The Economic Implications of Possible Street Conversion in Downtown San Marcos

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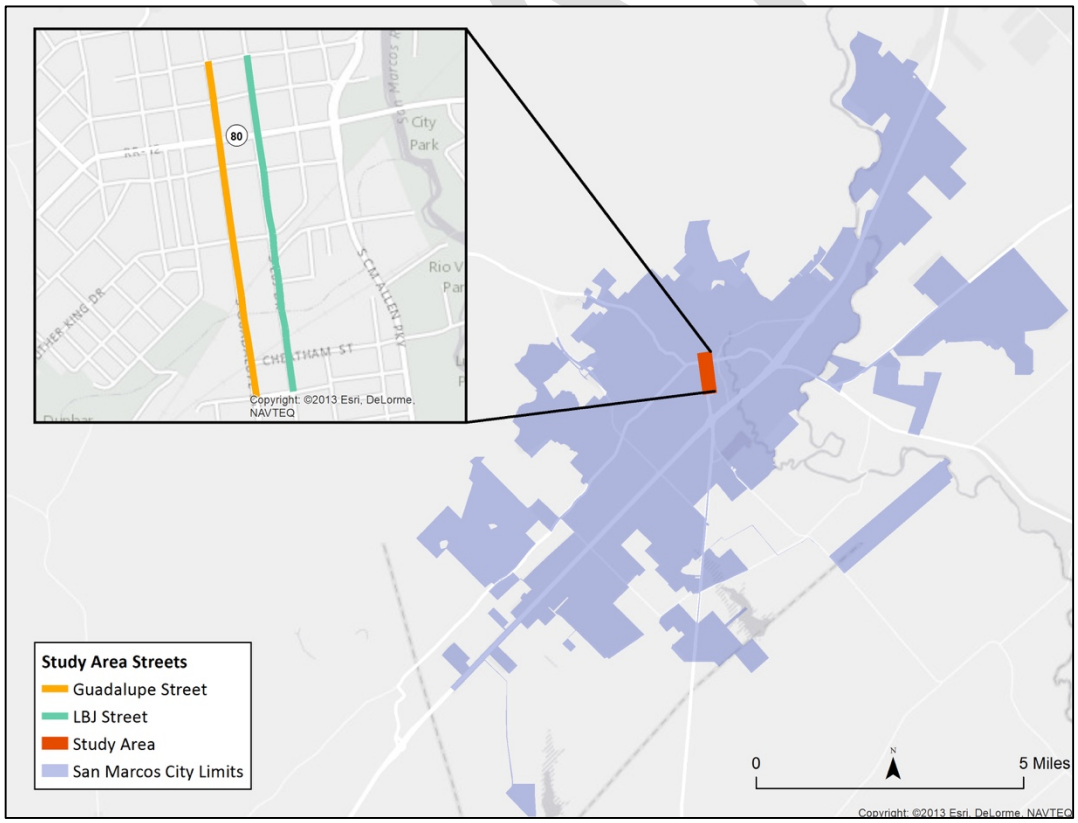
Introduction

The conversion of one-way streets to two-way traffic has been implemented in a number of cities across the country. Proposed in the 2008 Downtown Master Plan, San Marcos is now contemplating conversion of the one-way pair, Guadalupe Street and LBJ Street, in the downtown area. This is part of broader revitalization efforts in San Marcos' historic Downtown area that seeks to rebalance the past few decades of rapid growth along the I-35 corridor. In general, street conversions are seen as a means to improve the downtown area's economic vitality and reinforce existing or nascent redevelopment efforts.

Even so, there has yet to be a comprehensive, quantitative examination of impacts of street conversions, or in truth even the different benefits of one-way and two way streets, on the economic activity in areas adjacent to these roadways. In fact, the efforts to quantify the impact of street design have focused almost exclusively on traffic speeds, congestion modeling, and accident incidence. This report seeks to synthesize the existing available analysis of the economic implications of street design and related infrastructure improvements into a few major lessons to provide guidance to San Marcos policymakers.

Figure 1: City of San Marcos and Street Conversion Study Area



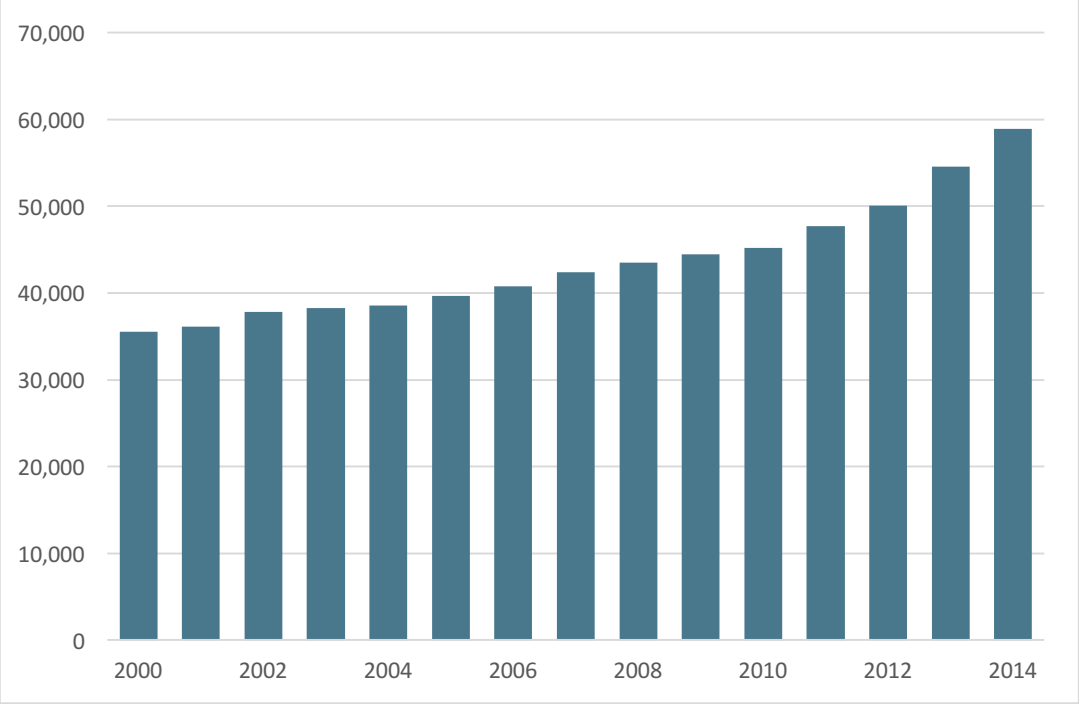
Source: TXP. Inc.

Context: Recent Growth in San Marcos

Overall Trends

Over the past decade and a half, San Marcos' story has been one of growth. Since 2010, total population in San Marcos has grown 65.6 percent to nearly 60,000 residents. In 2012, San Marcos had the highest population growth of any city in the country at more than 8 percent. The demographics of the City of San Marcos are undoubtedly influenced by the large student population. Residents of San Marcos are younger, live in smaller households, and have a lower income than the state average. The current unemployment rate in San Marcos is also slightly higher than some other areas of Texas.

Figure 2: Population Growth in San Marcos



Source: Intercensal Estimates, US Census Bureau.

Table 1: Demographic Characteristics

	Median Age	Average Household Size	Unemployment Rate	Housing Occupancy Rate	Per Capita Income
San Marcos City	23.2	2.38	9.7%	90.1%	$15,916
Hays County	30.6	2.77	7.5%	90.8%	$26,873
Texas	33.8	2.82	8.1%	88.2%	$26,019

Source: American Community Survey 2008-2013 5 Year, US Census Bureau

Table 2: Employment by Sector in the City of San Marcos

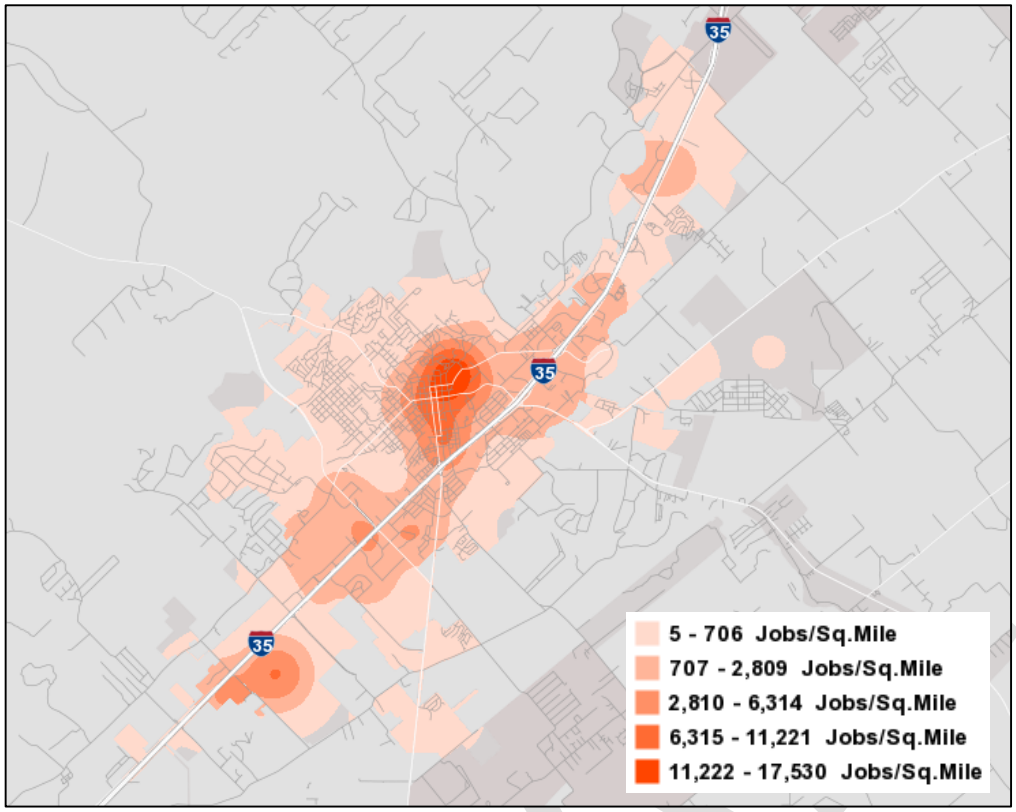
Sector	Number of 2012 Jobs	Share of 2012 Jobs	Change since 2002
Agriculture, Forestry, Fishing & Hunting	23	0.1%	-32.4%
Mining, Quarrying, & Oil & Gas Extraction	13	0.0%	116.7%
Utilities	152	0.5%	94.9%
Construction	402	1.3%	24.8%
Manufacturing	1,916	6.3%	-18.0%
Wholesale Trade	458	1.5%	12.5%
Retail Trade	5,848	19.3%	21.5%
Transportation & Warehousing	1,065	3.5%	79.3%
Information	474	1.6%	-14.3%
Finance and Insurance	556	1.8%	22.5%
Real Estate and Rental & Leasing	387	1.3%	11.8%
Professional, Scientific, & Technical Services	806	2.7%	77.9%
Management of Companies & Enterprises	226	0.7%	927.3%
Administration & Support & Waste Management	792	2.6%	-25.5%
Educational Services	7,373	24.4%	33.3%
Health Care & Social Assistance	2,722	9.0%	-1.1%
Arts, Entertainment, & Recreation	199	0.7%	-14.6%
Accommodation & Food Services	4,439	14.7%	68.1%
Other Services	1,001	3.3%	80.7%
Public Administration	1,420	4.7%	23.2%
TOTAL	30,272		24.4%

Source: Center for Economic Studies, US Census Bureau

Employment opportunities have also expanded rapidly. In the decade between 2002 and 2012 (the most recent year data in available) employment located in San Marcos has increased by 24.4 percent to more than 30,000 jobs. Employment in San Marcos-based businesses is centralized in three sectors: Educational Services (which includes Texas State University) and Retail Trade and Accommodation and Food Services (businesses along I-35, specifically the Outlets). These three sectors account for nearly 60 percent of all employment in the City of San Marcos and have dominated the San Marcos economy for the past decade.

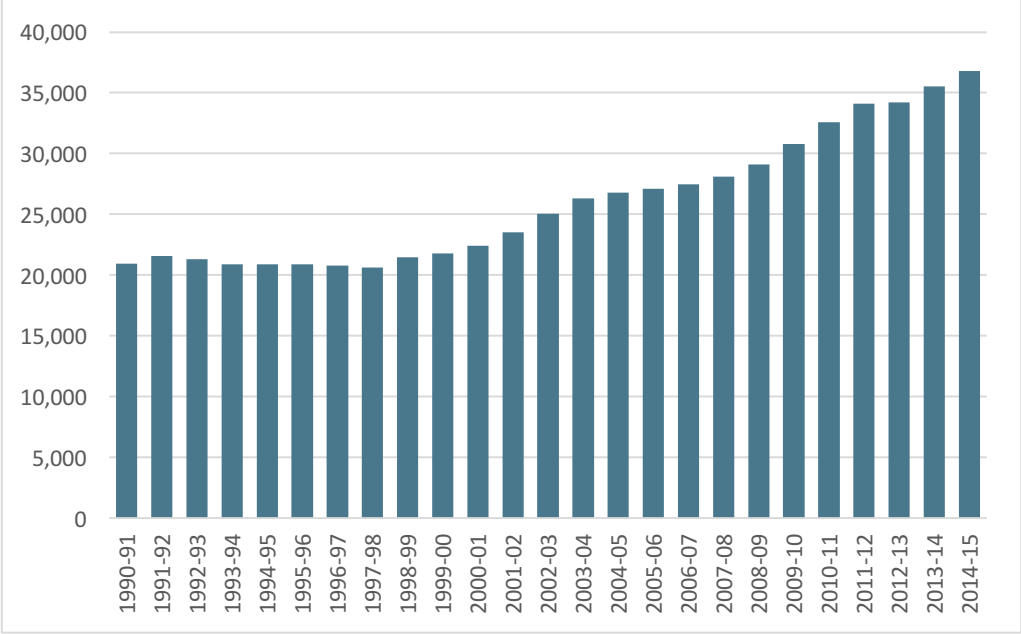
As Texas State has grown to more than 36,000 students and more than 3,200 faculty and staff in 2014-15 at its 491-acre San Marcos campus, it is the largest single employer in San Marcos. In Figure 3, it is possible to see that the highest concentration of employment is just north of the downtown area, with additional high employment areas located along I-35, including the Outlets at the furthest southwest portion of the city.

Figure 3: Employment Centers in San Marcos



Source: Center for Economic Studies, US Census Bureau

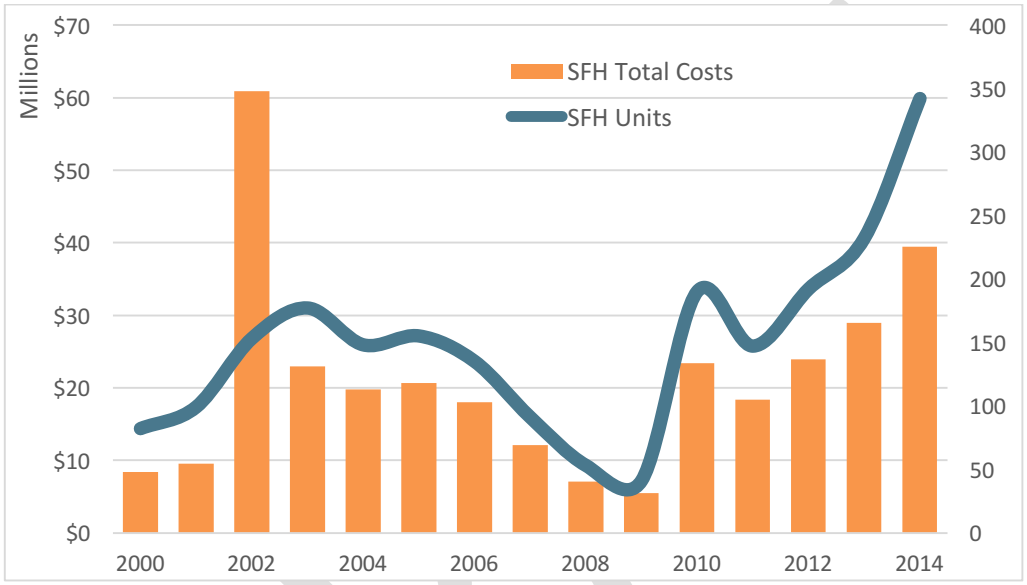
Figure 4: Enrollment Growth at Texas State University



Source: Office Institutional Research, Texas State University

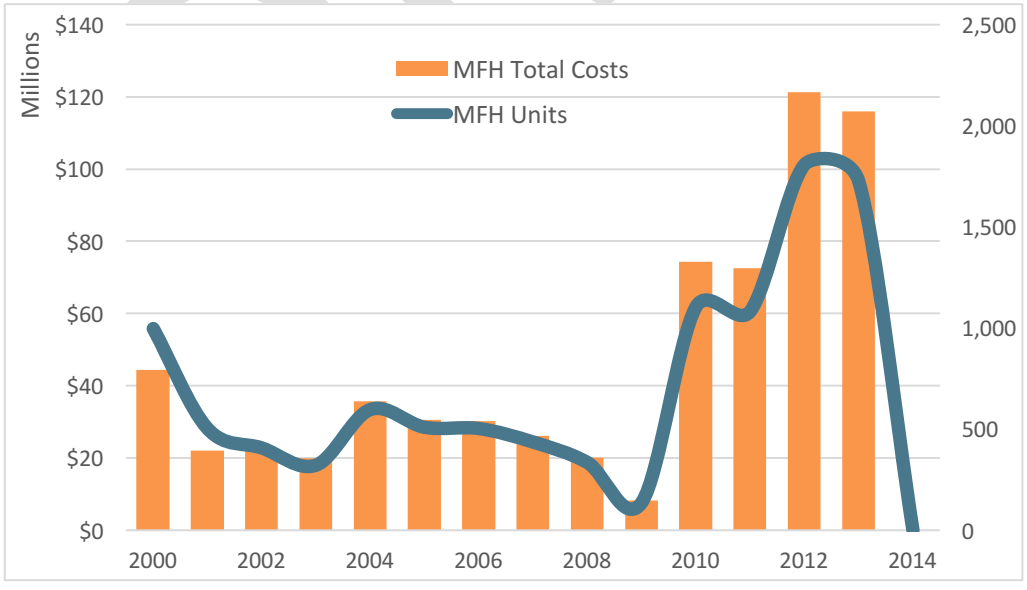
The housing market in San Marcos has followed larger regional trends, with significant spikes in new construction activity at the beginning of both of the last decades and a trough in 2007 through 2009. Since the financial crisis and housing market collapse, San Marcos has rebounded to a level of new home construction previously unseen with nearly 350 new single family homes permitted for construction in 2014. Multi-family home construction has similarly exploded since 2009, though no building permits for multi-family construction were documented in 2014.

Figure 5: New Single Family Homes Built in San Marcos



Source: Building Permits Survey, US Census Bureau

Figure 6: New Multi-Family Homes Built in San Marcos



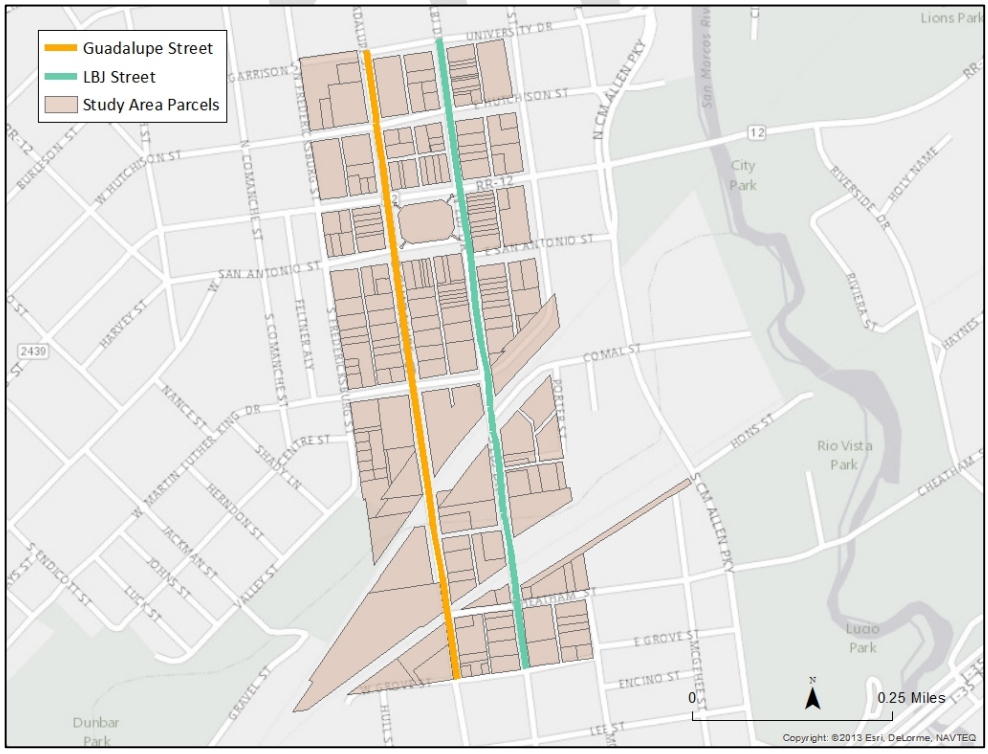
Source: Building Permits Survey, US Census Bureau

Downtown and the Study Area

San Marcos's downtown has not benefitted proportionately from the growth seen in other parts of the city. Anchored by the Hays County Courthouse and the Downtown Square, San Marcos' downtown has become more of a thoroughfare for the students and staff heading to and from Texas State University. San Marcos is examining the potential impact of converting a 0.8-mile stretch of Guadalupe and LBJ Streets in its historic downtown area. Currently, these two streets form a north-south one-way pair between University Drive and Grove Street. Guadalupe and LBJ Streets, along with C M Allen and TX-80/Hopkins Street, form the major thoroughfares for access from I-35 to the downtown area and Texas State University, the city's largest employer.

If the City of San Marcos implemented a one-way to two-way conversion on Guadalupe and LBJ Streets, the most significantly impact would occur in the properties and businesses immediately adjacent to these streets. There are 207 properties immediately adjacent to Guadalupe and LBJ Streets between University Drive and Grove Street. This area has been designated the Study Area for this report. Currently, the Study Area represents about two percent of the property value in San Marcos (within Hays County). The average assessed value of properties located in the Study Area has increased 12.8 percent over the past five years. Over the same period, the value of properties within the City of San Marcos (within Hays County) has increased 30.1 percent.

Figure 7: Study Area Parcels



Source: Hays County Appraisal District; TXP, Inc.

Figure 8: Study Area Parcels by Land Use

Source: Hays County Appraisal District; TXP, Inc.

The majority of parcels located in the Study Area, in terms of number, acreage, and value, are commercial properties. The majority of the businesses in this area are restaurants, bars, and professional service offices.

Table 3: Study Area Property Values by Land Use

Land Use	Property Count	Acreage	2015 Assessed Value	Value per Square Foot	Change in Value Since 2011
Single Family Residential	11	2.3	$576,528	$48.7	-2.9%
Multi-Family Residential	1	0.3	$1,206,570	$68.6	4.2%
Commercial	136	40.8	$47,606,440	$59.0	15.7%
Vacant	6	1.2	$183,380	n/a	0.0%
Exempt	6	3.2	$0	n/a	n/a
Utilities	13	3.5	$4,059,300	$63.7	-2.1%
Unmatched/ Unknown	34	18.9	$808,210	n/a	-20.5%
Total	**207**	**70.0**	**$54,440,428**	**$58.3**	**12.8%**

Source: Hays County Appraisal District; TXP, Inc.
*Average Value Per Square Foot is provided for parcels where Interior Square Footage data was available and value was greater than zero. Unmatched/Unknown parcels include properties for which the GIS shapefile data could not be matched to the appraisal dataset or where this data was missing in the appraisal dataset.

Table 4: Study Area Property Values by Land Use

Land Use	2015 Assessed Value	2014 Assessed Value	2013 Assessed Value	2012 Assessed Value	2011 Assessed Value
Single Family Residential	$576,528	$545,777	$540,670	$593,880	$593,880
Multi-Family Residential	$1,206,570	$1,206,570	$1,206,570	$1,200,370	$1,158,280
Commercial	$47,606,440	$46,895,520	$46,228,460	$44,076,580	$41,162,080
Vacant	$183,380	$183,380	$183,380	$183,380	$183,380
Exempt	$0	$0	$0	$0	$0
Utilities	$4,059,300	$4,059,300	$4,144,810	$4,144,810	$4,144,810
Unmatched/ Unknown	$808,210	$827,950	$926,550	$1,016,570	$1,016,570
Total	**$54,440,428**	**$53,718,497**	**$53,230,440**	**$51,215,590**	**$48,259,000**

Source: Hays County Appraisal District; TXP, Inc.

Figure 9: Development Potential

Source: TXP. Inc.

Parcels with development potential include those properties coded as vacant as well as parcels coded as commercial with no improvements or with a 2015 assessed value of less than $50 per square foot. These parcels total more than 18 acres in San Marcos' downtown.

Figure 10: Sales Taxpayers in the Study Area

Source: TXP. Inc.

Table 5: Sales Tax Paid by Businesses in San Marcos

	Guadalupe & LBJ	% Annual Change	Study Area	% Annual Change	City of San Marcos	% Annual Change
2011	$353,524		$558,072		$85,048,906	
2012	$369,865	4.6%	$504,668	-9.6%	$93,465,936	9.9%
2013	$378,415	2.3%	$574,297	13.8%	$100,656,796	7.7%
2014	$412,431	9.0%	$645,518	12.4%	$104,581,846	3.9%

Source: Hays County Appraisal District

Currently, there are 191 active Sales Taxpayers in Study Area. These businesses accounted for less than one percent of the sales tax paid by San Marcos area businesses in 2014. Of those Study Area locations, the majority, 124 taxpayers or 65 percent, are located along Guadalupe and LBJ Streets. These businesses would be the most affected by the proposed one-way to two-way conversion.

Background: Pros and Cons of Street Conversion

The street system in a downtown area serves a variety of purposes for its users. At different points in the past century, traffic engineers and urban planners have advocated for the use of different tools to move cars and people around the urban environment. One-way and two way streets are some of these tools.

Throughout the United States in the 1960s, rapid population growth in the suburbs and the ascent of the automobile as the dominant form of transportation created a new problem of traffic congestion. One-way street pairs were implemented in many urban environments along major arterials as a means to provide maximum mobility given the existing transportation infrastructure. One-way streets increased vehicle capacity without requiring the construction of major roadways to bypass downtown or conscripting existing on-street parking into additional lanes of traffic.

Over the next few decades, the downtown neighborhoods in most urban areas began to decline as businesses and residents relocated to the suburbs. As traffic volumes downtown declined and efforts to revitalize the central business districts gained popularity in the 1990s, city planners and other stakeholders began to reevaluate the use of vehicular mobility as the only metric for a successful street system. In fact, there are a number of measures which can be used to determine the best possible use of a city's street system. These will be examined below in the context of street design. In some cases, there is a clear benefit to using either one-way or two way streets. In others, experts differ in their conclusions from the available data.

Traffic Speeds

One of the significant impacts of one-way streets, and the reason most one-way street pairs were implemented, is that they allow for more vehicular traffic at higher speeds. One-way road pairs of more than 15 blocks in length tend to encourage higher operating speeds. Two way streets, regardless of posted speed limits, tend to have slower vehicular speeds. Additionally, peak-hour volumes of more than 500 vehicles per lane can cause significant delays on two-way streets, due in part to left-turn movements.

However, many experts assert that higher vehicle speeds are less safe for pedestrians and slowed traffic reduces noise, fumes, and other negative externalities for pedestrians. Moreover, the synchronization of traffic lights can increase the rate of traffic speed and decrease the number of stops vehicles make. In this way, the higher average speed of one-way streets may not necessarily be a benefit, if the ultimate goal is additional foot-traffic in adjacent areas.

Public Safety

There is significant disagreement between experts as to the relative safety of one-way and two way streets. One-way streets require both drivers and pedestrians to be aware of traffic travelling in only one direction. Moreover, because there is only one direction to the flow of traffic, head-on and left-turn accidents are decreased. However, some studies indicate that two-way streets are beneficial for pedestrians and bike traffic since vehicle traffic tends to travel more slowly, drivers pay more attention due to the conflicting traffic flow, and vehicular conflicts are more predictable. The clear link between traffic accidents and street design is that lower speeds decrease the seriousness of accidents. The National Highway Traffic Safety Administration reports that fatality rates for pedestrians correlate strongly with the speed at which they are struck. At 40 mph the chance of death is 80 percent, at 30 mph it is 40 percent, and at 20 mph the chance of fatality is 5 percent. Data from Albuquerque and Cincinnati showed that on streets which were converted from one-way to two ways, while traffic speed was decreased the incidence of traffic accidents actually increased in over the same time period.

Moreover, there is some indication that multi-lane one-way streets which stretch on for several miles can create opportunities for crime in urban areas. With multiple lanes, a driver can pull over to conduct illegal activity – including make a drug deal, solicit the services of a prostitute, or conduct a drive-by shooting – without blocking traffic. It is also easier on a high-speed one-way street to monitor the area for police or flee from the scene of a crime. Areas of a city with higher crime rates tend to get caught in a vicious cycle of violence, foreclosures, and neglect.

Mobility

One-way street systems were originally implemented to create increased mobility for vehicle traffic. A pair of one-way streets has been determined to have as much as 50 percent more capacity than a pair of two-way streets of the same dimension. However, a shorter, more direct path is available with two-way streets. As one-way streets do not allow vehicles to directly access every destination from every direction, there is additional travel time when drivers must go around the block to reach their destination. This additional travel time created by a circuitous route is more pronounced along shorter distance trips and is most problematic for bikers. Moreover, vehicles tend to stop less on one-way streets which improves vehicle travel time but can be difficult for the navigation of those same streets by bikers and pedestrians. Additionally, two-way streets also allow for improve flexibility in the event of a street closure, as both directions are still available on to traffic. In sum, one-way streets allow traffic to flow more freely through an area; two way streets allow vehicles, bikers, and pedestrians to most efficiently navigate within a specific area.

Economic Vitality

As the use of one-way streets corresponded with the overall decline of commercial business districts in downtowns across the country, some have been quick to seize upon this correlation as proof of one-way streets' negative impact on the economic and cultural vitality of urban neighborhoods. Additionally, while local business support of one-way to two-way conversions is important, the fact that most cities who have enacted these conversions can point to favorable reports from local businesses may indicate nothing more than that local business support is a prerequisite for enacting a street conversion project. Little effort has been made to separate the impacts of street conversion projects from effect of other downtown revitalization efforts.

By the same token, there has been a renaissance in downtowns across the United States. A variety of factors have contributed to this resurgence, including:

- Demographics, specifically smaller household sizes;
- Changes in the structure of the economy, with a heightened emphasis on adding value through the provision of service and knowledge;
- Shifts in consumer tastes and preferences, including a greater acceptance of owner-occupied multi-family housing and a strong desire for "authenticity" and "experience";
- Technology, especially as it enables decentralized work and informs consumer tastes;
- Transportation, including congestion and rising energy costs, and
- Cultural/entertainment, an element of society that is increasingly multi-faceted and diverse.

Underlying all of the above (which influence all of society) is the desire for what has been termed Walkable Urbanism. According to the Brookings Institute, "since the rise of cities 8,000 years ago, humans have only wanted to walk about 1,500 feet (approximately a quarter mile) until they begin looking for an alternative means of transport: a horse, a trolley, a bicycle, a car. This distance translates into about 160 acres – about the size of a super mall, including its parking lot. It is also about the size, plus or minus 25 percent, of Lower Manhattan, downtown Albuquerque, the financial district of San Francisco, downtown Atlanta, and most other major downtowns in the country." Downtown San Marcos would also fit these criteria.

What makes walkable urbanism function is not merely distance, but the experience – a pedestrian trip where one encounters a mix of sights and sounds in the context of a range of land uses and a diverse built environment. The translation is that "critical mass" occurs when visitors can find enough to do for an afternoon or an evening, residents' daily needs are largely met within easy access, and the underlying economics justify ongoing investment. When this happens (and is sustained), a dynamic system is in place that is expected to create

enhanced economic value. See Appendix One for more extensive discussion of the benefits associated with urbanism.

Proponents of suggest that two-streets facilitate walkable urbanism. The basic premise is that slower traffic increases the activity on and around the street and that a certain degree of congestion is beneficial to promote a sense that an area is busy and vibrant. Business visibility is also improved with slower traffic; if traffic is travelling too quickly, drivers do not effectively observe storefronts, signs, and window displays. Additionally, storefront eclipsing occurs on one-way streets where some of the retail space in an intersection is not easily in the sightline of drivers. (North-facing storefronts at the intersection of a north-bound one-way street and a cross-street, for example.) The visibility of storefronts is essential for smaller businesses. Moreover, for shoppers, especially those who visit an area sporadically or are visiting from out of town, one-way streets can be confusing and frustrating. As these are among the people that revitalization efforts seek to attract, this presents a challenge.

Case Studies

Existing studies which quantitatively examine the economic impact of one-way to two-way street conversions are extremely scarce. The majority of quantitative analysis around street conversion focuses exclusively on traffic speeds, total time and distance to destination, and collisions. The economic impact of street design more generally and street conversions in specific is discussed anecdotally at best, if not ignored all together. Several studies have attempted to catalogue impressions from the business community regarding one-way to two-way street conversions. In the majority of cases these communities report positive results, including increased sales, business expansions, and declining vacancy rates. Most reported benefits focused on improved livability or sense of community. A few indicated mixed results, but no studies indicated a negative impact or negative perception of the street conversion from the local business community. Even so, in a few instances there has been an attempt to calculate the economic benefits derived from street conversions.

Lubbock

The City of Lubbock, Texas implemented a one-way to two-way conversion of the paired Main and 10th Streets in 1995. This street conversion project is referenced in a number of studies and articles advocating the benefits of street conversions. In a study for the Institute of Traffic Engineers, Lubbock's City Traffic Engineer asserted that despite public anticipation of the conversion causing significant traffic problems, there has been no noticeable negative impact from the conversion. Total volume of traffic along Main and 10th Streets remained consistent after the directional conversion.

Main and 10th Streets were established as one-way streets in the 1960s; retail and commercial activity declined through the 1970s as these businesses relocated to major

shopping areas in the southwest part of the city. General consensus that the conversion was beneficial to the central business district which began experiencing growth after more then a decade of decline. Businesses in the area reported some growth following the street conversion, a change from the steady decline of the years previous. In fact, the City of Lubbock continued to implement other one-way to two-way street conversions in the ensuing years along the one-way pair of Buddy Holly Avenue and Texas Avenue due to the success of the earlier conversion of Main and 10th Streets.

West Palm Beach

In 1993, the City of West Palm Beach, Florida implemented a one-way to two-way street conversion project, including traffic calming and streetscape improvements, along Clematis Street. Historically, this was a thriving main street anchored by a plaza, library, and waterfront to the east and a historic train station on the west. A public investment of $10 million was made in street conversion, raised intersections, pedestrian amenities around the plaza, an interactive fount, and event spaces.

The City reported a dramatic decrease in the number of vacant retail shops, restaurants, residential housing units. Before 1993, 70 percent of the space along Clematis street was vacant; as of 1998, building space along Clematis Street was 80% occupied. Additionally, property values dramatically increased: in 1993 before the street conversion, property values along the street ranged from $10 to $40 per square foot and commercial space rented for an average of $6 per square foot. By 1998, property values ranged from $50 to $100 per square foot while commercial space rented for an average of $30 per square foot. Additional private investment in adjacent properties in these four years is estimated at $350 million. Vehicle traffic volumes remained steady at 2,500 vehicles per day, before and after the traffic calming and street conversion efforts. The City of West Palm Beach attribute the benefits to improved circulation routes from converting to two way streets as well as improve livability from streetscape design.

Louisville

In 2011, Louisville converted a pair of multilane one-way streets (Brook and First Streets) near downtown, each slightly more than a mile in length, to two-way single lane streets with a bike lane. The cost of the street conversion was approximately $250,000. In two years after the street conversions were implemented, a number of benefits were identified for the immediate area by John Gilderbloom, Director of University of Louisville's Center for Sustainable Urban Neighborhoods. Traffic collisions dropped steeply (36 percent on one street and 60 percent on another) even as the volume of vehicles, pedestrians, and bikes travelling these roads all increased. Crime dropped along these streets by 23 percent, even as crime rates throughout the city, and in an adjacent neighborhood with unconverted one-way streets, rose slightly. Property values, business revenue, and pedestrian traffic increased

– both in comparison to rates along these streets prior to conversion as well as relative to a pair of nearby streets which were not converted. Property tax values on Brook Street specifically increased by 39 percent on Brook Street, while property values on the nearby one-way streets which were not converted declined slightly. The owner of the local Burger Boy Diner reported that his revenue has increased enough that he was able to double the restaurant's table space. Gilderbloom followed up the initial study with a census tract level analysis of street design citywide. They found that in census tracts with multilane one-way streets, the risk of traffic accidents is twice that for the rest of the city. Likewise, census tracts with one-way streets had average property values half that in the city's other areas.

Charleston

Upper King Street in Charleston, South Carolina was converted from one-way to two way traffic in 1994. Originally it was a minor business corridor that experienced a dramatic increase in retail and service business after the street conversion. Vacancy rates along Upper King Street increased steadily from 1910 and peaked in 1990. Vacancy rates held steady or declined slightly between 1990 and 1996. Starting in 1996, benefits from the street conversion became apparent in the type of new businesses locating along Upper King Street and a steady decline in the vacancy rate. Prior to the 1994 street conversion, Upper King Street was home to primarily loan offices and low-end clothing stores. As of 2000, a variety of high-end restaurants, bookstores, cafes, art galleries and studios, and entertainment and cultural organizations had located along Upper King Street.

In a study which controlled for location (properties north of Calhoun Street are considered less desirable) and property size characteristics, it was determined that the one-way to two way conversion was significantly associated with higher property sales prices along King Street. The median price per square foot of commercial properties sold along Upper King Street increased by almost 50 percent from $36 per square foot before the one-way to two way street conversion to $62 per square foot after the conversion. During the same time period, commercial properties sold throughout the city of Charleston only increased by 13 percent, from $60 per square foot before the conversion to $67 per square foot afterwards.

Findings

The following findings are drawn upon major topical scholarship, local data evaluation, case studies, and discussions with local stakeholders and relevant experts, and represent TXP's best professional judgment as to the potential impact of street conversion in this case. Every attempt was made to apply available data and lessons learned from other communities to the specific context of San Marcos' downtown.

Street direction, per se, is not a determinant of economic impact

No studies were found which indicated that converting streets from one-way to two-way (or vice versa) in and of itself caused significant private investment in an area, or yielded a measurable change in retail activity. However, a more comprehensive program of public investment in roadway-related infrastructure (including elements such as streetscaping, wayfinding, and parking improvements) has been shown in a number of cases to both increase retail activity and subsequently spur private redevelopment efforts. For example, West Palm Beach, Florida reported $300 million in private investment in areas where the City had invested $10 million in public funds in streetscape, street conversion, and historic building renovation projects.

There is often a conflation between street direction and vehicular speed

Many urban planners emphasize the benefits of two-way streets for downtown commercial corridors. However, much of the benefit is derived from the slower rate of speed associated with vehicle traffic on two-way streets. Slower vehicle speeds are seen as beneficial for both pedestrian safety and comfort as well as promoting a sense of vitality through improved storefront visibility and "good congestion" in a commercial area. By using other measures, such as signal timing, to control traffic speed, San Marcos could derive the benefits of slower traffic on Guadalupe and LBJ Streets while at the same time not giving up the mobility bonus created by one-way streets during high traffic volume times of day.

There is also a perceived tension between vehicular and pedestrian traffic

The debate between one-way and two way streets among planning and traffic engineering experts often comes down to a disagreement as to the purpose of the roadway system. Advocates of one-way streets emphasize their mobility benefits, while detractors insist that the higher rates of speed are dangerous for pedestrians, detrimental to retailers, and damaging to the adjacent quality of life and place. Both points of view presuppose that pedestrians are not drivers and vice versa or that little overlap can exist between commuters and patrons of downtown commercial establishments.

Not all streets (and communities) are equivalent

In determining the benefits of one-way or two way streets, it is important to distinguish between multiple types of one-way streets. Most of the negative externalities associated with one-way streets are exacerbated with multiple mile-long stretches of three-lane or four-lane streets with few street lights or other traffic control methods. These are streets in which the average rate of speed is high and the surrounding areas become inhospitable to pedestrians, shoppers, and residents. In San Marcos, the one-way pair of Guadalupe and LBJ Streets are 0.8 miles long and punctuated at each cross-street by stop lights or stop signs. Thus the greatest negative impacts of large one-way arterials are unlikely present. In that same vein, the overall size, density, and pattern of the built environment has a significant impact on the impacts of changes in transportation infrastructure. In simple terms, the effect of changes tends to be greater in large, dense, highly urban environments. There is almost no information available that reports on the impact of street conversion in communities that are comparable to San Marcos in terms of size, density, role in a broader regional economy, and stage of development. However, it seems safe to say that the relatively small study area, lack of density, and proximity to a major employment center that is a commuter destination undercuts the magnitude of possible gains.

Conclusions

Good planning is often a balancing act, as goals such as increased mobility and downtown revitalization can come into conflict. In setting policy and spending programs, it is important to carefully evaluate the actual factors at work in San Marcos. To that end:

- Guadalupe and LBJ Streets are major arterials for traffic to flow between Texas State University, the city's largest employer, and the rest of San Marcos;
- In addition to street conversion, streetscaping, way-finding, public transportation infrastructure, and parking improvements are all fundamental parts of promoting a vibrant downtown;
- There is little to no analysis that considers the impact of the above potential improvements/tools (street conversions, streetscaping, etc.) in isolation, but a package tailored to fit this particular area in San Marcos is likely to facilitate the realization of downtown's development potential; and,
- The relative lack of density and smaller-scale built environment suggests that weight be given to mobility, at least at this stage of the community's development;

The translation is that conversion of Guadalupe and LBJ Streets from one-way to two-way is not likely, in and of itself, to have a significant economic impact. However, other policy tools and investments related to enhancing the pedestrian and visitor experience can serve to facilitate and support the goal of downtown revitalization in this area.

Appendix One – The Benefits of Urbanist Development

Urbanism (also referred to as "new urbanism") is a dynamic urban design movement that is seen as part of a broader trend toward the restoration of community and concern for a more sustainable environment. Charles Bohl, in his seminal book *Place Making*, defines urbanism as an innovative design concept that applies "the best urban design practices from the 'traditional urbanism' found in historic town centers and main streets, while pragmatically adapting them to modern lifestyles, business practices, and technologies." Urbanism has been characterized by New York Times architecture critic Herbert Muschamp as the "most important phenomenon to emerge in American architecture in the post-Cold War era."

Underlying new urban development ideals is a belief that the physical design of many communities and regions is seriously impairing quality of life, contributing to traffic congestion, environmental degradation, and a lost sense of community. Todd Bressi writes,

> …the New Urbanism is not a romantic movement; it reflects a deeper agenda. The planning and design approaches…revive principles about building communities that have been virtually ignored for half a century: public spaces like streets, squares, and parks should be a setting for the conduct of daily life; a neighborhood should accommodate diverse types of people and activities; it should be possible to get to work, accomplish everyday tasks (like buying fresh food or taking a child to day care) and travel to surrounding communities without using a car.

Bressi continues by stating that urbanists pay close attention to architecture – particularly to where a building sits on the lot, its mass, and exterior details, arguing that only certain types of buildings can create the range of public and private spaces that successful communities require. He notes that "the primary purpose of design rules is to force greater attention to detail, thereby invigorating urban and suburban architecture and imparting a greater level of civility to the streetscape."

Key Factors of New Urban Developments

A common characteristic of conventional real estate development is the presence of formula-driven designs that follow a set script, regardless of the place where the project is built. As Charles Bohl has noted, "while the real estate industry has become very good at building these projects, the projects themselves are not very good at building communities." Urbanism, on the other hand, is about reforming the design of the built environment. It revives the lost art of "place-making" and creates environments that are distinctly different from the standard product types. Bressi contends that:

> Buildings should not be conceived as objects isolated from their surroundings; they should contribute to the spatial definitions of streets, parks, greens, yards, and other

> open spaces. The New Urbanists draw upon a range of design traditions for inspiration. Their ideas about the relationships between planning and architecture reach back to the City Beautiful and Town Planning movements, which in turn reach back to Renaissance and Classical cities.

Some of the key factors of this approach to project development are outlined below.

Providing a Sense of Community

Thinking about public space in new ways that encourages sociability among residents and creates a sense of community is a key component of new urban design. Numerous studies have pointed to Americans' growing dissatisfaction with the feeling of "separateness" that comes from living and working in traditional suburbs and have identified a "quest for community" that is felt across society.

Sociologist Ray Oldenburg has described this phenomenon by naming the various places that humans live and interact. The home is the "first place," the workplace is the "second place," and community gathering places outside of home or work such as town squares, village greens, cafes, or taverns are identified as "third places." Oldenburg maintains that "third places" are what is absent in suburban neighborhood development and they are the missing ingredient that people in those areas are searching for today.

New urban developments fulfill this need and, if properly designed, have become magnets for residents and visitors alike. As Bohl notes,

> …today's town center projects typically revolve around a central plaza or park that establishes a public atmosphere and provides an ideal setting for the cafes, taverns, and bistros celebrated by Oldenburg. In fact, it is the space between buildings – the public realm of plazas, greens, squares, and walkable streets – that enables a town center or a main street to act as the third place for nearby neighborhoods and communities.

Creating a "Place Identity"

Physical places that promote sociability have become critical for building strong communities and creating a unique sense of "place." Booth, Leonard & Pawlukiewicz from the Urban Land Institute note that place making is the essence of real estate development, and "establishing a live-work-shop environment with a sense of place is a community need as well as an aspiration." Places that are desirable appeal to all the senses - sight, sound, smell, taste, and touch. Rather than relying on formulaic real estate products, new urban developments are a rich mix of local activities, aesthetic design, quality, and price.

As noted on Smart Growth Online, new urban developments are designed to:

> …create interesting, unique communities which reflect the values and cultures of the people who reside there, and foster the types of physical environments which support a more cohesive community fabric. Smart growth promotes development which uses natural and man-made boundaries and landmarks to create a sense of defined neighborhoods, towns, and regions. It encourages the construction and preservation of buildings which prove to be assets to a community over time, not only because of the services provided within, but because of the unique contribution they make on the outside to the look and feel of a city.

Whereas many conventional developments, such as shopping malls or retail strip centers, are focused exclusively on trade, Bohl notes that new urban market and town squares are designed to be not only "consumer space," but are clearly recognized and experienced as "public space," with a civic character that transcends the commercial activities that take place there.

Providing a Mix of Land Uses

A critical component of achieving better places to live is an integration of mixed land uses. Mixed uses create a critical mass and a sense of place by affording the community a wider range or goods, services, and experiences at one location, thereby increasing connectivity and choice. By putting uses in close proximity to one another, alternatives to driving, such as walking or biking, become viable.

Providing a mix of land uses generally refers to offering residential, retail, and office space within close proximity to one another. Booth, et al. note the economic synergy that happens from mixed uses in an new urban development:

> Office uses feed retail operations by supplying customers for stores and restaurants both during the day and after work. Retail uses within walking distance of employment or residences – restaurants, bookstores, clothing stores, gift shops, and coffee bars – reinforce amenities that allow and encourage employees and residents to go out to lunch or run errands without relying on their cars. The addition of theaters, museums, art galleries, libraries, post offices, and town halls that are properly integrated…attracts significant pedestrian traffic, which supports a range of other uses.

Creating Walkable Neighborhoods

At the heart of new urban design is the concept of walkable neighborhoods; walkable communities are desirable places to live, work, learn, worship, and play. These neighborhoods respect the human scale by providing pedestrian-friendly spaces that ensure that users feel at home and can navigate easily by foot within an area. As Bohl notes, "the

way that streets and pathways weave through the town center, connecting its buildings and public spaces, can provide pedestrians with a sense of discovery and delight that is seldom experienced in the suburban landscape, and that is essential to the town center experience."

Creating a sense of enclosure on a street is important in honoring the human scale and helping to define an area. It is thus crucial to pay attention to the proportion between the height of the buildings and the amount of open space; ideally, new urban designs achieve a tight 1:1 relationship and thus are much easier for pedestrians to navigate. By contrast, Bohl notes that:

> Streets in suburban areas are typically many times wider than the heights of the buildings that line them, often reaching ratios of 1:6 and more. Such wide streets prevent any sense of spatial enclosure from being achieved and are more difficult for pedestrians to cross.

Henton & Walesh, discussing the vital role of well educated, technically savvy young people in the growth of the new economy, note that these workers are attracted to places that have a lively mix of activity that need not be accessed by car. As one young worker told the Wall Street Journal, "It's a lot more fun to be in a locale where you can go for a walk and have a nice dinner, or shop and take in a sports game, than it is to be isolated in some sprawling suburban office park where a little truck comes by at lunch and sells microwave burritos." Providing pedestrian-friendly activities thus give new urban communities an edge in attracting and retaining workers and residents.

In addition to creating a more walkable environment, good urban design can also incorporate "traffic calming" changes to streets and sidewalks to make them safer, more attractive, and more livable to both pedestrians and bicyclists alike. Researcher Emily Drennen conducted a 2003 study of the economic effects of traffic calming measures on twenty-seven small businesses in the Mission District of San Francisco. Merchants were interviewed about how the Valencia Street bicycle lanes had impacted their businesses. Four and a half years after the bike lanes were built, the vast majority of the business owners expressed support for the bike lanes. Respondents generally felt that the bike lanes had made the street more attractive and had a generally positive impact on their business and/or sales.

Preserving Open Space

Greenspace or "open space" is broadly referred to in new urban design to mean natural areas both in and surrounding developments that provide important community space, habitat for plants and animals, recreational opportunities, places of natural beauty, and critical environmental areas (e.g., wetlands).

Increasing numbers of people are concerned about the natural environment and value access to open space in both their private life and in their workspace. A healthy environment, rather than viewed as an added bonus, is now seen as one of an area's prime economic assets. Fortunately, the divide that existed in the past between developers and environmentalists is gradually being eroded as both sides realize the interconnection and interdependence of a development's preservation of the natural environment and its economic viability.

New urban developments are designed to protect and preserve open spaces, thereby providing environmental quality and health benefits that are significant. According to Smart Growth Online,

> Open space protects animal and plant habitat, places of natural beauty, and working lands.... Additionally, preservation of open space benefits the environment by combating air pollution, attenuating noise, controlling wind, providing erosion control, and moderating temperatures. Open space also protects surface and ground water resources by filtering trash, debris, and chemical pollutants before they enter a water system.

In addition to environmental benefits, the preservation of open spaces can give a region a competitive economic edge. Open spaces can offer an amenity that a region may not currently possess in abundance, enabling the region to retain the people that currently live and work there by giving them a disincentive to relocate. Open spaces can also help a region compete with other communities in attracting businesses and residents, as well as enabling it to compete for tourist dollars. And, research has shown that oftentimes it makes good economic sense to preserve a parcel of land rather than develop it; a number of recent studies show that parks and open space development in many instances increases residential property values and the property tax base of communities.

Economic Development and Public Sector Benefits

Urbanism in many ways reflects the changing nature of the American economy and in turn the values of the American people. New urban developments provide numerous benefits to residents in the form of a higher quality of life, better places to live, work, and play, higher and more stable property values, and a healthier lifestyle with more walking and better access to the natural environment. Businesses and municipalities also benefit from urbanism; the economic development and public sector benefits of new urban communities will be discussed below.

Economic Development Benefits

According to Henton & Walesh, quality of life has become a community's most valuable asset in the new economy. As Smart Growth Online reports, "recent trends in the global economy – industrial clustering and specialization, diversification of the workforce, reintegration of work and home – are placing a premium upon community character and quality of life."

New economy companies are attracted to new urban communities for a variety of reasons. Companies realize their workers want to work and live in areas that offer a vibrant social life, environmental amenities, and a reasonable commute. Talent is attracted to sociable communities – places with destinations, public and civic spaces, plenty of open spaces – where they can come together with colleagues or friends either through planned or chance encounters. In addition, as business is increasingly being conducted outside the boardroom – in restaurants, health clubs, and other public spaces – access to places where people can come together, converse, network, and share ideas is paramount. Muro and Puentes note that:

> Regional economic performance is enhanced when areas are developed with community benefits and the promotion of vital urban centers in mind. Studies show that productivity and overall economic performance may be improved to the extent compact, mixed-use development fosters dense labor markets, vibrant urban centers, efficient transportation systems, and a high "quality-of-place."

Richard Florida, who has written extensively about the new knowledge economy, notes that knowledge workers like to mix fun with work, to be close to stimulations from colleagues, in close proximity to outside activity and recreation, and live and work in places convenient to services and recreation. He goes on to say:

> In this milieu, talent is scarce. Everybody is competing for the best people, and if you don't have quality of life and quality of place, you won't get talented people. Skilled talent calls the shots in where and how they want to work.

Companies must locate in such locales to attract and retain quality employees. In discussing how the state of Wisconsin can successfully integrate into the new economy, commentators noted that:

> A higher level of diversity in urban environments can be achieved through the creative design of our built environments and through the emphasis we place on innovative small businesses and attractions. New Urbanism ideas also help create diversity by emphasizing mixed-use developments and attractive architectural styles. Finding new uses for historic buildings also provides a mixture of old and new charm to urban

environments. Local governments can also encourage small business startups of ethnic restaurants and unique shops to increase diversity in their region.

In essence, the private sector in the new economy equates competitive advantage with the ability of being where the action is, and to them, the action is in new urban communities.

Public Sector Benefits

Tax Base Enhancement

In order to properly assess the fiscal benefits of new urban developments to the public sector, it is important to understand how these developments operate financially and how they are different from traditional suburban developments. According to Christopher Leinberger in a paper for *The Brookings Institution*, the investment cycle for many income-oriented conventional developments peaks around year seven. When comparing new urban and conventional developments on a short-term basis, therefore, conventional developments often project better cash flows as evaluated by internal rates of return. New income peaks can be achieved in subsequent years, but this often requires a major investment of additional capital. If a suburban development is no longer "cutting-edge," i.e. maintaining its viability, the influx of capital does not occur, and the development begins to decline. This has become a common occurrence in suburbia, and has created a "throwaway built environment" that has largely contributed to urban sprawl. The area formerly known as the "Miracle Mile" in 1980's Atlanta is an example of such a decline; it is now filled with over 15 dead or dying strip malls because the market has moved farther out and developers are not inclined to reinvest in it.

New urban developments, on the other hand, generally create and sustain value in excess of conventional developments, though their short-term performance may not be as attractive. This can be due, in part, to the quality (and thus cost) of architecture and construction intrinsic to new urban design, the amount of open space provided in the overall development, or the higher cost of financing. However, what may be lost in the short-term is made up for in the mid- and long-term. Leinberger notes that:

> The major reason progressive development seems to yield higher mid- and long-term returns and has a longer life is the pedestrian nature of its design. In stark contrast to conventional development with its car-dominated character, progressive developments create special places that are rather rare in this country.

The desirable nature of new urban developments, including the mix of land uses and physical context, translates into increased property values in the shorter run; in the longer run, Muro and Puentes note that these developments

> …may enhance regions' tax bases, create wealth through housing appreciation, and boost property tax collections. In that sense, smart growth may well create substantial value by enhancing the real estate market.

Increased real estate values in turn can make a tremendous difference in the overall value of the local tax base, and it is possible to develop some indication of the impact of a new urban development approach through evaluation of residential values. Researchers at George Washington University developed estimates of the incremental gain per unit attributable to traditional neighborhood design at the Kentlands, a new urban project in Maryland. The researchers estimated the price that homeowners were willing to pay for houses in Kentlands and comparable homes in surrounding traditional subdivisions. Based on their analysis, housing units in the new urban development commanded an 11.7 percent market premium, all other factors held constant. This premium existed in both new and resale markets.

Cost of Service Reduction

Muro and Puentes reviewed the best academic empirical literature on fiscal effects of growth and development for the Brookings Institution and reported that overall, the cost of providing public infrastructure and delivering services can be reduced through thoughtful design and planning. The logic is straightforward; compact, less sprawling development patterns can reduce the capital and operations costs governments incur from new growth. The authors identify two related ways urban form can decrease costs:

- Economies of scale – because the marginal cost of serving additional population decreases as more residents cluster within a small geographic area. Also referred to as "density efficiencies."

- Economies of geographic scope – because the marginal cost of serving each additional person decreases as each person locates more closely to existing major public facilities.

Muro and Puentes report that over the year 1999-2000 states and localities nationwide spent nearly $140 billion on capital outlays for infrastructure shaped by development patterns such as elementary and secondary schools, highways, sewer lines, solid waste management, and utility systems. More than $200 billion was spent on recurring expenditures to provide such services such as highway maintenance, police and fire protection, trash collection, and utility service. The authors note that:

Considering that these outlays represent almost 20 percent of the $1.7 trillion states and localities spent during 1999-2000, realizing even modest percentage savings from smart

growth could save taxpayers billions. Such savings grow only more attractive in light of economic stagnation, weakening federal support for states and cities, and the twin challenges many states face with shrinking revenue bases and increasing mandatory spending.

Several studies reported by the authors predict that rational use of more compact development patterns from 2000 to 2025 promise the following sorts of savings for governments nationwide: 11 percent, or $110 billion, from 25-year road-building costs; 6 percent, or $12.6 billion, from 25-year water and sewer costs; and roughly 3 percent, or $4 billion, for annual operations and service delivery.

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