrafael.org/Assets/Public+Works/Traffic/SRBikePlan2011Draft.pdf (accessed March 1, 2011), 30-31.

Public Transit Activity

There are two transit stops within the district. Both are located on 4th at Court Streets. During the observation period, no more than five riders were seen waiting for a westbound bus. The number of riders heading eastbound was even lower. Consistency in infrastructure amenities is lacking along the 4th Street corridor. The stop that service westbound passengers contains a bench and a schedule (although the schedule is facing the opposite direction). Yet, the eastbound stop does not have seating, but contains a schedule (refer to Figure 8-13).

Figure 8-13. Eastbound bus stop, 4th at Court Streets
Source: Author

Parking Demand

On-street Parking

Parking spaces were at capacity throughout the early afternoon to evening hours along 4th Street from B Street to E Street. However, there was high turnover at 4th Street at A Street.

Off-street Parking

Private off-street parking is not generally provided throughout the entire downtown as it is part of the Parking Assessment District. Yet, private parking spaces for businesses above 1.0 FAR were relatively full.

The public lots and garages along Fifth/Mission Residential/Office District, Second/Third Mixed Use East and West Districts are considered public parking facilities for 4th Street visitors and employees.

Remote Parking Opportunities

Throughout the observation, only one reasonable location seemed adequate for remote parking (refer to Figure 8-14):

- Office Complex- 1050 4th Street

Figure 8-14. Office Complex -1050 4th Street
Source: Author

Presence of Way-finding Signage

Way-finding signage is not present within this district, but 4th at Court Streets would be a perfect location for a downtown map (refer to Figure 8-15).

Traffic Conditions

4th Street at Lincoln Avenue posed the most threatening traffic conditions within the district. Vehicles along Lincoln Avenue begin to bunch up within the crosswalk of 4th Street (refer to Figure 8-16). The behavior causes some vehicles behind the observed bunching to speed around the vehicles in order to cross through the intersection before the light turns red. Installing left turn lanes on 4th at Lincoln Avenue would help to relieve some of the congestion.

Figure 8-15. Intersection of 4th at Court Streets
Source: Author

8.6. Cross Street Mixed Use District

The Cross Street Mixed Use District contains multifamily residences, small to medium office buildings, retail, restaurants and beauty and entertainment services. The area is bordered by 2nd Street traveling eastbound to Highway 101 to the south and 4th Street Retail Core District to the north.

Figure 8-16. 4th Street at Lincoln Avenue
Source: Author

Pedestrian Activity

Pedestrian activity was concentrated between Brooks and B Streets along 3rd Street. Most pedestrian seen were heading to Kaiser Permanente Medical Center, St. Vincent De Paul Dining room or offices along 2nd Street. Pedestrian activity peaked in the morning and afternoon periods. Interestingly, there were not many pedestrians leaving the small- to medium-size office buildings on 2nd and B Streets during the lunchtime hours.

Pedestrian-Vehicle Conflict

Pedestrian-vehicle interactions were not a major factor during the observations, however there was one pedestrian and vehicle conflict along A at 2nd Streets. The conflict involved a right-turning vehicle off of 2nd Street onto A Street.

Bicycle Presence and Activity

Similar to pedestrian activity, cyclists were concentrated between Brooks and B Streets along 3rd Street.

Bicycle presence was heavy along 3rd and B Streets, but rare along 2nd Street. Unlike the other districts in downtown San Rafael, bicycles were not tied to trees.

Bicycle Facility Opportunities

The only Class III bicycle rack is present outside St. Vincent De Paul's Dining room. The estimated utilization rate for the rack was estimated between 50-80% throughout the three-day observation period. The City of San Rafael can work with

a number of private businesses within the Cross Street Mixed Use District to establish on-street bicycle parking which includes:

- Kaiser Medical Center- 1033 3rd Street
- First Savings Federal Loan- 1050 3rd Street
- Depot Garden Cafe- 773 B Street
- Safeway Grocery Store- 700 B Street
- Office Complex - 710-714 B Street

Note: Kaiser Permanente provides two Class III bicycle racks (refer to Figure 8-17) inside their underground parking garage. The city should work with the medical center in order to move the bicycle racks above ground or publish bicycle signage should be erected to notify cyclists of the presence of bicycle parking.

Figure 8-17. Bicycle Parking Located at Kaiser Medical Center Garage
Source: Author

Furthermore, the City of San Rafael can designate bicycle racks in the B at 3rd Street garage close to pedestrian traffic.

Public Transit Activity

Public transit activity is not seen within this district. However, there are paratransit and senior vans that are present within this area.

Parking Demand

On-street Parking

On-street parking between Brooks Street and B Street was unoccupied

Figure 8-18. Public Garage on 3rd at B Streets
Source: Author

during the early morning hours, but began to fill up after 10 a.m. 3rd Street was especially busy given the proximity to Kaiser Medical Center. B Street between 4th and 2nd Streets were 80% occupied at their peak hours during the lunchtime hours and 2-hour free parking outside of Safeway's private parking lot was 60-100% occupied throughout the observation period.

Off-street Parking

Private off-street parking demand was not at capacity for a large portion of businesses in the Cross Street District. Therefore, there are opportunities for remote parking.

The closest public parking garage is located on 3rd at A Street (refer to Figure 8-18). The 4-story, 371-space garage[152] was active throughout the three days of observations. Drivers are able to pay for parking using an electronic pay station. Half of the ground-level (entering from B or 3rd Streets) is designated for 2-hour parking, but never reached capacity. The remaining floors were designated for "All Day" parking and were not at capacity as there was ample rooftop parking during the peak period hours. In 1998, the city observed a higher utilization rate than what was observed. The peak period was around noon and the utilization rate was 89%.[153]

Remote Parking Opportunities

During the observation, the following private lots have the opportunity to lease their parking spaces to residents or business owners within the area:

- Sheldon Doing Warehouse Museum, Comcast and Nigel for Hair Complex- 739 A Street
- St. Vincent, Sans Gluten-Free Grocery, and LLC/Christian Fellowship- 823 B Street

Presence of Way-finding Signage

Way-finding signage is sparsely seen along B and 3rd Streets (refer to Figure 8-19). Signage that was present directs all of its information onto one side of the sign, and towards oncoming westbound traffic.

[152] City of San Rafael Redevelopment Agency, Downtown Parking Report (1999), San Rafael, California, 4.

[153] Ibid.

Way-finding signage along A to B and 3rd Streets should attempt to direct drivers and pedestrians to sites such as Safeway Grocery Store, Gerstle Park Mahon Creek Path and the Sheldon Doing Warehouse Museum.

Figure 8-19. Way-finding Signage, 3rd at B Streets
Source: Author

Traffic Conditions

Traffic conditions along A and B Streets were quite tame throughout the observation period. However, traffic along 2nd and 3rd Streets was light during the early morning hours, but became overwhelming during the afternoon and evening peak timeframes.

8.7. Fifth/Mission Residential/Office District

The Fifth/Mission Residential Office District contains multi-family residences, small to medium Victorian style and contemporary office buildings; and financial, retail, beauty, educational, faith-based and civic services.

Pedestrian Activity

Pedestrian volume was light compared to 3rd and 4th Streets. Despite the volume, pedestrian activity was concentrated around three areas: 5th Avenue between A and C Streets, San Rafael City Hall, San Rafael Public Library, and Marin Academy High School. The city installed pedestrian countdowns throughout key intersections within the district, but the sidewalk conditions along specific segments on Mission Streets are less than acceptable. Notably, sidewalks are missing or incomplete on Mission Avenue between B and D Streets (refer to Figure 8-20). The City of San

Figure 8-20. Sidewalk terminates on Mission Avenue at B Street
Source: Author

Rafael acknowledges the missing sidewalks and has logged the condition as high priority in the *San Rafael Bicycle and Pedestrian Master Plan 2011*.

Pedestrian-Vehicle Conflict

The traffic volume throughout the observation was identified as either light or heavy. The observed traffic within the district was light compared to 3rd or 2nd Streets. Construction and delivery trucks traveled along 5th Avenue throughout the observation period, which can pose a risk. There were two instances of pedestrian-vehicle conflicts: 1) Located at Mission Avenue and C Street were a pedestrian was in the middle of the crosswalk traveling eastbound; and 2) Located at 5th Avenue and Court Street where a pedestrian was entering the crosswalk traveling northbound.

Bicycle Presence and Activity

Similar to the 3rd Street Mixed Use East District, bicyclists were found on 5th Street and segments of Mission Avenue rather than the side streets. However, more cyclists could be seen riding throughout the residential neighborhoods between E and H Streets during the evening hours. Unlike 3rd Street, only a handful of cyclists rode on the sidewalks.

Bicycle Facility Opportunities

Bicycle parking is not provided on Mission or 5th Avenues. The public library provides Class III bicycle facilities, but the City of San Rafael acknowledges the fact that facilities provided are substandard in the *San Rafael Bicycle and Pedestrian Master Plan 2011* (refer to Figure 8-21). Class III bicycle facilities are also provided within San Rafael City Hall, but they are not easily seen from the street.

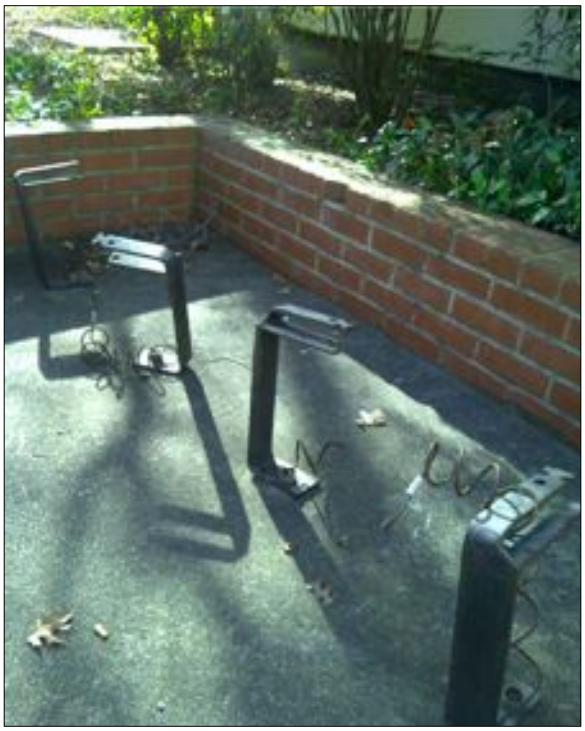


Figure 8-21. San Rafael Library: Potential Location for Bicycle Parking
Source: Author

Public Transit Activity

There are two bus shelters, one northbound and the other southbound on Lincoln Avenue and Mission Street. The utilization of the bus shelter was very light and the passengers that were

found waiting were traveling northbound. Paratransit and senior vans were also present within this area.

Parking Demand

On-street Parking

Given that there are large parcels designated with private parking lots for office and financial, residential, civic and educational uses, paid on-street parking spaces are not needed. However, metered parking exists along the side streets as you approach 4th Street and along 5th Street between Lincoln Avenue and E Street. Vehicle turnover appeared slow throughout the free parking spaces and general parking was close to capacity throughout the observation period. Via Sessi Street, located perpendicular to the City of San Rafael Parking Services Department is designated for 10-hour, "All Day" parking and peak utilization was at 70%.

Off-street Parking

Private parking for small office and retail were occupied along 5th Avenue between Court and H Streets. The off-street lots close to Julia Street were occupied because they were used by retail and food establishments operating along the 4th Street corridor.

There are four public parking lots and garages along 5th Avenue:

1. **5th Avenue at Garden Lane**: Utilization rates for this 24-space lot fluctuate throughout the day, peaking after 1 p.m. and the evening. However, the parking lot does not reach 90% occupancy. The City's 1998 parking study also notes that peak hour parking utilization did not reach past 85%.[154]

2. **5th Avenue at Lootens Place**: The 30-parking space lot happens to be one of two lots that allow drivers to pay for parking at a pay station. The city's 1998 parking study states that peak utilization rate was 62%.[155] The observation was well below the current utilization rates that were estimated throughout the day. Occupancy peaked well before noon and remained at 95-100% occupancy throughout the day.

3. **5th Avenue and C Street**: Utilization rates at this 96-space garage are estimated around 70-80% on the upper "All Day" 10-hour level of the garage and 40% on the lower deck 2-hour portion. Drivers are able to pay for parking using an electronic pay station. During the city's parking study in

[154] City of San Rafael Redevelopment Agency, Downtown Parking Report (1999), San Rafael, California,7.

[155] Ibid,8.

1998, the utilization rate dropped to 56% during peak period hours, much less than what was currently observed.[156]

4. **5th Avenue at D Street**: The 42-space public parking lot located next to the San Rafael Parking Services and across from city hall and the public library allows drivers to pay for parking using an electronic payment station. Utilization rates during the observations were estimated around 70-80% during peak hours starting in the afternoon and evening hours. The observations are similar to San Rafael's last parking study estimate of 77% peak demand.[157]

Remote Parking Opportunities

During the observation, the following private lots have the opportunity to lease their parking spaces to residents or business owners within the area (refer to Figure 8-22):

- Schubert Investment- 810 5th Avenue
- TruthSayer/Barry Gilbert/Point Productions- 820 5th Avenue
- Rose G Kuntz- 824 5th Avenue
- Office Complex- 1101 5th Avenue

Figure 8-22. Off-street parking at 820 5th Avenue
Source: Author

Presence of Way-finding Signage

As noted from the previous districts, way-finding signage is not frequent or clearly present within the Fifth and Mission District.

Figure 8-23. Way-finding Signage, 5th Avenue at B Street
Source: Author

[156] Ibid,7.
[157] Ibid.

Present signage directs all of its information towards one side of the sign aimed for vehicular traffic rather than pedestrian traffic (refer to Figure 8-23).

Traffic Conditions

During the day traffic conditions overall were light along Mission and 5th Avenues and the side streets. During the early to late evening hours, traffic became quite heavy along Mission Avenue from Court to Hetherton Streets and Lincoln Avenue.

8.8. Second/Third Mixed Use West District

The Second/Third Mixed Use West District encompasses multi- and single-family housing, small to medium office buildings, retail, restaurants and beauty services. The area contains the most heavily used streets (2nd and 3rd) in the Downtown District where vehicle traffic travels to and from Highway 101.

Figure 8-24. Sidewalk Segment terminates at 2nd at Hayes Streets
Source: Author

Pedestrian Activity

Generally, pedestrian activity is concentrated on 3rd Street between A and C Streets. Sidewalk conditions are well maintained until one reaches the intersection of 3rd at E Streets. Thereafter, sidewalks are uneven and some segments are narrow. One sidewalk segment was unavailable near a development at 3rd and Shaver (refer to Figure 8-24) and pedestrian countdown devices are predominately present on 2nd Street. The City of San Rafael acknowledges in the 2011 pedestrian and bicycle master plan to prioritize sidewalk construction and retrofit segments along 2nd and 3rd Streets.[158]

[158] City of San Rafael, *San Rafael Bicycle and Pedestrian Master Plan Draft*, 2011, http://www.cityofsanrafael.org/Assets/Public+Works/Traffic/SRBikePlan2011Draft.pdf (accessed March 1, 2011), 53.

Pedestrian-Vehicle Conflict

Pedestrian-vehicle conflicts were not present in the area. Yet, the traffic speed levels increase from 25 mph to 35 mph at the convergence of 2nd and 3rd Streets at Hayes Street, which pose a threat to pedestrian activity.

Bicycle Presence and Activity

Bicycle activity was active around 3rd Street between A and Shaver Streets and peaked during the afternoon hours. The majority of cyclists present rode on the street.

Figure 8-25. Bicycle Parking at 3rd Street and C Street Public Garage
Source: Author

Bicycle Facility Opportunities

Class III bicycle parking is provided at 3rd at C Streets public parking garage on the ground level (refer to Figure 8-25), but signage is not present in order to indicate that bicycle parking exists. Bicycle parking is also available in front of the United States Postal Service located off of 3rd and D Streets but was not utilized during the observation period. Bicycles were also seen tied to the gate of Ginolina's Restaurant on 3rd Street.

Potential private and public sites for bicycle parking include:

- Precision 8 Hair Salon- 1622 Street
- Public Parking Lot- 2nd Street at D Street
- Office Complex- 1295 2nd Street
- Belli-Deli- 1304 2nd Street
- Operation C.H.E.F.- 1115 3rd Street

Public Transit Activity

Public transit is not present within this area given that a majority of bus stops are along the Fourth Street Retail Core District. However, Golden Gate Transit buses and paratransit shuttles were traveling along 2nd and 3rd Streets.

Figure 8-26. 3rd Street at C Street Public Parking Lot
Source: Author

Parking Demand

On-street Parking

Parking demand was high at 3rd and A Streets and dropped off from C to D Streets. Free 2-hour parking is available after 3rd and E Street. There is "All Day" 10-hour parking available on E Street between 3rd and 2nd, but is not fully utilized. The 2009 West End Village Parking Analysis conducted by the city also observed the same activity along E Street.[159]

Off-street Parking

Private lots that were occupied were generally small office spaces with 3 to 5 parking spaces.

There are two available public parking facilities for drivers- one parking lot and one parking garage:

1. **3rd at C Streets**: The 5-story, 390-space garage contains 2-hour parking on the ground-level and 10-hour "All Day" parking on the remaining upper levels. Drivers are able to pay via the parking pay stations, and the garage posts signage, notifying drivers of businesses who validate parking within the downtown. Furthermore, the garage has postcards near the elevators reminding drivers to pay before returning to their car and note that there is a 10-minute grace period to pay before exiting the garage. Parking utilization rates were estimated between 70% given the rooftop-level of the garage was barely used. There have not been any current parking utilization studies for this site.

[159] City of San Rafael Redevelopment Agency. West End Village Parking Analysis Report (2009), San Rafael, California, 4.

2. **2nd at D Streets**: The 18-space lot provides permitted parking that is predominately used by taxis (refer to Figure 8-26). There is one disabled parking space and three metered parking spaces. Two out of three-metered parking spaces were used throughout the entire observation period. The City of San Rafael estimated that the utilization of the lot was 18% and this was before the parking permit spaces were installed. [160] If demand within the area were to increase, Katie Korzun, Economic Development Coordinator for the City of San Rafael Redevelopment Agency states that meters can be re-installed within the parking lot.[161]

Remote Parking Opportunities

Throughout the observation, there was one reasonable location deemed adequate for remote parking:

- Patrick and Company- 1814 2nd Street

Presence of Way-finding Signage

Way-finding signage can be found on 2nd at E Streets, and 3rd at E Streets. Similar to the rest of the signage in the downtown area, the present signage directs all of its information towards one side of the sign aimed for vehicular traffic rather than pedestrian traffic.

Traffic Conditions

Similar to all districts surrounded by 2nd and 3rd Streets, traffic became heavy during the afternoon to evening hours. Unlike the rest of the districts, traffic speeds heading westbound are higher in the Second/Third Mixed Use West area due to the change of speed levels after E Street.

8.9. West End Village District

The West End Village District embodies single- and multi-family housing, Victorian and contemporary office buildings, restaurants, retail, beauty, entertainment and auto repair and sale services. Two major buildings, YardBirds Home Center (within the West End Office and Retail Center) and the accompanying YardBirds Garden Center (on 1822 4th Street) lie vacant.

[160] City of San Rafael Redevelopment Agency, Downtown Parking Report (1998), San Rafael, California, 3.

[161] Katie Korzun, Economic Development Coordinator, City of San Rafael Redevelopment Agency, interview by the author, March 4, 2010.

The West End Village Parking Analysis, conducted in 2009 by the City of San Rafael revealed that out of 876 off-street commercial parking spaces, 70% are private spaces. Most of the available public off-street parking spaces are greater than the calculated demand.[162]

Pedestrian Activity

Pedestrian activity was concentrated along 4th Street between E and H Streets. A handful of Marin Academy students could be found traveling from the high school south onto 4th Street and H Street. The sidewalks along the main street (4th Street) are well-maintained until you reach E Street and West End Avenue where a few segments (side streets between D and H Streets) are uneven and caked with debris. The few pedestrian countdowns that are available are on 4th and H Streets and the intersection of West End Avenue at the 4th Street.

Figure 8-27. Midblock Crossing, West End Avenue and East Street
Source: Author

Pedestrian-Vehicle Conflict

When approaching the West End Village, the speed limit increases from 25 miles per hour (mph) to 35 mph. To make matters worse, one midblock crossing is present just a few minutes away at East Street and West End Avenue. The increase in speed limits and the presence of a midblock crossing threatens pedestrian safety (refer to Figure 8-27).

Bicycle Presence and Activity

Bicycle presence was light compared to the rest of the downtown neighborhoods and most were seen between 2nd and 4th Streets.

[162] City of San Rafael Redevelopment Agency, West End Village Parking Analysis Report (2009), San Rafael, California, 3.

Bicycle Facility Opportunities

Although the entire 4th Street corridor is designated a Class III Bicycle Route, more Class III bicycle racks are found along 4th Street at E Streets to West End Avenue than 4th Street between Lincoln Avenue and E Street.

Potential private and public sites for bicycle parking include:

- West End Office and Retail Center- 1814 2nd Street

Public Transit Activity

Besides the C. Paul Bettini Transit Center, public transit service runs along Fourth Street through the Retail Core and West End Village. There are four transit stops within the West End Village District, but the stops lack consistent amenities. One out of the four stops is a fully sheltered transit stop, the other stop that is located directly across from the shelter contains only a bench and bus sign without a bus schedule (shown in Figure 8-28).

Figure 8-28. Bus Stop, 4th at Ida Streets
Source: Author

Golden Gate Transit route 22 and 23 buses were frequently seen, but ridership appeared low throughout the observation period. Ridership was low in the morning and afternoon hours and medium throughout the remainder of the day.

Parking Demand

On-street Parking

Parking is available along 4th Street and a few 2-hour free spaces along F, H, and Ida Streets. “All Day” is 10-hour parking available on E Street between 3rd and 4th Streets, but is not fully utilized. The 2009 West End Village Parking Analysis

conducted by the city also observed the same activity along E Street.[163] Furthermore, the West End Study states that 71% of the total side streets are utilized during its peak hour of 1p.m. Off-street spaces along 4th Street receive a peak hour utilization rate of 60% at peak noon hour. [164]

Off-street Parking

Private off-street parking ranged from low to medium utilization throughout the day. One 20-space[165] off-street public lot is located adjacent to 1556 4th Street. The occupancy gradually increased after 10 a.m. and continued to hover around 70-80% throughout the observation period.

Figure 8-29. West End Office and Retail Center
Source: Author

Remote Parking Opportunities

Throughout the observation, only one reasonable location seemed adequate for remote parking:

- Dharma Trading Company- 1604 4th Street
- West End Office and Retail Center- 1515 3rd Street (refer to Figure 8-29)

Figure 8-30. Downtown Landmark on 4th Street at West End Avenue Intersection
Source: Author

Presence of Way-finding Signage

Way-finding signage was not present throughout the district. Still, there is a downtown landmark sign located at 4th Street and West End Avenue intersection that

[163] City of San Rafael Redevelopment Agency, West End Village Parking Analysis Report (2009), San Rafael, California, 3.
[164] Ibid..
[165] Ibid, 4.

corresponds to the landmark sign located at Hetherton Street and Mission Avenue (Figure 8-30).

Traffic Conditions

Similar to the Second/Third Mixed Use West District, once traffic heading westbound reaches 35 mph, the entire road system appears to be dangerous, especially during the evening hours. Traffic along 4th Street and the subsequent side streets range from light to medium throughout the day.

8.10. Key Lessons

The City of San Rafael is determined to increase pedestrian and bicycle activity and the downtown is a prime location for such activity. Yet, without adequate bicycle facilities, sidewalk facilities or way-finding signage to entice pedestrians and bicyclists to venture downtown, the city will not meet its objective.

Parking demand is concentrated around the Fourth Street Retail Core and Second and Third Mixed Use East Districts. Although peak afternoon parking demand is centered near popular businesses during the morning and afternoon periods, parking demand has not exceeded supply. In fact, on-street “All Day” 10-hour spaces located on Via Sessi, E and Hetherton Streets could be utilized for employees at a discounted permit rate. If parking requirements were eliminated, or maximum parking ratios were imposed, private businesses would have the opportunity to lease their current excess parking spaces to nearby businesses.

Traffic conditions are rather mild during the day, but 2nd and 3rd Streets pose a risk for pedestrians and bicyclists especially around the Second/Third Mixed Use West and West End Districts. Therefore, pedestrian facilities (sidewalk conditions) should be maintained and midblock crossings should be enhanced to secure pedestrian safety.

Chapter 9: Employer Survey Analysis

9.1. The Survey's Purpose

The objective of the survey is to examine the perception of businesses that reside in downtown San Rafael in order to understand the following:

- Do employees who work near the C. Paul Bettini Transit Center have a higher vehicle share mode than employees who work further away from the transit center?
- Do office and financial institutions tend to subsidize employee parking more than other business types?
- Do employers near the C. Paul Bettini Transit Center believe that the SMART Rail will spur an added customer base compared to other businesses further away from the transit center?
- Do retail employers tend to desire off-street parking as a downtown enhancement compared to other business types?

9.2. Key Findings

Listed below are some of the key findings of the survey:

General Findings

- Driving to work is the prominent commute mode for employees who commute to the downtown.
- Employers located near the C. Paul Bettini Transit Center do not have a higher public transit, bicycle or walking commute mode share than employers located further away from the transit center.
- Although 52% of the 63 employers indicated that off-street parking was adequate for their business and their customers and clients, 30% of employers out of 66 respondents desired more off-street parking as an enhancement to downtown.
- Of the 66 respondents who were asked what they would like as an enhancement to downtown, 24% of employers requested to enhance public transit services.
- Employers would encourage employees to take public transportation if public transportation was enhanced.
- Employers are not willing to fund a signage program within the downtown.

9.3. Survey Methodology

Participant Selection

Survey participants were obtained from the City of San Rafael Planning Department database of San Rafael business licenses.

The survey was constructed from a stratified systematic sampling of 1,044 potential businesses that were identified in the study area (shown in Figure 9-1) based upon the following criteria:

- All business must have a minimum of one employee.
- All business locations must be based within San Rafael's Downtown District.
- All businesses must be an office, retail, food services or entertainment venue and government offices or government-related offices were excluded.

9.4. Survey Design and Distribution

From November of 2010 to January 2011, 120 businesses out of the total 1,044 businesses were contacted in person to gain permission to conduct an on-site survey.

The two-page survey (refer to Appendix C) consisted of 15 questions divided into the following categories: employee travel habits, employee commute benefits, parking, perception of downtown amenities, and SMART Rail's influence on pedestrian and business activity.

9.5. Constraints and Limitations

The survey process had a number of identifiable limitations, which produced a lower than expected response rate.

Survey distribution began during the winter months of November to January 2011 when many businesses in the downtown were closed or had limited operating hours.

Secondly, a large percentage of selected employers consisted of self-employed small offices that are prominent within the downtown district, thus excluded the business from participating in the survey process.

Thirdly, given the economic downturn and consequential closure of many storefronts within the downtown, a large number of employers did not wish to discuss downtown parking behavior because they believe the city overwhelms businesses.

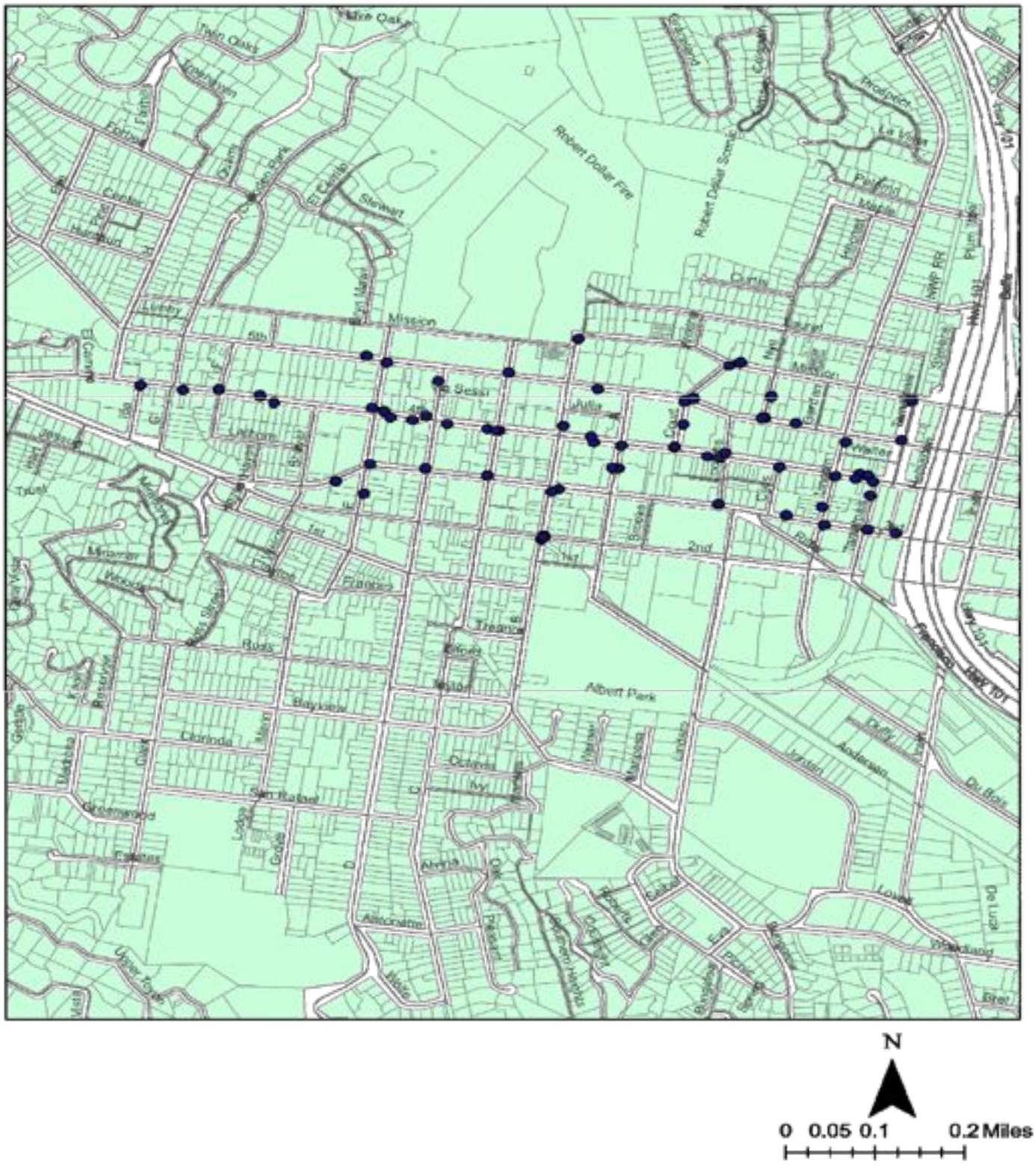


Figure 9-1. Downtown San Rafael Employer Survey Area.
GIS Data Source: City of San Rafael.

and their customer base with high parking prices and an overbearing ticketing policy.

Lastly, a number of multiple employers who were listed in the San Rafael Business License list also occupied the same business address. This happened for such businesses as beauty services or law offices. Therefore, the total pool of available participants was reduced.

9.6. Survey Results

Of the 120 potential businesses identified, 70 responses were collected with a response rate of 58%.

The following responses were collected per district:

- **2nd and 3rd Mixed Use East District**: Seven surveys were collected, for a response rate of 77%.
- **2nd and 3rd Mixed Use West District**: Four surveys were collected, for a response rate of 29%.
- **4th Street Retail Core District**: 26 surveys were collected, for a response rate of 46%.
- **Cross Street Mixed Use District**: A total of three surveys were collected, for a response rate of 43%.
- **Fifth and Mission Office District**: 17 surveys were collected, for a response rate of 57%.
- **Hetherton Office District**: Seven surveys were collected, for a response rate of 100%.
- **West End Village District**: Six surveys were collected with a response rate of 83%.

For a complete report of the survey results refer to Appendix D.

The following sections discuss the results of the survey and the analysis that was conducted using the survey data collected. The discussion of survey results is organized by topic in the following order:

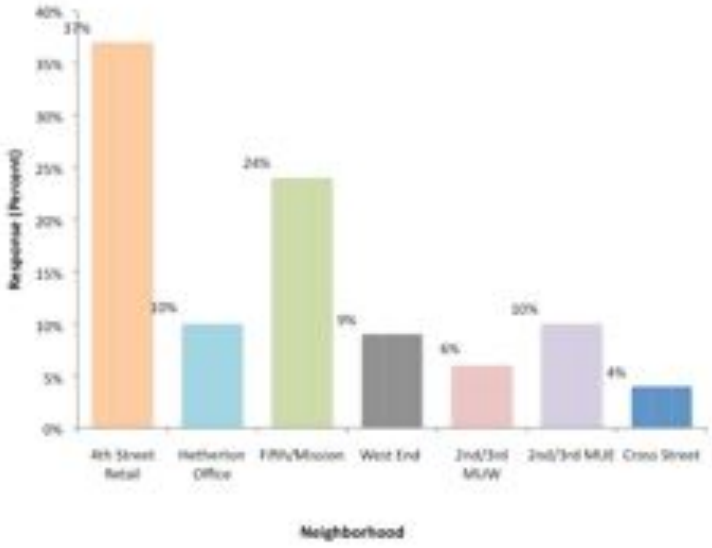
- Survey participant Demographics
- Employee vehicle miles traveled and modal split
- Employer subsidized parking and transportation demand management programs

- Off-street parking validation
- Off-street parking demand
- SMART Rail expectations
- Employer desired enhancements

9.7. Survey Participant Demographic

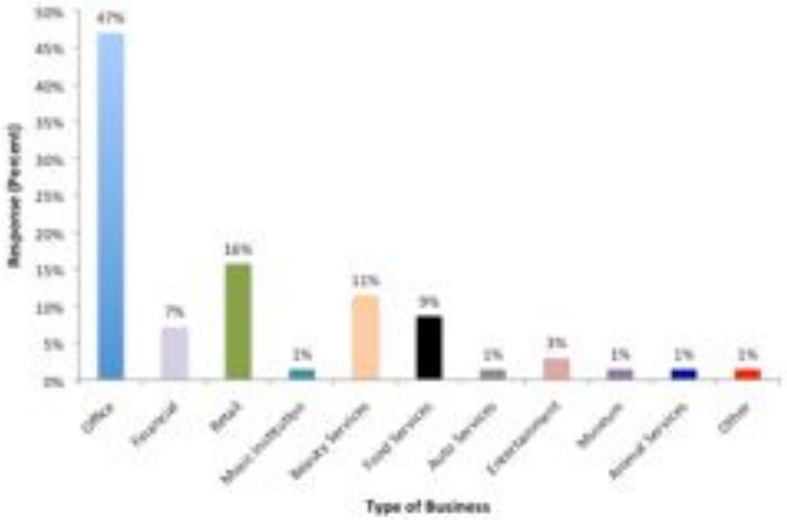
Over 37% of participants reside in the Fourth Street Retail Core District and 24% reside within the Fifth and Mission Residential/Office District (shown in Figure 9-2). The outcome may be due to a large concentration of businesses within that area, which employ more than one employee.

Figure 9-2. Survey Response by Neighborhood



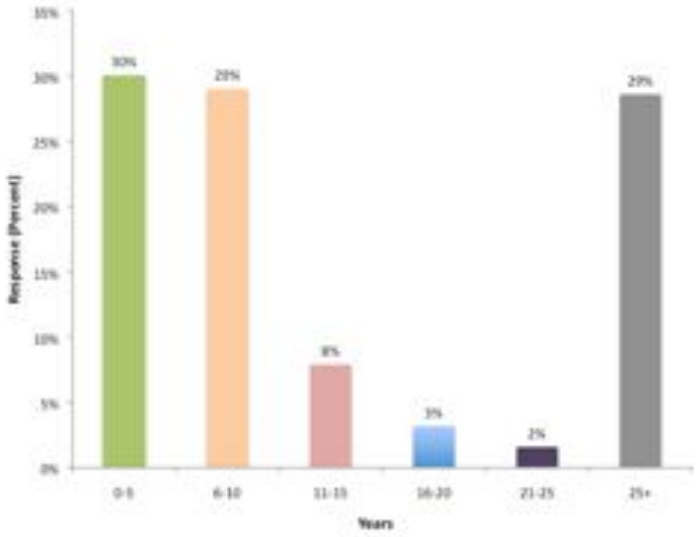
Office, retail, and beauty services dominate the downtown landscape and that reflects within the survey participation rate (shown in Figure 9-3). Office participants dominated with over 47% of the survey response rate, retail participation levels were 16% of the total, and beauty services were the third highest response rate at 11%.

Figure 9-3. Survey Response by Business Type



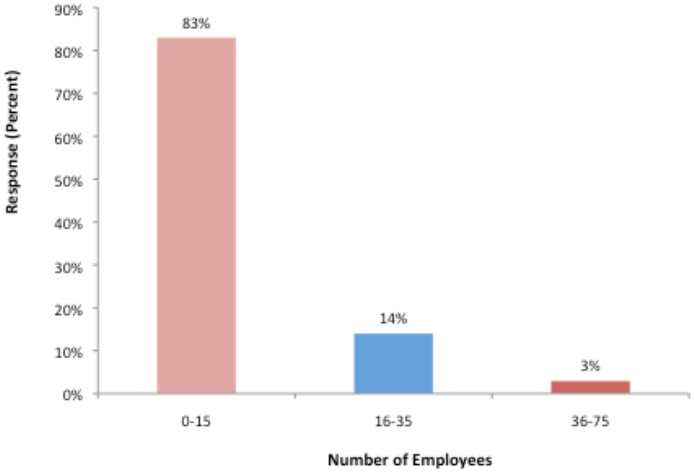
A majority of the participants in the downtown stated that their businesses have been in the downtown for 10 years or less, and over 29% stated that they have been in the district for 25 years or longer (shown in Figure 9-4).

Figure 9-4. Length of Time the Business Has Resided in the Area



Survey participants stated that a majority or 83% of businesses employ less than or equal to 15 employees (shown in Figure 9-5).

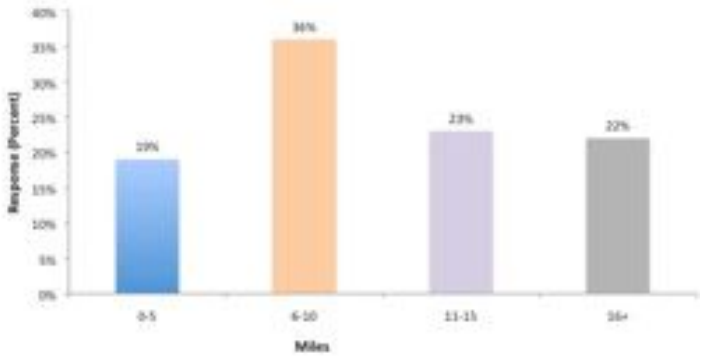
Figure 9-5. Total Number of Employees



9.8. Employee Vehicle Miles Traveled and Modal Split

Survey respondents were asked how many miles do employees live from work. The majority of survey respondents, or 51%, reside within 10 miles of the downtown (shown in Figure 9-6). The results demonstrate that many employees live within Marin County, have access to Golden Gate Transit bus service, and thus have the opportunity to commute by public transit.

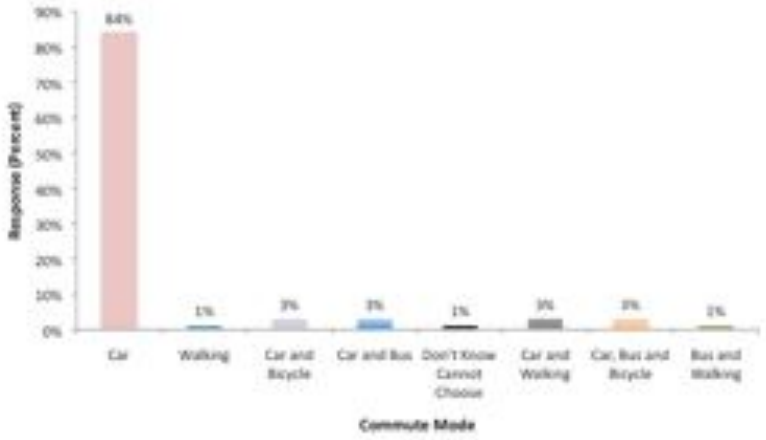
Figure 9-6. Total Employee Miles from Home to Work



Although survey respondents stated that employees have a variety of commute modes, 84% %, commute to work by automobile (shown in Figure 9-7). The result

is well above the 67% of Marin County residents who commute to work by automobile.[166]

Figure 9-7. Employee Commute Mode Share



9.9. Commute Mode Share

An analysis of employees' commute mode share using the 2-Factor Chi Square method was conducted upon businesses near the C. Paul Bettini Transit Center and transit stops in downtown San Rafael and businesses further away from the transit center and transit stops.[167] The objective was to understand whether employers who reside close to the transit center and transit stops have more employees who commute through a variety of methods compared to employees who are further away. The results from survey question # 4 were grouped into car commuters only and all others (including a combination of car and alternative modes); and neighborhood districts were grouped into two groups: 1) Districts near the transit center (Hetherton Office and Second Mixed Use East Districts); and 2) The remaining five neighborhoods. Responses that contained "don't know or cannot choose" were omitted from the analysis.

The Chi-square test between the relationship of business location (near and away from the transit center) and employee commute mode share (car only, and car and other modes) produced a p-value equal to 0.094.

As seen in the stacked column chart, (refer to Figure 9-8) the proportion of car commuters only per neighborhood group is 10 (71.4%) for neighborhoods close to the transit center and 49 (89.1%) for all other neighborhoods within the

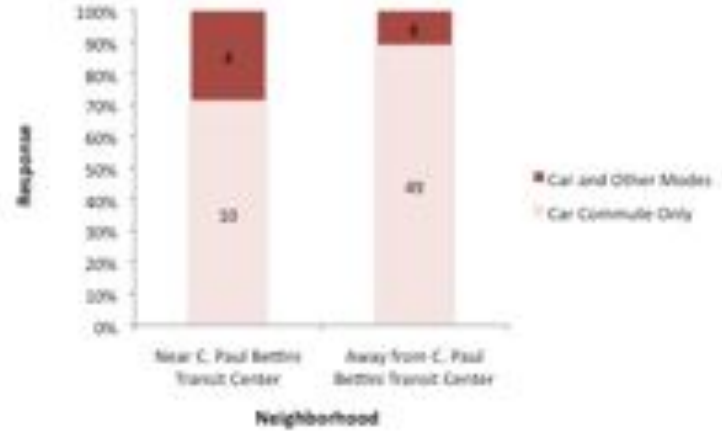
[166] United States Census Bureau, 2005-2009 American Community Survey, "5-Year Estimates Data Profile Highlights: Marin County, CA," http://factfinder.census.gov (accessed February 1, 2011)

[167] The Pearson Chi-Square value 1 cells (25%) have expected count less than 5. The minimum number expected for the count is 2.03. The small number of survey responses (n<5) produced a caveat to the analysis that reduces the reliability of the outcome.

downtown district. The proportion of cars and other commute modes near the transit center is four (28.6%) and for all other neighborhoods, the proportion is six (10.9%).

With a p-value of 0.094 at a 95% confidence level we reject the relationship between business location and employee commute mode share. However, at 90% confidence interval there is a statistically significant relationship. Thus, it is appropriate to conclude that the businesses near the transit center are more likely to commute using alternative travel modes. Consequently, different policies that promote alternative commute modes should be targeted to businesses residing near the transit center.

Figure 9-8. Employee Commute Mode by Neighborhood



9.10. Employer Subsidized Parking and Transportation Demand Management Programs

Survey respondents were asked if: a) They have a transportation demand management (TDM) program established within the workplace such as a Guaranteed Ride Home Program or carpool match; b) Public transportation were enhanced, would they encourage their employees to commute by public transportation; and c) Employers subsidized employee parking, and if so, how much?

Only six survey respondents stated they have a TDM program in place, and 17 respondents stated that they subsidize employee parking. The mean parking charge range for those who subsidized employee parking was $51 to $100.

An overwhelming number, or 72%, of survey respondents indicated that they would encourage employees to commute by public transportation if transportation services were enhanced.

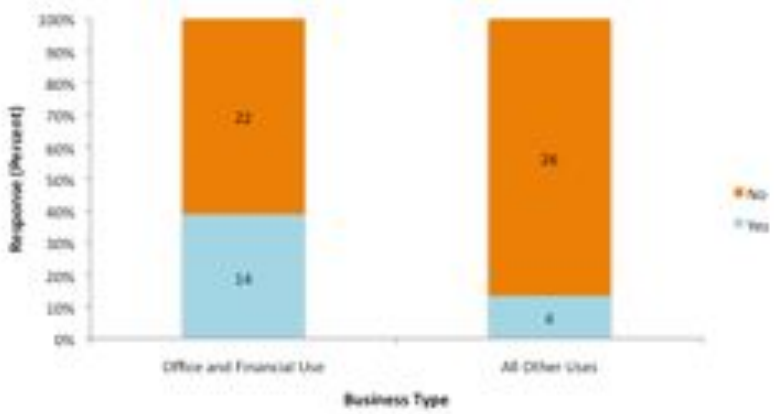
An analysis was conducted using the 2-Factor Chi Square method to understand if office and financial employers subsidize employee parking more than other employers.[168] Group 1 contained office and financial uses, which were the highest present activities in the downtown and Group 2 were all other business types such as retail and food services. Survey question # 6 was used in the analysis. Responses that contained "don't know or cannot choose" were omitted from the analysis.

The Chi-square test between the relationship of business type (office and financial uses, and all other uses), and whether they subsidize employee parking produced a p-value equal to 0.020.

As seen in the stacked column chart (refer to Figure 9-9), the proportion of employers who subsidized employee parking is 14 (38.9%) for office and financial uses and four (13.3%) for all other businesses within the downtown district. The proportion of office and financial employers who did not subsidize employee parking is 22 (61.1%) and for all other businesses, the proportion is 26 (86.7%).

Therefore, at 95% confidence level it is appropriate to conclude that office and financial uses subsidize employee parking more than all other uses in downtown San Rafael.

Figure 9-9. Employers who Subsidize Employee Parking



9.11. Off-Street Parking Validation

Businesses in the downtown have the ability to purchase validation vouchers from the City of San Rafael Parking Services. Validations are redeemable in city parking garages located at 3rd and A Streets, and 3rd and C Streets.[169] The public garages

[168] The Pearson Chi-Square value cell is 0 and has an expected count of less than 5. The minimum number expected for the count is 8.18. The small number of survey responses (n<5) produced a caveat to the analysis that reduces the reliability of the outcome.

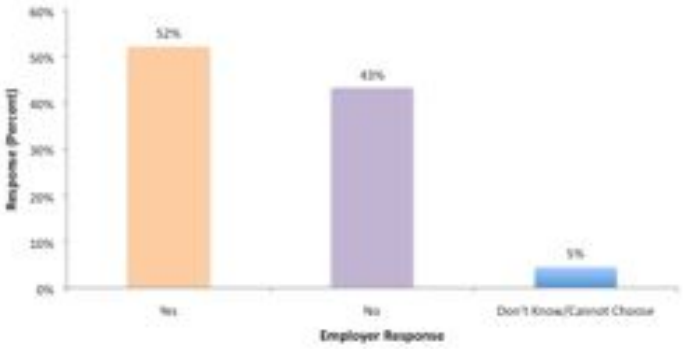
[169] City of San Rafael Parking Services. Newsletter, "Free Customer Parking… Could this Help Your Bottom Line?"

are within the Fourth Street Retail Core, Second and Third Mixed Use East, Second and Third Mixed Use West, and Cross Street Districts. Only a handful, or 10%, of survey respondents stated that they validate customer parking. For those who did validate parking, the mean response was they issued validation vouchers frequently.

9.12. Off-Street Parking Demand

Survey participants were asked if they believed off-street parking was adequate for employers, customers, and clients. Over half or 52% of the responses (shown in Figure 9-10) stated that the availability of off-street parking was adequate.

Figure 9-10. Adequacy of Off-Street Parking



9.13. SMART Rail Expectations

The Sonoma-Marin Area Rail Transit (SMART) regional rail project between Cloverdale and San Rafael began the process of designing a service station in downtown San Rafael. Respondents were asked whether they believe that the rail service will increase pedestrian and bicycle traffic, vehicular traffic or both. Over 55% stated that the SMART rail service would encourage pedestrian and bicycle traffic within the downtown. The next question inquired whether the SMART line would generate an added customer base to their business. 46% indicated that they believe that the SMART line would create a new customer base within the downtown. To further analyze this response a 2-Factor Chi Square test was used from survey question # 14.[170] Neighborhood groups were divided into groups that were near the transit center (Hetherton Office and Second and Third Mixed Use East Districts), and all other neighborhoods within the downtown. Survey responses that indicated "don't know or cannot choose" were omitted from the analysis.

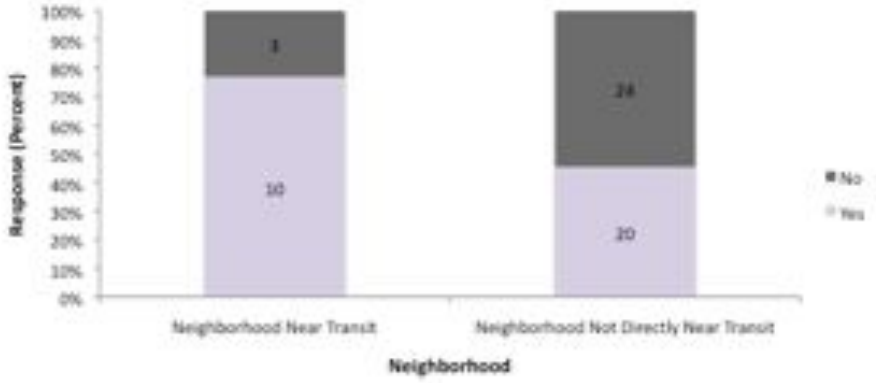
[170] The Pearson Chi-Square value cell is 0% and has an expected count of less than 5. The minimum number expected for the count is 6.16. The small number of survey responses (n<5) produced a caveat to the analysis that reduces the reliability of the outcome.

The Chi-square test between the relationship of business location (near and away from the transit center) and each groups' perception that SMART will increase business produced a p-value equal to 0.046.

As seen in the stack column chart (refer to Figure 9-11), the proportion of employers that are located within neighborhoods near transit who believe SMART will increase business activity is 10 (76.9%), and the proportion of employers that reside away from transit who believe SMART will increase business is 20 (45.5%). The proportion of employers that reside within neighborhoods near transit that do not believe SMART will increase business activity is three (23.1%), and the proportion of employers that reside away from transit that do not believe SMART will increase business is 24 (54.5%).

Therefore, at 95% confidence level it is appropriate to conclude that employers who reside within neighborhoods near transit believe that the SMART Rail will increase their business activity.

Figure 9-11. Perceived Future Business Activity Based on SMART Rail



9.14. Employer Desired Enhancements

Survey respondents were asked if the city of San Rafael were to propose signage around key areas in the downtown district to guide residents and shoppers would employers be willing to contribute financially to the proposal. A small percentage or 11% stated they would be interested in the idea of a signage program, yet 60% stated they would not be willing to contribute to the program.

Furthermore, respondents were asked to indicate what type of enhancement they would like to see in the entire downtown and they could only choose one option. The highest responses were increased public off-street parking at 30% and enhanced public transportation service at 24%. The need for additional off-street parking is interesting given that the majority of responses for survey question # 11 resulted in 52% stating that off-street parking was adequate.

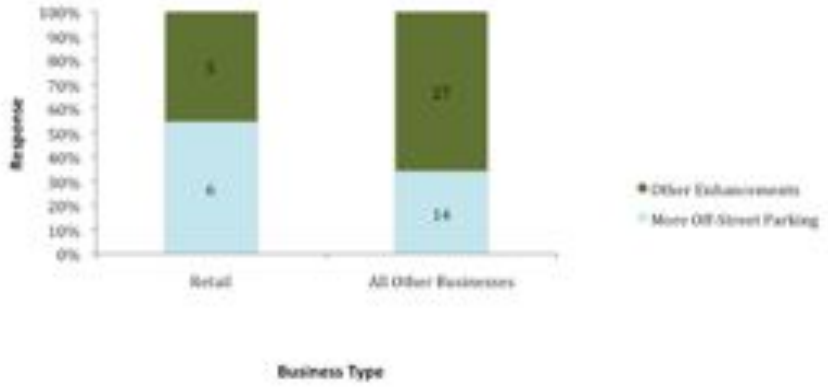
Using the 2-Factor Chi Square test on employer-desired enhancements[171] survey question # 15 was placed into two groups to state whether employers wish to have off-street parking or something else. Businesses were grouped into two groups (retail uses and all other business activity) to understand whether retail uses preferred more off-street parking.

The Chi-square test between the relationship of business type (retail use and all other businesses), and desired downtown enhancements produced a p-value equal to 0.217, indicating that business type is not related to the enhancement desired.

As seen in the stacked column chart (refer to Figure 9-12), the proportion of retail employers who wish to have more off-street parking are six (54.5%) and 14 (34.1%) for all other businesses within the downtown district. The proportion of retail employers that desire other enhancements are five (45.5%) and for all other businesses, the proportion is 27 (65.9%).

Therefore, at 95% confidence level we can reject the hypothesis that downtown enhancements are impacted by business type.

Figure 9-12. Employer Desired Downtown Enhancements by Business Type



9.15. Key Lessons from the Survey Output

Despite the fact that only 26% of survey respondents subsidize employee parking, commuting to work by automobiles continues to remain the dominant mode for employees. Interestingly, the survey found employees who work near the main transit center, have a diverse commute mode share. This behavior shows that Eco Passes could influence companies to encourage their employees to commute by public transportation. Although the City of San Rafael remains uninterested in the

[171] The Pearson Chi-Square value cell is 1 or 25% has an expected count of less than 5. The minimum number expected for the count is 3.79.The small number of survey responses (n<5) produced a caveat to the analysis that reduces the reliability of the outcome.

Eco Passes,[172] funding from MTC, Caltrans and possibly the Transportation Authority of Marin (TAM) may change this opinion. Furthermore, the survey states that 30% of respondents would like off-street parking spaces as an added enhancement in the downtown while the next popular option was enhancing public transit services. Again, this provides reason to create transportation demand management programs for employers, similar to the City of Redmond, Washington's R-Trip.

[172] Vince Guarino, San Rafael Parking Services Manager, filled out a parking survey on October 10, 2010 for the Metropolitan Transportation Commission's (MTC) SMART Parking Training: Parking Survey and Training Assessment Summary Report. One of the questions asked would you consider Transit Incentive Programs such as transit pass discounts and his answer was "No interest."

Chapter 10: Recommended Policies and Conclusion

10.1. Chapter Overview

The purpose of the recommendations is to position San Rafael in a manner that promotes strong economic activity through new development within the downtown while managing existing parking efficiently and encouraging multimodal access into the downtown. Based on the personal observations, as well as the interviews with the city and planning professionals, specific short and long-term policy solutions are presented to the city for consideration. A summary of the recommendations are available in Appendix E.

10.2. Assessing the Status Quo

Marin County and the City of San Rafael indicate their interest in alternative travel modes. The city began to procure resources to construct projects that promote public transit usage, bicycling and walking such as the Mahon and Puerto Suello Multi-Use pathways, implement county bicycle facilities program and construct Class III bicycle racks within the downtown's West End Village District. Additionally, San Rafael is working with the SMART Transit District to create a downtown station that reflects the culture of San Rafael and integrates seamlessly with the existing C. Paul Bettini Transit Center.

10.3. Parking and Land Use Policies for Implementation

Short-term recommendations address the need to changes current policy/code and engage with government departments to begin implementation of incentive programs. The final recommendations will aid in optimizing the efficiency of downtown San Rafael's existing parking inventory. Long-term strategies include requiring public input and requesting local and state funding for pedestrian, and bicycle infrastructure enhancements.

10.4. Short-term Parking and Land Use Policies for Implementation

Short-term recommendations are a stepping stone for all stakeholders, including participating government agencies to work together to devise a strategy to transition greater percentages of downtown employees, visitors and residents into alternative modes of transportation as a means to more efficiently and cost effectively manage the parking supply. The section is divided into policy adjustments to the general plan, zoning ordinance, and bicycle and pedestrian master plan. The final sections propose infrastructure improvements, program, and policy decisions to improve mobility for all travel modes.

General Plan Amendments

- Fulfill the *San Rafael General Plan 2020* Housing Element H-22a. goal to rezone parcels around the SMART and C.Paul Bettini Station to include High-Density Residential (HR1).

- Include language in the San Rafael Municipal Code that requires new commercial developments to provide bicycle facilities regardless of the number of parking spaces (currently Chapter 14.18.090 of the municipal code requires commercial, office and industrial uses with 30 or more parking spaces to construct 3% of the total amount of parking spaces for bicycle parking). Also, remove animal sales and services from exempt uses because employees may want to ride their bicycles to work.

- Include language in the *San Rafael General Plan 2020* under the Circulation Element that incorporates the city's declared target for bicycle and pedestrian mode shares, which is in the *San Rafael Pedestrian and Bicycle Master Plan* 2011, but also include carpool and public transportation targets.

Pedestrian and Bicycle Master Plan Amendment

- Revise language in the San *Rafael Pedestrian and Bicycle Master Plan 2011*, under Objectives and Policy Actions, Objective E to "require" city-sponsored and privately sponsored events within the downtown to accommodate bicycle riders with bicycle parking.

Promoting Alternative Travel

- Work with the City of San Rafael, Marin Transit District and TAM to create a TMA, which the BID or Parking Service Department should oversee.

- Require the TMA to develop an Eco Pass TDM program with MTC, Marin Transit District and Golden Gate Transit. The program should begin with San Rafael government employees and large employers (over 200 employees). The program can then expand to include the SMART Rail Eco Pass.

- Set up a rideshare program via the TMA where carpoolers are allowed to purchase cheaper parking permits.

- Include designated carpool parking spaces within the 3rd Street at Lootens Place, 3rd at B Street and 3rd at C Street garages.

- Reinstall way-finding signage on the street that engages both drivers and pedestrians.

- Work with Marin Transit District, Golden Gate Transit and City of San Rafael to have similar amenities (seating, schedules, transit signs) at all transit stops.

- Require that all vehicular traffic within the downtown adhere to a 25 mph speed limit.

- Install pedestrian countdown devices around the C. Paul Bettini Transit Center. Specifically on Hetherton at 3rd and 4th Streets, Tamalpais at 3rd and 4th Streets.

- Require the City of San Rafael to seek partnerships with existing private businesses (as outlined in the "Bicycle Facilities Opportunities" element in Chapter 8, Analysis of Field Observations) to take advantage of the county's bicycle parking program.

- Measure how many government employees use city cars in order to reduce future car purchases and convert to a carsharing program.

- Require the city to reach out to two major Bay Area carsharing companies, City CarShare or Zipcar to conduct a 1-year pilot program to promote carsharing opportunities in the downtown.

- Speak with Caltrans to see if the city can acquire empty bicycle parking lockers within the Park and Ride Lots along Hetherton Street and Mission Avenue.

Parking Management

- Install way-finding signage in the parking garages to direct drivers to exiting side streets.

- Allow a "warning" for first time parking meter offenders for both on-street and off-street parking facilities.

- Replace 10-hour "All-Day" parking at Lindaro, Via Sessi and E Streets with a permit system at a reasonable rate (between $25 and $50 a month) for employees and residents residing within the downtown.

10.5. Long-term Parking and Land Use Policies for Implementation

Long-term recommendations are to be applied once alternative travel modes have increased and the SMART Rail route operates during commute hours. Through public input, and concerted efforts from all city agencies to seek funding for infrastructure improvements will truly organize parking demand in a constructive way.

Zoning Amendments

- Consider eliminating minimum parking requirements for the entire downtown district or incorporate maximum parking ratios in the zoning ordinance that is consistent with the transportation and land use objectives of the General Plan. Also, consider any financial constraints that may be imposed by reducing or capping parking requirements.

- Change the language within the zoning ordinance to accept shared parking for all new developments and require connectivity between the two businesses.

- Explore the development of incentives to encourage shared/remote parking agreements (i.e., signage, landscaping, lighting or sidewalk improvements).

- Set up an application process for businesses to lease their excess parking spaces to businesses within the downtown without the restriction of the location being within 500 feet of the parking space (restriction language is located in San Rafael Municipal Code, section 14.18.220).

Promoting Alternative Travel

- Work with SMART Rail Transit District to establish a shuttle system from the designated SMART station to popular stops within the downtown as part of the city's transportation demand management scheme.

- Install signage outside of the 3rd at C Street public garage informing bicyclists of available bicycle parking.

- Install Class III bicycle racks in available spaces for all public parking facilities. Include signage indicating that bicycle parking is available.

Parking Management

- Install Parking Guidance Systems for all public garages displaying available spaces or establish a Twitter account of real-time parking occupancies.

- Replace on-street and off-street coin only parking meters with automated pay stations that accept all forms of payment in order to create a cohesive payment system within the downtown.

- Evaluate the impact of short and long-term strategies in the downtown based on updated utilization studies conducted biennially.

Traffic Management

- Illuminate midblock crossings with LED lighting to make the pedestrian crossing visible to automobile traffic.

10.6. Recommendation Overview

The recommendations provide a link between eliminating and maximizing parking requirements, managing parking demand, and fulfilling the target of increased pedestrian and bicycle mode shares. The overall strategy provides quality service to automobile users within the downtown by providing a one-time grace period for meter offenders, providing on and off-street uniform parking payment systems, providing real time information regarding the number of off-street parking spaces available within the public parking facilities, and supplying on-street parking permits to under utilized on-street spaces and off-street private parking spaces.

Including LED lighting at midblock crossings, erecting pedestrian countdown devices around the most heavily trafficked and vulnerable areas of the downtown, and requiring a uniform speed limit of 25 miles per hour throughout the district will improve pedestrian, bicyclists and public transit safety by educating drivers to prevent pedestrian and bicycle collisions. Way-finding signage that outlines the downtown district's landmarks and amenities allow active users[173] to navigate throughout the downtown, consequentially attracting additional foot traffic around business establishments. The creation of additional bicycle parking facilities will encourage employees and visitors to bicycle. Incorporating a TDM program that promotes carpooling and provides Eco Passes on the Golden Gate Transit's system entices employees to reduce single-occupant driving and experiment with public transit. Promoting a carsharing program for government employees and large employers reduces the need for the city to continue to purchase and maintain

[173] Active users are defined as individuals who use their body to travel from one destination to the other and are classified as pedestrians and bicyclists.

government vehicles, while advertising carsharing as a viable option for many employers within the downtown and the City of San Rafael.

Lastly, the recommendations to amend sections of the municipal codes and general plan allow proper management of existing parking stock while encouraging alternative transportation modes. San Rafael's ability to rezone parcels around the C. Paul Bettini Transit Center and SMART Rail to High Density Residential will promote transit adjacent development and encourage transit activity. Including language in the municipal code to require a maximum number of off-street parking spaces within the downtown or the elimination of parking requirements altogether will permit the city to better manage their parking stock, prevent the construction of additional commercial parking, and allow the utilization of opportunities such as shared and remote parking to fulfill parking needs without degrading the existing urban landscape with additional parking structures and surface lots.

10.7. Conclusion

The City of San Rafael is part of a wealthy community of cities just north of San Francisco. San Rafael has a distinct characteristic due to its county seat title and the city contains the greatest diversity amongst all the other Marin County cities.

Although the city expect slow growth, the general plan states that San Rafael intends to construct mixed-use development within the downtown, promote infill, and affordable housing development. Thus, the city created intentionally thoughtful regulatory decisions by: 1) Defining the downtown as an urban destination; 2) Including the Parking Assessment District surrounding the downtown's retail intensive corridor; 3) Reducing parking requirements for office and financial uses; and 4) Including language to accept shared parking opportunities in order to reduce drive alone trips. San Rafael is also on the road to fulfilling increasing alternative transportation mode share objectives with the assistance of the *San Rafael Pedestrian and Bicycle Master Plan 2011* that promotes bicycling, walking, and public transportation use.

The city has also done a good job of managing their parking assets up until this point. What is lacking is a clear blueprint of how parking will be managed in the future and the strategies to be implemented to reduce parking demand. With Golden Gate Transit as a major presence within the city, and the anticipation of additional public transit via the SMART Rail entering the downtown, the recommendations set forth within this report are consistent with the city's general plan for promoting dense, mixed-use development and reducing congestion along U.S. Highway 101 and the downtown area.

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Appendix A: Glossary of Acronyms

BID- Business Improvement District

BRT - Bus Rapid Transit Service

FAR – Floor Area Ratio

GFA- Gross Floor Area

GGHTD- Golden Gate Highway and Transportation District

GGT- Golden Gate Transit

GLA – Gross Leasable Area

ITE - Institute of Transportation Engineers

MPH- Miles Per Hour

MTC- Metropolitan Transportation Commission

NPTS – National Public Transportation Survey

NTPP- Non-motorized Transportation Pilot Program

PAD – Parking Assessment District

SMART- Sonoma Marin Area Rail Transit

SMSA- Standard Metropolitan Statistical Area

TAM – Transportation Authority of Marin

TCRP - The Transit Cooperative Research Program

TDM- Transportation demand management

TMA- Transportation Management Association

VMT- Vehicle Miles Traveled

Appendix B: Case Study Summary Table

City	County	State	Pop.	Transit Provider	Minimum Parking Req. Retail and Office: 1,000 SQFT of GFA		Type of Parking Policies Implemented							
					Retail	Commercial	Reduced Parking Req.	In-lieu Fee	Parking Dis.	TDM Prog.	Specific Plans	Electronic Parking Payment	Improve-ment District Manages Parking	Parking Validat-ion avail.
San Rafael	Marin	CA	55,902	Golden Gate Transit, Marin County Transit District	2.5-4.0 spaces	3.3 spaces (Based within the Parking Assessment District)	√	√	√		√	√*		√
Union City	Alameda	CA	72,850	BART,AC Transit, Dumbarton, Union City Transit	5.0-5.7	5.0 spaces	√	√				√*		
Walnut Creek	Contra Costa	CA	64,007	BART, City Shuttle, County Connect	4.0 spaces	4.0-5.0 spaces	√	√	√		√	√		√

Boulder	Boulder	CO	100,160	Regional Transportation District	NA	NA	√	√	√	√	√	√
Redmond	King	CO	52,406	King and Metro Transit	2.0-5.5	2.0-5.5						

Note: * (1) San Rafael has six paid parking stations located at 3rd Street and Lootens Place Garage, 5th Street and Lootens Place, C Street Garage, 3rd Street and B Street Garage, C Street and 5th Street and 5th Street and D Street. (2) Union City has paid parking stations near the Union BART Station.

ID #

Downtown San Rafael Employer Survey

This survey is being conducted to facilitate the completion of a Masters thesis in the department of Urban and Regional Planning at San Jose State University. The questions in the survey are aimed towards Human Resource Managers or Employers who have travel information on employers, information about the company's history and information regarding Transportation Demand Management programs within the company including parking or public transportation subsidies.

The survey should take no more than 4 minutes to fill out. Once complete please submit the survey in the beige envelope attached for pickup by [Monday, November 29th, 2010]. **Please check only one category in each question, unless directed otherwise.**

Please be assured that your information is confidential and your answers will not be used for marketing or advertising purposes. If you have additional questions or concerns please contact Adrienne Heim at (415) 860-0479.

Thank you for your participation!

1. How long has this establishment been in this location?

_____

2. How many part-time and full-time employees do you currently have employed?

- ☐ 0-15
- ☐ 16-35
- ☐ 26-75
- ☐ 76-100
- ☐ 101-125
- ☐ 126-150
- ☐ 151+

3. How many miles away do the majority of your workers live?

- ☐ 0-5 miles
- ☐ 6-10 miles
- ☐ 11-15 miles
- ☐ 15+ miles
- ☐ Don't know/ cannot choose

4. How do most of your employees commute to and from work?

- ☐ Car
- ☐ Bus
- ☐ Ferry
- ☐ Bicycle
- ☐ Walking
- ☐ Don't Know/ cannot choose

Comments:

5. Has your company established a Transportation Demand Management Program (e.g. commuter checks, carpool matches or guaranteed ride home program)?

- ☐ Yes
- ☐ No
- ☐ Have looked into it
- ☐ Don't know/ cannot choose

Comments:

6. Do you subsidize employee parking?

- ☐ Yes
- ☐ No
- ☐ Don't know/ cannot choose

If you answered No or Don't know to this question please skip to question # 8.

7. If you subsidize employee parking, how much do you pay?

- ☐ $0-$50
- ☐ $51-$100
- ☐ $101-$150
- ☐ $150+

8. Do you validate customer's parking?

- ☐ Yes
- ☐ No
- ☐ Have looked into it
- ☐ Don't know/ cannot choose

If you answered No or Don't know to this question

please skip to question # 10.

9. If you validate customer's parking, how often do you do so?

- ☐ Daily
- ☐ Frequently
- ☐ Infrequently
- ☐ Rarely- Less than once a month
- ☐ Don't know/ cannot choose

10. If the city were to propose signage around key areas in the downtown district to guide residents and shoppers would you be willing to contribute financially to this proposal?

- ☐ Yes
- ☐ No
- ☐ Don't know/cannot choose

Comments:

11. Is current off-street parking adequate for employers and customers/clients?

- ☐ Yes
- ☐ No
- ☐ Don't know/cannot choose

Comments:

12. If public transportation services were enhanced and the proposed SMART rail line already existed would you encourage your employees to commute by public transportation?

- ☐ Yes
- ☐ No
- ☐ Don't know/cannot choose

Comments:

13. Do you estimate that the proposed SMART rail line will encourage pedestrian and bicycle traffic or vehicular traffic?

- ☐ Increase pedestrian and bicycle traffic
- ☐ Increase vehicular traffic
- ☐ Don't know/ cannot choose
- ☐ Neither one

Comments:

14. Do you estimate that the proposed SMART rail line will generate an added customer base?

- ☐ Yes
- ☐ No
- ☐ Don't know/ cannot choose

Comments:

15. What would you like to see enhanced to the entire downtown? Choose Only 1 option

- ☐ Increased public off-street parking
- ☐ A signage program directing customers and clients
- ☐ Enhanced public transportation services
- ☐ Increased density around the retail 4th Street core (includes residential developments)
- ☐ Don't know/ cannot choose
- ☐ Nothing

Comments:

Appendix D: SPSS Output of Employer Survey

Frequency Table per Survey Question

Respondent by Neighborhood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4th Street Retail Core	26	37.1	37.1	37.1
	Hetherton Office	7	10.0	10.0	47.1
	Fifth/Mission	17	24.3	24.3	71.4
	WestEnd	6	8.6	8.6	80.0
	2nd/3rd MUW	4	5.7	5.7	85.7
	2nd/3rd MUE	7	10.0	10.0	95.7
	Cross Street	3	4.3	4.3	100.0
	Total	70	100.0	100.0	

Business Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Office	33	47.1	47.1	47.1
	Financial	5	7.1	7.1	54.3
	Retail	11	15.7	15.7	70.0
	Music Institution	1	1.4	1.4	71.4
	Beauty Services	8	11.4	11.4	82.9
	Food Services	6	8.6	8.6	91.4
	Auto Services	1	1.4	1.4	92.9
	Entertainment	2	2.9	2.9	95.7
	Museum	1	1.4	1.4	97.1
	Animal Services	1	1.4	1.4	98.6
	Other	1	1.4	1.4	100.0
	Total	70	100.0	100.0	

When was Business Established

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 years	19	27.1	30.2	30.2
	6-10 years	18	25.7	28.6	58.7
	11-15 years	5	7.1	7.9	66.7
	16-20 years	2	2.9	3.2	69.8
	21-25 years	1	1.4	1.6	71.4
	25+ years	18	25.7	28.6	100.0
	Total	63	90.0	100.0	
Missing	9	7	10.0		
Total		70	100.0		

Number of Employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-15 employees	57	81.4	82.6	82.6
	16-35 employees	10	14.3	14.5	97.1
	36-75 employees	2	2.9	2.9	100.0
	Total	69	98.6	100.0	
Missing	9	1	1.4		
Total		70	100.0		

Miles Employees Commute

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 miles	13	18.6	18.8	18.8
	6-10 miles	22	31.4	31.9	50.7
	11-15 miles	16	22.9	23.2	73.9
	16+ miles	15	21.4	21.7	95.7
	8	3	4.3	4.3	100.0
	Total	69	98.6	100.0	
Missing	9	1	1.4		
Total		70	100.0		

Does you Have a TDM Program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	6	8.6	8.6	8.6
	No	62	88.6	88.6	97.1
	Have looked into it	1	1.4	1.4	98.6
	Don't know/Cannot Choose	1	1.4	1.4	100.0
	Total	70	100.0	100.0	

Do you Subsidize Employee Parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	25.7	26.1	26.1
	No	48	68.6	69.6	95.7
	Don't Know/Cannot Choose	3	4.3	4.3	100.0
	Total	69	98.6	100.0	
Missing	9	1	1.4		
Total		70	100.0		

How much Do you Subsidize Employee Parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$0-$50	7	10.0	41.2	41.2
	$51-$100	4	5.7	23.5	64.7
	$101-$150	2	2.9	11.8	76.5
	$151+	4	5.7	23.5	100.0
	Total	17	24.3	100.0	
Missing	9	53	75.7		
Total		70	100.0		

Do you Validate Customer Parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	10.0	10.3	10.3
	No	59	84.3	86.8	97.1
	3	1	1.4	1.5	98.5
	Don't Know/Cannot Choose	1	1.4	1.5	100.0
	Total	68	97.1	100.0	
Missing	9	2	2.9		
Total		70	100.0		

How Often Do you Validate Parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	3	4.3	23.1	23.1
	Frequently	2	2.9	15.4	38.5
	Infrequently	2	2.9	15.4	53.8
	Don't Know/Cannot Choose	6	8.6	46.2	100.0
	Total	13	18.6	100.0	
Missing	9	57	81.4		
Total		70	100.0		

Would you Pay for Signage Program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	10.0	10.8	10.8
	No	39	55.7	60.0	70.8
	Don't Know/Cannot Choose	19	27.1	29.2	100.0
	Total	65	92.9	100.0	
Missing	9	5	7.1		
Total		70	100.0		

Do you Believe there is Adequate Off-street Parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	50.0	52.2	52.2

	No	29	41.4	43.3	95.5
	Don't Know/Cannot Choose	3	4.3	4.5	100.0
	Total	67	95.7	100.0	
Missing	9	3	4.3		
Total		70	100.0		

If Public Transit were Enhanced would you Encourage Public Transit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	47	67.1	72.3	72.3
	No	9	12.9	13.8	86.2
	Don't Know/Cannot Choose	9	12.9	13.8	100.0
	Total	65	92.9	100.0	
Missing	9	5	7.1		
Total		70	100.0		

Do you Believe that SMART will Increase Pedestrian Activity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Increase Pedestrian and Bicycle Traffic	35	50.0	54.7	54.7
	Increase Vehicular Traffic	1	1.4	1.6	56.3
	Increase both Pedestrian and Vehicular Traffic	5	7.1	7.8	64.1
	Neither	5	7.1	7.8	71.9
	7	1	1.4	1.6	73.4
	Don't Know/Cannot Choose	17	24.3	26.6	100.0
	Total	64	91.4	100.0	
Missing	9	6	8.6		
Total		70	100.0		

Do you Believe that SMART Encourage More Customers?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	30	42.9	45.5	45.5
	No	27	38.6	40.9	86.4

	Don't Know/Cannot Choose	9	12.9	13.6	100.0
	Total	66	94.3	100.0	
Missing	9	4	5.7		
Total		70	100.0		

What would you like to See Enhanced to the Downtown?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Increase Public Off-Street Parking	20	28.6	30.3	30.3
	A Signage Program	6	8.6	9.1	39.4
	Enhance Public Transportation	16	22.9	24.2	63.6
	Increase Density Around the 4th Street Retail Core	10	14.3	15.2	78.8
	Nothing	6	8.6	9.1	87.9
	Don't Know/Cannot Choose	8	11.4	12.1	100.0
	Total	66	94.3	100.0	
Missing	9	4	5.7		
Total		70	100.0		

Survey Analysis

1. Commute Mode Share

Using 2-Factor Chi Square

An analysis of employees' commute mode share using the 2-Factor Chi Square method was conducted upon businesses near the C. Paul Bettini Transit Center in Downtown San Rafael and businesses further away from the transit center.

Variables: Employer Commute to and from work (survey question # 4 grouped into car commuters only and all other modes including mixture of cars and alternative modes) and Neighborhood District (grouped into two groups near transit stops and the C. Paul Bettini Transit Center and farther away from transit stops and away

from the transit center) Note: Survey responses to Commute Mode of Don't Know/Cannot Choose were filtered out of the analysis

Hypothesis (H0): Employees who work at a business close to the C. Paul Bettini Transit Center or close to a major bus stop have a variety of commute modes than employees who work at a business farther away from the transit center or major bus stop.

Null (H1): The variety of employees' commute modes is not dependent on whether they work close to transit center or near a major bus stop.

Significance Level = 5%

X(2) Obtained = 2.809
Asymp Sig (p-value) = 0.094

X(2) Critical = 3.84

2.809 <3.84 = Reject the null hypothesis, but accept the null hypothesis at 90% confidence level.

Businesses close to the transit center indicate a higher level of alternative transit use than businesses away from the transit center.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
CommuteGRP1 * C.PaulBettini	69	98.6%	1	1.4%	70	100.0%

CommuteGRP1 * C.PaulBettini Crosstabulation

			C.PaulBettini		
			Near C. Paul Bettini Transit Center	Far from C. Paul Bettini Transit Center	Total
CommuteGRP1	Car Commute Only	Count	10	49	59
		Expected Count	12.0	47.0	59.0
		% within CommuteGRP1	16.9%	83.1%	100.0%
		% within C.PaulBettini	71.4%	89.1%	85.5%
	Car and Other Modes	Count	4	6	10
		Expected Count	2.0	8.0	10.0
		% within CommuteGRP1	40.0%	60.0%	100.0%

	% within C.PaulBettini	28.6%	10.9%	14.5%
Total	Count	14	55	69
	Expected Count	14.0	55.0	69.0
	% within CommuteGRP1	20.3%	79.7%	100.0%
	% within C.PaulBettini	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.809[a]	1	.094		
Continuity Correction[b]	1.565	1	.211		
Likelihood Ratio	2.447	1	.118		
Fisher's Exact Test				.109	.109
Linear-by-Linear Association	2.768	1	.096		
N of Valid Cases	69				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.03.

b. Computed only for a 2x2 table

2. Employer Subsidize Parking

Using 2-Factor Chi Square Method

Variables: Business Group (recoded to Group 1: Office and Financial uses 2: All Other Business Uses) and Subsidize Employee Parking survey question # 6 Note: Survey responses to Subsidize Employee Parking survey question # 6 of Don't Know/Cannot Choose were filtered out of the analysis

Hypothesis (H0): Do office and financial employers subsidize employee parking than other employers

Null (H1): The type of business doesn't affect employee subsidized parking

Significance Level = 5%

X(2) Obtained = 5.388

Asymp Sig (p-value) = 0.020

X(2) Critical = 3.84

5.388 > 3.84 = Accept the null hypothesis that office and financial employers subsidize employee parking more than other employers.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
subparking_employee * BusGrp1	66	100.0%	0	.0%	66	100.0%

subparking_employee * BusGrp1 Crosstabulation

			BusGrp1		
			Office and Financial Use	All Other Uses	Total
subparking_employee	Yes	Count	14	4	18
		Expected Count	9.8	8.2	18.0
		% within subparking_employee	77.8%	22.2%	100.0%
		% within BusGrp1	38.9%	13.3%	27.3%
	No	Count	22	26	48
		Expected Count	26.2	21.8	48.0
		% within subparking_employee	45.8%	54.2%	100.0%
		% within BusGrp1	61.1%	86.7%	72.7%
Total		Count	36	30	66
		Expected Count	36.0	30.0	66.0
		% within subparking_employee	54.5%	45.5%	100.0%
		% within BusGrp1	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.388[a]	1	.020		
Continuity Correction[b]	4.177	1	.041		
Likelihood Ratio	5.671	1	.017		
Fisher's Exact Test				.027	.019
Linear-by-Linear Association	5.306		1.021		
N of Valid Cases	66				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.18.

b. Computed only for a 2x2 table

3. SMART Rail Expectations (increase customer base)

Using 2-Factor Chi Square Variables

SMART line will generate added customer base (survey question # 14) and Neighborhood Group (2 groups one group directly near the C. Paul Bettini Transit Center and the other group further from the station) Note: Survey responses to SMART survey question # 14 of Don't Know/Cannot Choose were filtered out of the analysis

Hypothesis (H0): Employers who believe the proposed SMART line will increase business are prone to reside near the transit center.

Null (H1): The location of the business does not indicate that SMART will not boost the employers customer base, there are other factors such as land use type that may or may not increase sales.

Significance Level = 5%

X(2) Obtained = 3.986

Asymp Sign (p-value) = 0.046

X(2) Critical = 3.843

3.986 > 3.84 = Accept the null hypothesis that businesses near the transit center believe they will gain an added customer base due to SMART Rail than other businesses in the downtown.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
SMART_businessactiv *	57	100.0%	0	.0%	57	100.0%

No	Count	3	24	27
	Expected Count	6.2	20.8	27.0
	% within SMART_businessactiv	11.1%	88.9%	100.0%
	% within NeighTransitGRP	23.1%	54.5%	47.4%
Total	Count	13	44	57
	Expected Count	13.0	44.0	57.0
	Expected Count	6.8	23.2	30.0
	% within SMART_businessactiv	33.3%	66.7%	100.0%
	% within NeighTransitGRP	76.9%	45.5%	52.6%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.986[a]	1	.046		
Continuity Correction[b]	2.824	1	.093		
Likelihood Ratio	4.183	1	.041		
Fisher's Exact Test				.061	.045
Linear-by-Linear Association	3.916	1	.048		
N of Valid Cases	57				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.16.

4. Downtown Enhancements (Retail vs. Other Businesses)

Using 2-Factor Chi Square Method

Variables: Business Group (recoded to Group 1: Retail and Group 2: All other uses) and Business Enhancements survey question # 15 (request off-street parking and request to have all other enhancements) Note: Survey responses to downtown enhancements # 15 of Don't Know/Cannot Choose and Neither were filtered out of the analysis.

Hypothesis (H0): Do retail businesses have different enhancement needs for downtown San Rafael than non- retail businesses?

Null (H1): The type of business does mean their needs for enhancements to downtown San Rafael will be different?

Significance Level = 5%

X(2) Obtained = 1.525

Asymp Sig (p value) = .217

X(2) Critical = 3.84

3.986 < 3.84 = Accept the null hypothesis that the type of business does not affect the choice of downtown enhancements.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
EnhanceGRP * BusGrp	52	100.0%	0	.0%	52	100.0%

EnhanceGRP * BusGrp Crosstabulation

			BusGrp		
			Retail	All Other Businesses	Total
EnhanceGRP	More Off-Street Parking	Count	6	14	20
		Expected Count	4.2	15.8	20.0
		% within EnhanceGRP	30.0%	70.0%	100.0%
		% within BusGrp	54.5%	34.1%	38.5%
	Other Enhancements	Count	5	27	32
		Expected Count	6.8	25.2	32.0
		% within EnhanceGRP	15.6%	84.4%	100.0%
		% within BusGrp	45.5%	65.9%	61.5%
Total		Count	11	41	52
		Expected Count	11.0	41.0	52.0
		% within EnhanceGRP	21.2%	78.8%	100.0%
		% within BusGrp	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.525[a]	1	.217		
Continuity Correction[b]	.785	1	.376		
Likelihood Ratio	1.491	1	.222		
Fisher's Exact Test				.299	.187
Linear-by-Linear Association	1.496	1	.221		
N of Valid Cases	52				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.23.

b. Computed only for a 2x2 table

Appendix E: Summary of Recommendations

Short-term Parking and Land Use Policies for Implementation	
General Plan Amendments	Rezone parcels around the SMART and C. Paul Bettini Station to include High Residential (HR1).
	Require all commercial developments to include bicycle parking and remove animal sales and services from exempt uses.
	Include carpool and public transit targets within the Circulation Element.
Pedestrian and Bicycle Master Plan	Revise Objective E of the Master Plan to require city and private sponsored events in the downtown to include bicycle parking.
Promoting Alternative Travel	Work with Marin Transit District and TAM to create TMA overseen by BID or Parking Services.
	Require TMA to develop Eco Pass for Golden Gate Transit and SMART Rail.
	Setup a rideshare program through the TMA.
	Install designated carpool parking spaces in specific public parking facilities.
	Reinstall way-finding on the street that attracts drivers and pedestrians.
	Work with government agencies to install similar transit stops (signs, seating, etc.).
	Require uniform speed limit (25 mph) throughout downtown.
	Install pedestrian countdown devices around the transit center.
	Require the city to seek partnerships with existing private businesses to take advantage of the county's bike parking program.

	Measure how many government employees use city cars to carsharing program.
	Require the city to reach out two City CarShare or Zipcar to conduct a 1-year pilot program to promote carsharing.
	Speak with Caltrans to acquire bicycle parking lockers within Park and Ride Lots.
Parking Management	Install way-finding signage in parking garages to direct drivers to exiting streets.
	Allow a "warning" for first time parking meter offenders.
	Replace 10-hour parking at select areas to permit parking for employees and residents.
Long-term Parking and Land Use Policies for Implementation	
Zoning Amendments	Consider elimination of minimum parking requirements or maximum parking ratios for the entire downtown.
	Accept shared parking for all new developments.
	Setup an application process for businesses to lease their excess parking spaces within the downtown
Promoting Alternative Travel	Work with SMART Rail Transit District to establish a shuttle system from the SMART station to key locations within the downtown.
	Install signage outside of the 3rd at C Street garage informing bicyclists of available bicycle parking.
	Install Class III bicycle racks in available spaces Within all public parking facilities. Include signage indicating that bicycle parking is available.

Parking Management	Install Parking Guidance System for all public garages.
	Replace on-street and off-street coined meters with parking payment system.
	Evaluate the impact of short and long-term strategies based on biennially utilization studies.
Traffic Management	Illuminate midblock crossings with LED lighting.