Has New Urbanism Taken Over City Planning?
A Description of the Use of the Principles of New Urbanism
in Comprehensive Plans

By

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Abstract

From the 1960s through the 1980s, planners, architects, designers, and academics assembled ideas for new developments in response to the suburbanization, increase in private automobile use, and lack of diversity in communities in the decades following World War II. The resulting philosophy, New Urbanism, became the most influential urban design movement to emerge from the latter part of the twentieth century.

The purpose of this research is to describe the use of the principles of New Urbanism in the comprehensive plans of large Texas cities. This study analyzes the content of the comprehensive plans of large Texas cities to describe the extent to which New Urbanism has shaped city planning.

The research found that New Urbanism significantly influences the planning of large Texas cities. Half of the plans (six) studied contain all of the principles of New Urbanism, showing the profound impact made by New Urbanism on the cities' planning doctrine. Only oneLfourth (three) of the plans studied contain less than half of the principles of New Urbanism. Since all three of these plans were adopted prior to the rise of New Urbanism, the prevalence of New Urbanism in the other plans studied suggests that these plans will add principles of New Urbanism in future updates.

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About the Author

David earned his Bachelor of Arts in Humanities in 2011 from the University of Texas at Austin following a career in management in the publishing and printing industry. David joined the Master of Public Administration program in 2012 with a focus on Urban and Environmental Planning to gain the tools to begin a new career in planning in the public sector. David is currently employed in the Air Quality Division of the Texas Commission on Environmental Quality (TCEQ) as a Program Specialist for the Low Income Vehicle Repair, Retrofit, and Accelerated Vehicle Retirement Program (LIRAP). LIRAP provides financial assistance in sixteen participating counties for qualified vehicle owners to repair or replace vehicles that fail a mandatory emissions inspection.

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Chapter 1

Introduction

Suburbanization in the Twentieth Century

While suburban sprawl today may appear to be without rhyme or reason, postLWar suburban development and the resulting sprawl did not happen by accident. The invention and proliferation of the automobile changed perspectives of city life. The horseLdrawn and electric streetcars of the nineteenth century extended the distances that people could live outside the city center, but the automobile enabled freedom of domestic life beyond the city (Cunningham 2005, 112). The most influential modernist architects of their time—Frank Lloyd Wright and Le Corbusier—promoted planning theories that included segregation of land uses, decentralization of cities, and glorification of the automobile as the means to achieve a new and better way of life (Cunningham 2005, 112). However, while Wright's "Broadacre City" and Le Corbusier's "Ville Contemporaine" were wellLconsidered theoretical designs, suburbs and sprawl in the United States resulted largely from inadequate planning (Cunningham 2005, 112).

Causes of Urban Sprawl and Suburbanization

In addition to promotion of decentralization by influential architects like Wright and Le Corbusier, three main factors encouraged suburbanization in the United States. First, a pattern of widespread suburban growth started after local governments began to separate land uses through singleLuse or Euclidian zoning following the 1926 case, *Village of Euclid, Ohio v. Amber Realty Co.* This case upheld the constitutionality of zoning ordinances

(Waugh 2004, 9). After *Euclid*, zoning ordinances allowed governments to designate areas where specific land uses were grouped together yet separated from other uses. Examples of singleLuse zoning designations—often called "Euclidian zoning"—include residential, commercial, industrial, and many others that developed over time (Ellis 2002, 278; Foreman 2009, 3; Talen 2000, 325).

Second, public policy favored promotion and expansion of automobile infrastructure. The Federal Aid Highway Act of 1956 that created the Interstate Highway System, subsidies supporting the production of fossil fuels, subsidies and bailouts for automakers, and farm subsidies for production of grain to be used as fuel enabled proliferation of the automobile. By the beginning of the twentyLfirst century, public funds that enabled the automobileLcentric suburban lifestyle were spread so extensively that transportation researchers estimated that total subsidies to automobile use in the United States ranged from 500 billion to one trillion dollars per year; approximately $1,500 to $3,000 per United States resident (Ellis 2002, 263).

Third, twentieth century suburbs grew due to the migration of African Americans from rural areas in Southern states to cities of the North and Midwest such as New York, Chicago, Detroit, Philadelphia, and Washington, D.C. (Lemann 1991). In response to the influx of African Americans, many Whites engaged in 'white flight' by moving away from cities and into developing suburban areas (Cunningham 2005, 113). Thus, several causes explain the expansion of suburbs and sprawl in the twentieth century.

Dissatisfaction with Suburbanization

Suburbs have not proven to be the ideal places that Wright and Le Corbusier

dreamed. Cunningham (2005, 113) argues that the move to the suburbs was simply an act of exchanging one set of problems for another. People who move to the suburbs seem to have "escaped the mounting 'black scare' of the inner city," but have also "created for their grandchildren a legacy of banality, boredom, cultural homogeneity, and familial/personal dysfunctionality" (Cunningham 2005, 113). Long commutes in ubiquitous traffic jams only add to the dissatisfaction (Cunningham 2005, 113).

Conversely, Forsyth and Crewe (2009, 415) explain that suburban life works well for many people. They disagree with Cunningham and the bandwagon of critics who perceive suburbs as nothing more than ugly, failed places. They write that the suburbs offer their own brand of aesthetic diversity that includes a mix of convenience, quiet, "spaciousness, and a green landscape that is highly attractive" (Forsyth and Crewe 2009, 415). Nonetheless, the suburbs have yielded mixed results. The solution to the problems of the suburbs, for some, is a return to style like the dense, pedestrianLoriented cities before the war through a movement called New Urbanism.

Rise of New Urbanism

From the 1960s through the 1980s, planners, architects, designers, and academics assembled ideas for new developments in response to postLWar suburbs (Plaut and Boarnet 2003, 255; Trudeau and Malloy 2011, 425). Their desire for a new design aesthetic arose in response to the negative effects of singleLuse zoning and overuse of private automobiles, the need for mixed land uses, and the importance of diversity, public spaces, pedestrian activity, and coherent urban form (Talen 2000, 324; Trudeau and Malloy 2011, 424L426). Also important to the development of this new design aesthetic was the compact

urban form of the streetcar suburbs of the early twentieth century. Such form became

known as "neotraditional" and its resulting practice as "neotraditional urbanism" or "New

Urbanism" (Ellis 2002, 261; Foreman 2009, 9; Gallini 2010, 4; Trudeau and Malloy 2011,

425).

New Urbanism is considered the most influential urban design movement to emerge

from the latter part of the twentieth century (Plaut and Boarnet 2003, 255). It is an urban

design philosophy and movement in the United States intended as a solution to sprawl and

associated problems of postLWorld War II suburban development (Plaut and Boarnet 2003,

255; Garde 2006, 33; Trudeau and Malloy 2011, 424). Sprawl is "a pattern of urban and

metropolitan growth that reflects lowLdensity, automobileLdependent, exclusionary new

development on the fringe of settled areas often surrounding a deteriorating city" (Squires

2002, 2). New Urbanism asserts that most of the current problems with urban and

suburban areas in the United States, including sprawl, are due to the development patterns

that arose after World War II (Garde 2006, 33). As a remedy to these issues, New Urbanists

promote infill projects intended to mitigate sprawl, facilitate walking and transit, and

encourage development and growth that are sensitive to the environment and economy,

and promote diversity and social equity (Day 2003, 83; Garde 2006, 35). Furthermore, New

Urbanism claims abstract benefits that include an attractive design aesthetic (Forsyth and

Crewe 2009, 415), a strong sense of community (Brown and Cropper 2001, 402; Garde

2006, 35), placeLmaking (Forsyth and Crewe 2009, 415), and improvement of overall

satisfaction and quality of life (Brown and Cropper 2001, 402; Garde 2006, 33).

In 1993, the Congress for the New Urbanism (CNU) met, codified its standards and

values as the *Charter of the New Urbanism*, and unified its movement for new urban design

standards (Congress for the New Urbanism 2001; Trudeau and Malloy 2011, 426). Yet, as New Urbanism's main proponents were architects and not planners, many in planning criticized it as being simply a design aesthetic. Advocates disagreed, claiming that New Urbanism merges an aesthetic style, urban design practices, and land use policies together to create an ostensibly ideal recipe for development (Trudeau and Malloy 2011, 426). Trudeau and Malloy (2011, 434) explain the depth of New Urbanism by calling it "an intricate combination of designer, developer, and government agendas, as well as the constraints and opportunities afforded by surrounding built and natural environments."

From the beginning, the Congress for the New Urbanism (CNU) intended New Urbanism to become public policy in response to existing structures that encouraged automobileLoriented development and sprawl. *Charter of the New Urbanism* says, "We advocate the restructuring of public policy and development practices to support the following principles…" (Congress for the New Urbanism 2001). When Henry Cisneros, United States Secretary of Housing and Urban Development (HUD) from 1993 to 1997, signed the *Charter of the New Urbanism* in May 1996, the movement gained substantial clout for inclusion in public policy (Garde 2006, 34). Secretary Cisneros and HUD included principles of New Urbanism such as demographic diversity and mixed housing types into HUD's HOPE VI program that improved United States public housing in the 1990s. For example, HOPE VI projects have a mix of public, subsidized, and marketLrate housing units available both for rent and to own (Day 2003, 84; Garde 2006, 34). Additionally, CNU worked directly with HUD to ensure successful inclusion of its principles in HOPE VI (Day 2003, 84). Since Secretary Cisneros signed the *Charter*, many other officials, including former ViceLPresident Al Gore, and organizations, including the American Institute of

Architects, the Institution for Transportation Engineers, and the Smart Growth movement, have shown support and adopted principles and guidelines of New Urbanism (Cunningham 2005, 115; Garde 2006, 34).

A number of redevelopment projects incorporate New Urbanism principles in spite of zoning laws and local codes that favor traditional suburban development (Cunningham 2005, 115; Garde 2006, 33). Some developments genuinely adhere to or even celebrate the principles of New Urbanism, while others perfunctorily incorporate the visual language of New Urbanism simply as window dressing (Brown and Cropper 2001, 402). The preference for traditional suburban development continues alongside the rise of New Urbanism, and the differences between the two blur in a variety of suburban developments with the some of the looks of New Urbanism (Garde 2006, 35; Trudeau and Malloy 2011, 426). Furthermore, critiques of New Urbanism say that the movement is nothing more than a design fetish or aesthetic riff on sprawl, referring to the movement as "New Suburbanism" and "suburbs in disguise" (Trudeau and Malloy 2011, 426L427).

Originally conceived as a reform movement in response to suburban sprawl and development focused on automobileLcentric design, New Urbanism appears to have traversed the gap from design aesthetic to policy initiative by infiltrating plans everywhere. By 2005, New Urbanism made its way into local land development policy (Talen 2005, 217). Many city planners and local governments were enacting regulatory changes to combat the "social and economic segregation and monocultural settlement pattern of most American cities" caused by Euclidian zoning methods (Talen 2005, 214). Many communities had already changed zoning ordinances from singleLuse to mixedLuse, and began considering zones that included "workLplay," "liveLwork," or "playLlive" (Talen 2005,

217). However, New Urbanism has not completely taken over planning and development. Sprawl continues at the same time as city planners and policy makers appear to have embraced New Urbanism as a guiding force in planning. Two decades after CNU first met to author a *Charter* that advocates "the restructuring of public policy and development practices to support" the principles of New Urbanism (Congress for the New Urbanism 2001), it is meaningful to look at the extent to which New Urbanism has been made part of planning for major cities.

New Urbanism in the Comprehensive Plan

New Urbanism has progressed from being a response to suburban sprawl to a movement of its own to changing public policy. HUD embraced New Urbanism in the 1990s and Talen (2005, 214) claims that local governments are enacting the principles of New Urbanism as well. Day (2003, 83) writes, "Through comprehensive urban design and planning, New Urbanism seeks to foster identity, sense of community, and environmental sustainability." For cities to use New Urbanism to address the problems of suburbanization, principles of New Urbanism should be included in their comprehensive plans.

Research Purpose

The purpose of this research is to describe the use of the principles of New Urbanism in the comprehensive plans of large Texas cities. The comprehensive plans of Texas cities are particularly interesting to study for several reasons. First, unlike many states, Texas does not statutorily require comprehensive planning of its governments. Texas's "Wild West" attitude of property owner's rights would not allow it. Second, Texas's

major metropolitan areas are as sprawling and automobileLoriented as just about anywhere. While this research might find otherwise in an analysis of plans, Texas definitely sprawls in practice. Third, Texas's largest city and the fourth largest city in the United States, Houston, has never had a comprehensive plan. Finally, planners alone cannot alone insert New Urbanism into comprehensive planning. The creation of a comprehensive plan involves extensive citizen engagement to capture the planning and development intentions from citizens in the community. Comprehensive plans are ultimately adopted by elected officials. They are not simply the work of planning wonks. Therefore, an analysis of the comprehensive plans of large Texas cities will tell us much about the ways in which a planner's movement, New Urbanism, has worked its way into the laisse faire development language of Texas cities.

Chapter 2

Literature Review

Chapter Purpose

      The purpose of this chapter is to provide a review of the literature that defines the

principles of New Urbanism. A literature review provides an overview of the topic being

researched and positions the topic being researched within the academic space (Shields

and Tajalli 2006, 8). The chapter identifies compact urban form, community character

development, and transportation as foundational themes of New Urbanism. The chapter

then formalizes specific principles that describe New Urbanism.

Conceptual Framework

      A review of literature identified three foundational themes of New Urbanism:

compact urban form, community character development, and transportation. Table 1.1

consists of the conceptual framework that outlines the descriptive categories and the

literature that supports each of these.

Table 1.1 Conceptual Framework	
Descriptive Category	**Scholarly Support**
Compact Urban Form	
• Mixed Use	Calthorpe (1993), Congress for the New Urbanism (2001), Cunningham (2005), Duany, PlaterLZyberk and Speck (2000), Jacobs (1961), Steuteville and Langdon (2003), Talen (2005)
• Mixed Housing Types	Brown and Cropper (2001), Calthorpe (1993), Congress for the New Urbanism (2001), Duany, PlaterL Zyberk and Speck (2000), Langdon (1994), Waugh (2004)

• Increase Density	Brown and Cropper (2001), Calthorpe (1993), Congress for the New Urbanism (2001), Jacobs (1961), Langdon (1994), O'Neill (2002), Waugh (2004)
Community Character Development	
• Demographic Diversity	Brown and Cropper (2001), Congress for the New Urbanism (2001), Cunningham (2005), Day (2003), Fainstein (2005), Sarkissian (1976), Talen (2005)
• Redevelopment & Revitalization	Calthorpe (1993), Congress for the New Urbanism (2001)
• Open & Public Space Provision	Calthorpe (1993), Congress for the New Urbanism (2001), Duany, PlaterLZyberk and Speck (2000), Steuteville and Langdon (2003)
• Traditional Neighborhood Structure	Calthorpe (1993), Congress for the New Urbanism (2001), Cunningham (2005), Duany, PlaterLZyberk and Speck (2000), Gallini (2010), Langdon (1994), Steuteville and Langdon (2003)
Transportation	
• Walkable and Bikeable	Brown and Cropper (2001), Calthorpe (1993), Congress for the New Urbanism (2001), Couch (2011), Cunningham (2005), Duany, PlaterLZyberk and Speck (2000), Handy (2002), Langdon (1994), Litman (2012)
• TransitLorientation	Brown and Cropper (2001), Calthorpe (1993), Congress for the New Urbanism (2001), Duany, PlaterL Zyberk and Speck (2000)
• Connected Street Networks	Cervero, Sarmiento, et al. (2009), Couch (2011), Crane (1996), Cunningham (2005), Duany, PlaterLZyberk and Speck (2000), Handy (2002), Jackson (2003), Jacobs (1961), Langdon (1994), Steuteville and Langdon (2003)
• Decreased Dependency on the Automobile	Brown and Cropper (2001), Calthorpe (1993), Cervero (2002), Cervero, Sarmiento, et al. (2009), Congress for the New Urbanism (2001), Crane (1996), Duany, PlaterLZyberk and Speck (2000), Dunphy and Fisher (1996), Ellis (2002), Handy (2002), Langdon (1994)

The principles of New Urbanism do not lend themselves easily to categorization. While compact urban form and transportation can be operationalized as separate concepts, the principles of New Urbanism do not each exist individually. The principles that inform these concepts integrate and overlap inseparably. For example, compact urban form as an ideal for land use requires density of development and a mixture of uses, but is also defined by pedestrianLfriendly transportation characteristics such as walkability and an interconnected street grid. When trying to describe New Urbanism in a nutshell, scholars often string together sentences that credit density and mixed use with providing a walkable environment in which one can easily access shopping, civic services, and public transit. Likewise, New Urbanism asserts that the combination of mixed housing types and pricing levels, walkability, and nearby access to public transit, all with highLdensity development, offer opportunities for demographic diversity. Thus, the principles of New Urbanism are discussed individually to facilitate presentation of the specific element and the issue or problem the element is intended to address.

Compact Urban Form

Compact urban form is one of the foundational themes of New Urbanism. The *Charter of the New Urbanism* calls for cities, towns, and villages to have an identifiable center and for neighborhoods to be compact (Congress for the New Urbanism 2001). More compact urban form is among the guidelines of Calthorpe's (1993, 41) attempt to "...define a new context and direction for the built environment..." Additionally, Waugh (2004, 15) determines that compact form is significant to New Urbanism. In sum, a mixture of uses, a mixture of housing types, and increased density combine to actualize compact urban form.

Mixed Use

Mixed use is an essential principle of New Urbanism (Calthorpe 1993, 16; Congress for the New Urbanism 2001; Cunningham 2005, 122). New Urbanism is defined by a mixture of land uses and eschews the "segregation of land uses which separate old from young, home from job and store, rich from poor, and owner from renter" (Calthorpe 1993, 27). Duany, et al., note that every residential neighborhood needs at least a corner store to provide residents with access to their daily needs. In conventional suburbs, many of these "destinations of daily life" are next to each other but cannot be accessed directly because of singleLuse zoning (Duany, PlaterLZyberk and Speck 2000, 24). In response to spatial disconnects that result from singleLuse zoning, New Urbanism declares that neighborhoods and districts should mix uses, including a mixture of residential, civic, institutional, cultural, and commercial uses and activities (Congress for the New Urbanism 2001; Duany, PlaterL Zyberk and Speck 2000, 15).

Scholars claim that the principle of mixed use combines with other principles of New Urbanism to improve communities. Jacobs (1961, 35L40) details the desirability of mixed use with her description of the effect of "eyes upon the street." She contends that a combination of residences, stores, and public places with pedestrian activity along sidewalks and streets creates safety through an environment of casual, unconscious mutual policing and surveillance by all those present. Similarly, Talen (2005, 233) writes that mixed use and diversity together create a community "actively supportive of places that comingle people of different races, ethnicities, genders, ages, occupations, and households." Steuteville and Langdon (2003, 1L2 & 1L3) suggest designing mixedLuse communities with

the principles of human scale. Furthermore, mixed use and increased density work together to define the notion of compact urban form.

Therefore, mixed use is a principle of New Urbanism. However, simply finding that a comprehensive plan mentions mixed use does not indicate that the comprehensive plan was informed by New Urbanism. Instead, this research will search for elements that define mixed use as a developmental goal to determine if New Urbanism has influenced the comprehensive plan's inclusion of mixed use.

Mixed Housing Types

Scholars use varying language to describe the principle of mixed housing types as an essential component of the compact urban form of New Urbanism (Waugh 2004, 16). The existence of a mixture of housing types within the community is a goal of New Urbanism. The *Charter of the New Urbanism* calls for "a broad range of housing types and price levels" to create communities diverse in age, race, and income (Congress for the New Urbanism 2001). Langdon (1994, 236) says, "Neighborhoods should contain housing in a mixture of sizes, prices, and types so that a variety of people and households can come together and rely upon one another." A mixture of ownerLoccupied and rentals units together also exemplifies the concept of mixed housing types (Brown and Cropper 2001, 403). Finally, neighborhoods should include live/work units, apartments above stores, shophouses, garage apartments, and granny flats (Duany, PlaterLZyberk and Speck 2000, 50L51). Thus, expansive variety defines the principle of mixed housing types.

New Urbanism advocates mixing housing types as a panacea for the racial and socioL economic segregation that shaped American cities in the twentieth century. To avoid socioL

economic segregation, affordable housing should be distributed throughout the community and should not look different than other housing (Congress for the New Urbanism 2001; Duany, PlaterLZyberk and Speck 2000, 52). Specifically, affordable housing "should not be concentrated in large quantities" as it was throughout the twentieth century in the United States. Instead, it should be scattered among marketLrate housing sparsely "to avoid neighborhood blight and reinforce positive behavior" (Duany, PlaterLZyberk and Speck 2000, 52L53). Finally, affordable housing needs to be near transit to facilitate travel (Calthorpe 1993, 17).

Hence, mixed housing types is a principle and goal of New Urbanism. While New Urbanism cannot be credited for all planning that advocates for a mixture of housing types, the existence of details mentioned above as developmental goals determine if New Urbanism has influenced the comprehensive plan's inclusion of mixed use.

Increase Density

Creation of compact urban form by increasing density is an essential principle of New Urbanism. The *Charter of the New Urbanism* calls for compact neighborhoods, "concentrations," and "appropriate building densities" to assert the principle of increased density (Congress for the New Urbanism 2001). The goals of higher densities in New Urbanism include mixing owners and renters to achieve social inclusiveness, providing the critical mass needed to support commercial enterprises, providing the critical mass needed to support transit and reduce auto dependence, and reducing the land consupmtion made by housing (Brown and Cropper 2001, 403). Although high density is often unjustifiably confused with overcrowding (Jacobs 1961, 205; Waugh 2004, 14), Langdon (1994, 236)

explains that the densely developed, concentrated, and walkable neighborhoods promoted by New Urbanism "will reap advantages unavailable to sparsely populated tracts" because they can incorporate public transit so that residents of all ages and income levels can get around more easily and reduce dependence on automobiles. Specifically, Calthorpe (1993, 83) suggests that seven units per net acre is a minimum density for New Urban developments, compared to four dwelling units or less per acre for conventional suburbs. In order to achieve such densities, communities must have a mix of multifamily and single family housing types (O'Neill 2002, 117).

Thus, New Urbanism suggests that communities increase density as a strategy to achieve the goal of compact urban form. While statistics for density targets or thresholds describe precise levels of density suggested by various theorists, this research does not operationalize densities into statistical levels as part of its model. Instead, this research asks whether increased density, a principle of New Urbanism, is proscribed as a goal or policy in each comprehensive plan being analyzed.

Community Character Development

Community character development is the second foundational theme of New Urbanism. Kunstler emphatically criticizes the devolution of community character as a result of land use strategies in the twientieth century, saying, "Indulging in a fetish of commercialized individualism, we did away with the public realm, and with nothing left but private life in our private homes and private cars, we wonder what happened to the spirit of community" (Kunstler 1993, 273). The *Charter of the New Urbanism* views reversal of the disintegration of cities as "…one interrelated communityLbuilding challenge" to be achieved

with "communities of real neighborhoods" and "reestablishing the relationship between the art of building and the making of community, through citizenLbased participatory planning and design" (Congress for the New Urbanism 2001). Likewise, New Urbanism is about placeLmaking. Langdon romantically describes the placeLmaking of New Urbanism, saying, "Streets should be conceived as outdoor 'public rooms' that people will relish occupying—places pleasingly enclosed by the fronts of the buildings and other agreeable elements…" The character of New Urban houses—augmented by inviting and engaging streetLfacing features like porches, architectural detailing, and landscaping—create the friendly atmosphere of the figurative 'public rooms' (Langdon 1994, 236).

This paper has already mentioned several ways in which principles of New Urbanism propose to contribute to community character development. For example, New Urbanism mixes housing types and puts renters next to homeowners to not only affect urban form, but also to create a stronger "sense of community" (Brown and Cropper 2001, 402, 404). Similarly, New Urbanism posits that more neighborhood activity and more interaction as a result of compact urban form create a greater "sense of community" (Brown and Cropper 2001, 403). While few have studied whether New Urban developments actually create a greater "sense of community," a case study comparing a New Urban subdivision and a Standard Suburban subdivision by Brown and Cropper (2001, 413) found that New Urbanist design elements facilitated meeting and socializing to create "a feeling of membership" even though residents of each type of subdivision reported equal "sense of community." As much as these ideas help to promote positive community character, New Urbanism asserts that demographic diversity, redevolopment

and revitalization, the provision of open space, and traditional neighborhood structure are the principles that work together to produce desirable community character.

Demographic Diversity

Advocating for demographic diversity represents an important goal of New Urbanism (Cunningham 2005, 122; Day 2003, 84). New Urbanism advocates demographic diversity to end segregation by race and income (Day 2003, 84). Additionally, sprawl has a variety of negative effects on its residents, especially women, children, the elderly, the poor, and disabled because conventional suburbs are "optimized for the affluent, single adult" (Waugh 2004, 10). As a cure for segregation and sprawl, the *Charter of the New Urbanism* calls for districts diverse in population, income, race, and age for "strengthening the personal and civic bonds essential to an authentic community" (Congress for the New Urbanism 2001). Sarkissian (1976, 231L232) writes that "social mix" raises the standards of lower classes and improves the functioning of the city. Fainstein (2005, 13) claims that diversity fosters creativity, encourages tolerance, and highlights previously underappreciated lifestyles. Brown and Cropper (2001, 403) say that promotion of social inclusiveness—offering activity options for young and old, car owner and nonLcar owner— is the goal of higher densities. In summary, New Urbanism champions comingling "people of different races, ethnicities, genders, ages, occupations, and households" (Talen 2005, 233).

Therefore, demographic diversity is a principle of New Urbanism. Inclusion of demographic diversity language in a comprehensive plan does not ensure that the demographic diversity aspect of the comprehensive plan was solely informed by New

Urbanism's goal of demographic diversity. Nonetheless, this research will search for elements that define demographic diversity to determine if the goal of demographic diversity as promoted by New Urbanism is included in the comprehensive plan.

Redevelopment and Revitalization

Redevelopment and revitalization together form a fundamental principle of New Urbanism. The *Charter of the New Urbanism* calls for the restoration, revitalization, redevelopment, and reclamation of existing urban areas and downtowns. These strategies aim to preserve and revitalize historic structures, districts, and landscapes (Congress for the New Urbanism 2001). The *Charter* also suggests reinforcement of "safe environments but not at the expense of accessibility and openness" (Congress for the New Urbanism 2001). This can be seen as a condemnation of the gated communities that have become so prevalent in suburban development. In particular, the *Charter* proscribes infill development in existing urban areas instead of suburban expansion (Congress for the New Urbanism 2001). Likewise, Calthorpe (1993, 68) recommends development of underutilized urban parcels with new uses that allow them to function as "walkable, mixedL use districts" (Calthorpe 1993, 68).

Therefore, redevelopment and revitalization strategies form a principle of New Urbanism. This research will seek language within the comprehensive plans being studied that indicates the use of infill, redevelopment, and revitalization strategies in land use planning.

Open and Public Space Provision

New Urbanism considers provision of open, public, and civic spaces an essential strategy for developing and improving communities and their institutions. The *Charter of the New Urbanism* mentions open, public, and civic spaces by various names throughout the document. For example, the *Charter* suggests a range of parks that include totLlots, village greens, ball fields, and community gardens (Congress for the New Urbanism 2001). Additionally, conservation, shared use, and open lands should be used to connect neighborhoods and districts (Congress for the New Urbanism 2001). Such spaces must coexist with the overall design of the community. Calthorpe (1993, 17) says that communities should invest in open space—the commons—and architecture should reinforce the public domain. Streets should accommodate automobiles, but respect the pedestrian and "the form of public space" (Congress for the New Urbanism 2001). Likewise, "streets and squares should be safe, comfortable, and interesting to the pedestrian" (Congress for the New Urbanism 2001). Steuteville and Langdon (2003, 1L2 and 1L3) connect the principle of humanLscale communities to the provision of public spaces saying that corridors create the boundaries, buildings define the public spaces, and civic buildings should be in town squares to reinforce their cultural importance. New Urban developments should set aside unique sites for civic buildings where positioning and distinctive form contribute to their prominence and show that they are different from the rest of the city (Congress for the New Urbanism 2001; Duany, PlaterLZyberk and Speck 2000, 17).

Therefore, the provision and integration of open and public spaces into the cityscape is imperative to New Urbanism. As seen here, conceptions of open and public

space include a variety of names and forms. This research will search for indications that the comprehensive plans being studied include the provision of open and public space that is integrated into development.

Traditional Neighborhood Structure

New Urbanism intends to create an aesthetically pleasing (Gallini 2010, 23), vibrant, and colorful architectural style (Langdon 1994, 166) that is also functional. Furthermore, the principles of New Urbanism go beyond the superficial into the notions of placeLmaking. The narrative of placeLmaking in New Urbanism relies on the use of traditional neighborhood structure in the development of community character (Steuteville and Langdon 2003, 1L2). Traditional neighborhood structure is an alternative to sprawl that accommodates "modern institutions without sacrificing human scale and memorable places" (Calthorpe 1993, 16L17). The principle of traditional neighborhood structure is a collection of nearly all of the other principles. As seen with the other principles, separating one principle from another is difficult. They all play off each other and work together in context to create an active system.

Some planners refer to New Urbanism as "neotraditionalism" to make it more attractive to homebuyers (Duany, PlaterLZyberk and Speck 2000, 254). According to Duany, PlaterLZyberk and Speck (2000, 254L255),

> Neotraditionalism is an apt term to describe the New Urbanism, because the New Urbanism's intention is to advocate what works best: what pattern of development is the most environmentally sensitive, socially responsible, and economically sustainable. As is often the case, what seems to work best is a historic model—the traditional neighborhood—adapted as necessary to serve the needs of modern man.

Accordingly, New Urbanism "revivies ideas and practices that were at the heart of American community building from the 1600s until the Second World War—and largely abandoned during the pellmell expansion of the postwar decades" (Steuteville and Langdon 2003, 1L2).

The traditional neighborhood structure promoted by New Urbanism is guided by graphic urban design codes "that serve as predictable guides for change" (Congress for the New Urbanism 2001). While each local code is different, they contain many standard elements that together define traditional neighborhood structure. The architecture is at human scale (Calthorpe 1993, 17), and in scale and historical context with the street and entire neighborhood (Cunningham 2005, 122; Duany, PlaterLZyberk and Speck 2000, 16L 17). The street scene is pedestrainLfriendly and designed for neighborly interraction with wide sidewalks, shade trees, smaller lot sizes, shallow setbacks, and porches instead of garages on the front of houses (Brown and Cropper 2001, 405; Duany, PlaterLZyberk and Speck 2000, 16). Meanwhile, garages and parking are hidden at the back of buildings (Duany, PlaterLZyberk and Speck 2000, 16L17). Buildings in a wide range of types define public spaces, and address and honor the street (Calthorpe 1993, 64; Duany, PlaterLZyberk and Speck 2000, 49; Steuteville and Langdon 2003, 1L2 & 1L3). Architecture and landscape design are regional, linked to their surroundings, and conservationLminded to "celebrate local history, climate, ecology, and building practice" (Congress for the New Urbanism 2001, 1). Thus, graphic urban design codes provide the framework for the actualization of traditional neighborhood structure.

Thus, New Urbanism includes guidelines and strategies for development that incorporate traditional neighborhood structure. Specific elements that contrast greatly

with the structure and elements of conventional suburbs define the visual vernacular of the

the traditional neighborhood structure of New Urbanism. This research will look for ways

in which the comprehensive plans being studied include the language of New Urbanism's

traditional neighborhood structure.

Transportation

Transportation is the third foundational theme of New Urbanism. As the

proliferation of the automobile enabled the suburban style of development that appeared

during the twentieth century (Langdon 1994, 240), New Urbanism responds to the

sprawling development made possible by the automobile with alternatives that include

"transit, pedestrian, and bicycle systems" focused on "reducing dependence upon the

automobile" (Congress for the New Urbanism 2001).

These alternatives and a wellLconnected network of streets act as an integrated

system (Crane 1996, 53). New Urbanism encourages multiLmodal transportation in which

walking, bicycling, public transit, and decreased dependency on the automobile offer "local

access for all the daily needs of a diverse community" (Calthorpe 1993, 16). By offering

transportation alternatives to the personal automobile, New Urbanism aims to fulfill its

goal to "reduce auto traffic and create affordable neighborhoods" (Calthorpe 1993, 16). As

with several of the other New Urbanist principles defined in this literature review, the

principles related to transportation cooperate to form the complete transportation vision

of New Urbanism.

Walkable and Bikeable

New Urban communities are organized to encourage walking and bicycling to the places of everyday life (Calthorpe 1993, 41; Handy, et al. 2002; Langdon 1994, 14). New Urbanism asserts that neighborhoods should be pedestrianLfriendly with intentional pedestrian and bike systems (Calthorpe 1993, 101). These systems integrate with what Duany, PlaterLZyberk, and Speck (2000, 64L83) call "Prerequisites for Street Life: Meaningful destinations, safe streets, comfortable streets, and interesting streets." Street life helps make communities walkable and bikeable (Duany, PlaterLZyberk and Speck 2000, 64L83).

The founders of CNU agree that pedestrian orientation is essential to New Urbanism (Brown and Cropper 2001, 415). Activities and amenities of daily life, such as schools, parks, stores, and services, should be walking distance from home (Congress for the New Urbanism 2001; Langdon 1994, 236). Calthorpe considers a tenLminute walk the standard for walkability (Duany, PlaterLZyberk and Speck 2000, 199). However, Duany, PlaterL Zyberk, and Speck (2000, 15) recommend placing residences within a fiveLminute walk from daily needs. Community planners equate the fiveLminute walk to a one quarter mile radius called the "pedestrian shed" (Duany, PlaterLZyberk 2000, 198). According to Duany, PlaterLZyberk, and Speck (2000, 199), the center of developments should be one quarter mile from the edge to be walkable. Although the exact distance to be considered for walkability varies depending on the source, the goal of walkability is universal to New Urbanism.

Supporters of New Urbanism claim that walkable and bikeable communities produce a variety of positive results (Cunningham 2005, 114). First, walkability allows

independence for those who do not drive, such as young, elderly, and disabled residents (Congress for the New Urbanism 2001). Second, walking enables and encourages residents to interact with their neighbors and "protect their communities" (Congress for the New Urbanism 2001, 2). Walkable and bikeable neighborhoods exhibit more neighborhood activity and a greater sense of community created by more interaction (Brown and Cropper 2001, 403). Calthorpe (1993, 17) summarizes the importance of the street scene by saying, "Pedestrians are the catalyst which makes the essential qualities of communities meaningful." Third, walking and cycling "encourage transit use, since most transit trips involve walking or cycling links" (Litman 2012). In other words, walking and cycling play "an integral part in a diverse multiLmodal network of transportation options" (Couch 2011, 13). Therefore, New Urbanism emphasizes walkability and bikeability in an effort to achieve specific outcomes in communities.

Thus, planning for walkability and bikeability is a substantial goal of New Urbanism. The comprehensive plans studied in this research will be reviewed for promotion and improvement in making their communities walkable and bikeable.

TransitTorientation

Another necessary ingredient and goal of the transportation vision espoused by New Urbanism is deliberate, planned orientation toward transit. Increased density provides the critical mass necessary to support transit (Brown and Cropper 2001, 403) and pedestrians use walkable, wellLconnected streets to access transit. By putting dense development within walking distance of transit stops, public transit becomes a viable alternative to the automobile (Congress for the New Urbanism 2001). Duany, PlaterL

Zyberk, and Speck (2000, 202L203) contend that for transit to be successful, it must be frequent and predictable, follow a direct and logical route, and transit stops must be safe, dry, and dignified. Together, these details combine to position transit as another component of New Urbanism's transportation vision.

TransitLOriented Development, a concept developed by Peter Calthorpe, is a more specific embodiment of the entirety of New Urbanism (1993, 17). Calthorpe (1993, 56) writes, "A TransitLOriented Development (TOD) is a mixedLuse community within an average 2,000Lfoot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot, or car" (Calthorpe 1993, 56). Calthorpe's "comfortable walking distance" of 2,000Lfeet or approximately ten minutes links development to transit.

This research looks at the principles of New Urbanism and asserts that development that is oriented to transit is one of those principles. The operationlization of transit orientation requires that the comprehensive plan specifically explains that a development policy or goal is future development oriented to transit.

Connected Street Networks

A connected network of streets is an essential strategy for the transportation vision of New Urbanism. The street network "plays an integral part in a diverse multiLmodal network of transportation options" (Couch 2011, 13). According to Langdon (1994, 123L 124), "connection" summarizes New Urbanism, because increased density, mixed use, diversity, and open and public spaces all aim to connect people, places, and activities.

Cunningham (2005, 122) describes an easily navigated street pattern. Steuteville and Langdon (2003, 1L2 & 1L3) insist that a heirarchy of streets consisting of boulevards, narrow lanes, and alleys combine to make the ideal street network.

As with other principles of New Urbanism, the emphasis on wellLconnected streets responds to the shortcomings of conventional developments. First, conventional developments consist of long, curvy streets and culLdeLsacs intended to be scenic, but instead "limit connectivity and make smaller lots awkward to build on" (Duany, PlaterL Zyberk and Speck 2000, 34). Jackson (2003, 1382) found that conventional street planning impacts health negatively. Second, streets "connect frequently and extensively to one another" in New Urbanism (Langdon 1994, 124), partly because wellLconnected streets and short blocks encourage walking and biking (Handy, et al. 2002). Short blocks are better than the long blocks of the suburbs because they offer more opportunities to turn corners, which improves walkability and reduces social isolation (Jacobs 1961, 178L179). Short blocks also facilitate pedestrian trips by shortening them, increase community legibility (Crane 1996, 53), and make exploring the community enticing and interesting (Langdon 1994, 125). Furthermore, a wellLconnected street network reduces trip distance, offers alternative routes, and slow vehicle speeds, ultimately benefitting for all users, including pedestrians, bicyclists, and motorists (Cervero, Sarmiento, et al. 2009; Langdon 1994, 236).

Therefore, New Urbanism advocates a wellLconnected network of streets instead of the long, curvy "drives" and "lanes" of conventional suburbs. Operationalization of this concept may appear difficult, however this research will look for evidence of the notions explained above to determine whether or not each comprehensive plan includes New Urbanism's principle of connected street networks.

Decreased Dependency on the Automobile

Walkability and bikeability, transitLorientation, and a wellLconnected grid of streets combine in New Urbanism to enable and encourage decreased dependency on the automobile. Likewise, decreasing dependency on the automobile is a strategy used by New Urbanism to realize its overall transportation goal. While a decreased dependency on the automobile might seem to simply be the result of the improvement of other transportation modes, it is actually a fully developed strategy and principle of New Urbanism.

AutoLfocused society and development rank high among the ills that New Urbanism attempts to cure. Duany, PlaterLZyberk, and Speck (2000, 60L61) write, "The average American, when placed behind the wheel of a car, ceases to be a citizen and becomes instead a *motorist.*" According to Brown and Cropper (2001, 404), the separations caused by conventional development "reinforce social distinctions and create the ecological and financial costs of automobile dependence." New Urbanism professes that decreased dependency on the car relieves financial and emotional stresses of car ownership and driving, thereby allowing a lower cost of living (Langdon 1994, 236).

Based on the principles of New Urbanism presented thus far, one might conclude that New Urbanism intends to eliminate cars. The goal, however, is not to eliminate the car, but to balance its use with other transportation options (Calthorpe 1993, 17). Indeed, New Urbanism was conceived as an alternative to "prevailing patterns of lowLdensity, autoL dependent land development" (Ellis 2002, 261). However, New Urbanism does not propose to do away with personal automobiles. Instead, the *Charter of the New Urbanism* includes automobiles as part of the strategic transportation picture, saying, "communities should be designed for the pedestrian and transit as well as the car" (Congress for the New Urbanism

2001). Furthermore, the *Charter* insists that development accommodate automobiles, but reduce the number and length of automobile trips as well as reduce overall dependence on the automobile (Congress for the New Urbanism 2001).

New Urbanism emphasizes transportation options—alternatives to the automobile—with the goal of reducing the use of automobiles (Crane 1996, 53). Scholars have tested the effects of several principles of New Urbanism on transportation use and travel patterns. For example, Cervero (2002, 268) found that many factors influence mode choice, but that landLuse matters. Neotraditional neighborhoods averaged higher rates of walk trips than conventional, autoLoriented neighborhoods (Cervero 2002, 268). Higher density and mixed land use favored transit riding and accounted for reduced driveLalone automobile travel (Cervero 2002, 280). Doubling residential density can result in a 25 to 30 percent decrease in the number of vehicle miles traveled (Dunphy and Fisher 1996, 89). In sum, density and mixed use influence travel demand (Cervero, et al. 2009, 223).

Thus, New Urbanism actively and deliberately encourages decreasing dependency on the automobile as a strategy to achieve its transportation goals. In order to show that decreasing dependency on the automobile has been indicated in the comprehensive plans being studied in this research, more evidence than increased emphasis on other travel modes will need to be observed. The plans studied will need to show a specific planning goal that intends to decrease automobile use.

Chapter 3

Methodology

Chapter Purpose

The purpose of the methodology chapter is to explain the methods for determining how much the principles of New Urbanism have been integrated into the planning doctrine for large Texas cities. This chapter operationalizes the three categories of the descriptive conceptual frameworks into variables and specific indicators that will be used to measure the presence of New Urbanist principles in the comprehensive plans of large Texas cities.

Research Method

The purpose of this research is to describe the use of the principles of New Urbanism in the comprehensive plans of large Texas cities. This study uses content analysis to determine which principles appear in the comprehensive plans of large Texas cities. Content analysis was chosen as the research method for this study because it is effective for answering the "what" questions of social research and is well suited to the study of communications (Babbie 2013, 331). According to Earl Babbie (2013, 330), "Content analysis is the study of recorded human communications." This method of research involves the examination of social artifacts, such as books, websites, paintings, and laws (Babbie 2013, 330, 356).

Strengths and Weaknesses of Content Analysis

Content analysis contains strengths and weaknesses, just as other research methods. According to Babbie, "the greatest advantage of content analysis is its economy in terms of both time and money" (Babbie 2013, 341). Researchers do not face financial or time constraints by using content analysis in descriptive research. Second, content analysis allows for the correction of mistakes made during the experiment or survey. When mistakes are made, it is only necessary to recode the errant data rather than all of the data (Babbie 2007, 330). Likewise, content analysis "strengthens the likelihood of reliability" because researchers can code the data repeatedly without any change in the content that they are coding. Third, Babbie states that content analysis "permits the study of processes occurring over a long time" (Babbie 2007, 330). Finally, content analysis is an unobtrusive process that rarely affects the subject being studied (Babbie 2013, 342). Hence, the comprehensive plans themselves will not be affected by the research method used in this project.

However, there are also disadvantages to content analysis. For example, the process is "limited to the examination of recorded communications" (Babbie 2013, 342). Also, reliability can also be a problem in content analysis. The data must be recorded and interpreted consistently for the measure to be reliable and valid. While most of the principles being coded are straightforward and clear, reliability between coding done by different researchers could be an issue. In an effort to overcome this weakness, a sample of the comprehensive plans will be coded by another person to improve the validity of the coding sheet as a method of measurement (Anderson 2003, 37).

Data Source

The unit of analysis for this study is the comprehensive plan of a large city in Texas. For this study, a large city is one with a population greater than 200,000. Based on this definition of a large city and the 2010 United States Census, there are thirteen large cities in Texas.

A population containing the aggregation of all Texas cities with populations greater than 200,000 was selected rather than a random sample in order to develop a complete understanding of the incorporation of the principles of New Urbanism in the comprehensive plans of all large Texas cities. Houston does not have a comprehensive plan. Plans for the remaining twelve cities were downloaded in Adobe Acrobat PDF format from city websites.

Table 2 lists relevant population and ranking information about the cities for which comprehensive plans were studied.

Table 2: Texas cities with 2010 population greater than 200,000 in descending order			
Texas Rank	**City**	**2010 Population**	**U.S. Rank**
1	Houston	2,099,451	4
2	San Antonio	1,327,407	7
3	Dallas	1,197,816	9
4	Austin	790,390	13
5	Fort Worth	741,206	16
6	El Paso	649,121	19
7	Arlington	365,438	50
8	Corpus Christi	305,215	60
9	Plano	259,841	70
10	Laredo	236,091	80
11	Lubbock	229,573	83
12	Garland	226,876	86
13	Irving	216,290	93

Manifest and Latent Content

A code sheet for content analysis was used to show whether each descriptive category is present in the analyzed comprehensive plans. Coding consists of both manifest and latent content. Manifest content is the "visible, surface content" and "concrete terms" in the documents being studied (Babbie 2013, 336). According to Babbie (2103, 336), manifest content has the advantage of ease and reliability in coding. This research relies on the coding of manifest content to determine the presence or absence of the specified principles in the documents being examined.

The alternative to manifest content is latent content. Latent content is the "underlying meaning" in the documents being studied (Babbie 2013, 336). Babbie contends that the best solution is to use both manifest and latent content methods (Babbie 2013, 336).

Operationalization of the Conceptual Framework

Tables 3.1, 3.2, and 3.3 show how the conceptual framework is operationalized to connect the descriptive categories and principles of New Urbanism to the data collected using content analysis. For each category, the New Urbanist principle must link to a planning goal in the comprehensive plan. This link—from the principle to an explicit goal—shows that the principle of New Urbanism is present in the comprehensive plan being studied.

Compact Urban Form (Table 3.1)

Mixed Use

Mixed use is an important principle of New Urbanism, however it is not completely unique to New Urbanism. Mere mention of "mixed use" does not indicate that the comprehensive plan was informed by New Urbanism. The presence of "mixed use" or "mixedLuse" in conjunction with development or within the language of land use planning in the comprehensive plan will indicate that New Urbanism's principle of mixed use is part of the comprehensive plan.

Mixed Housing Types

Varying planning language describes the principle of mixed housing types as a principle of New Urbanism. Indicators of the inclusion of this principle include a mixture of sizes, prices, "affordable housing," ownerLoccupied and rental, live/work units, apartments above stores, shophouses, garage apartments, and granny flats. Finding evidence of mixed housing types in the comprehensive plans will require both manifest and latent content methods to determine whether the documents portray the underlying meaning of housing mix. What may seem like a complex explanation with such diverse language is actually quite simple: Does the comprehensive plan speak of mixing housing prices, sizes, styles, and/or types? The existence of these details within the comprehensive plans studied will indicate the presence of this principle of New Urbanism.

Increase Density

Compact urban form requires increasing density. Language that speaks to this principle includes "densely developed" and "concentrated." Simply referring to urban goals or urbanization does not explicitly indicate a plan to increase density. While statistics for density targets or thresholds describe precise levels of density suggested by various theorists, this research does not operationalize densities into statistical levels as part of its model. Instead, this research asks whether increased density, compactness, or concentration is proscribed in each comprehensive plan being analyzed. The existence of these details within the comprehensive plans studied will indicate the presence of this principle of New Urbanism.

Table 3.1: Operationalization of the Conceptual Framework	
Category 1: Compact Urban Form	
Principle of New Urbanism	**Measure**
Mixed Use	Search the document for "mixed use" or "mixedLuse." Look for language that talks about goals or priorities for future land use or development to be mixed use.
Mixed Housing Types	Search for "housing type" and "housing diversity." If neither of these provide results. Search for simply "housing" and "diversity" separately. With each search, look for language that refers to mixes of different types or kinds of housing in a given area. If the plan includes goals or policies toward a mix or diversity of housing types, then this principle is present.
Increase Density	Search for "density" and "compact." If the plan includes goals or policies toward increased density or development becoming more compact, then this principle is present.

Community Character Development (Table 3.2)

Demographic Diversity

The *Charter of the New Urbanism* calls for districts diverse in population, income, race, and age. Some academics refer to such diversity as social mix and social inclusiveness, but its essence is a mixture of people of different races, ethnicities, genders, ages, occupations, and households. Indication of demographic diversity as a planning goal in the comprehensive plans beings studied is an indication of the presence of this New Urbanist principle in the area of demographic diversity.

Redevelopment and Revitalization

Redevelopment and revitalization as planning goals can be indicated by a wide variety of names. Some examples include preservation, restoration, revitalization, redevelopment, and reclamation. Beyond notions of simple redevelopment or revitalization, New Urbanism promotes infill development and development of underutilized parcels in existing urban areas. The research will look for indication of planning for infill development or redevelopment within the city to indicate existence of this principle of New Urbanism.

Open and Public Space Provision

Provision for open, public, and civic spaces is not a new concept. Traditional suburban development includes parks, ball fields, trails, community gardens, and open lands. What sets New Urbanism apart in its principle of open and public space is that the spaces are intentional and integrated into the community. These spaces are used to connect

neighborhoods and districts. Streets, squares, and pedestrian spaces take the form of public

space rather than leftover space required to fulfill a zoning law. Steuteville and Langdon

(2003, 1L2 and 1L3) write that corridors create the boundaries, buildings define the public

spaces, and civic buildings should be in town squares to reinforce their cultural

importance. New Urban developments set aside unique sites for civic buildings where

positioning and distinctive form contribute to their prominence. This research will seek

specific indication of provision for intentional open and public spaces that are integrated

into the community through planning to show existence of this principle of New Urbanism.

Traditional Neighborhood Structure

The notion of traditional neighborhood structure goes beyond the superficial into

the notions of placeLmaking and the development of community character. Additionally,

planners often refer to New Urbanism as "neotraditionalism." The traditional

neighborhood structure promoted by New Urbanism is guided by graphic urban design

codes "that serve as predictable guides for change" (Congress for the New Urbanism 2001).

These graphic urban design codes, sometimes called "formLbased code," provide the

framework for the actualization of traditional neighborhood structure. This research will

look for ways in which the comprehensive plans being studied include the language of New

Urbanism's traditional neighborhood structure, neotraditionalism, or formLbased code to

confirm the presence of this principle of New Urbanism.

Table 3.2: Operationalization of the Conceptual Framework	
Category 2: Community Character Development	
Principle of New Urbanism	**Measure**
Demographic Diversity	Search for "diversity" and look for language that speaks of ethnic, racial, income, and/or age diversity. To show evidence that this principle is present, the plan must state that some kind of diversity of residents is a goal. Simply saying that the area is becoming diverse on its own is not an indication of planning for diversity.
Redevelopment & Revitalization	Search for "infill" and "redevelopment." If the plan includes goals or policies that encourage infill development or urban redevelopment, then this principle is present.
Open and Public Space Provision	Search for "open space," "public space," or "civic space." Look for a goal or policy toward incorporating open, public, and/or civic space into land use design. This is not the same as setting aside greenbelt space on the edges. Instead, this principle insists that these spaces exist within the development. If the plan includes such goals or policies, then this principle is present.
Traditional Neighborhood Structure	Search for "New Urbanism," "neotraditional," or "formLbased code." If any of those are present in the search, then this principle is present in the plan. If the search yields no matches, search for "traditional" where it refers to a development goal or policy where "traditional" is the kind of development that existed prior to postLWar suburbs.

Transportation (Table 3.3)

Walkable and Bikeable

Planning for walkability and bikeability is a substantial goal of New Urbanism. The comprehensive plans studied in this research will be reviewed for promotion and improvement in making their communities walkable and bikeable.

TransitTorientation

New Urbanism espouses deliberate, planned orientation toward transit. Development is done within walking distance of transit stops or transit is fully integrated into the plan. This research looks at the principles of New Urbanism and asserts that development that is oriented to transit is one of those principles. The operationlization of transit orientation requires that the comprehensive plan specifically explains that a development policy or goal is future development oriented to transit.

Connected Street Networks

The connected network of streets, easily navigated street pattern, and desirable heirarchy of wellLconnected streets advocated by New Urbanism responds to and rejects the shortcomings of long, curvy, disconnected streets and culLdeLsacs of conventional suburban developments. Operationalization of this concept may appear difficult, however this research will look for evidence of the notions explained above to determine whether or not each comprehensive plan includes New Urbanism's principle of connected street networks.

Decreased Dependency on the Automobile

While decreased dependency on the automobile might seem to simply be the result of the improvement of other transportation modes, it is a fully developed strategy and principle of New Urbanism. New Urbanism actively supports decreasing dependency on the automobile as a strategy to achieve its transportation goals. In order to show that decreasing dependency on the automobile has been indicated in the comprehensive plans being studied in this research, more evidence than increased emphasis on other travel modes will need to be observed. The plans studied will need to show specific planning goals or wording that describing a future with decreased automobile use.

Table 3.3: Operationalization of the Conceptual Framework	
Category 3: Transportation	
Principle of New Urbanism	**Measure**
Walkable and Bikeable	The plan must address both walkability and bikeability for this principle to be considered present in the plan. Search for "walkable" and "walking" to find language about development that encourages walking or is walkable. Search for "bikeable," "bike," and "bicycling" to find language about development that encourages bicycling.
TransitLorientation	Search for "transit" to find language about transitLoriented development or transit villages as methods of development.
Connected Street Networks	Search the document for the following terms: "Connected street," "connected streets," "connect frequently," "wellL connected," or "short blocks." If any of these are present in the plan, read the context to look for language that confirms that a connected street network is a goal of the plan. Examples of language that confirms this includes but is not limited to laid out in a wellLconnected manner with short blocks,

	numerous corners, and a design that enables interaction.
Decreased Dependency on the Automobile	Search for "auto" and "car" to find language about decreased dependency on the automobile, transportation that is less autoL centric, or a goal to develop in ways that allow a lifestyle free of cars. This is different from walkability and bikeability because this principle specifies a goal of actually decreasing automobile dependence. If the plan includes goals or policies specifically toward decreasing dependency on auto use, then this principle is present.

Coding Scheme and Evaluation Criteria

The coding instrument used in this study can be found in Appendix A. Each city's comprehensive plan was reviewed using content analysis. All cities in the defined population of Texas cities with 2010 population greater than 200,000 were evaluated, including cities that do not have a comprehensive plan.

For comprehensive plans in Adobe Acrobat PDF format, the "find" feature in Adobe Acrobat Reader facilitated searching for the applicable criteria measured. Each match was examined for applicability. For comprehensive plans in Adobe Acrobat PDF format with text that cannot be searched automatically, the full document was visually observed to detect the presence of each criterion measured. It is important to bear in mind that the absence of an observation does not prove the absence of a phenomenon, merely that the means prescribed to observe it was not sufficient to detect it.

Cities without Comprehensive Plans

Those cities without a comprehensive plan were coded as "no" (coded 0) for all measures. Discussion of the influence of cities without a comprehensive plan on the statistical analysis of this research is addressed in the Findings chapter.

Findings

Chapter Purpose

The purpose of this chapter is to show the findings of the content analysis. The findings are categorized from general to specific. The narrative thoroughly describes themes and trends shown by the data collected.

Table 4: Comprehensive Plan Content Analysis

Principle	Houston	San Antonio	Dallas	Austin	Fort Worth	El Paso	Arlington	Corpus Christi	Plano	Laredo	Lubbock	Garland	Irving	Number of Cities with Principle in the Plan	% of Cities with the Principle in the Plan
Mixed Use		X	X	X	X	X		X	X		X	X	X	10	83%
Mixed Housing Types		X	X	X	X	X			X			X	X	8	67%
Increased Density		X	X	X	X	X			X			X	X	8	67%
Demographic Diversity			X	X	X	X			X			X	X	7	58%
Redevelopment & Revitalization		X	X	X	X	X	X	X	X	X	X	X	X	12	100%
Open & Public Space Provision		X	X	X	X	X	X	X	X	X	X	X	X	12	100%
Traditional Neighborhood Structure		X	X	X	X	X			X	X		X	X	9	75%
Walkable & Bikeable		X	X	X	X	X		X	X			X	X	9	75%
TransitYorientation		X	X	X	X	X			X			X	X	8	67%
Connected Street Networks		X	X	X	X	X			X			X	X	8	67%
Decreased Dependency on the Automobile			X	X	X	X	X	X	X		X		X	9	75%
Number of Principles in the Plan	0	9	11	11	11	11	3	5	11	3	4	10	11		
Percentage of All Principles in the Plan	0%	82%	100%	100%	100%	100%	27%	45%	100%	27%	36%	91%	100%		

Table 4 shows the complete set of data collected by determining which of the eleven principles of New Urbanism appear in the comprehensive plans of the thirteen largest cities in Texas.

Houston, the largest city in Texas, has never had a comprehensive plan. According to the research methods for this project, Houston is scored as zero for all principles and is included in the statistics to show a complete view of all cities in Texas with populations larger than 200,000.

Of the thirteen comprehensive plans analyzed, six contain all eleven principles of New Urbanism. The comprehensive plans for two cities—Garland and San Antonio—contained ten and nine of the principles respectively. Eight of the thirteen plans studied contained nine or more of the principles of New Urbanism. For these eight cities—Dallas, Austin, Fort Worth, El Paso, Plano, and Irving, Garland, and San Antonio, New Urbanism is a driving force in planning. For example, the Urban Design Element in Dallas's comprehensive plan, *forward!Dallas*, is New Urbanism in a nutshell. This section comprised of descriptions, goals, and policies sets the implementation of New Urbanism in motion for Dallas (City of Dallas 2006). Similarly, nine pages of Austin's plan, *ImagineAustin*, read as though they were taken directly from New Urbanism literature. They enthusiastically promote all of the principles and promises of New Urbanism (City of Austin 2012, 126L 134). Finally, El Paso's comprehensive plan, *Plan El Paso*, goes so far as to include the complete *Charter of the New Urbanism* in one of its appendices (City of El Paso 2012, E.2) Plan El Paso also includes a "Community Design Manual" of its formLbased code. At 751 pages, *Plan El Paso* is the longest of all of the comprehensive plans analyzed for this project. While the comprehensive plans of six cities contain all eleven principles of New Urbanism,

El Paso's extensive plan is likely to be considered the ultimate New Urbanist comprehensive plan.

Two principles—redevelopment and revitalization and open and public space provision—appear in all of the comprehensive plans actually analyzed. The next most common principle, mixed use, appears in ten of the plans. The two plans in which mixed use does not appear—Arlington and Laredo—contain the fewest principles of New Urbanism. As explained earlier, the principles of New Urbanism overlap and work in concert with one another. Mixed Use is an especially essential principle of New Urbanism as the mixing of land uses enables the functions of other principles by increasing density, improving walkability, and theoretically decreasing dependency on the automobile by reducing the need for cars. The exclusion of mixed use alone from the plans of Arlington and Laredo shows that New Urbanism does not influence their plans. Of the eleven principles of New Urbanism described in Table 4, only one principle, demographic diversity, appears in fewer than eight of the plans.

Table 4.1: Compact Urban Form

Principle	Houston	San Antonio	Dallas	Austin	Fort Worth	El Paso	Arlington	Corpus Christi	Plano	Laredo	Lubbock	Garland	Irving	Number of Cities with Principle in the Plan	% of Cities with the Principle in the Plan
Mixed Use		X	X	X	X	X		X	X		X	X	X	10	77%
Mixed Housing Types		X	X	X	X	X			X			X	X	8	62%
Increased Density		X	X	X	X	X			X			X	X	8	62%
Number of Principles in the Plan	0	3	3	3	3	3	0	1	3	0	1	3	3		
Percentage of Compact Urban Form Principles in the Plan	0%	100%	100%	100%	100%	100%	0%	33%	100%	0%	33%	100%	100%		

Support for the category of compact urban form appears in all of the plans except Arlington, Corpus Christi, Laredo, and Lubbock. The plans of Corpus Christi and Lubbock both include the principle of mixed use, whereas Arlington and Laredo do not encourage a compact city at all.

Laredo's plan follows the Euclidian zoning model (City of Laredo 1991) by separating residential, commercial, and industrial areas. Mixed use developments are listed once in the plan as an option, but mixed use development is neither a goal nor a principle of the plan. The plan refers to lowL, mediumL, and highLdensity residential areas as completely separate designations. The descriptions of these various densities does not refer to increasing density overall in the future as a goal, principle, or priority. Arlington's plan prioritizes road and traffic planning for its numerous freeways, highways, and major thoroughfares. Like Laredo, its residential, commercial, and industrial areas are zoned separately in a Euclidian fashion (City of Arlington 1992).

Table 4.2: Community Character Development

Principle	Houston	San Antonio	Dallas	Austin	Fort Worth	El Paso	Arlington	Corpus Christi	Plano	Laredo	Lubbock	Garland	Irving	Number of Cities with Principle in the Plan	% of Cities with the Principle in the Plan
Demographic Diversity			X	X	X	X			X			X	X	7	54%
Redevelopment & Revitaliation		X	X	X	X	X	X	X	X	X	X	X	X	12	92%
Open & Public Space Provision		X	X	X	X	X	X	X	X	X	X	X	X	12	92%
Traditional Neighborhood Structure		X	X	X	X	X			X	X		X	X	9	69%
Number of Principles in the Plan	0	3	4	4	4	4	2	2	4	3	2	4	4		
Percentage of Community Character Development Principles in the Plan	0%	75%	100%	100%	100%	100%	50%	50%	100%	75%	50%	100%	100%		

Of the three categories described in this research, the principles that make up community character development are represented the most. For the four principles that comprise community character development, an average of ten comprehensive plans contain each principle. Only Houston, which does not have a comprehensive plan, lacked all of the principles in this category. It is worth noting that Arlington, Corpus Christi, and Lubbock all include only redevelopment and revitalization and open and public space provision in their comprehensive plans. Neither of these principles is unique to New Urbanism. They were part of city planning for decades before the rise of New Urbanism (Ellis 2002, 271).

Table 4.3: Transportation

Principle	Houston	San Antonio	Dallas	Austin	Fort Worth	El Paso	Arlington	Corpus Christi	Plano	Laredo	Lubbock	Garland	Irving	Number of Cities with Principle in the Plan	% of Cities with the Principle in the Plan
Walkable & Bikeable		X	X	X	X	X		X	X			X	X	9	69%
TransitKorientation		X	X	X	X	X			X			X	X	8	62%
Connected Street Networks		X	X	X	X	X			X			X	X	8	62%
Decreased Dependency on the Automobile			X	X	X	X	X	X	X		X		X	9	69%
Number of Principles in the Plan	0	3	4	4	4	4	1	2	4	0	1	3	4		
Percentage of Transportation Principles in the Plan	0%	75%	100%	100%	100%	100%	25%	50%	100%	0%	25%	75%	100%		

The transportation category shows the fewest commonalities of the three categories. While the plans of Dallas, Austin, Fort Worth, El Paso, Plano, and Irving contain all four principles in this category, the combinations of principles present in the remaining cities' plans are not as simple as they were in the other two categories. Laredo is the only city with none of these principles in its plan. Laredo's plan includes planning for sidewalks, bike paths, and trails, but walkability and bikeability are never expressed as goals. Walkability is particularly absent. Laredo's plan makes allowances for sidewalks, but does not address the goal or principle of making places more accessible or connected for pedestrians through the use of these sidewalks. Instead, Laredo plans for connecting arterials, freeways, and expressways for better automobile traffic flow (City of Laredo 1991).

One of the more interesting results for the project is the presence of decreased dependency on the automobile as the only transportation principle present in the plans of Arlington and Lubbock. Lubbock's plan suggests traffic education and improving public

transportation as ways to decrease automobile dependency (City of Lubbock 1986, 25L27).

Reducing the amount of car travel by improving other modes of travel is one of Arlington's

three stated transportation goals (City of Arlington 1992, VII).

Chapter 5

Conclusions

Chapter Purpose

The purpose of this chapter is to draw general conclusions about the presence of New Urbanism in the planning doctrine of large Texas cities. Additionally, this chapter will acknowledge limitations of this research and suggest potential areas for future research.

General Conclusions

Six of the thirteen plans studied contain all eleven principles of New Urbanism. Excluding Houston from the total count, half (six out of twelve) of the plans of large Texas cities contain all eleven principles of New Urbanism. With a full generation of planning graduates indoctrinated in the principles that define New Urbanism and staffing local planning departments, city plans are replete with these eleven principles. Furthermore, eight of the plans studied contain nine or more of the principles of New Urbanism. New Urbanism is an influential movement in the planning policies of large Texas cities.

The Evangelists

El Paso believes so strongly in New Urbanism that it went to the extreme of including the entire text of the *Charter of the New Urbanism* in its appendices. Additionally, the "Community Design Manual" within *Plan El Paso*, comprised of Neighborhood Design Standards, General Architectural Standards, and Architectural Style of El Paso, consists of 66 pages detailing the principles of New Urbanism and images of the desirable forms to be

used for future development and redevelopment. Captions "appropriate" and "not appropriate" as well as "do" and "don't" with big red X's overlaid on images of undesirable designs make up the General Architectural Standards section of the "Manual." Plan El Paso is truly comprehensive in its emphasis on New Urbanism (City of El Paso 2012).

Austin's *ImagineAustin* plan does not go to the extreme of *Plan El Paso* as it neither includes the *Charter* nor dozens of pages of formLbased code. Instead, all of its more than 200 pages overflow with New Urbanism. In particular, its "Land Use and Transportation" building block includes nine consecutive pages of sections entitled "MixedLUse," "Compact Places," "Complete Streets," and "PeopleLFriendly Places." Like the first few pages of *Plan El Paso's* "Community Design Manual," this nineLpage section could easily stand alone to serve as an introduction to New Urbanism.

The Future of New Urbanism in Texas Cities

While the plans of El Paso, Austin, and several others show total faith in New Urbanism as a panacea from sprawl, not all of the plans studied show such devotion. One possible explanation for the lack of New Urbanism principles in the three plans with the lowest scores—Arlington, Laredo, and Lubbock—is that they are also the oldest plans. As explained earlier, the ideas that grew into New Urbanism developed from the 1960s through the 1980s before coming together as a cohesive movement of common values in 1993 with the Congress for the New Urbanism's *Charter of the New Urbanism.* Additionally, influential texts like Calthorpe's *The Next American Metropolis: Ecology, Community, and the American Dream* which formally introduced the idea of transitLoriented development (Calthorpe 1993) and Duany, PlaterLZyberk, and Speck's *Suburban Nation: The Rise of*

Sprawl and the Decline of the American Dream (Duany, PlaterLZyberk and Speck, 2000)

which presented New Urbanism to the masses were published in 1993 and 2000

respectively. While planners had been developing the principles of New Urbanism for

several decades, the comprehensive plans of these three cities were adopted prior to the

publication of the texts that began to popularize the movement. The lack of the principles

of New Urbanism in these older plans and its overwhelming presence in the most recently

adopted plans reaffirms that the principles of New Urbanism have grown to become

commonplace in city planning.

Table 5: Year Comprehensive Plan was Adopted		
Texas Rank	**City**	**Year Adopted**
1	Houston	NA
2	San Antonio	1997
3	Dallas	2006
4	Austin	2012
5	Fort Worth	2012
6	El Paso	2012
7	Arlington	1992
8	Corpus Christi	2010*
9	Plano	2012*
10	Laredo	1991
11	Lubbock	1986
12	Garland	2012
13	Irving	2008

* The comprehensive plans of Corpus Christi and Plano are a series of documents adopted over time. The date shown here is the date that the most recent document was adopted.

Furthermore, a lack of the principles of New Urbanism in a city's current plan does

not mean that subsequent iterations will not eventually contain them. This research shows

that New Urbanism influences recentlyLadopted comprehensive plans in large Texas cities.

For instance, although Arlington's current plan, adopted in 1992, lacks most of the

principles of New Urbanism, the plan is currently undergoing an extensive community engagement process to update its plan for the twentyLfirst century. Based on this research, one can expect that Arlington's plan will include a healthy portion of New Urbanism.

Although the principles of New Urbanism appear throughout the more recent plans, the focus of planning is already changing. New Urbanism is a movement in a series of movements that overlap and build upon one another to define the arc of the planning profession. From New Urbanism, Smart Growth arose in the late 1990s and was followed immediately by Sustainable Development or Sustainability, the current dominant growth management policy in the United States (Chapin 2012, 7). As many cities have latched onto Sustainable Development, political opposition from the right has formed due to Sustainable Development's connection to the United Nations' Agenda 21. Thus, while we can expect that new comprehensive plans from Arlington, Laredo, and Lubbock will include more principles of New Urbanism, a switch to the politicallyLcontroversial Sustainable Development as the dominant planning movement might hinder adoption of these principles in more conservative cities.

The Most Common and Least Common Principles

Redevelopment and revitalization and open and public space provision not only appear in the largest number of plans studied, but they appear in all of the plans that were analyzed. The ubiquity of both principles is no surprise as both have long been universal considerations for cities. Every city addresses and will continue to address redevelopment and revitalization in its planning doctrine because the natural cycle of life within cities includes development and growth, degradation, and redevelopment and revitalization.

Likewise, the long and pervasive history of open and public space, such the plaza, town square, commons, park, and village green, demonstrates that provision of such spaces has always been a principle in land use. Thus, while the movement may be called "New" Urbanism, some of its principles are not new at all.

Of all of the principles of New Urbanism described in this project, demographic diversity appears in the fewest plans. "Diversity" proved to be a misleading word when searching for demographic diversity in the content analysis. For example, in *Plan El Paso*, diversity appears in a wide variety of contexts, such as biodiversity, species diversity, diversity of housing types, retail diversity, diversity of farmland, diversity of mobility options, diversity of uses, and diversity of housing products. Some of these terms, like diversity of housing types, actually indicate a different principle of New Urbanism. Others, like retail diversity and diversity of mobility options, are logical additions to city planning documents, but they have no connection to the principle of New Urbanism.

While demographic diversity's appearance in only seven plans is still a majority of the plans analyzed, its position as the least common principle provides opportunity for further analysis. The principle appears in only the six plans that contain all eleven principles and the one plan that contains ten. In other words, demographic diversity appears only in the plans that have fully embraced New Urbanism. The plans that do not appear to be influenced by New Urbanism also do not plan for or prioritize demographic diversity. As with the most common principles mentioned above, a lack of emphasis on planning for demographic diversity in cities comes as little surprise. Texas cities were segregated geographically by race for almost a century until racial discrimination and segregation in real estate were federally prohibited in the 1960s. Desegregation has proven

a much harder task than segregation was in the first place. Theories for how to desegregate cities abound, the city ultimately cannot demand that people pack up their homes and move to achieve a social goal. Diversity has to happen because people see a reason to move. New Urbanism attempts to create a draw to its type of development as a byproduct of mixedLuse, mixed housing type, and increased density.

Suggestions for Future Research

In the comprehensive plans of the largest cities in Texas, New Urbanism is a guiding force but not unanimous. For those cities and plans that appear to be largely uninfluenced by New Urbanism, what is the explanation? Is this omission simply due to the age of the plans or is there some political, regulatory, or economic force keeping these cities from embracing New Urbanism?

A second suggestion for future research is to compare central cities like Dallas, Fort Worth, San Antonio, Austin, and El Paso with suburbs like Irving, Plano, and Garland to see if there are differences in the ways that they incorporate New Urbanism into their planning policies. Such research should dig deeper into the details that define each principle of New Urbanism, or possibly compare the cities for the details of only one key principle. For example, as "walkability" is a popular term in planning circles nowadays, how do the plans and policies that these cities are using to achieve walkability compare?

Appendix A: Coding Sheet

Coding Sheet for ARP Serrins   City: _____

Principle	Search for	Contextual description needed	Page where found
Mixed Use	mixed use, mixed;use	Language about goals or priorities for future land use or development to be mixed use.	
Mixed Housing Types	housing type, housing diversity, housing, diversity	Language that refers to mixes of different types or kinds of housing in a given area. If the plan includes goals or policies toward a mix or diversity of housing types, then this principle is present.	
Increased Density	density, compact	If the plan includes goals or policies toward increased density or development becoming more compact, then this principle is present.	
Demographic Diversity	diversity	Language about ethnic, racial, income, and/or age diversity. To show evidence that this principle is present, the plan must state that some kind of diversity of residents is a goal. Simply saying that the area is becoming diverse on its own is not an indication of planning for diversity.	
Redevelopment & Revitalization	infill, redevelopment	If the plan includes goals or policies that encourage infill development or urban redevelopment, then this principle is present.	
Open & Public Space Provision	open space, public space, civic space	Look for a goal or policy that incorporates open, public, and/or civic space into land use design. This is not the same as setting aside greenbelt space on the edges. Instead, this principle insists that these spaces exist within the development. If the plan includes such goals or policies, then this principle is present.	
Traditional Neighborhood Structure	New Urbanism, neotraditional, form; based code	If any of those search terms are present in the search, then this principle is present in the plan. If the search yields no matches for those terms, search for "traditional" where it refers to a development goal or policy where "traditional" is the kind of development that existed prior to post; War suburbs.	
Walkable and Bikeable	walkable, walking, bikeable, bike, bicycling	The plan must address both walkability and bikeability for this principle to be considered present in the plan. Search for "walkable" and "walking" to find language about development that encourages walking or is walkable. Search for "bikeable," "bike," and "bicycling" to find language about development that encourages bicycling.	
Transit;orientation	transit	Language about transit;oriented development or transit villages as methods of development.	
Connected Street Networks	connected street, connected streets, connect frequently, well; connected, well connected, short blocks	Language that confirms that a connected street network is a goal of the plan.	
Decreased Dependency on the Automobile	auto, car	Language about decreased dependency on the automobile, transportation that is less auto;centric, or a goal to develop in ways that allow a lifestyle free of cars. This is different from walkability and bikeability because this principle specifies a goal of actually decreasing automobile dependence.	

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