Describing Diversity of New Urban Developments in Austin, Texas

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Abstract

This applied research project describes the diversity of new urban developments in Austin, Texas. The project begins with an overview of the history, causes and negative effects of suburban sprawl. The idea of new urbanism is then presented as the antithesis of suburban sprawl. Additionally, the literature surrounding issues in diversity relating to new urbanism is explored. Diversity literature is categorized by built diversity, demographic diversity, and economic diversity. These are the descriptive categories used to describe the diversity of new urban developments. The methodology used is a combination of field analysis and document analysis. Field analysis was primarily used in collecting data for the built environment while document analysis was primarily used for collecting data regarding demographics and economy of the new urban developments. The developments selected were the Mueller development, The Domain and The Triangle; all of which are self-proclaimed new urban developments. Finally, findings reveal a description of the diversity of each development. The three developments vary in diversity across the three descriptive categories. Overall, the Mueller development proved most successful in achieving diversity.

About the Author

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Chapter 1
Introduction

Suburban Sprawl: Defined, Causes, and Negative Effects

Defined

Sprawl can be defined as "a pattern of urban and metropolitan growth that reflects low-density, automobile-dependent, exclusionary new development on the fringe of settled areas often surrounding a deteriorating city" (Squires 2002). This type of settlement began in the early 19th century due to numerous factors (Downs 1998, Squires 2002). Cities were once densely packed and provided a diverse collection of amenities to its citizens in a confined urban core. Residents of cities had everything they might need in a centralized area where automobiles were not necessary to conduct errands and tasks of every day living (Canby 2003, 26). Human settlement patterns are now spreading farther outside of the urban core for numerous reasons. Sprawl has now "been the dominant form of metropolitan-area growth in the United States for the past 50 years" (Downs 1998, 8). As sprawl has proliferated and rooted its self on the fringe of cities, the American landscape has been reshaped by suburbs. Suburbs exist on the fringe of urban centers and are characterized by large residential lots, auto-dependency, and homogeneous architecture, and are an outgrowth of sprawl.

Causes

The causes of sprawl are vast and include, but are not limited to, the changing tastes of Americans and their desire for the "American dream," the government's investment in infrastructure and housing subsidies to foster suburbanization, and finally,

discriminatory practices by the insurance and banking industries (Peiser 2001, Squires 2002, Jackson 1985). The proliferation of the automobile gave Americans the opportunity to move out of the city to pursue "the 'American dream', namely a single-family detached home" (Peiser 2001, 280). Americans could experience the luxury of living away from the crowded and busy life of the inner city (Robinson, Newell, and Marzluff 2005, 51). Upper and middle class Americans were seduced by the suburban life style that promised an environment free of signs of poverty, small communities, large, attractively landscaped workplaces and residences, and the ownership of automobiles (Peiser 2001).

In the sprawling areas of municipalities it was also quite common to allow and enforce "exclusionary zoning ordinances (e.g., minimum lot sizes, maximum density requirements, and limitations on multifamily housing) in most suburban communities" (Squires 2002, 10). This type of land use planning encouraged homogeneity among the residences of the sprawling communities, enticing upper-class residents to relocate to where only the upper-class could afford to reside. The Federal government also played a large role in the encouragement of sprawl by establishing "federally subsidized highways, cheap fuel provided by keeping taxes on gasoline far below the rate of other industrialized countries" (Squires 2002, 9).

The Federal government also provided subsidized home mortgage insurance almost exclusively in suburban communities, offered property tax breaks, and allowed homeowners to deduct interest on their mortgage loans (Squires 2002, 9). The federal government essentially used banking and insurance mechanisms to make homeownership

on the fringe of urban centers possible to people who would otherwise not be able to afford their own home (Jackson 1985).

Negative Effects

The negative effects of sprawl include significant damage to the environment, fiscal inequality among communities, disparities in the quality of public services, transportation issues, and inefficient land-use and infrastructure (Squires 2002, 11-15). The environmental impacts made by suburban sprawl are notable. The negative environmental impacts include a decline in air and water quality, loss of arable land, contributions to climate change due to increased carbon dioxide, and the greater extraction of natural resources to create infrastructure for the ever sprawling settlement patterns (Cieslewicz 2002, 25-30). Sprawl results in environmental deterioration because this type of development requires huge "infrastructure investments for roads, sewer systems, schools, and other public services" that cannot always be made and supported (Squires 2002,12). Suburban sprawl has greatly contributed to fiscal inequalities among minorities and the impoverished based on the continual homogeneity of races and classes in human settlements (Jargowsky 2002, Powell 2002). Finally sprawl lessens the quality of life due to extended periods of time spent in the car, increased homogeneity of neighborhoods, and physical and social fragmentation (Putnam 2000). The negative impacts of sprawl have become significant enough that there is a push among city planners to respond.

New Urbanism as an Alternative to Sprawl

Many city planners have subscribed to the idea of new urbanism as a way of combating suburban sprawl. New urbanism is characterized by ideals that mitigate

sprawl and is therefore considered to be the antithesis of suburban sprawl (Fainstein 2005, 3). New urbanists feel that "the single biggest failure of the past century of American city building can be summed up in a single word: Separation" (Talen 2005). The "negative effects of separating people (rich and poor, black and white, young and old), and activities one (land use from another)" have far outweighed any positive effects of sprawl (Talen 2005).

While new urbanism is difficult to define, it can be effectively described by its characteristics. Congress for the New Urbanism (CNU) is a leading non-profit organization that promotes new urban ideals in city development. CNU defines new urbanism as a reinvestment in central cites. The overarching goal of new urbanism is to develop cities that provide a collection of services to its community within a confined geographical location. The Congress for the New Urbanism advocates for diversity of neighborhoods in use and population, design that facilitates pedestrians, cyclists, and transit use, and density that mimics the way that cities originally developed before the proliferation of the automobile and suburban sprawl.

Robert Cervero, a prominent transportation scholar, states that the three pillars of new urbanism are "density, diversity, and design" (Cervero 2002). Diversity is a prominent component of new urbanism and can be defined as a community that is "mixed in income, mixed in use and actively supportive of places that commingle people of different races, ethnicities, genders, ages, occupations and house holds" (Talen, 2006, 233). The following review of the literature will focus on the diversity of new urban development through the lens of the built environment, demographics and the economy.

Research Purpose

The purpose of this research is to describe the multiple dimensions of community diversity of self-proclaimed new urban developments in Austin, Texas. First, a review of the literature will be presented. A literature review is useful in indentifying the aspects of a phenomenon, new urbanism in this case, to be described (Sheilds 1998, 2006). An exploration of the literature breaks down the concept of community diversity into three elements: the built diversity, demographic diversity, and economic diversity. Second, a series of descriptive categories are deduced from the literature to assist in the analysis of new urban developments. The descriptive categories serve in the operationalization of the three elements of community diversity. Finally, a practical application of the descriptive categories is applied to new-urban developments in order to describe the climate of their individual diversity in regards to the built diversity, demographic diversity, and economic diversity.

Chapter 2
Literature Review

Diverse Built Environment

The built environment "comprises urban design, land use and the transportation system and encompasses patterns of human activity within the physical environment" (Handy 2002, 65). Public administrators have a great deal of control over the built environment because they establish zoning designations, develop transportation corridors, enforce building and design codes, and utilize many other policy tools that heavily influence a city's built environment. Because of the large impact policies have on the built environment, there is opportunity to significantly encourage diversity in built infrastructure. Addressing if new urbanist developments "deliver" on promoting diversity is an empirical question. This chapter reviews the literature on three ways that new urbanists claim to promote neighborhood diversity: transportation, zoning, and housing types.

Multi-Modal Transportation Option

A goal of new urbanism is to decrease the dependency on the automobile (Charter for the New Urbanism, 2001). In traditional, auto-dependent planning methods, "transport and land use patterns increase automobile ownership and use, reduce travel choices, and disadvantage non-drivers relative to drivers" (Litman 1996, 1). New urbanism discourages transport and land use patterns that increase automobile ownership and use (Charter for the New Urbanism 2001, 13). A diverse, multi-modal transportation network can reduce car usage in that neighborhood. A diverse built infrastructure

includes restricting the supply of parking, large and shaded sidewalks to encourage walking, dedicated bike lanes, short blocks so pedestrians may be more mobile, and public transportation options (Congress for the New Urbanism, 2001). New urban developments create a diverse transportation infrastructure that encourages alternative transportation options to the automobile through the presence of specific planning elements correlated with less auto usage.

Walk-ability and Bike-ability

For new urbanists, walking and cycling are an ideal alternative to the automobile, for many reasons. First, walking and cycling emit zero green house gases, making it the cleanest mode of transportation. Secondly, walking and cycling serve as a form of exercise that creates healthier communities as a whole (Cutts et al. 2009 and Litman 2009). Finally, walking and cycling is significantly less costly than purchasing and maintaining an automobile. For new urbanists, neighborhoods should be dense and offer diverse shopping and work opportunities within walking and/or biking distance.

Finally, and perhaps most importantly, the built infrastructure must facilitate walking and cycling because it serves as a connector to other modes of transportation, creating greater accessibility (Litman 2009). Walking and cycling is crucial to a cohesive and diverse transportation system because it "encourage transit use, since most transit trips involve walking or cycling links" (Litman 2011). Infrastructure that encourages walking and cycling offers many benefits to a new urban community and increases the usability of other modes of transportation.

There are numerous methods that increase the walk-ability and bike-ability of a community. New urban developers encourage walking and cycling by building streets

that are well connected and have short blocks (Handy 2002). Creating good street connectivity by having "grid street networks can increase biking and walking by reducing trip distances, offering alternative pathways, and slowing automobile travel" (Cervero 2009). Good street connectivity makes walking and cycling easier because it reduces trip time and makes it much easier for one to maneuver around the community on foot or bicycle (Johnson 2003, 167). While good street connectivity facilitates walking and cycling, it also plays an integral part in a diverse multi-modal network of transportation options.

Built infrastructure also encourages walking and cycling by creating public corridors that facilitate these activities. In order to do this," streets and squares should be safe, comfortable, and interesting to the pedestrian" (Charter for the New Urbanism 2001). Public corridors can achieve this in numerous ways, such as dedicated bike lanes, large sidewalks, and foliage that provides adequate shade (Congress for the New Urbanism, 2001). While changing citizens' habits can be a difficult task, planners can be influential through creating a built environment that caters to bikers and pedestrians (Handy 2002).

Parking Management Strategies

New urbanists use efficient parking infrastructure and management as a way to "encourage more compact, mixed, multi-modal development to allow more parking sharing and use of alternative modes" (Litman 2011, 23). Parking management can reduce automobile use and land dedicated to parking structures (Litman 2011, 16) by creating a built environment that does not solely cater to the automobile. In contrast, traditional parking structures provide a generous parking supply that imposes numerous

indirect costs, including increased sprawl, reduced design flexibility, reduced efficiency of alternative modes (walking, ride-sharing and public transit use), and increased traffic problems (Litman 2011, 11).

One parking management strategy is to charge more for parking to discourage long-term storage of automobiles (Litman 2011,16). Higher parking densities around transit stations encourage alternative modes of transportation to the automobile (Litman 2009, 25). Another approach is to un-bundle parking, where "parking is rented or sold separately" and not sold as part of the building (Fainstein 2005, 3). This allows for parkers to just pay for what they are actually using and to perhaps use a spot less or more aggressively consider mass transit or reducing the number of vehicles in the household. Efficient parking management and infrastructure can discourage automobile use, and in concert with other built infrastructure that facilitates this goal, are imperative to any new urban development.

Transit-oriented Development

The most efficient type of public transportation is one that uses transit stations as hubs for commercial and residential development which supports transit use (Johnson 2003, 22). New Urbanists have coined this type of development at Transit Oriented Development (TOD) (Johnson 2003, 22). New urbanists see that "transit use can be increased through transit-friendly land use planning" or TODs in two distinct ways (Johnson 2003, 21). First, new urban developments use public transportation as a way to replace the automobile for more distant trips, where perhaps walking or biking might not be possible. The second benefit for TODs is that once one reaches their destination, they may make much more efficient use of their time because of the dense diversity of the

development around the public transit stop. TOD "creates "transit villages" around transit stations, where numerous errands(travel to school, shops, etc.) can be performed within walking distance (Litman 2011, 25). In addition to public transit decreasing the need for the automobile for long distance trips, it also encourages walking and cycling while doing numerous tasks in one area. New urbanists assert that TODs play a significant role in the solution to bring development back near the city core and encourage an auto-independent urban fabric.

New urbanism encourages built infrastructure that facilitates diverse mobility options. These include parking arrangements that discourage car use, streets that encourage walking and biking, and finally, a transportation system that encourages development around the stations.

Diverse Zoning Purposes

Land use zoning is "one of the most potent tools planners have to enact change in human settlement patterns" (Talen 2005, 214). Local governments use zoning ordinances to accomplish a variety of public purposes. Traditionally, planners use it to create single use land development, often times referred to as exclusionary zoning. Ninety-two percent of US cities use zoning to create single use land development (Hirt 2007, 439). For example, zoning may be used to entirely separate residential dwellings from commercial businesses. This is accomplished by designating a residential area as "single family residence" (SF-1) and only allowing single families to reside in this zone, and designating other areas as commercial, only allowing businesses to reside there. Other examples of this type of exclusionary zoning are "minimum lot sizes, maximum density requirements, and limitations of multifamily housing" (Squires 2002, 10). This lack of

diversity in zoning and land use designations has greatly increased dependency on the automobile, because all activities are geographically separated. While the original intention of this type of zoning "was to preserve the character of the local community, segregation is often the effect" (Squires 2002). This includes segregation of people and of business types.

Exclusionary zoning is distinguished from new urban approaches to zoning (Talen 2005, 214). New urbanists highlight more flexibility by mixing uses within one zoning designation, for example, allowing certain businesses and residences to coexist in one area or even one building (Handy 2002). Thus, zoning that encourages diverse land uses is an element of this descriptive framework.

New urbanism promotes mixed use zoning because "the organization of the urban environment in terms of separate zones of dwelling, work, transportation and recreation" does not promote diversity (Talen 2005, 214). When land uses are separated by zoning restrictions, it makes efficient mobility more difficult compared to higher-density, mixed-use communities that result in fewer vehicle trips and shorter distances (Richardson and Bae 2000, 262). Mixed land use zoning allows for a more diverse mixture of activities to take place in a single area (Handy 2002). For instance, one may live, work, recreate, and exercise in a more confined geographical area, making car use unnecessary. A successful new urban development shows a "juxtaposition of workshops, entertainment venues, residences, and offices, side by side" creating an environment where one may complete day-to-day tasks in a confined, geographical area (Fainstein 2005, 9). Mixed-use and diverse zoning practices are imperative in new urban developments.

Diverse Housing Types

Diverse housing types suggest a mixture of multi-family and single-family homes including apartments, houses, town homes, etc. ranging in size and price. This concept also refers to "a mix of high- and low-rise structures, of streetscapes encompassing a range of architectural styles" (Fainstein 2005, 9). Diverse housing offers "interspersed public, subsidized, and market-rate housing units—including units both for rent and to own (Day 2003, 84). A key idea is that "housing units of various types share similar design features, making affordable housing indistinguishable from other types" (Day 2003, 84). New urbanists have long held that it was desirable to have population diversity within neighborhoods (Gans, 1961; Sarkissian, 1976).

Creating diverse housing options has three advantages. First, it serves to combat gentrification. A common criticism of new urban developments is that new urbanism results in gentrification of minority and lower income neighborhoods. In fact, new urbanism discourages this by providing "a range of housing prices and housing types in each community" so that housing is available to all social classes (Day 2003, 84). Second, disadvantaged classes may benefit from exposure to the advantaged classes. New urbanism prioritizes diverse housing types because "disadvantaged individuals *may be* helped by the presence of more advantaged groups in their neighborhood" (Galster 2009, 24). This is a result of "positive role modeling, stronger social norms/control and elimination of geographic stigma." (Galster 2009, 24). Finally, advantaged classes may benefit from exposure to disadvantaged classes. A greater sense of tolerance and culture is instilled in the advantaged groups of a community when they are exposed to cultures

and classes outside of there own (Galster 2009). Fostering diverse housing types are beneficial to both the advantaged and the disadvantage classes in the community.

In summary, new urban development will exhibit a diverse multi-modal transportation system. This includes parking infrastructure, walking and biking infrastructure, and public transportation that work together to create an auto-independent environment. A new urban development will use diverse zoning designations throughout the community, encouraging mixed uses in confined geographical areas. Finally, new urban developments will exhibit diverse housing types encouraged through social programs.

Table 1.1: Conceptual Framework

Descriptive Categories	**Scholarly Support**
Built Diversity	
Diverse transportation elements Walkability Bikeability Parking Management Transit oriented development	(Litman 2009), (Litman 2011), (Johnson 2003), (Cervero 2009), (Congress for the New Urbanism, 2001), (Handy 2002), (Cutts 2009)
Diverse zoning districts	(Talen 2005), (Fainstein 2005), (Richardson and Bae 262 *handbook*), (Squires 2002), (Fainstein 2005), (Handy 2002), (Hirt 2007)
Diverse housing types	(Fainstein 2005), (Galster 2009), (Day 2003),(Sarkissian 1976), (Gans 1961)

Demographic Diversity

A diverse built environment created through "encouraging a mix of housing types and uses may be a good start for communities eager to facilitate diversity" (Grant and Perrott 2009, 285). Demographic diversity serves as a second dimension of diversity within a new urban development. It is evident that there are many adverse effects to demographic homogeneity within communities and that communities will greatly benefit from a diverse demography.

Negative effects of homogenous demographics

The separation of human settlements has been devastating to the demographic diversity of cities. New urbanists see that "whatever legitimate needs there have been for balkanizing human settlements and rationalizing urban space have by now been clearly overshadowed by the negative effects of separating people (rich and poor, black and white, young and old), and activities (land use from another)" (Talen 2005). The negative effects include an unequal distribution of public services and resources, intolerance, and, finally, the lack of a diverse input for policy-making that *should* cater to a "desirable mix of people with differing demographic, economic and ethnic characteristics that together create a balanced or complete community" (Grant and Perrott 2009).

New urbanists have campaigned around issues of race, age, sexuality, income, cultures, and gender and "have challenged the notion of a homogeneous public and developed the view of a socially and culturally diverse society" (Booth 2006, 47). Offering a diverse range of transportation, housing types and zoning land uses, new

urbanism hopes "to develop and maintain a melting pot of neighborhood homes serving a wide range of household and family sizes, ages, cultures, and incomes" (U.S. Department of Housing and Urban Development 1996b, 5-6).

Benefits of a Diverse Demography

The benefits of having a diverse community are vast. A demographically diverse community helps to bridge the gap between the disadvantaged population and the advantaged population. The disadvantaged are helped because "mixing improves access to services and resources" (Sarkissian, 1976). New urbanists acknowledge that "space and place affects the allocation and distribution of resources to different types of people and communities" (Harvey 1973). If transportation infrastructure, such as mass transit, for example, is installed in an urban community that is dominated by a certain demographic, such as the upper class, then this resource is lost to the lower class. On the other hand, if diversity is encouraged within that urban community, the disadvantaged population will also get to reap the benefits.

A second benefit is the exposure of a disadvantaged class to a more advantaged class (Galster 2011, 24). This shows that there are other pursuits to be had in life than the ones directly associated with ones own class. Studies have shown "broad-based evidence that disadvantaged individuals *may be* helped by the presence of more advantaged groups in their neighborhood, likely due to positive role modeling, stronger social norms/control and elimination of geographic stigma" (Galster 2011, 24). One benefit of a diverse demography is the help received by the disadvantaged population.

A third benefit is that it "encourages social interaction and tolerance" which benefits the more advantaged classes (Sarkissian, 1976). When people interact with

others from a different background, whether that is ethnic, cultural, economic, etc., they share new and different ideals, which in turn foster creativity and new ways of thinking. This interaction also encourages tolerance. When one is immersed in different ways of life, that experience eventually changes from something that is different to something that is a social norm. A benefit to a diverse demographic is that it "it fosters creativity, it can encourage tolerance, and it leads city officials to see the value in previously under appreciated lifestyles. For instance, whereas gays were once the object of police raids, they now are viewed as urban pioneers, taming areas of the city once considered dangerous and nurturing innovative industries" (Fainstein 2005, 13). Through the simple interaction between people from different backgrounds, new ways of thinking and tolerance may result.

Finally, from the perspective of a policy maker, a diverse community is beneficial in making effective and fair policy decisions. When a diverse community exists, policy makers must take into account everyone's needs. They are forced to view policy development as "creating a working culture and practice that recognize, respect, value and harness difference for the benefit of the organization and the individual" (Rees 1998). If a community is represented by a diverse demographic in community discourse, it is possible to make more effective policy decisions for the betterment of the entire community (Booth 2006, 49). Policy makers are able to understand and respond "to the diverse needs of different interests in the policy-making and decision making process, as well as the engagement of diverse groups of people through community involvement strategies (Booth 2006, 49). This would not be possible in a community lacking in diverse demographics. Therefore it is important to integrate "equality and diversity at all

stages of the policy-making process" in order to make and implement policy that reflect the needs of all sects of society (Council of Europe, 1998).

Based on the literature on new urban developments, it is apparent that a prominent goal is to achieve demographic diversity. With its presence, a community may have a less disadvantaged lower class, increased tolerance, and an improved climate for effective local policy making. For purposes of this research, we shall define a diverse demographic in terms of ethnicity, income, and age. A new urban development will display a diversity of demographics within that community.

Table 1.2: Conceptual Framework

Descriptive Categories	Scholarly Support
Diverse demographics are evident in new urban developments.	(Sarkissian 1976), (Harvey 1973), (Galster 2009), (Reese 1998)
New urban communities are more integrated as far as differences in ethnicity.	(Talen, 2005), (Grant and Perrott 2009), (Booth 2006), (U.S. DHUD 1996), (Fainstein 2005), (Rees 1998), (Council of Europe 1998)
New urban communities are more integrated as far as economic status.	(Talen, 2005), (Grant and Perrott 2009), (Booth 2006), (U.S. DHUD 1996), (Fainstein 2005), (Rees 1998), (Council of Europe 1998)
New urban communities are more integrated as far as differences in age.	(Talen, 2005), (Grant and Perrott 2009), (Booth 2006), (U.S. DHUD 1996), (Fainstein 2005), (Rees 1998), (Council of Europe 1998)

Diversity of the Economic Market

Importance of diversity in economic vitality

As new urban developments create diversity within the built environment and in the demography of their citizens, conditions become ripe for a vibrant and thriving economy. New urbanists argue that built and demographic "diversity not only makes cities more appealing but is the source of economic productivity"(Fainstein 2005, 5). Community diversity encourages economic vitality when three conditions are present: (1) diverse business types that foster intellectual spillover, (2) involved community and civic associations that foster trust and commerce, (3) and varied employment opportunities that will be in demand because of varying types of job seekers. Economic vitality is beneficial to a new urban development because it increases a city's tax base (Jacobs 1960, 254). Economic vitality increases "competitive advantage of cities, and thus the most promising approach to attaining economic success, lies in enhancing diversity in society, the economic base, and the built environment" (Fainstein 2005, 4). The investment and encouragement in a diverse built environment and a diverse demography is fiscally healthy to a community.

Diverse Business Types

Diverse business types exist in new urban communities. Diverse business types mean that businesses that serve different functions such as groceries, office buildings, and restaurants, are contained in one compact geographical area. Diverse business types contribute to the economic vitality of a new urban community because it encourages the

flow of knowledge, known as intellectual spill over, and secondly, businesses become markets for other businesses.

Business and entrepreneurial culture thrive on the interaction between one another. New urban developments foster this interaction through "the cramming of individuals, occupations, and industries into close quarters" which "provides an environment in which ideas flow quickly from person to person" (Glaeser 1127). As businesses interact with one another, ideas and knowledge are inevitably shared. A good example of this would be the micro-chip from Silicon Valley, where intellectual spillover exponentially grew that industry (Arthur 1989). This occurs through business-to-business commerce or simply through the coincidental interaction that happens with mutual immersion in the same business culture, "after all, intellectual breakthroughs must cross hallways and streets more easily than oceans and continents" (Glaeser 1992). The phenomenon is referred to as intellectual spillover and adds to the innovation and practices of individual enterprises. Intellectual spillover may serve as an engine to economic growth (Romer 1986; Lucas 1988). A diverse new urban development creates a business environment ripe for intellectual spillover.

Diverse business types are also beneficial to the economy of a new urban development because of the opportunity for business-to-business commerce. Businesses in an isolated area must supply all aspects of the business themselves, while businesses in a diverse environment may "draw on many and varied supplies and skills outside themselves" and may "serve a narrow market" for other outside businesses (Jacobs 1992, 145). For example, a small business that does not have a marketing division may outsource this service to a nearby marketing firm. This generates commerce and

economic vitality while. In a diverse new urban development, conditions may be right for business-to-business commerce.

Diverse business types within the development, fosters a more vibrant economy through intellectual spillovers and business-to-business commerce. For purposes of this research, the existence of diverse business types will be measured by how many different businesses exist within one city block. Business types may be broken down into retail, food service, professional services, and grocery stores.

Diverse Social Capital mechanisms

The cramming of diverse businesses and people into a compact community create ripe conditions for fostering social capital. This term was created as one of the original ideas of new urbanism and is vital to a vibrant economy. Social capital can be referred to as "features of social organization such as personal contacts, multi-person networks, and norms of generalized reciprocity and trust that facilitate social cooperation for mutual benefit, or more succinctly as networks of civic engagement" (Putnam 1995, 67). In a new urban development, mechanisms of social capitol should exist.

Social capital serves as an important mechanism for economic vitality. As members of a community engage one another, there is a level of "trustworthiness and reciprocity" that is considered, by new urbanists, as a "factor of production" (Coleman 1990, Ideka 181). As these networks "facilitate coordination, communication, and amplify reputations," there is incentive to do business with one another (Ideka 181). As these relationships begin to develop, there is a sense of reciprocity that follows, further encouraging and fostering economic growth (Seabright 2004). Social capital as "a city's

ability to bring people together with communities of interest is one of its greatest assets, possibly the greatest" asset to the economy (Jacobs 1961,119).

In new urban communities, social capital manifests itself through "public spaces to accommodate their unintended and informal contact" and through "churches, P-TA's, business associations, political clubs, and local civic leagues" to accommodate their more formal networks (Jacobs 1961). Modern day examples of social capital mechanisms are community events, publications, regular meetings and available associations.

Diverse Employment Opportunities

When studying the diversity, vitality and success of any economic climate it is imperative and helpful to illuminate the employment opportunities and unemployment rate within that community. Diverse employment opportunities should be the result of diverse business types and social capital (Grant and Perrott 2009). When these conditions exist, the "urban variety" will "encourage employment growth in industries" (Glaeser 2009, 1126). Considering the economic climate of a new urban development, a diversity of job opportunities should exist.

In addition to new urban development fostering a vibrant economy with many diverse job opportunities, "more diversity in metropolitan areas is correlated with lower unemployment and less instability" (Malizia and Ke 1993). This is because new urban developments have characteristics that attract a quality of human capital. New urbanists recognize that talented workers and investors find places with a diverse mix of people and activities attractive, therefore fostering economic growth (Florida 2002; 2005). Having a strong and talented work force should be prevalent in a new urban development, and therefore result in low unemployment rates within these developments.

Table 1.3: Conceptual Framework	
Descriptive Categories	Scholarly Support
Economic Vitality Diversity	
Diverse Business Types	(Glaeser, 1992), (Jacobs 1992), (Duranton and Puga 2001), (Romer 1986), (Lucas 1988), (Arthur 1989)
Social Capital	(Putnam 1995), (Ideka 2008), (Jacobs 1961), (Seabright 2004), (Coleman 1990)
Low Unemployment	(Glaeser, 1992), (Malizia and Ke 1993), (Grant and Perrot 2009), (Florida 2002) (Florida 2005)

Chapter 3
Methodology

Chapter Purpose

The purpose of the methodology chapter is to explain the methods for determining if self-identified new urban developments in Austin, Texas promote different dimensions of diversity. This chapter operationalizes the three categories of the descriptive conceptual frameworks into variables and specific indicators that will be used to measure the diversity of new urban developments in Austin, TX.

Research Method and Data Sources

The methods used for describing new urban developments in Austin, Texas include field research and document analysis. Qualitative field research is an "observational method designed to produce data appropriate for quantitative analysis" (Babbie 296, 2010). The research sites included the Triangle, the Mueller Development, and the Domain. All field-research observations will be focused on mass transit stops that serve the development. This includes mass transit stops within the developments and on the periphery of the developments. Based on this approach, four stops in triangle, six stops in the Domain, and seven stops in Mueller are researched. The strength of field research is that the measurements may be empirically seen and noted.

The second method to be used is document analysis. Document analysis is researching existing documents to compile information. The documents to be used are United States Census and Geographic Information Systems (GIS) maps with zoning

layers applied to ascertain zoning information. The GIS map will be accessed through the City of Austin website that was created by the Watershed Protection Department. Finally, the websites relative to each development will be used to attain information on housing subsidies and social capital mechanisms.

Limitations to Methods and Data Sources

The census data collected, presented limitations to the study. The data collected was on a census tract level. The new urban developments selected are only representing a portion of the census tract level and therefore skew the data collected. While the data represents the area surrounding the development, it is still useful to describe the demographics of the neighborhoods that surround the new urban developments being studied.

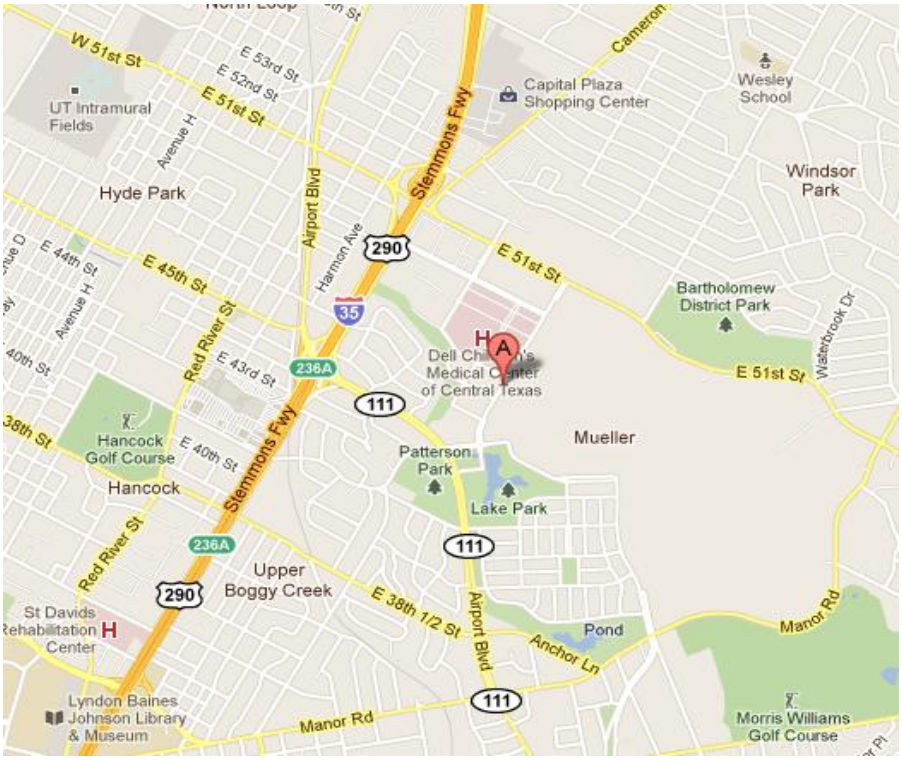
A second limitation is the methods used to describe the diversity of the built infrastructure. There is extensive literature surrounding measurements for built diversity that far exceed the methods used in this research project. The methods used do not suffice in giving a detailed description of the built environment. While there are more sufficient methods available, the methods used in this paper do illuminate the built infrastructure to the degree that we can compare the different developments in Austin.

Research Sites

The research sites to be described are new urban developments in Austin, Texas. Although there may be developments that have new urban characteristics, for purposes of this research, self-designated new urban developments will be used. These neighborhoods include: The Mueller Development, The Triangle and The Domain.

The Mueller Development is located just east of Interstate Highway 35. The Northern boundary is 51st, the Eastern boundary is Manor Road, and the Southern boundary is Airport Boulevard. In 2002 the Catellus Development Group, in concert with the City of Austin broke ground on construction. The first store opened in 2007. According to the main website, the Mueller Development is home to approximately 10,000 residents and approximately 10,000 employees. Its main features are 140 acres of parks and green space, Dell Children's Medical Center of Central Texas, and Austin Film Studios. Mueller considers itself to adhere to many new urban characteristics such as redeveloping existing buildings, fostering diverse housing opportunities, and transit as a viable alternative to the automobile.[1]

Figure 3.1: Map of Mueller Development



[1] See Mueller Website at http://www.muelleraustin.com/about/about-mueller

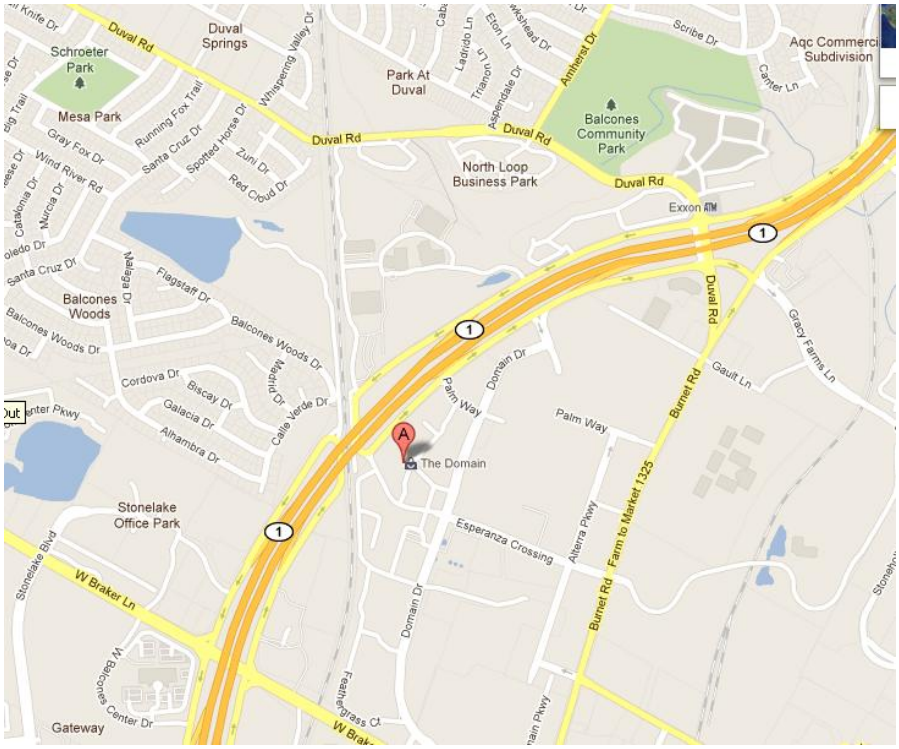
The Triangle is located just north of downtown Austin. Its boundaries include 45th street as its Southern boundary, North Lamar to the west, and Guadalupe to the east. It was developed by Cencor Realty Services with heavy influence by the Hyde Park Neighborhood Association on the design of the development. The development broke ground in 2003 and was completed and began registering tenants in late 2005.[2] The Triangle features a weekly farmers market and 120,000 square feet of retail, commercial, restaurant space, and a jogging trail. The Triangle describes itself as "reshaping the way people live, work and play in the state capital".[3]

Figure 3.2: Map of Triangle Development

[2] See Austin History Center at http://www.lib.utexas.edu/taro/aushc/00207/ahc-00207.html
[3] See Triangle Website at http://www.triangleaustin.com/Austin-TX-apartments.asp

The Domain is located just east of MoPac Expressway, with Burnet Road as its Eastern boundary, and Braker Lane as its Southern boundary. It was built in 2007 by Simon Property Group. The domain is known for its high end shopping and accessibility to the rest of Austin. It claims itself to be "defining the urban Austin lifestyle for the next 100 years".[4]

Figure 3.3: Map of the Domain Development



Limitations to Sites

The research conducted on the new urban developments is limited by the developments themselves. New urban developments are geographically defined by their particular boundaries and are typically designed by developers. This distinguishes it

[4] See Domain website at http://www.thedomainaustin.com

from smart growth, which focuses on municipal policy implementation that affects neighborhoods and communities as a whole. The research sites limit the study because there is no context given for the developments within the neighborhood that surrounds them. This is particularly concerning in regards to the research done on the connectivity and the available transportation options. When analyzing transportation, it is helpful to connect the developments to the outside areas. The rigidly defined sites limit this research by removing the context of the neighboring areas.

Diverse Built Environment (Table 3.1)

Intersection of Transportation Modes

Intersections of transportation modes are indicators of diverse transportation options. An "intersection" is defined as numerous modes of transportation designed to be used in concert with one another. For instance, if one gets off of at a transit stop, walking and biking options should be available. The presence of multiple modes at a single transit stop facilitates public transit. All transit stops at each development will be visually inspected to determine if there are numerous transportation options. The number of transportation modes at each site is recorded. Considering that transit stops on the periphery of each development also serve the development, they will be counted as well. The following transportation modes are classified: bike racks, bike lanes, park-and-ride facilities, and sidewalks. Each development's transportation diversity is described by as the percentage of transit stops that have each mode present.

Walk-ability

The indicator for **walk-ability** of a new urban development will be the average width of sidewalks. Sidewalks in each development will be measured at each transit stop within and on the periphery of the development. The sidewalks to be measured will be selected from each mass transit stop that serve the developments. The width of the sidewalks will then be divided by the number of sidewalks measured to get an average sidewalk width for the entire development. This will then be compared to the average width of sidewalks in Austin, which is 5ft based on City of Austin standard sidewalks. As the Public Works Department for the City of Austin solicits bids for sidewalk construction, 5 feet is the standard for typical projects. Through this comparison, it will be apparent if the development has walk-ability as a priority.

Bike-ability

The presence of dedicated bike-lanes will be the key indicator for **bike-ability**. As planners are designing community transportation networks, they may choose to create safe dedicated bike lanes that only cyclists may use, or they can assume that cyclists can use the same traffic lanes that automobiles. If they choose to do the former, it is apparent that bike- ability was prioritized in the development. Dedicated bike-lanes will be defined as marked lanes that indicate only bicycles are allowed to occupy that lane. The entirety of each development will be looked at for the presence of dedicated bike lanes.

Parking Mechanisms

A new urban development will have **parking mechanisms** that deter parking and, in turn, automobile use in general. A common parking deterrent is the cost. If parking is free, then one will be more inclined to drive to the development. Therefore, the cost of

public parking will be compared to that of public parking throughout Austin. Street parking in Austin is $1.00 per hour and will serve as the dollar amount to compare.[5] This research method will focus solely on street parking costs.

Diverse Zoning

Diverse Zoning indicates that diverse land use and non-automobile transportation is a priority. The presence of zoning designations within these developments that allow for commercial and residential uses near one another or on the same property, will be considered as **Diverse Zoning** designation. Also, if there is a single zoning designation used that allows for multiple commercial uses and residential near one another or on the same property, then the development will be considered to have **Diverse Zoning** designations. Analysis of the City of Austin Geographic Information System (GIS) will be used to determine if this zoning type exists. The zoning layer of the GIS map will be used to identify zoning designations.

Housing Types

Residential zoning designations will be used to indicate diversity of **housing types**. Many exclusionary zoning practices only allow for one type of residence in an area, such as single- family or multi-family, but not both. The development will be examined for the type of residential zoning they have and if it fosters the co-existence of single-family housing and multi-family housing within that designation. This could be achieved through single-family zoning and multi-family zoning being close to one another and intermingled, or there could be one zoning designation that allows for both of these housing types in that zoning designation. The presence of this type of zoning will

[5] See Downtown Austin Alliance Website at http://www.downtownaustin.com/transportation/parking/

be an indicator of the diversity of the residential zoning regulations. Analysis of the City of Austin Geographic Information System (GIS) will be used to determine if this zoning type exists. The zoning layer of the GIS map will be used.

Affordable Housing

Municipalities and developers will often times develop social programs to create more **affordable housing** within a development. Affordable housing fosters diverse housing types because it diversifies the prices of housing within a neighborhood. Document analysis will be used to determine if the development offers any type of social program to create affordable housing in the respective areas. The presence of this will indicate diverse housing types as a priority of the new urban development.

Table 3.1: Operationalization of the Conceptual Framework		
Category 1: Diverse Built Environment		
A. Diverse Transportation Modes	**Data source**	**Measure**
1. Intersection of diverse modes	Field Analysis	Number of modes offered at transit stops
2. Walk-ability	Field Analysis	Average width of sidewalks.
3. Bike-ability	Field Analysis	Do dedicated bike lanes exist?
4. Parking efficiency	Field Analysis	Cost of public parking compared to Austin
B. Diverse Zoning Types		
1. Mixed Use Zoning	Document Analysis	Yes or No?
C. Diverse Housing Types		
1. Diverse residential zoning	Document Analysis	Yes or No?
2. Affordable housing mechanisms	Document Analysis	Yes or No?

Demographic Diversity (Table 3.2)

Ethnicity, Age, and Income

The extent to which new urbanist developments have demographic diversity is also described in this study. U.S. Census information for the city of Austin and the new urban developments will be used to describe the **ethnic, age, and income diversity** of residents at the census-tract level. The City of Austin Demographer generated demographic information from census tract numbers that each development was in. The census tract numbers are 3.03 for Mueller, 18.49 for the Domain, and 2.03 for the Triangle. The demographic characteristics of each new urban neighborhood will be generated into an average. The average of the three developments is then compared to the demographics of Austin as a whole, to describe how diverse new urban developments in Austin are. If there is a greater diversity of ethnicities, age groups, and incomes in the average of these developments, compared to Austin as a whole, new urban developments in Austin will be considered to attract diverse groups of people.

Table 3.2: Operationalization of the Conceptual Framework		
Category 2: Demographic Diversity		
A. Ethnic Diversity	Data source	Measure
1. Hispanic	Document Analysis	Average New Urban Percentage compared to Austin Average
2. Caucasian	Document Analysis	Average New Urban Percentage compared to Austin Average
3. African American	Document Analysis	Average New Urban Percentage compared to Austin Average
B. Income Diversity		
1. Percentage of low income	Document	Average New Urban Percentage

($10,000- $34,999)	Analysis	compared to Austin Average
2. Percentage of middle Income ($35,000- $74,999)	Document Analysis	Average New Urban Percentage compared to Austin Average
3. Percentage of upper Income ($75,000 and up)	Document Analysis	Average New Urban Percentage compared to Austin Average
C. Age Diversity		
1. Young residents (20- 44)	Document Analysis	Average New Urban Percentage compared to Austin Average
2. Middle age residents (45-64)	Document Analysis	Average New Urban Percentage compared to Austin Average
3. Older residents (65 and up)	Document Analysis	Average New Urban Percentage compared to Austin Average

Economic Diversity (Table 3.3)

Business Diversity

All businesses available in the development will be categorized to indicate the **business diversity** of the development as a whole. The different businesses will be categorized as retail, food service, and professional services. The data will then generate a pie chart to get an accurate description of the business diversity in each development.

Social Capital

Social capital is an indicator of a diverse economic environment. While measuring social capital is difficult, publications, events, associations and regularly scheduled meetings will be used to indicate the presents of social capital. These show that the opportunity for communication and connection is present within the community. Document analysis will be used to find publications, scheduled events, associations, and regularly scheduled meetings available to the residences and people employed in the

development. The website for each respective development will have information on these. The three developments will then be compared to an average number of social capital mechanisms of eight other neighborhoods in Austin. These other neighborhoods are Clarksville, Tarrytown, Travis Heights, Bouldin Creek, Onion Creek, Cherrywood, Mesa Park, and Chimney Hills, and compile an average of 3.1 mechanisms. These neighborhoods each represent a different area in Austin to get an accurate idea of the social capital mechanisms available in typical Austin neighborhoods. New urban developments should have a larger number of social capital mechanisms compared with the traditional neighborhoods in Austin.

Unemployment Rate

Low **unemployment rates** will be indicative of diverse employment opportunities. Document analysis of the U.S. Census will be used to find the unemployment rate of these developments. The rate will then be compared to the rate of Austin as a whole. If the rate is lower, then the development will be considered to have a low unemployment rate.

Table 3.3: Operationalization of the Conceptual Framework		
Category 3: Economic Diversity		
A. Diverse Business Types	Data Source	Measure
1. Retail	Field Analysis	Mix within a city block
2. Food Service	Field Analysis	Mix within a city block
3. Grocery Stores	Field Analysis	Mix within a city block
4. Professional Services	Field Analysis	Mix within a city block
B. Social Capital		
1. Associations	Document	Yes or No?

	Analysis	
2. Meetings	Document Analysis	Yes or No?
3. Events	Document Analysis	
4. News Letter/ Publication	Document Analysis	Yes or No?
C. Diverse Job Opportunities		
1. Unemployment rate	Document Analysis	Compared to Austin's Unemployment rate

Chapter 4
Findings

Chapter Purpose

The purpose of this chapter is to show the findings from the document analysis and the field research. The results are categorized by topic. There is a narrative following the tables to thoroughly describe the characteristics of the development.

Diverse Built Environment

Intersection of modes

Development	Total Sites	Bike Racks	Bike Lanes	Parking	Sidewalks
Mueller Development	Bus Stops (7)	100.00%	29.00%	0.00%	100.00%
The Domain	Bus Stops (5) Rail Stops (1)	100.00%	50.00%	17.00%	83.00%
The Triangle	Bus Stops (4)	100.00%	0.00%	100.00%	100.00%

New urbanist developments support different modes of transportation as alternatives to the automobile by making sure that modes intersect and become more useful and convenient. The intersection of modes was determined for each development based on the options at mass transit sites in each development. Each site was analyzed for bike racks, bike lanes, park-and-ride, and sidewalks.

The Mueller development has seven bus stops within the development and on the periphery. The strengths of Mueller were that 100% of the stops had bike racks and sidewalks. This functions as a multi-modal transit stop for cyclists and pedestrians. The negative aspects of Mueller are that there were only buses offered as mass-transit options and that there were no options for park and ride. Based on the lack of mass transit

options and no park-and-ride facilities, makes Muller not ideal for long- distance travelers. Although, this could be explained by the central location of the Mueller Development relative to the urban core (see Appendix A for stop details).

The Domain also has characteristics of multi-modal transit planning. The Domain stands apart from the other developments because it was the only one with a metro rail servicing the development that also offered a park and ride facility, sidewalks, bike lanes, and bike racks. Although this was not a measure used for this research, there was also a bus stop at this facility. This was the most ideal multi-modal transit stop of all the stops researched. However, the Domain did not have stops within the development and the stops occupying the periphery were lacking in sidewalks and bike lanes. Although the Domain could greatly improve transportation options, it is clearly multi-modal. (see Appendix A for stop details).

The Triangle has multiple transportation options. The Triangle stood out from the other developments because of the dedicated park-and-ride facility that was located within the development. The park-and-ride, considering the small size of the development, could potentially service all bus stops that surrounded it. The Triangle also had bike racks and sidewalks at 100% of its stops. However, the Triangle did not have any bike lanes that connected to transit stops and it also had no stops within the development. (see Appendix A for stop details).

Walk-ability

Development	**Sidewalk Width**
Mueller Development	7 feet
The Domain	5.2 feet
The Triangle	5.75 feet
Austin	**5 feet**

As noted in the literature review, sidewalks are important for numerous reasons. Walking encourages a healthier lifestyle, emits zero green house gases, and, most importantly, serves as a connector to other modes of transportation such as mass-transit to cycling. As the City of Austin places bids for traditional sidewalks, the standard width for a sidewalk is 5 ft. Therefore, the average width of sidewalks at each transit stop in the development was compared to the city standard. While all three developments surpassed the 5 ft. benchmark, there is certainly room for improvement.

The Mueller development surpassed all other developments. The sidewalks within the development were significantly wider than typical sidewalks in Austin, averaging at 7 ft., two feet more than the Austin average. Based on the sidewalk widths and the location of the transit stops, the Mueller development is considered "walk-able". The success of the Mueller development is linked to the fact that the transit stops, where the sidewalk measurements were taken, were mostly within the development, not on the periphery. This indicates that new urban characteristics are more strongly valued within the geographical boundaries of the development. The Domain's sidewalks appeared to only be subject to typical Austin sidewalk standards, primarily having 5 foot sidewalks. The Domain had a metro rail station that serviced it with a sidewalk above the Austin average

at 6 feet, making the average sidewalks for the Domain above the 5 foot threshold. The Triangle's sidewalk standards were wider than a typical sidewalk in Austin averaging at almost 6 feet wide. All three developments surpassed the average City of Austin sidewalk standard. For details about the width of each sidewalk measured, see appendix 1.

Bike-ability

Do bike lanes exist?	**YES**	**NO**
Mueller Development	X	
The Domain	X	
The Triangle	X	

Reducing auto dependency is imperative to new urban development (Charter for the New Urbanism, 2001). Bike lanes are an important part of a multi-modal transportation system. They encourage bike use, which decreases auto-dependency. It also offers a more environmentally conscious, healthier, and less costly way to navigate city streets. Dedicated bike lanes are an indicator of bike-ability.

All three developments showed bike-ability is a priority because they had dedicated and marked bike lanes. Therefore, the three developments are described as bike-able. However, the bike lanes do not exceed the City of Austin standard for dedicated bike lanes. The developments could improve bike-ability through making lanes that are not just demarcated with paint, but perhaps a curb or some sort of physical barrier to make a safer path. Safety is a common criticism of simply using paint to demarcate dedicated bike lanes. New urban developments have the opportunity to lead the way in bike-ability through safer, more prominent bike lanes.

Parking Costs

Development	Parking Cost
Mueller Development	Free
The Domain	Free
The Triangle	Free
Austin	$1/ hr

Reducing automobile use is one of the dominant goals of new urban development (Charter of the New Urbanism, 2001). Efficient parking management strategies may greatly reduce the necessity for the automobile and for land dedicated to parking (Litman 2011). One strategy used is to reduce parking availability through raising the cost. Therefore, the street parking costs of each development were compared to the standard street parking cost in Austin, which is $1/ hour. As parking becomes more expensive and less accessible, people will find alternative ways of getting there.

On-street parking is free in all three new urban developments. Free and easily accessible parking indicates parking management strategies that encourage and facilitate car usage. It is apparent that these developments have not utilized parking management strategies to deter automobile usage within the development.

Diverse Commercial Zoning Designations

Development	YES	NO
Mueller Development	X	
The Domain	X	
The Triangle	X	

It is imperative to new urbanism to use zoning designations that encourage diverse and mixed uses. This allows for the community to live, work and recreate in a

confined geographical area, making a car unnecessary (Handy 2002). The zoning designations were found by using the City of Austin GIS map with a zoning layer applied. The findings for the developments were quite interesting because they all used unique zoning mechanisms to achieve mixed uses. As described below, they included PUD's, neighborhood plans, and intergovernmental contracts. Overall, the developments succeeded in providing a mixture of uses, so that residents may work, live, and play in one area.

The Mueller development is entirely zoned as a Planned Unit Development (PUD). A PUD is "a planning tool which allows a developer greater flexibility in site planning and building design. The design "flexibility permits the developer to incorporate amenities in the project that exceed those that could have been achieved under the general provisions of the Zoning Regulations".[6] The Mueller Development has used this flexibility to make diverse land use a priority. The entirety of the development allows for a mix of residential and commercial purposes on the same property . Considering the priority of the PUD, the Mueller Development will be considered to have diverse commercial zoning designations.

The Domain is comprised of North Burnet Gateway (NBG) zoning. This was originally a neighborhood plan, but has since become a unique zoning designation for that area. The goal "is to enhance development design quality and create great places where people can live, work, shop, interact and recreate within walking distance of each activity and transit" [7] Considering the priority of the NBG zoning designation, the Domain will be considered to have diverse zoning designations.

[6] See Mueller website at http://www.muelleraustin.com/the-plan/principals-of-new-urbanism

The Triangle is owned by the State of Texas and is technically Un-Zoned (UNZ). This type of zoning is typical for land owned by the state because they are not subject to municipal zoning restrictions.[7] In order for the Triangle to be developed, there was a contract between the State of Texas and Austin designating the uses for the parcel of land. Despite the lack of zoning designations at The Triangle, as one observes the development, it is apparent that the state allows for mixed uses within the development. There is a mixture of business types and residential throughout the entirety of the development. Therefore, The Triangle is considered to have diverse commercial zoning designations.

Diverse Residential Zoning Designations

Development	**Yes**	**No**
Mueller Development	X	
The Domain	X	
The Triangle		X

The Mueller development's residential zoning fosters a diverse mix of housing types. Below is a portion of the ordinance that describes the residential zoning contained in the Mueller Development:

> "Mixed residential area (MR) means the land use areas identified on Exhibit C (Land Use Plan) as MR-1, MR-2, MR-3, and MR-4. The Mixed Residential land use areas allow a wide diversity of residential building types, including single family, multi-family, as well as sites for office, commercial, civic, and mixed use buildings".[8]

[7] See City of Austin website at http://www.ci.austin.tx.us/planning/neighborhood/north_burnet.htm
[8] See City of Austin Ordinance No. 20090423-87 at http://www.ci.austin.tx.us/edims/document.cfm?id=127877

Based on analysis of this Mueller ordinance, the conditions of the PUD imply that mixed housing options are prioritized in this development. Mueller will be considered to have diverse zoning designations.

The Domain is comprised of North Burnet Gateway (NBG) zoning. The purpose of this zoning designation "is to enhance development design quality and create great places where people can live, work, shop, interact and recreate within walking distance of each activity and transit".[9] Considering the priority of the NBG zoning designation, the Domain will be considered to have diverse residential zoning designations.

The Triangle is owned by the State of Texas and is technically Un-Zoned (UNZ). This type of zoning is typical for land owned by the state because they are not subject to the municipal zoning restrictions. In order for the Triangle to be developed, there was a contract between the State of Texas and Austin designating the uses for the parcel of land. Although, as one observes the residences at The Triangle, there is only rentable, multi-family housing available. There are only rental properties available and no single family housing. Based on these observations, The Triangle will not be considered to have diverse residential zoning designations.

Affordable Housing Mechanisms

Development	**YES**	**NO**
Mueller Development	X	
The Domain		X
The Triangle		X

[9] See City of Austin Website at http://www.ci.austin.tx.us/planning/neighborhood/north_burnet.htm

New urbanists have long held that it is desirable to have at least a small mix of population diversity within neighborhoods (Gans, 1961, Sarkissian, 1976). A common tool used to accomplish this is to subsidize housing costs. This encourages a diverse mix of residences in a single neighborhood, which is beneficial to all classes. To describe whether or not the new urban developments in Austin foster diverse housing options, social programs for housing within those developments were researched. The Mueller development was the only development that had affordable housing mechanisms in place. The Mueller affordable housing program's goal is to subsidize 25% of rental homes, and 25% of homes for sale. This program is funded through the Mueller Foundation that subsidizes homes within the development. Eligibility is based on Median Family Income (MFI). Neither the Domain nor the Triangle had affordable housing programs.

Demographic Diversity (Table 3.2)

Ethnicity

Development	African-American	Hispanic	Caucasian
Mueller Development	2%	16%	70%
The Domain	4%	17%	64%
The Triangle	3%	15%	71%
New Urban Average	3%	16%	69%
Austin	9%	35%	66%

The racial demographics of all three developments mirror one another quite closely, and are compared quite equally to that of Austin as a whole. Austin has an African-American population in the single digits and new urban developments appear to have just a few percent less. New urban developments have quite a bit fewer Hispanics

with only mid-teen percentages and Hispanics comprise more than a third of Austin's population. Finally, the Caucasian population is overwhelmingly dominant in new urban developments, much like the city of Austin as a whole. Considering that most ethnicities were either equal to or less diverse than the City of Austin as a whole, all three developments will be considered to be not racially diverse.

Income

Development	**$10,000- $34,999**	**$35,000- $74,999**	**$75,000 and up**
Mueller Development	27%	23%	42%
The Domain	27%	39%	32%
The Triangle	23%	43%	18%
New Urban Average	26%	35%	30%
Austin	27%	33%	32%

All three developments mirror the City of Austin's income economics quite closely, approximately a third for each income bracket. It appears that the new urban developments in Austin attract the same amount of people in each income bracket. One percentage that does stand out, is Mueller appears to have significantly higher incomes residing there than the Triangle. Based on the fact that the Triangle is strictly rental property, this is not terribly surprising. The Mueller Development has been popular enough that the market price is so high, even the subsidized housing costs are more expensive. Considering that a population cannot get much more diverse than equally split three ways, new urban developments in Austin will be considered to have diverse income populations.

Age

Development	20 - 44	45 – 64	65 and up
Mueller Development	63%	16%	3%
The Domain	82%	11%	1%
The Triangle	86%	5%	1%
New Urban Average	77%	11%	2%
Austin	42%	27%	7%

Based on the high percentage of 20-44 age people, new urban developments are very attractive to a younger population. While this is also true of Austin as a whole, with 42% of Austin's population being in that age bracket, new urban developments are much more extreme. An interesting statistic that stands out is the Triangle having the largest young population at 82%. Some reasons for this could be the fact that only rentals properties are available, where younger people typically need to be more transient. This could also be a result of the close proximity the Triangle has to the young population of The University of Texas. The new urban developments have a very heavy young population with virtually none in the 65 and up bracket. New urban developments in Austin do not have diverse age groups.

Economic Diversity (Table 3.3)

Business Diversity

Development	Types of businesses observed	Total
Mueller Development	Food Service (7), Retail (14), Professional Services (8)	3
The Domain	Food Service (15) Retail (50), Professional Services (3),	3
The Triangle	Food Service (11), Retail (8), Professional Services (12)	3

Diverse business types are when various business types exist in one confined area. This typically occurs when there is diverse zoning designations and efficient mobility. This also occurs when there is a diverse demographic in a community, where there are many different types of people to fill many different types of employment opportunities. Diverse business types are beneficial because it fosters intellectual spillover and business to business commerce. The businesses in the three developments were categorized into different categories to illuminate what mix of businesses there are. All three new urban developments show a mix of business types between food service, retail, and professional services. The Mueller development has the most equal of all types. The Domain appears to be much heavier on retail than food or professional services. The Triangle is predominately professional services and is much less focused on retail and food services.

Social Capital

Development	Social Capital Mechanisms	Total
Mueller Development	Publication, Events, Meetings, Associations	4
The Domain	Events	1
The Triangle	Events, publication	2
Benchmark*		3.1

Social capital is a very difficult and intangible idea to measure. It is also very important to the economic diversity of a community. It acts as a communication and connection mechanism for residences and businesses. "Features of social organization are defined as personal contacts, multi-person networks, and norms of generalized reciprocity and trust that facilitate social cooperation for mutual benefit, or more succinctly as networks of civic engagement" (Putnam 1995, 67). In order to measure this, there were four categories created for potential social capital mechanisms: events,

publications, associations and regular meetings. Eight neighborhoods were analyzed to see what the average amount was for an average Austin neighborhood. An average for the three developments was also generated. The two were then compared. Overall, new urban developments in Austin do not compare to traditional neighborhoods for social capital mechanisms.

Mueller surpassed the average for traditional neighborhoods. It has established a unique property owners' association (POA) that includes homeowners, commercial property owners, and retailers. They have also created an e-news letter that gives monthly updates called livewire. Finally, Mueller has regularly scheduled community events including movie nights and meetings. Mueller is the only development that contains more social capital mechanisms than the other neighborhoods that were used as a benchmark. The Domain hosts events such as a farmers market and the Austin wine festival, but is lacking in meetings, associations, and a regular publication. The Triangle holds events such as a weekly farmers market and has an active blog for the residences and employees, but fails to offer an association and regularly scheduled meetings. New urban developments in Austin have much room to place more value on social capital mechanisms.

Unemployment Rate

Development	Unemployment Rate
Mueller Development	7%
The Domain	5%
The Triangle	16%
Austin	7%

New urbanists feel that "more diversity in metropolitan areas is correlated with lower unemployment and less instability" (Malizia and Ke 1993). As new urban communities continue to create diverse infrastructure and foster diverse demographics, the unemployment rate should decrease. To describe new urban developments, the unemployment rate was collected from census data and then compared to Austin as a whole.

Based on new urban economic status, unemployment should be significantly lower than the City of Austin average. Based on census data, this is not true for new urban developments in Austin. The Muller development has the same unemployment rate as Austin does. The Domain comes in first for the three developments at only 5% unemployment. The Triangle comes in last for unemployment more than doubling the Austin unemployment rate. The student population that the Triangle is comprised of could account for this large unemployment rate. New urban developments, as a whole do not surpass Austin in unemployment rate.

Chapter 5
Conclusions

Chapter Purpose

The purpose of this chapter is to draw general conclusions about the diversity of each development. The general conclusions include both positive aspects that increased the diversity of the new urban developments and also negative aspects that took away from the diversity of a particular development. Secondly, this chapter will suggest ways for the new urban development to improve the diversity. Finally, as is typical with most research projects, it has opened doors for research that may further illuminate the diversity of new urban developments in Austin.

Highlights

The Mueller Development, overall, was successful in achieving diversity, compared to the other two developments. Mueller surpassed the others by offering an affordable housing program and offering numerous social capital mechanisms. Mueller was also the only one that had mass transit stops within the development. As with all new urban developments in Austin, the street parking is free. This is a huge deterrent for alternative modes of transportation within Mueller, crippling the attempt at multi-modal transportation networks.

The Domain displayed diversity in some ways and was lacking in others. The Domain was the only development that had a metro rail stop, facilitating long distance travel. It also had all other modes of transportation available, making it the most diverse as far as transportation modes. The most striking anti-diverse characteristic was the

heavy focus on retail. From the standpoint of this project, it was considered diverse because it had all three types, but retail was many times more dominant than the other two categories.

The Triangle also displayed relatively weak diversity over all. The overwhelming statistics of the triangle in age suggests that the development only attracts a young population. Also, the Triangle was the only development with homogonous housing types, only offering multi-family, rental properties.

Overall positive

In general, all developments had a nice diversity of business types mixed with residential. Despite the fact that they all had unique commercial zoning designations, it is apparent that mixed-use was a strong, if not the first, priority throughout the creation of these developments. Zoning designations are typically thought of as being rigid municipal mechanisms that force development. It is apparent, with the use of public utility districts, neighborhood overlays, and intergovernmental contracts, that zoning designations can be creative, flexible and achieve the goals set out by new urban planners.

Overall Improvements

The most significant improvement would be to implement parking management strategies. There is a plethora of literature that have creative, effective, and easy mechanism to deter parking, and in turn, automobile use. It is apparent that parking management strategies were implemented to foster automobile use and not deter it. All

three developments would greatly benefit from adoptions of parking management strategies.

Suggestions for future research

Diversity is only one of many characteristics of new urbanism. One could put the three new urban developments under the microscope for other characteristics. One that is quite possibly as important as diversity is density. Not only is density as important, but they work in concert with one another. For example, what benefit exists in having three modes of transportation in a development if they are nowhere near one another? A future research project ideal for the new urban developments in Austin would be to describe the density.

A second suggestion for future research is to contextualize new urban developments within their respective neighborhoods. A development or neighborhood will affect, and be affected by, their surroundings. A study that illuminates this relationship may further describe new urban developments in Austin. For example, a study that describes a development's mobility and connectivity to surrounding areas, as opposed to just within the development is recommended.

Appendix A

Transit Type	Stop Location	Bike Rack	Bike Lanes	Dedicated Parking	Side walks
Mueller					
Bus	Philomenia Dr./ James Wheat 37/ 320	X			X
Bus	Mueller Blvd./ Philomenia 37/ 320	X			X
Bus	1714 Aldrich St./ Mueller 37	X			X
Bus	1719 Aldrich St./ Mueller 37	X			X
Bus	Barbara Jordan Blvd./ Lancaster 37/ 320	X	X		X
Bus	Lancaster/ Barbara Jordan Blvd. 320/ 485	X			X
Bus	51st / Cameron 37/ 320	X	X		X
The Domain					
Metro Rail	Kramer	X	X	X	X
Bus	Burnet/ Kramer 320/ 466	X			X
Bus	Burnet/ Braker 240/ 466	X			X
Bus	Braker/ Burnet 3/392	X			
Bus	Braker/ IBM 3/392	X	X		X
Bus	Braker/ Mopac 3/392	X	X		X
The Triangle					
Bus	Guadalupe 1L/ 1M/ 101/ 481	X		X	X
Bus	Guadalupe & 45th 1L/ 1M/ 481	X		X	X
Bus	45th 5/338	X		X	X
Bus	45th & Lane #5	X		X	X

Appendix B

Transit Type	Stop Location	Side Walk Width (in feet)
Mueller		
Bus	Philomenia Dr./ James Wheat 37/ 320	5
Bus	Mueller Blvd./ Philomenia 37/ 320	6
Bus	1714 Aldrich St./ Mueller 37	10
Bus	1719 Aldrich St./ Mueller 37	6
Bus	Barbara Jordan Blvd./ Lancaster 37/ 320	6
Bus	Lancaster/ Barbara Jordan Blvd. 320/ 485	6
Bus	51st / Cameron 37/ 320	10
Average		7
The Domain		
Metro Rail	Kramer	6
Bus	Burnet/ Kramer 320/ 466	5
Bus	Burnet/ Braker 240/ 466	5
Bus	Braker/ Burnet 3/392	5
Bus	Braker/ IBM 3/392	5
Bus	Braker/ Mopac 3/392	N/A
Average		5.2
The Triangle		
Bus	Guadalupe/ Lamar 1L/ 1M/ 101/ 481	8
Bus	Guadalupe/ 45th 1L/ 1M/ 481	5
Bus	45th/ Guadalupe 5/338	5
Bus	45th & Lane 5	5
Average		5.75

Appendix C

Social Capital Mechanisms					
	Associations	Meetings	Events	Publications	Totals
Clarksville	Y	Y	Y	Y	4
Tarrytown	N	N	N	Y	1
Travis Heights	Y	Y	Y	Y	4
Bouldin Creek	Y	N	Y	N	2
Onion Creek	Y	Y	Y	Y	4
Cherrywood	Y	Y	Y	Y	4
Mesa Park	Y	Y	Y	Y	4
Chimney Hills	Y	N	N	Y	2
Averages					**3.1**

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