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## **Mixed-Use Development in Reno, NV, and the Resulting Effect on Quality of Life**

Shannon Robert Manning

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**Mixed-Use Development in Reno, NV, and the Resulting Affect on Quality of Life**

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EMPA 396-12/27/08

**Abstract**

*The goal of this research project was to identify how the newly designated Mixed-Use zoning change in the Reno South Virginia Transit Oriented Development, North Section, would affect quality of life for the people whom reside there. Through several sources of secondary data collection, key informant interviews, and convenience sampling with a structured questionnaire, I will make every attempt to present an unbiased, and in-depth view of the history of Mixed-Use, the advantages and disadvantages to this zoning type, the government process at the local, county, state, and federal level to initiate this zoning change, and provide solutions to enhance the Quality of Life for those within Mixed-Use and Transit Oriented Development corridors.*

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## Introduction

### *Overview*

It is the object of administrative study to discover, first, what government can properly and successfully do, and, secondly, how it can do these proper things with the utmost possible efficiency and at the least possible cost either of money or of energy. On both these points there is obviously much need of light among us; and only careful study can supply that light. (Wilson, p.1)

A thorough analysis of quality of life in the framework of Mixed-Use (MU) zoned neighborhoods, the process the local government utilized to implement this zoning change, the methodology of my research, findings, and recommendations to improve quality of life for MU residents in the SVTOD will be examined (See Fig. 1.1-1.2 below for SVTOD corridor boundaries). It can be *assumed* that a majority of Reno residents reside in the following types of zoning: 1) Single Family Residential (SF), 2) Urban Residential, 3) Mixed Residential, 4) Tourist Commercial and, 5) Special Planning Area. Within these zoning types a multitude of housing densities exist. For example, SF residential consists of predominantly suburban and rural homes; these carry monotype zoning, meaning only one family can occupy the residence. However, when you look at Urban residential, a variety of housing units could occupy these parcels to include Multi-Family (MF), Planned Unit Developments (PUD), and Professional Office (PO). MU zoning falls under the Special Planning area zoning, which includes Planned Unit Development, a Specific Plan District such as the SVTOD, and Open Space, see Table 1.1 below for further clarification including density units (du) per acre and lot size classifications.

Based on preliminary data prior to this research and common knowledge of zoning my *hypothesis* encompasses the following: Those individuals and families, who reside in MU urban environments, enjoy a higher quality of life than those in non-MU urban environments. The independent and dependent variables consist of the following:

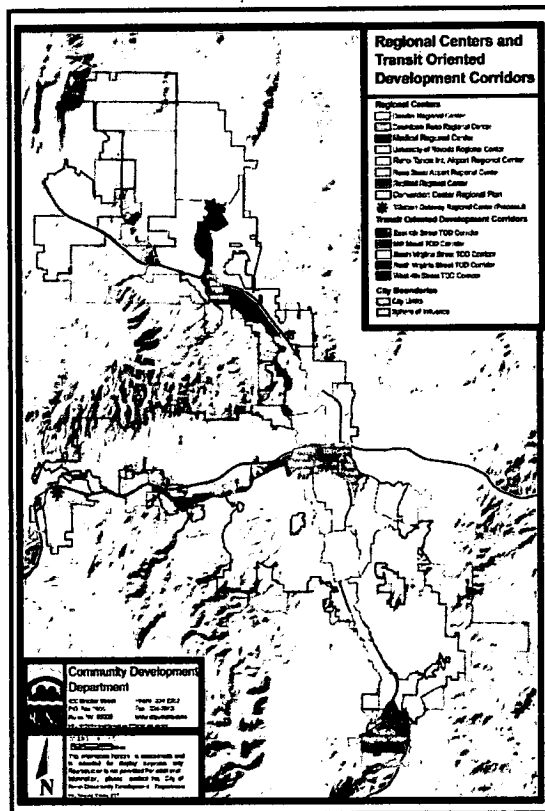
- Independent Variable: Those individuals and families who reside in MU urban environments
- Dependent Variable: Quality of life for those in non-MU urban environments

**Table 1.1: City of Reno, Land Use Designations and Conforming Zoning Districts**

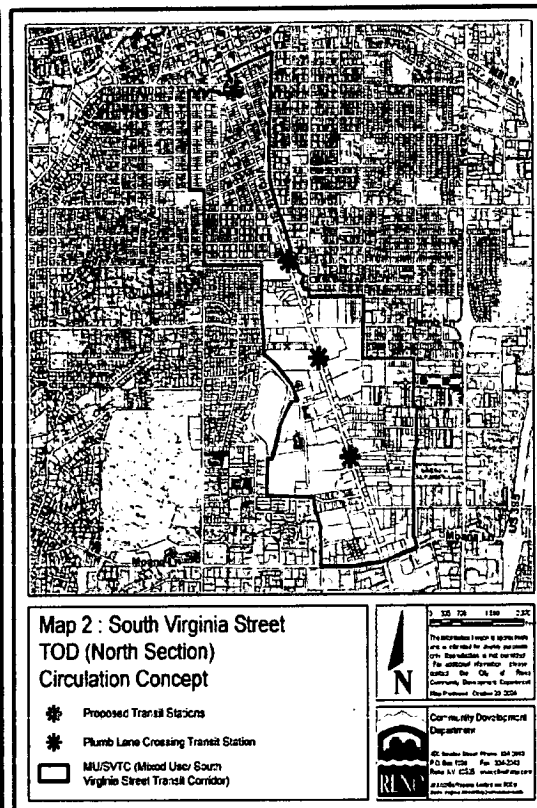
|                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single Family Residential (≥1 acre/du (Density Units) to 3 du/acre) | Large Lot Residential - 2.5 acres, Large Lot Residential - 1 acre, Large Lot Residential - .5 acre, Single Family Residential - 15,000 square feet, Planned Unit Development <sup>2</sup> , Specific Plan District <sup>2</sup> , Public Facility <sup>3</sup> , Open Space                                                                                                                                                                                          |
| Mixed Residential (3-21 du/acre and some commercial uses)           | Single Family Residential - 15,000 square feet, Single Family Residential - 9,000 square feet, Single Family Residential - 6,000 square feet, Single Family Residential - 4,000 square feet, Multi-Family - 14 d.u./ac, Multi-Family - 21 d.u./ac, Professional Office, General Office <sup>2</sup> , Neighborhood Commercial <sup>2</sup> , Planned Unit Development <sup>2</sup> , Specific Plan District <sup>2</sup> , Public Facility <sup>3</sup> , Open Space |
| Urban Residential/Commercial                                        | Multi-Family - 21 d.u./ac, Multi-Family - 30 d.u./ac, High Density Multi-Family, Professional Office, General Office, Neighborhood Commercial, Arterial Commercial <sup>2</sup> , Community Commercial <sup>2</sup> , Planned Unit Development <sup>2</sup> , Specific Plan District <sup>2</sup> , Public Facility <sup>3</sup> , Open Space                                                                                                                        |
| Tourist Commercial                                                  | Multi-Family - 21 d.u./ac, Multi-Family - 30 d.u./ac, High Density Multi-Family, Professional Office, General Office, Neighborhood Commercial, Arterial Commercial, Community Commercial, Central Business, Hotel/Casino <sup>2</sup> , Hotel/Casino Downtown <sup>2</sup> , Planned Unit Development <sup>2</sup> , Specific Plan District <sup>2</sup> , Public Facility <sup>3</sup> , Open Space                                                                 |
| Industrial                                                          | General Office, Industrial, Industrial Commercial, Industrial Business, Airport Operations <sup>2</sup> , Planned Unit Development <sup>2</sup> , Specific Plan District <sup>2</sup> , Public Facility <sup>3</sup> , Open Space                                                                                                                                                                                                                                    |
| Parks/Recreation/Open Space                                         | Public Facility, Open Space                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Public Facility                                                     | Public Facility, Airport Operations, Open Space                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Special Planning Area                                               | Planned Unit Development, Specific Plan District, Open Space, <u>Mixed Use</u>                                                                                                                                                                                                                                                                                                                                                                                       |
| Unincorporated Transition                                           | Unincorporated Transition - 40 ac, Unincorporated Transition - 10 ac, Unincorporated Transition - 5 ac, Public Facility, Open Space                                                                                                                                                                                                                                                                                                                                  |

The SVTOD is depicted below in orange (Northern most orange section), the Reno SVTOD on Figure 1.1, and a blown up view of the SVTOD is depicted in Figure 1.2, below.

### Figure 1.1: Master Plan Summary



**Figure 1.2: SVTOD Area of Interest**



**The City of Reno twenty-year master plan, which spells out the details of the SVTOD, is a result of collaborative planning from regional agencies and local city municipalities.**

**This study will produce an extensive, unbiased list of dimensions that affect the residents within the Reno SVTOD, North Section, and how the MU zoning change will affect social, health, economic, and environmental characteristics within the SVTOD. The subjectivity of this data cannot be overlooked; however, through studious, and thorough analysis of both secondary and primary data collection the resulting findings and recommendations for improvement will stem from a neutral position.**

*Methodology*

A conglomerate of information was utilized to gather both primary and secondary data for analysis and interpretation. Primary data was collected through a questionnaire that contained 11 questions (Appendix A). The questions were structured and dichotomous in nature, with 7 of the 11 questions centered on Quality of Life (QOL) dimensions, while the remaining questions focused on demographics and the respondent's current zoning at their primary residence. In all, 21 questionnaires were returned via email, drop-off, and convenience sampling. The questionnaires came from Reno Neighborhood Advisory Board (NAB) members, one City of Reno employee, several residences within the SVTOD, and various co-workers who lived in Reno's Sphere of Influence (SOI). Also among the primary data was two key informant interviews, one from Peter Gower a Senior Planner at TMRPA, and the other from the Director of Community Development for the City of Reno, John Hester. Both key informant interviews shed light on the local, regional, and state governmental process involving the zoning change along with the challenges associated with Reno's growth, and the twenty-year master plan. A majority of secondary data collection was gathered through online research via Proquest, Lexus Nexus, and Google databases. A number of advantages and disadvantages of MU zoned properties were identified along with key factors to success of these types of developments, which emphasize pedestrian and public transportation. Through primary and secondary data interpretation of quality of life, and the dimensions surrounding this subjective analysis, an attempt at an unbiased interpretation was realized.

## Literature Review

### *Quality of Life*

According to the Global Development Research Center (GDRC), quality of life consists of three domains: being, belonging, and becoming. These domains will be utilized as a measuring mechanism to measure one's quality of life. These attributes can vary from one person and one family to another. Also, quality of life encompasses an abundance of attributes all of which play a small but adjoining role in computing and understanding one's quality of life or sense of being. A quote from gdrc.org explains QOL, "QOL reflects the difference, the gap, between the hopes and expectations of a person and their present experience." The domains and their associated sub-domains are outlined in Table 1.2.

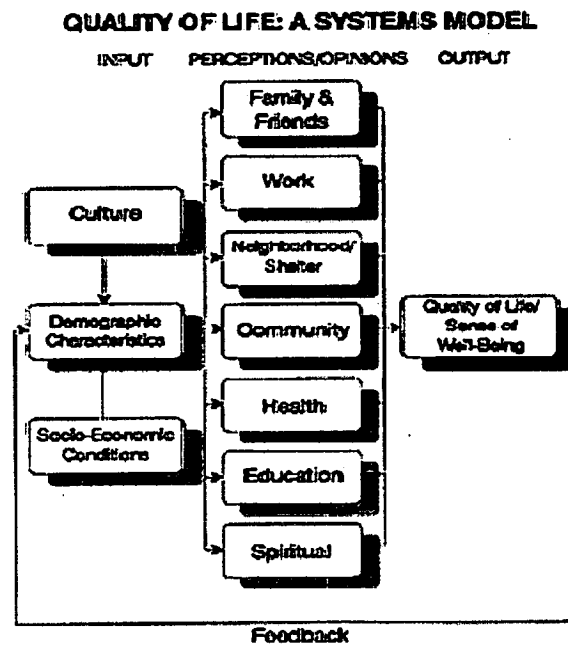
**Table 1.2:** Three Domains of Quality, from gdrc.org

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The <b>Being</b> domain includes the basic aspects of "who one is" and has three sub-domains. <b>Physical Being</b> includes aspects of physical health, personal hygiene, nutrition, exercise, grooming, clothing, and physical appearance. <b>Psychological Being</b> includes the person's psychological health and adjustment, cognitions, feelings, and evaluations concerning the self, and self-control. <b>Spiritual Being</b> reflects personal values, personal standards of conduct, and spiritual beliefs which may or may not be associated with organized religions.</p> | <p><b>Belonging</b> includes the person's fit with his/her environments and also has three sub-domains. <b>Physical Belonging</b> is defined as the connections the person has with his/her physical environments such as home, workplace, neighborhood, school and community. <b>Social Belonging</b> includes links with social environments and includes the sense of acceptance by intimate others, family, friends, co-workers, and neighborhood and community. <b>Community Belonging</b> represents access to resources normally available to community members, such as adequate income, health and social services, employment, educational and recreational programs, and community activities.</p> | <p><b>Becoming</b> refers to the purposeful activities carried out to achieve personal goals, hopes, and wishes. <b>Practical Becoming</b> describes day-to-day actions such as domestic activities, paid work, school or volunteer activities, and seeing to health or social needs. <b>Leisure Becoming</b> includes activities that promote relaxation and stress reduction. These include card games, neighborhood walks, and family visits, or longer duration activities such as vacations or holidays. <b>Growth Becoming</b> activities promote the improvement or maintenance of knowledge and skills.</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



The three domains along with their associated sub-domains define QOL in terms of this research. For the purpose of this study, if one has more access, easier access, and can frequent these domains and sub-domains on a regular basis they would have a better QOL compared to an individual or family that is separated from a majority of the QOL domains. The process of QOL can be further explained in Fig. 2.3.

**Figure 2.3: Quality of Life-A Process**



-The University of Oklahoma School of Social Work

Now that we've framed what QOL consists of, the measurement of QOL is just as important. Measurement of quality of life can be accomplished through surveys and other data collection methods which make up the Quality of Life Index (QOLI). The following was extrapolated from [gdrc.org](http://gdrc.org): "The purpose of a QOLI is to provide a tool for community development which can be used to monitor key indicators that encompass the social, health, environmental and economic dimensions of the quality of life in the

community.” The QOLI can be used to comment frequently on key issues that affect people and contribute to the public debate about how to improve the quality of life in the community. It is intended to monitor conditions which affect the living and working conditions of people and focus community action on ways to improve health indicators for the QOLI, which include the following from gdrc.org:

- SOCIAL: Children in care of Children’s Aid Societies; social assistance beneficiaries; public housing waiting lists etc.
- HEALTH: Low birth weight babies; elderly waiting for placement in long term care facilities; suicide rates etc.
- ECONOMIC: Number of people unemployed; number of people working; bankruptcies etc.
- ENVIRONMENTAL: Hours of moderate/poor air quality; environmental spills; tonnes diverted from landfill to blue boxes etc.

These dimensions of quality of life may vary from one city to the next, but can be manipulated to be more relevant to the current geographic and demographic composition of cities across the country including Reno.

In summary, there are three life domains, and several sub-domains all of which combined, define quality of life in a highly subjective fashion. Lastly, quality of life should not be confused with standard of living, which is a measure of the quantity and quality of goods available to people. Standard of living measurement can be accomplished through measuring cars/1000, GDP, life expectancy rates, population/dwelling, the percentage of GDP spent on education, and health care to name

a few. In short, Mixed-Use zoning and its affects on quality of life are difficult to measure both objectively and subjectively, but through primary and secondary data analysis and collection, I will frame its' affects on Reno residents in the South Virginia Transit-Oriented Development.

### *History of Mixed-Use*

Mixed-Use housing and development has been the foundation of American cities since the early 17<sup>th</sup>. Prior to World War II, much of town planning and development, including housing construction, incorporated a mix of uses in relatively close proximity to one another" (Tombari, p. 2). Examples include accessory dwelling units, where MF, SF, and MU resident types were all within walking distance, or within the walkshed (within one mile), of essential needs such as retail, public transportation, health, emergency, and human services. Automobile ownership was more of a luxury at the time and required this type of housing mix. However, the advent of the automobile has changed the fundamental design of city frameworks and infrastructure. "It was not until after World War II that a movement toward complete segregation of land uses dominated the new American urban landscape" (Tomabari, 2007, p. 2). Zoning changes required greater and greater distances between housing units, monotype zoning became the norm where sections of cities would be devoted to a single zoning type, and the disparity between the good side of the railroad tracks became more distinct. With that change, smart growth urban planners, architects, and community development leaders have come forward over the past several years to question the sustainability of the urban sprawl and growing suburbs. With urban sprawl came infrastructure, increased pollution, automobile

dependency, a lack of affordable housing, and tax revenue declines in city centers. Businesses shutdown to move to suburbia, and a fundamental shift in how Americans live took place. So, are we better off, or worse living in MU, Transit Oriented Development (TOD) urban center cores, or in a "cookie cutter" cluster of homes, several miles away from downtown centers? The drive now amongst urban planners, architects, and community development leaders has been to incorporate public transportation around MU, and diverse housing types. This would effectively provide a mix of affordable housing, retail and commercial, public services, healthcare, and schools all within close proximity to each other and within TOD corridors, which emphasize alternative modes of transportation and are within close proximity of public transit if designed correctly. With these TODs citizens can leave their car at home, walk to the transit station from their MU residence, get on a public transit bus or light-rail, and move from one regional center to the next where a large hub of activity occurs. TOD implementation coordinates with some of the HUD strategic objectives for growing cities as well.

Transit-oriented development is increasingly recognized as having the potential to improve the quality of life for American households, by creating vibrant, livable communities in proximity to transit. Improved access to transit can reduce transportation costs for working families and mitigate the negative impacts of automobile travel on the environment and the economy. The need for a mix of housing types that is affordable to a range of family incomes in proximity to transit is an important policy concern at all levels of government, including the federal government. Through its policies and investments, the federal government can help shape opportunities at the regional and local level to meet the growing demand for affordable housing near transit. (huduser.org)

The City of Reno has incorporated eight Regional Centers, and five TOD corridors, and will likely receive bus-rapid-transit funding. However, an attempt to receive funding for light rail to connect the downtown center to other activity and regional centers, which

would be a 15-20 mile rail system and cost close to \$250 million dollars, would be an added benefit to those within the Reno SOI, and promote future development of the SVTOD and Regional Centers. With MU developments receiving a sizeable amount of attention among planners and those within the construction industry what's so bad about the alternative and why the shift from Suburbia back to the city core?

*The Alternative: Suburbia, Exurban, and Planned Unit Development*

The mass production of the automobile gave new impetus to suburbanization in the early decades of the 20<sup>th</sup> century, allowing commuters to live yet further from their place of employment. The automobile virtually eliminated restriction on travel, and the subsequent demise of much public transportation left millions dependent on the automobile. State and local governments responded with massive road-building projects, and the federal government with a major expansion of the interstate highway system in the 1950's. Congestion in the central city and a consequent deterioration of living conditions there provided additional incentive for people to move to the suburbs. In some cases, such migration diminished the city's tax base to the point that it could not afford to provide adequate services, inciting further suburban flight of business as well as population. (Answer.com)

The above scenario was repetitious across many mid-to-large cities across the country from the late 1950's into the Twenty-First Century. Often what results is a morphing of suburban dwellings to suburban communities. Economic activities have slowly followed the urban sprawl. Characteristics of American suburbs, according to Answer.com, include all or some of the following:

- Lower densities than central cities, dominated by single family home on small plots of land, surrounded at close quarter by very similar dwellings
- Zoning patterns that separate residential and commercial development, as well as different intensities and densities of development. Daily needs are not within walking distance of most homes

- Subdivisions carved from previously rural land into multiple-home developments built by a single real estate company. These subdivisions are often segregated by minute differences in home value, creating entire communities where family incomes and demographics are almost completely homogenous
- Shopping malls and strip malls behind large parking lots instead of a classic downtown shopping district
- A predominantly white, increasingly diverse, middle- or upper-class population, with a few exceptions (e.g., Ford Heights, IL, a predominantly black working-class suburb of Chicago, and Inglewood, CA, also a predominately black and Latino suburb of Los Angeles)
- A road network design to conform to a hierarchy, including cul-de-sacs leading to larger residential streets, in-turn, leading to large collector roads, in place of the grid pattern common to most central cities and pre-World War II suburbs
- Ready access to large, multi-lane freeways or toll ways, limited or no access to public transit
- The importance of public space reduced in favor of private property
- Governance split between local town governments and homeowners associations (especially in newer developments)
- More wildlife habitat than is found in the city, and more areas set aside as nature preserves
- Retail and office building design as minimalist "big box" structures, with little or no exterior decoration

The alternative to MU and diverse housing in urban environments, suburban lifestyles and development will continue to be an upward trend due to the cheap costs to build such structures and the profit on the other end for local builders and large developers.

However, a trend has been on the rise which involves suburban MU communities that incorporate a village core of retail and commercial goods and services, these communities also incorporate a mix of zoning allowing for a more diverse housing type within a planned unit development. That mix incorporates mixed housing income levels, but arguably doesn't necessarily alleviate the dependency of the automobile due to their suburban, and exurban locations, which are several miles from downtown urban centers.

*SVTOD Development and Managing Growth-A Collaborative Effort*

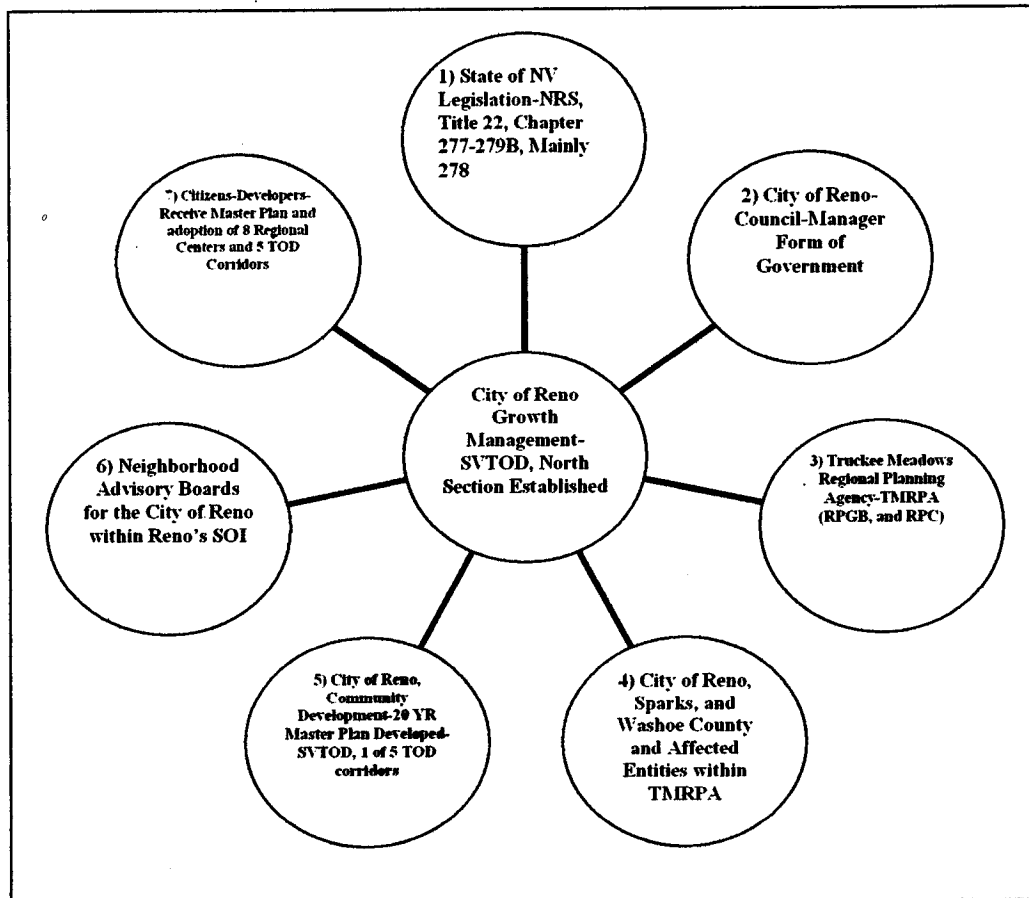
With guidance from the Nevada Revised Statutes (NRS), the Truckee Meadows Regional Planning Agency (TMRPA), in conjunction with the City of Reno, and the City council-manager form of government have developed a plan to handle growth in the City of Reno's Sphere of Influence. Excerpted from the City of Reno website the government structure has the following characteristics:

The city has a Council-Manager form of government with five Council members representing wards and one Councilmember elected at large for staggered four year terms. The Mayor is the chief elected official and formal representative of the City. Elected at-large, the Mayor serves a four-year term. The City Manager is selected by the Council and is the City's chief administrative official. The City Manager is responsible for all City business. The "City of Reno" consists of the City and the Redevelopment Agency of the City of Reno. Although the City and the Agency are separate legal entities, the Reno City Council exercises oversight authority of the Agency. The members of the City Council act as the governing body of the Agency and City staff provide management support and technical assistance to the Agency. (cityofreno.org, 2008)

The Reno Planning Governing Board, (RPGB), an entity within TMRPA, ascertains its powers through Chapter 278 of the NRS, and the NRS derives its powers and language through Nevada Legislation, with little guidance from the Federal Housing and Urban Development agency. With specific language in NRS, chapter 278, concerning the implementation of MU zoning, and TOD corridors, MU housing and development represent a key strategic goal to combat growth, and improve overall quality of life for Reno citizens for years to come. A visualization of the collaborative process outlined above can be seen in Figure 2.4.



**Figure 2.4:** The components and entities involved in the SVTOD and City of Reno Master Plan



The City of Reno's latest Master Plan was confirmed on June 2008. The Master Plan outlines policies within the City of Reno and its SOI, and highlights the major categories of public policy to include: Regional neighborhoods and housing, cultural resources and the environment, public services, facilities and infrastructure, civic services and participation, and urban design. According to "The Great City Plan", for City of Reno over the next twenty five years the City of Reno's population will grow approximately 1.67% compounded annually, which presents several obstacles for the city to overcome, all of which are related to quality of life. Arguably, MU zoning, which promotes higher

density within the transit and urban core, could help facilitate and ease some of the challenges facing Reno over the next several years to come. Some challenges, and the impact that MU development may have on those challenges include:

- Conservation

- Wetlands/stream environments-MU and urban infill slows the urban sprawl growth rate and reduces the developer needs to modify or reduce our wetlands and streams
- Air quality-Fewer, and smaller homes reduces the overall carbon footprint of homes, an increased number of people within the watershed reduces auto emissions
- Preservation of Historical resources-Conversion of dilapidated structures to updated historically preserved multi-unit attached homes accomplishes the preservation and the infill development goals of the City of Reno
- Managing the Truckee River-Water Management
- Understanding and handling our unique geological hazards and geology (earthquakes, etc...)

- Land Use

- Increasing the service area for regional centers, public transit, and rapid transit corridors-Promotes a positive social aspect, reduces the overall environmental impact, less stress, and reduced road maintenance
- Parking within MU, MF, and HDR zoning environments-Condensed parking and reduced off-street parking guidelines reduces large 3-4 car garages

- An ever expanding sphere of influence which will require growth management-MU slows the urban sprawl; thus reducing the geographic span of control of the City over time
- Conservation and preservation of open space, and historical structures to retain the character of the city-MU promotes infill and vertical development reducing land grabs for development
- Public Services, Facilities and Infrastructure
  - Containing and managing flood zones-Most MU zones are not directly in flood zones, and those that are can be exclusively managed due to their small area
  - Streets and highways-Fewer commuters, less wear and tear on public roads
  - Police and fire protection-reduced response times
  - Parks and Rec-Strategic locations of parks and rec. centers around MU, MF, HDR, and Transit corridors reduces the need to have several more parks and rec. centers because the urban core already has in-place parks and rec centers
  - Sewage, Water, Electricity and Gas: Central location of a well planned grid and utility infrastructure reduces the cost for the public utility companies as well as for the builders, and intern, the residents
- Open Space and Greenways

- Existing open space and green ways within the urban core, TOD zones, and MU zones will need to be developed and modified to make them more bike and pedestrian friendly
- Open Space-MU preserves open space through vertical development

In short, the SVTOD consists of one of the strategic objectives of the TMRPA and City of Reno, which would facilitate managed and sustained growth over the long-term.

However, successful implementation and execution of mass public transit, which requires substantial monetary investment, remains to be a vital component in the TOD, MU, and Regional Center concept for sustained growth.

#### *Urban, Mixed-Use Advantages-SVTOD*

“Developers and investors should support more mixed-use development in city centers as they offer opportunities through good architecture and urban design for an improved quality of life for all-and help to support more sustainable communities” (Birmingham Post, February, 2008).

National and International magazine and journal articles were reviewed to identify some of the common themes in MU developments and their affect on QOL. Several of those common themes include:

- Reduced commute times, and resulting less stress
- Access to public transit is more prevalent in MU, TOD zones compared to the alternative

- When planned correctly, an abundant of resources are contained within the walkshed, which result in the following benefits to QOL:
  - Multi-modal transportation options within a close vicinity
  - Easy access to health-care
  - An abundance of restaurants, grocery stores, cafes, bars, and eateries within walking distance
  - An array of affordable housing
  - The ability live and work in the same residence
  - Capacity to drive less, walk and bike more
  - Reduced tax burden: infrastructure, public services
  - Faster response times from both fire and police public servants, as well as a closer vicinity to parks per MU zoning requirements
  - Less crime depending on the source
  - A multitude of summer and winter entertainment events within walking distance
  - Revitalization and historical preservation-Aesthetically pleasing neighborhoods
  - Sustainability-Stifling the urban sprawl reduces the impact on our public services, open space, and wetlands
- Job creation-MU projects require longer development times, resulting in long-term employment for contractors

- Special needs' citizens-more options for Seniors, and citizens with disabilities will have all amenities for survival in one place, within the walkshed, and the ability to transit via a short wheel chair ride, walk, bus, or rail ride
- Unique, affordable, housing when implemented within MU projects, promotes equal, social and economic cultures
- Vertical development (increased density) increases property taxes on a per acre basis, resulting in sustained, and adequate public services through an increase in the previously flat-lined tax base
- MU development accomplishments are aligned with HUD, TMRPA, and a majority of the City of Reno's Council Priorities: communication, planning, redevelopment, public safety, and building green

The advantages of MU urban living are relevant to the SVTOD and consisted of a review of multiple sources of secondary data collection as well as primary data collection from the two key informant interviews. The above advantages to MU might outweigh the disadvantages, in terms of quality of life, but a closer look at the disadvantages of MU zoning within the SVTOD is warranted.

#### *Urban, Mixed-Use Disadvantages, SVTOD*

With MU, sometimes it's not the quality of the final product but how you got there: community involvement, communication with all stakeholders, aesthetically pleasing architectural design, and parking are some of the considerations to planning that could stifle MU developments. Some disadvantages to MU living within TOD corridors and urban environments include the following characteristics:

- Noise, the mix of commercial with residential requires planning within the community and from developers; if not executed correctly results in annoyance to all residents
- Mixed-Use residences can deepen economic and social divisions if affordable housing does not exist within MU developments and TODs
- Urban, and specifically downtown MU environments, without the necessary resources, can provide several nuances that would have a negative impact on quality of life, to include: gangs, graffiti, homeless squatters, heavy traffic, insufficient lighting, and parking
- MU projects are expensive to build relative to single family homes resulting in contractor and development hesitancy due to high lender risks and subsequent higher interest rates for borrowers, which makes it difficult to carefully orchestrate projects to provide for affordable housing
- MU developments foster construction of merely high-end, ultra secure, expensive projects, which drive out the optimal mix of low, middle, and upper middle class families
- Arguably higher crime rates per capita in MU zones due to the density and mixed social classes
- Less open space on your property resulting in a feeling of confinement
- More traffic, due to more people jammed into a smaller space
- Public schools may not be up to County and State standards due to the mass exodus of teachers leaving the tougher inner-city kids for the more polished, and well funded students of the suburbs

- Affordable housing in MU properties may be non-existent due to construction costs, and many urban social elites buying the downtown lofts
- Not safe for children-more through traffic, more people resulting in more opportunity for criminal activity

Suburban benefits could also be MU property benefits in a carefully planned MU project.

The subjectivity of the advantages and disadvantages comes down to individual and family preference. If you want the long commute, have the large garage, big house, high utility bills, and a severe dependence on the automobile for years to come, then the suburbs are for you. Furthermore, Planned Unit Developments are no replacement for MU urban properties, the automobile still plays a large part of everyday life, and a majority of public services remain a significant distance away, compared to urban MU developments. However, if you enjoy the urban MU environments you'll enjoy several advantages over your residential suburban and planned community counterparts, but the security, quality schools, low noise, and low traffic will not be a part of your everyday life. In short, it comes down to personal preference and what's important to you and your family in terms of your quality of life. Some communities that have enjoyed the success of MU and TOD corridors deserve a closer analysis.



*Similar Developments and Best Practices*

A number of cities across the nation are integrating MU housing and higher densities to accommodate the need for more live-work environments and affordable housing, which in theory would reduce traffic congestion and pollution over the long-term. According to huduser.org, low and moderate-income households often pay more than 30 percent of their household income on housing. Consequently, other needs such as health care, transportation, food, insurance are at risk to cutbacks, or no support at all.

Combining public agency services such as libraries and affordable housing has been an option for some cities across the country to include Portland, OR, and Seattle, WA to name a few. Provided community development leaders, and smart growth planners can get past the hurdles of zoning, parking limitations, height requirements, and political and private special interests the benefits to these projects can be realized. Combining public service facilities with affordable housing can be a viable option for MU projects within the City of Reno SVTOD and other TOD corridors within Reno's sphere of influence.

An example of this type of project, which provides essential public goods, TOD corridor development, and affordable housing, can be seen in Portland, OR where they combined a 13,000 square foot public library on the first floor, with floors 2 through 4 making up apartments with an average square footage near 900s.f./unit. Of the 47 units within those apartments, almost half are set aside for affordable housing. The Portland project was a culmination of six years of design, compromise, negotiation, and construction. Other similar projects which enhance QOL within downtown TODs and urban cores are listed in Table 2.5.

**Table 2.5: Library Conversions to Mixed-Use: Joint Projects to include a library, affordable housing, retail, condos**

| City/County       | Project Description                                                                                                                                                                                                               | Proposed | Built |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|
| Minneapolis, MN   | The city is seeking to redevelop an existing library, which is to include commercial and/or residential space. Twenty percent of residential units (rental or ownership) must be affordable.                                      | X        |       |
| New York, NY      | A nonprofit developer is proposing to rebuild four branch libraries, incorporating low-and moderate-income housing.                                                                                                               | X        |       |
| Saint Paul, MN    | A new community outreach library includes 31,000 square foot library and 98 apartment units. 80 percent of apartment units are affordable to households earning 60 percent or less of the area median income.                     |          | X     |
| San Francisco, CA | A new development houses a 7500 square foot branch library, a health center, retail space, and affordable senior housing. All 140 apartment units are available to seniors earning less than 50 percent of the area median income |          | X     |
| Seattle, WA       | A new 5600 square foot branch library was built to incorporate 19 apartments, affordable to those earning less than 50 percent of the area median income                                                                          |          | X     |

These projects combine affordable housing, and in some instances housing to special needs groups such as seniors, and essential goods and services to the public in libraries, and health centers. Overall, these MU projects within TODs and urban centers create a win-win for most communities and a viable option for a multitude of U.S. cities.

Arguably, it would be a stretch to argue that projects similar to these, negatively affect QOL for residences within these communities, but with a wealth of essential goods and services within the walkshed everyday life would clearly be simplified.

## Findings

### *Descriptive Statistics*

The findings presented here are based on the responses gathered from the QOL survey.

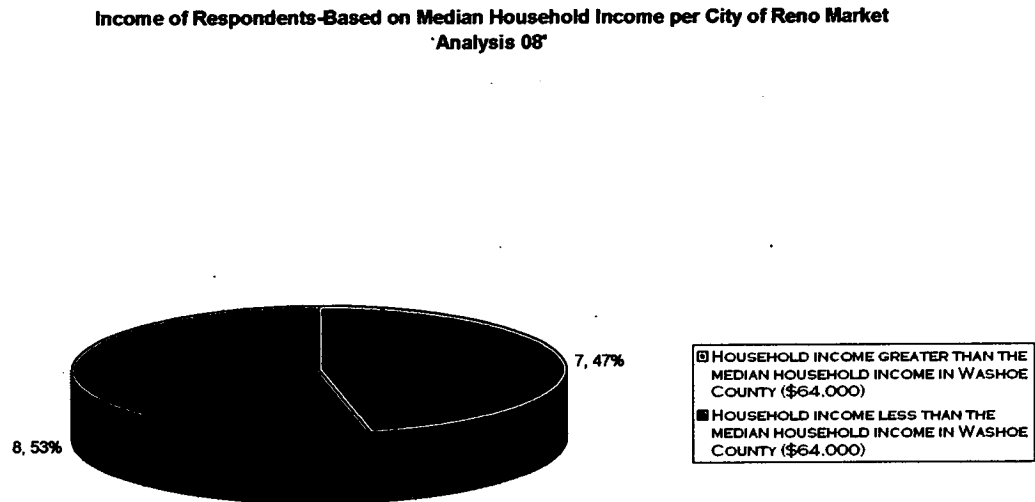
Due to the subjective nature of the survey, the findings presented are based on a qualitative analysis of nominal and ordinal data. The results are presented in the following tables and figures.

**Table 3.1: Summary of QOL Survey and Demographics**

| Demographics |   |        |
|--------------|---|--------|
| Male         | 8 | 53.33% |
| Female       | 7 | 46.67% |
| Age 14-19    | 1 | 6.67%  |
| Age 20-30    | 6 | 40.00% |
| Age 31-45    | 1 | 6.67%  |
| Age 46-60    | 2 | 13.33% |
| Age >61      | 1 | 6.67%  |

**Table 3.1: Summary of Demographics (Only section of QOL questionnaire that not all 21 respondents answered-15 of 21 responded)**

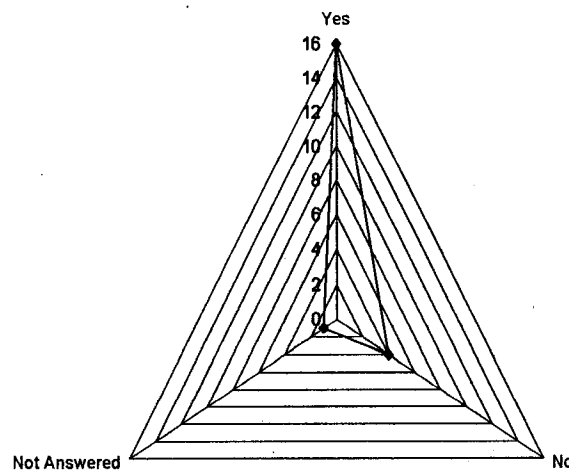
The ratio of male to female respondents closely represents that of the City of Reno as a whole. Although the cumulative percentage for the age range from age 14-60 represents a close correlation to the percentage within this range when compared to the City of Reno, the overall percentage for those ages 31-45 is less than the City of Reno, based on a per capita basis.

**Figure 3.1: Median Income of Respondents**

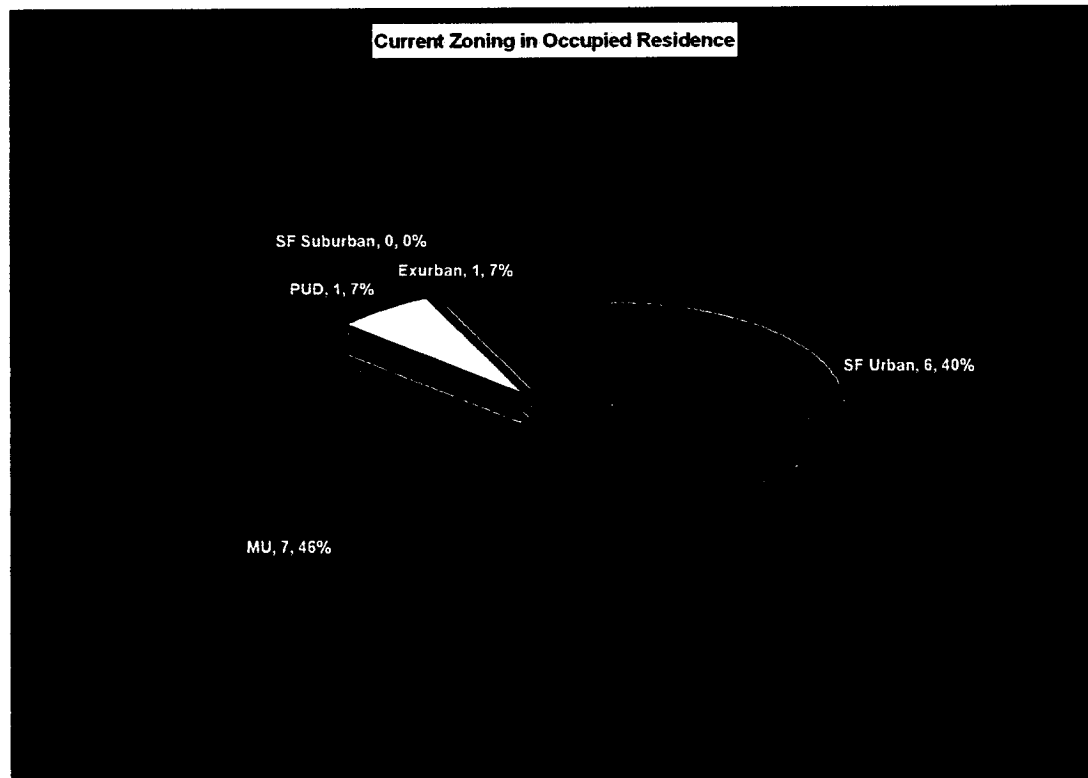
**Figure 3.1:** Based on 15 respondents from the questionnaire almost half were above or below the median family income for the City of Reno. The median family income for the City of Reno was based on a recent housing and market analysis report conducted by the Department of Housing and Urban Development, as of January 1, 2008.

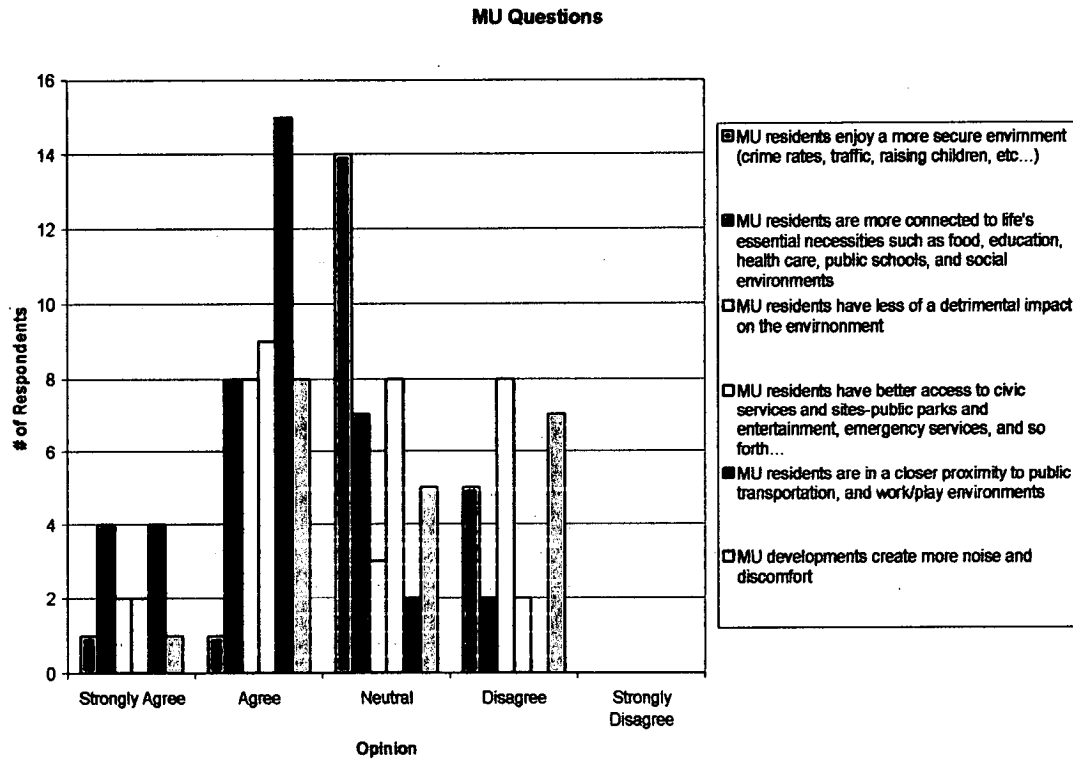
**Figure 3.2: Zoning Experience by Respondent**

HAVE YOU, OR SOMEONE IN YOUR HOUSEHOLD LIVED IN A SINGLE FAMILY RESIDENTIAL COMMUNITY, EXURB, PUB, OR SUBURB (CIRCLE ONE)?

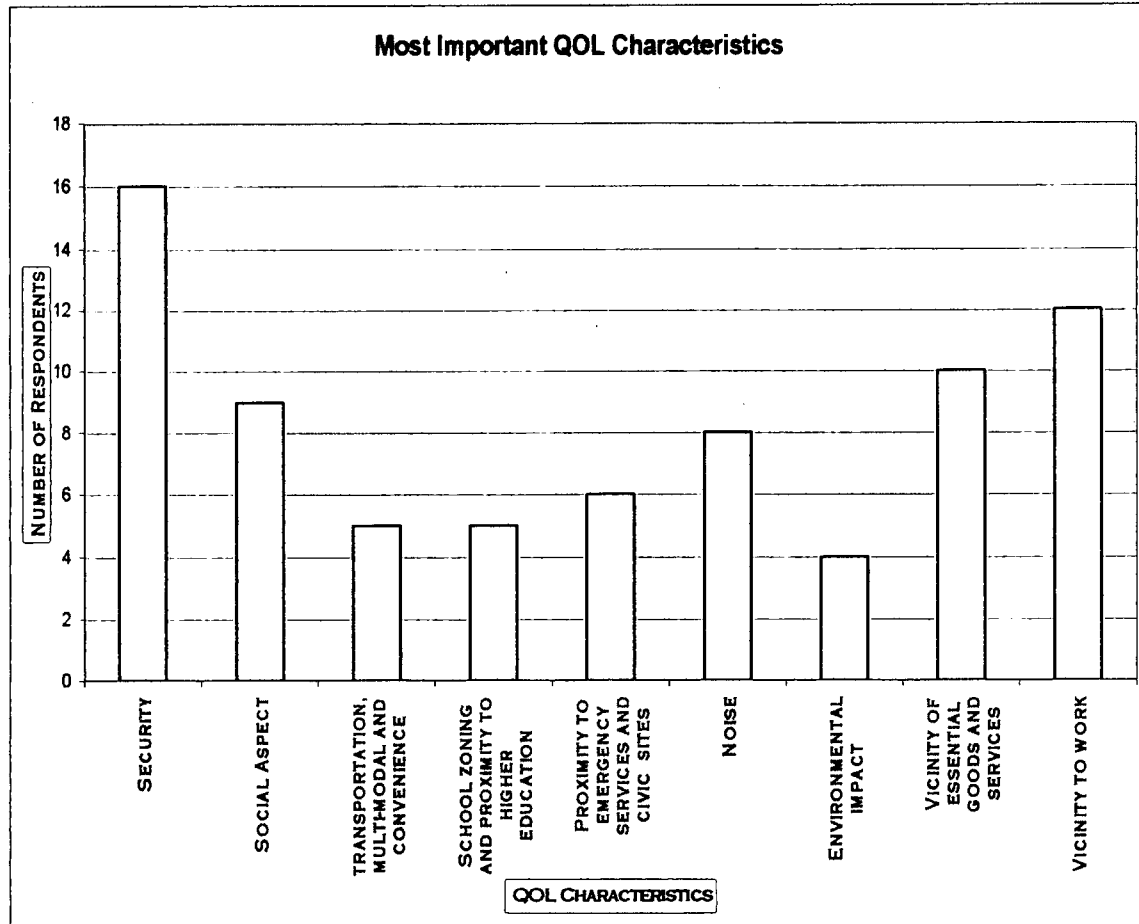


**Figure 3.2:** Represents the population size and their experience within the alternative form of zoning and community types compared to MU. This depiction along with Figure 3.3 below represents the unbiased nature of the sample experience with the alternative and MU zoning types. Sixteen respondents have had experience in non-MU zoning environments, while only four have not had experience with non-MU zoning environments.

**Figure 3.3: Current Zoning in Primary Residence****Figure 3.3:** Represents the zoning of the respondent's current place of residence.

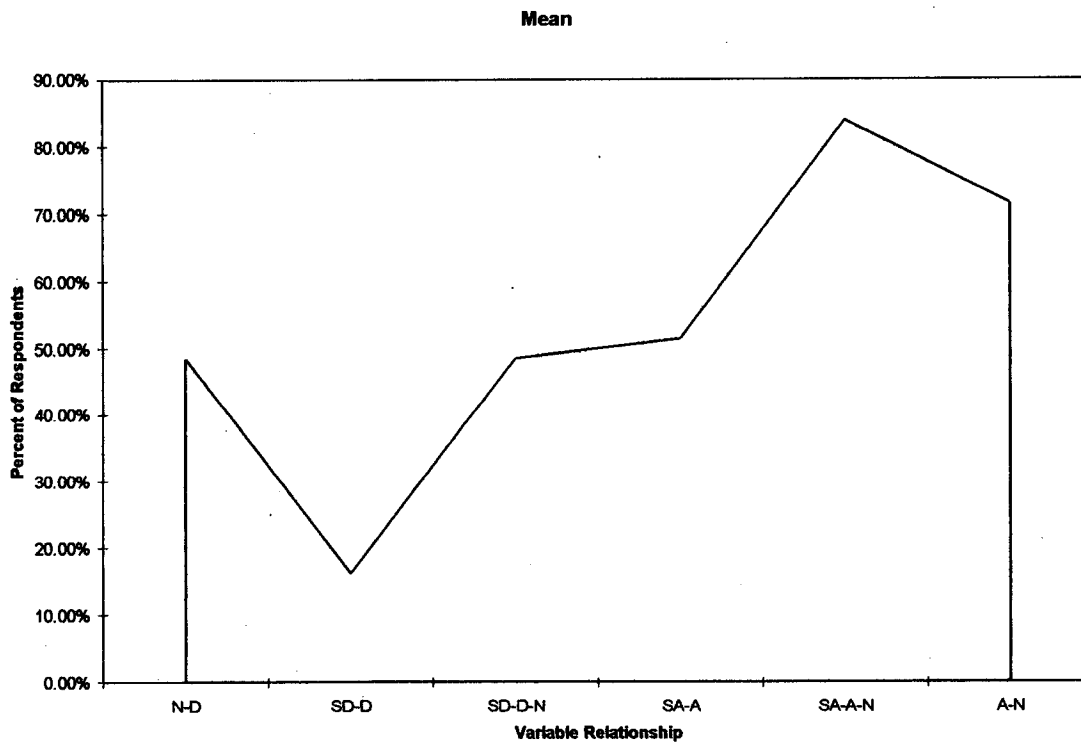
**Figure 3.4: Response for QOL Correlation with MU Zoning**

**Figure 3.4:** Discarding the last (pink) bar chart because it represents a negative aspect on quality of life compared to the other five questions, which would favor quality of life in MU environments, a depiction of normal distribution can be visualized. Also, a skewed data set toward the “Strongly Agree, Agree, and Neutral” response to the questions which favor MU dimensions and quality of life characteristics is apparent.

**Figure 3.5: Top Three Aspects of QOL**

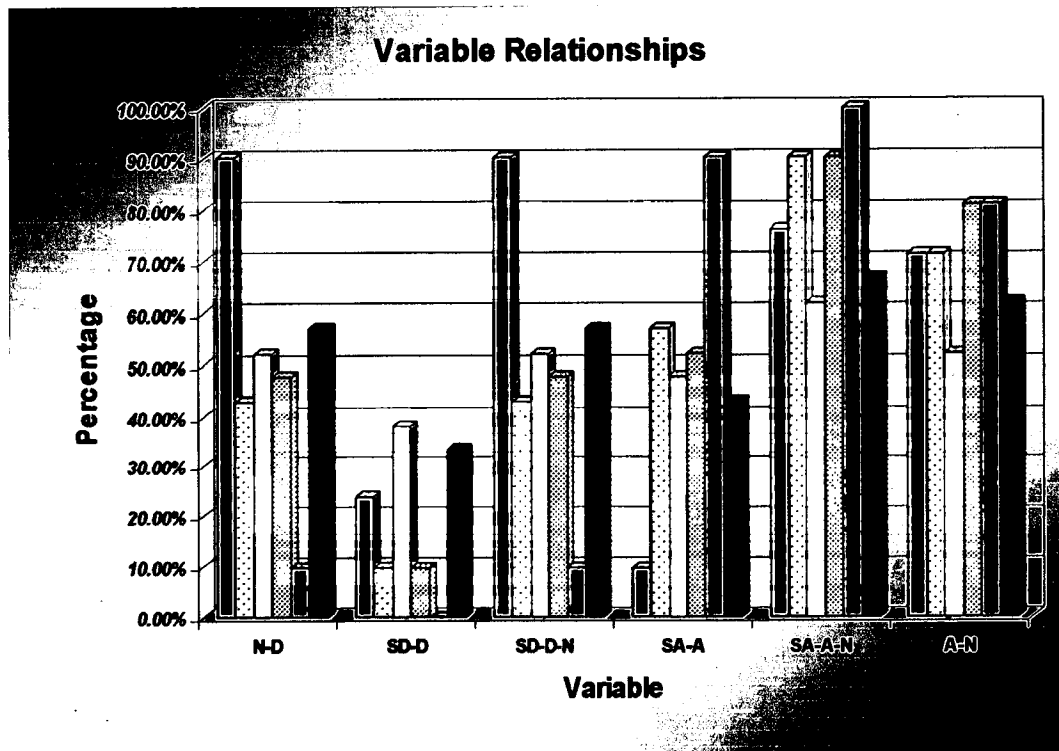
**Figure 3.5:** The following questions followed the structured questions in the QOL questionnaire (See Appendix A), which asked for the top three most important dimensions of quality of life. The results were skewed toward security, vicinity to work, the social aspect, and vicinity of essential goods and services rounding out the top four characteristics of QOL from the respondent's perspective.



**Figure 3.6:** Mean for Questions 3-7 of the QOL Questionnaire

**Figure 3.6:** The mean for the first five, dichotomously structured questions, represent a definitive skewness toward the favorability of living in MU environments when it comes to quality of life. The following combined relationship between the following variables is depicted in Figure 3.6 above, and 3.7 below: N-D-Neutral and Disagree, SD-D-Strongly Disagree, and Disagree, SD-D-N-Strongly Disagree, Disagree, and Neutral, SA-A-Strongly Agree, and Agree, SA-A-N-Strongly Agree, Agree, and Neutral, and lastly A-N-Agree, and Neutral

Figure 3.7: Relationship of Combined Responses



Orange-MU Residents Enjoy a more secure environment

Lightly Spotted-MU residents are more connected to life's essential needs

Light-MU residents are less detrimental on the environment

Heavy Spotted-MU residents have better access to civic services

Green-MU residents are in closer proximity to public transportation and work/play environments

Blue-MU developments create more noise and discomfort

**Figure 3.7:** Depicts the relationship between the combined values of two or three responses related to each question from the QOL survey. Questions 3-7 were analyzed in Figures 3.6-3.7. Again, a skewed relationship is clearly apparent between Strongly Agree, Neutral, and Agree.

A majority of the secondary data was extrapolated from various city examples of Mixed-Use projects from magazines to self-assessment studies of current MU environments, which were discussed in the literature review. Also, the City of Reno had a wealth of information concerning housing market analysis, growth issues, and frameworks for MU developments. Most of the primary data was retrieved from the QOL survey to various 21 respondents. To better understand the concept of quality of life and MU developments I took a broad look at the history of MU developments, their disadvantages, and advantages, the governments role at the local, county, and state level, and defined quality of life in relation to the subject matter.

### **Summary and Conclusions**

#### *Summary*

The South Virginia Transit Oriented Development and the Mixed-Use, urban high-density residential zoning that accompanies this change over the next 10-20 years will appear to have a positive impact on the residents within this corridor. The amount of positive impact will vary between one family and one person from the other. The 21 questionnaires, two interviews, and literature review combine to provide a compelling argument in favor of MU development, and investment to counter suburban sprawl, and utilize core existing infrastructure, also provides a solution to Reno and Washoe County's growth challenges. For the citizens and developers within the SVTOD it appears they will benefit from a more viable live-work concept, enjoy the benefits of being within a close vicinity to essential goods and services, social and entertainment venues, public and private transportation, and health care. These benefits promote all three aspects of the

QOL domain: being, belonging, and becoming. The study produced some recommendations for the local government to better capitalize on MU and TOD corridors and particularly the SVTOD corridor over the next twenty years as MU and TOD corridors experience maturity.

### *Recommendations and Further Research*

The data and findings found several facets of QOL that could be improved to enhance the draw towards MU development and occupation. The programs and ideas to enhance QOL within the SVTOD, and foster stakeholder buy-in across all levels are included in the following list and description:

1. Open the network of governance at higher levels to the citizens and developers who live and work in the SVTOD and similar projects across Reno's sphere of influence. This change would require a shift from an elite circle collaboration process to an innovation community collaboration process. The process above and the table below are extrapolated from Harvard Business Review, December, 2008, with a slight public sector twist:

|                                                                                                                                                                                                           |                                                                                                                                   |                      |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|
| <b>Innovation Mall</b> -A place where a company or government organization can post a problem, anyone can propose solution, and the company or government organization chooses the solution it likes best | <b>Innovation Community</b> -A network where anybody can propose problems, offer solutions, and decide which solutions to use     | <b>Participation</b> | <b>Open</b>   |
| <b>Elite Circle</b> -A select group of participants chosen by a company or public organization that also defines the problem and picks solutions                                                          | <b>Consortium</b> -A private group of participants that jointly select problems, decide how to conduct work, and choose solutions |                      |               |
| <b>Governance</b>                                                                                                                                                                                         |                                                                                                                                   |                      | <b>Closed</b> |

A more flat, open forum for all stakeholders should be employed to foster innovation and collaboration for future key Reno projects. Critical input at the bottom: NABs, citizens, and developer input, may not always reach the top: TMRPA, The City Council, The City Manager, redevelopment/community development directors, and affected entity leadership

2. Security was split almost down the middle in terms of those who thought it was safer in MU environments compared to those who thought it was not safer in MU environments. To make the SVTOD and other TOD corridors around the City of Reno safer, a collaborative effort with developers, citizens, and NABs could accomplish the following:

- a. Utilize Dept. of Housing and Urban Development, Community Development Block Grants to install more pedestrian friendly lighting, which could be powered by solar energy making it safer for the public and the environment
- b. Install safer walkways, bike lanes, and more crosswalks: several neighborhoods within the SVTOD do not have sidewalks, or a stretch of them do not have sidewalks, which forces pedestrians to cross the street at random locations, and bike paths are almost non-existent
- c. In collaboration with all stakeholders, utilize information technology to develop neighborhood watch programs and focus groups, disseminate e-newsletters, emails, and spread information for community groups via the web

3. Convert existing, old, and out-dated public and private structures, and under-utilized or undeveloped lots, within the Regional Centers and TOD corridors to MU, retail, commercial, luxury, and affordable housing. This accomplishes several, sustained growth management objectives: 1) Injects more live-work residents, 2) Fosters sustainable urban growth, 3) Increases the Reno's property tax base, 4) Provides more essential goods and services within the SVTOD and Regional Centers, 5) Allows developers, in collaboration with the city of Reno, to offer more inclusionary zoning with shared costs for infrastructure development.

Some examples of these types of projects include the following:

- a. Convert the US Post Office near the Truckee River to a public and private MU, retail, and affordable housing hub integrating affordable housing for USPS workers, and retail office space on specific ground floor locations opposite the USPS hub center of activity
  - b. Convert the aesthetically out-dated public library to a MU, affordable housing, and retail complex; this should be a collaborative private, public, and taxpayer investment, and would require shared costs for all stakeholders involved
  - c. Continue to invest in private and public schools at all levels within the SVTOD, other Reno TODs, and near Regional Centers
4. Invest in self-sustained successful processes such as NABs, volunteer programs that foster a positive QOL for residents within the SVTOD, and participation from all government levels at these self-sustained meetings and gatherings, which fosters further open and flat communication and ultimately public buy-in

## 5. Utilize IT

- a. Notify the public of meetings via email, and website postings and attempt to move away from postcards. Post on multiple sites other than the City of Reno, such as RN&R, RGJ, Reno Envy, for across the board stakeholder involvement and ultimately buy-in at all levels
- b. Use IT to track those within the SVTOD, and their Quality of Life Index over the next several years, which could foster new focus groups, innovative teams, and solutions to difficult quality of life problems

For further research, I would gather more input from the questionnaire, which would provide a more representative sample and higher confidence level for my findings. Also, an ongoing analysis of the QOLI would be warranted to track progress of QOL initiatives within the SVTOD. Lastly, more input from developers and citizens at all zoning levels would facilitate an unbiased and representative sample of the population for the City of Reno to further justify their case for SVTOD and TOD development in general, and the importance of public transit funding.

## *Conclusion*

Through collaboration with all stakeholders, flattening out the hierarchy which makes up public sector business and fostering innovation across multiple levels, up, down, and across, the true benefits of MU in the SVTOD to quality of life can be realized. Buy-in at the public level and continued investment in public transit, remains paramount to the ultimate success or failure of MU development. The subjectivity of quality of life and dimensions involved are clearly visible, but being, belonging, and becoming at the

physical and spiritual level, comprise a brief description of what makes up quality of life.

The information from the questionnaire highlighted what aspects of quality of life are important to not only those within the SVTOD, but also some outside input as well.

Secondary data was skewed in favor of MU developments for several reasons outlined in the research and MU advantages, but there are obstacles to this development, which were brought forward. The process of identifying the flow of information from the legislation level, which results in the Nevada Revised Statutes and down to the customer, the taxpayers and citizens of Reno was extremely fruitful and I hope my findings and recommendations are looked at further by the City of Reno and TMRPA for consideration. The research opened with a quote from Woodrow Wilson's, Essay on Administration, and will close the same:

Our duty is, to supply the best possible life to a federal organization, to systems within system; to make town, city, county, state, and federal government live with a like strength and an equally assured healthfulness, keeping each unquestionably its own master and yet making all interdependent and co-operative combining independence with mutual helpfulness. The task is great an important enough to attract the best minds. (1886)



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## Appendixes

### Appendix A

**Golden Gate University: Executive Master's Public Administration**  
**Student Research Project for Shannon Manning-Fall 2008**  
**Email: m\_averick9@hotmail.com**

**Background:** The City of Reno, under the direction of the Truckee Meadows Regional Planning Agency (TMRPA), has re-zoned certain areas located near the city center and major transport arteries to Mixed-Use (MU). Empirical studies explicitly highlighting the advantages or disadvantages that Mixed-Use developments employ regarding "Quality of Life" are extremely limited.

**Purpose:** Identify the advantages and disadvantages of living in soon to be higher density, MU zoned environments within Reno's Sphere of Influence (SOI). Also, provide recommendations to the TMRPA and City of Reno to improving some of the disadvantages to living in MU zoned environments, and highlight its current advantages in order to capitalize on them in the future.

**Problem:** Do Mixed-Use residents in Reno's South Virginia St. Transit-Oriented Development (SVTOD) Corridor (North Section), enjoy a better or worse quality of life compared to the alternative options: Single Family residential in Planned Unit Developments (PUD), Suburbs, and Exurban built environments?

The SVTOD (North Section) extends from California Ave South to Moana Lane several blocks East and West of South Virginia St., and varies East to West depending on location. (See attached map of SVTOD boundary per the City of Reno)

**Definitions:** *Quality of Life:* the degree of enjoyment and satisfaction experienced in everyday life as opposed to financial or material well-being (Merriam-Webster, Dictionary).

*Mixed-Use (MU)*-This refers to different types of development (e.g. residential, retail, office, etc.) occurring on the same lot or in close proximity to each other.

*Suburb*-Town or unincorporated developed area close to a city

*Exurban*-A region lying beyond the suburbs of a city, located 10-30 miles outside of larger cities

*Single Family Residential*- This is a one-unit residential structure detached from any other house

*Planned Unit Development (PUD)*-A development with a variety of uses, single family, MU, industrial, commercial, and multi-family zoning contained within one subdivision

**Questionnaire:** All questions below are related to MU residents in the SVTOD, outlined above, with the alternative of planned community neighborhoods, residential single family neighborhoods, Exurban, and the suburban built environments (Check or Circle as Required)

Have you, or someone in your household lived in a single family residential community, Exurb, PUD, or suburb (Circle One)?

Yes ☐ No ☐

Have you, or someone in your household lived in a Mixed-Use designated area in an urban built environment?

Yes ☐ No ☐

MU residents enjoy a more secure environment (crime rates, traffic, raising children, etc...)

|                |       |         |          |                   |
|----------------|-------|---------|----------|-------------------|
| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|----------------|-------|---------|----------|-------------------|

Comments:

Continue On Back Side

**MU residents are more connected to life's essential necessities such as food, education, health care, public schools, and social environments**

|                       |  |              |  |                |  |                 |  |                          |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|
| <b>Strongly Agree</b> |  | <b>Agree</b> |  | <b>Neutral</b> |  | <b>Disagree</b> |  | <b>Strongly Disagree</b> |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|

**Comments:**

**MU residents have less of a detrimental impact on the environment**

|                       |  |              |  |                |  |                 |  |                          |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|
| <b>Strongly Agree</b> |  | <b>Agree</b> |  | <b>Neutral</b> |  | <b>Disagree</b> |  | <b>Strongly Disagree</b> |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|

**Comments:**

**MU residents have better access to civic services and sites—Public Parks and Entertainment, Emergency Services, and so forth....**

|                       |  |              |  |                |  |                 |  |                          |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|
| <b>Strongly Agree</b> |  | <b>Agree</b> |  | <b>Neutral</b> |  | <b>Disagree</b> |  | <b>Strongly Disagree</b> |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|

**Comments:**

**MU residents are in a closer proximity to public transportation, and work/play environments**

|                       |  |              |  |                |  |                 |  |                          |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|
| <b>Strongly Agree</b> |  | <b>Agree</b> |  | <b>Neutral</b> |  | <b>Disagree</b> |  | <b>Strongly Disagree</b> |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|

**Comments:**

**MU developments create more noise and discomfort**

|                       |  |              |  |                |  |                 |  |                          |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|
| <b>Strongly Agree</b> |  | <b>Agree</b> |  | <b>Neutral</b> |  | <b>Disagree</b> |  | <b>Strongly Disagree</b> |  |
|-----------------------|--|--------------|--|----------------|--|-----------------|--|--------------------------|--|

**Comments:**

**In terms of quality of life, what aspects are most important to you? (Mark Your Top Three)**

Security ☐ ☐  
 Social Aspects ☐  
 Transportation, multi-modal and convenience ☐ ☐  
 School zoning and proximity to higher education ☐  
 Proximity to Emergency Services and Civic Sites ☐  
 Noise ☐  
 Environmental Impact ☐  
 Vicinity of essential goods and services ☐  
 Vicinity to Work ☐

**Other:**

**Male:** **Female:** **Age:** **Combined Household Income <\$64,000:** **Yes** ☐ **No** ☐

**Where do you live now?** **Single Family (Urban)—Mixed-Use—Planned Unit Development—Single-Family (Suburban)—Exurban**

**Additional Comments:**

**Submittal Methods:** Drop Box Provided, Scan and Email, or Fill-In Save and Email to: [m\\_averick9@hotmail.com](mailto:m_averick9@hotmail.com), or Mail to: P.O. Box 71113, Reno, NV 89570

## Appendix B

**Summary of Interrelationship and Combined Responses of Descriptive Statistics**

**Note:** Data coincides with questionnaire, questions 3-7, which offered five responses to questions, which favorably portrayed MU in terms of quality of life

| SA-A-N-Percent          |              | A-N-Percent             |              |
|-------------------------|--------------|-------------------------|--------------|
| Mean                    | 0.838095238  | Mean                    | 0.714285714  |
| Standard Error          | 0.066666667  | Standard Error          | 0.052164053  |
| Median                  | 0.904761905  | Median                  | 0.714285714  |
| Mode                    | 0.904761905  | Mode                    | 0.714285714  |
| Standard Deviation      | 0.149071198  | Standard Deviation      | 0.116642369  |
| Sample Variance         | 0.022222222  | Sample Variance         | 0.013605442  |
| Kurtosis                | -0.247813411 | Kurtosis                | 2            |
| Skewness                | -0.769259537 | Skewness                | -1.360827635 |
| Range                   | 0.380952381  | Range                   | 0.285714286  |
| Minimum                 | 0.619047619  | Minimum                 | 0.523809524  |
| Maximum                 | 1            | Maximum                 | 0.80952381   |
| Sum                     | 4.19047619   | Sum                     | 3.571428571  |
| Count                   | 5            | Count                   | 5            |
| Confidence Level(95.0%) | 0.18509634   | Confidence Level(95.0%) | 0.14483063   |
| SA-A-Percent            |              | SD-D-N-Percent          |              |
| Mean                    | 0.514285714  | Mean                    | 0.485714286  |
| Standard Error          | 0.129011592  | Standard Error          | 0.129011592  |
| Median                  | 0.523809524  | Median                  | 0.476190476  |
| Mode                    | #N/A         | Mode                    | #N/A         |
| Standard Deviation      | 0.28847869   | Standard Deviation      | 0.28847869   |
| Sample Variance         | 0.083219955  | Sample Variance         | 0.083219955  |
| Kurtosis                | 1.763841145  | Kurtosis                | 1.763841145  |
| Skewness                | -0.241532285 | Skewness                | 0.241532285  |
| Range                   | 0.80952381   | Range                   | 0.80952381   |
| Minimum                 | 0.095238095  | Minimum                 | 0.095238095  |
| Maximum                 | 0.904761905  | Maximum                 | 0.904761905  |
| Sum                     | 2.571428571  | Sum                     | 2.428571429  |
| Count                   | 5            | Count                   | 5            |
| Confidence Level(95.0%) | 0.358193604  | Confidence Level(95.0%) | 0.358193604  |
| SD-D-Percent            |              | N-D-Percent             |              |
| Mean                    | 0.161904762  | Mean                    | 0.485714286  |
| Standard Error          | 0.066666667  | Standard Error          | 0.129011592  |
| Median                  | 0.095238095  | Median                  | 0.476190476  |
| Mode                    | 0.095238095  | Mode                    | #N/A         |
| Standard Deviation      | 0.149071198  | Standard Deviation      | 0.28847869   |
| Sample Variance         | 0.022222222  | Sample Variance         | 0.083219955  |
| Kurtosis                | -0.247813411 | Kurtosis                | 1.763841145  |
| Skewness                | 0.769259537  | Skewness                | 0.241532285  |
| Range                   | 0.380952381  | Range                   | 0.80952381   |
| Minimum                 | 0            | Minimum                 | 0.095238095  |
| Maximum                 | 0.380952381  | Maximum                 | 0.904761905  |
| Sum                     | 0.80952381   | Sum                     | 2.428571429  |
| Count                   | 5            | Count                   | 5            |
| Confidence Level(95.0%) | 0.18509634   | Confidence Level(95.0%) | 0.358193604  |

## Appendix C

### Definitions

**Accessory Dwelling Unit**-A dwelling unit that is a separate living quarter from the principle dwelling unit and has its own kitchen and bathroom.

**Affordable Housing**-Refers to the relationship between the price of housing in a region (either sale price or rent) and household income-For housing to be affordable, shelter costs must not exceed 30 percent of the gross annual income of the household. Affordable housing is that which is affordable to households of very low, low and moderate incomes.

**Architectural Dress Code Requirements**-Door and window placement, exterior materials, roofing, etc... that can be implemented into zoning codes.

**Civic Sites**-Clearly identified and at a prominent location should attract residents to that location where they can meet neighbors or have scheduled community events. They also lead to a "sense of place", which increases pride in one's community.

**Connectivity**-Plentiful connections between different communities within a development reduces traffic on connector routes, by allowing for traffic to flow on a greater number of local streets.

**Density**-This refers to the number of housing units on a unit of land (e.g. ten units per acre).

**Diverse Housing Types**-Single Family, townhouses, and multi-family apartments and condos can be integrated into one development, as long as the scale and design of adjacent uses is compatible with each other.

**Dwelling Unit**-Any residential structure, whether or not attached to real property, including condominium and cooperative units and mobile or manufactured homes.

**HUD**-The United States Department of Housing and Urban Development is a cabinet level department of the federal government that oversees program and funding for affordable housing laws, development, and federally funded financial assistance.

**Inclusionary Zoning (IZ)**-Requires developers to make a percentage of housing units in new residential developments available to low-and moderate-income households. In return, developers receive non-monetary compensation-in the form of density bonuses, zoning variances, and/or expedited permits-that reduce construction costs.

**Infill Development**-A reference to location, meaning new development constructed in developed areas, typically surrounded on all sides by existing development.

**Live-Work Concept**-Conversion of urban factories, warehouses, and lofts in central business districts, which allow residential lofts and businesses; this concept has been driven by more liberal zoning and often enacted to spur re-development.

**Low Income**-Low-income households are defined as households with incomes between 50 and 80 percent of the area median household income.

**Median Income**-Each year, the federal government calculates the median income for communities across the country to use as guidelines for federal housing programs. Area median incomes are set according to family size.

**Mixed Residential**-A reference to a zoning district that allows for a variety of uses within one district.

**Mixed Use**-This refers to different types of development (e.g. residential, retail, office, etc...) occurring on the same lot or in close proximity to each other.

**Moderate-Income**-Moderate-income households are defined as households with incomes between 80 and 120 percent of the county median.

**Multi-Family Dwelling**-A structure containing two or more dwelling units for the use of individual households; an apartment or condominium building is an example of this dwelling type.

**Not In My Back Yard (NIMBY)**-The lack of enthusiasm for residents to have a particular type of structure near their primary home of residence.

**Single Family Detached Home**-This is a one-unit residential structure detached from any other house (i.e. with open space on all four sides). A house is considered detached even if it has a shed or garage.

**Single Family Attached Housing**-This is a one-unit residential structure that has one or more walls extending from ground to roof separating it from adjoining structures. This category includes row houses, townhouses, and houses attached to residential structures.

**Smart Growth**-A combination of TND, MU, and Infill that results in a more sustainable development than conventional residential development.

**Suburb**-A town or unincorporated developed area in close proximity to a city: Suburbs, largely residential, are often dependent on the city for employment and support services; generally characterized by low-density development relative to the city.

**Very Low-Income**-Very low-income households are defined as households with incomes less than 50 percent of the area median household income.



**Walkability**-A modified grid design, with sidewalks, mixed with linear parks, and parkways, encourages residents to move around other than in automobiles.

**Walkshed**-A zone within one mile of home, or an area that a person can reasonably cover on foot.

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