



**COMMUNITY SERVICES DEPARTMENT
PLANNING & BUILDING DIVISION**

Master Plan Land Use and Transportation Element

**WASHOE COUNTY
NEVADA**

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This document is one of a series that, as adopted, constitutes a part of the Master Plan for Washoe County, Nevada. This document is available for \$10.00 from the Washoe County Department of Community Development. If you have a copy of the Washoe County Master Plan notebook, please place this behind the Land Use and Transportation Element tab. The Washoe County Master Plan can also be found on our department's website.

In accordance with Article 820 of the Washoe County Development Code, the Land Use and Transportation Element was amended by Master Plan Amendment Case Number MPA11-005. This amendment was adopted by Resolution Number 11-11 of the Washoe County Planning Commission on July 5, 2011, by the Washoe County Commission on August 9, 2011, and found in conformance with the Truckee Meadows Regional Plan by the Regional Planning Commission on September 14, 2011. The adopting resolution was signed by the Washoe County Commission Chairman on September 27, 2011. Amended by the Washoe County Commission, Resolution Number R20-049 on September 22, 2020 and found in conformance with the Truckee Meadows Regional Plan on November 12, 2020.

FIFTH PRINTING, NOVEMBER 2020

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Photos courtesy Nicholas D. Exline.

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Introduction

The purpose of the Land Use and Transportation Element (LUTE) is to set goals, policies, and action items that will shape communities throughout Washoe County through the year 2025. The Element establishes location and use of land and transportation systems. The primary focus is to provide for future population and employment in Washoe County. The timing of new development should correlate with transportation capacity and infrastructure needs which have been established in the Master Plan.

There are many factors that influence where future development will occur. These factors include historic growth patterns, economic conditions, national and regional policy, marketing trends, location of existing development, public land and environmental constraints. The purpose of the LUTE is to encourage sustainable growth practices while discouraging sprawled communities where the automobile is viewed as a necessity to obtain daily amenities.

The LUTE will encourage the development of appropriate character-based communities within Area Plans consistent with the Regional Land Designations and Priority Hierarchy of the Truckee Meadows Regional Plan. As development occurs within the Truckee Meadows Service Area, smart growth practices will be adhered to. Smart growth is defined as a collection of land use planning techniques that features compact, mixed-use, sustainable development with the objective of creating more attractive, livable, economically strong communities while protecting natural resources. These terms are discussed in length throughout the LUTE. Within suburban Washoe County, this form of sustainable development will begin to be used to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The policies and action plans established in the LUTE are intended to address broad County needs up to and beyond the year 2025. These policies and action plans are to be used as a guide for the public, decision makers, and staff as to the ultimate pattern of development for the unincorporated areas of Washoe County. Should an initial conflict arise between a policy found within the LUTE and a policy within any of the Washoe County Area Plans, the conflict will initially be resolved in favor of the Area Plan policy. However, an analysis and public review of both policies will be conducted in a timely manner to determine which plan should be amended to best serve the public.

This Element is divided into three sections. The Goals and Policies section contains the decision-making policies that were derived from the principles and vision of the individual land use and transportation plan sections. The Land Use section addresses conditions and trends that influence growth in unincorporated Washoe County, analyzes the distribution and interrelationships of the various land use types, and contains policies and action plans which establish a development pattern for the year 2025. The Transportation section addresses current transportation service conditions and trends, analyzes and identifies future facility needs, and contains policies and action plans to achieve an efficient, safe and attractive transportation system.

Goals and Policies

Land Use

Goal One: Influence future development to abide by sustainable growth practices.¹

- LUT.1.1 Washoe County will conform to the Truckee Meadows Regional Plan's Regional Land Designations in order to direct growth to sustainable development areas based on the Character Management Areas (CMAs) outlined in the area plans.
- LUT.1.2 Mixed-use, sustainable developments are extremely encouraged.
- LUT.1.3 Streets should be narrowed and interconnected with bicycle lanes to provide more opportunity for walking and cycling as viable as well as desirable and safe modes of transportation.
- LUT.1.4 Residential should be within close proximity to retail/commercial land uses within the TMSA to facilitate both walking and cycling as desirable and safe modes of transportation.

Goal Two: Standards ensure that land use patterns are compatible with suburban development and incorporate mixed-use.¹

Policies

- LUT.2.1 Ensure that existing and proposed land uses are compatible.
- a. Projects shall be evaluated with the intent to promote mixed-use and land use compatibility.
 - b. Mixed-use refers to the combining of retail/commercial and/or service uses with residential or office use in the same building or on the same site in one of the following ways:
 - i. Vertical Mixed-Use - A single structure with the above floors used for residential or office use and a portion of ground floors for retail and commercial (Photo 2).
 - ii. Horizontal Mixed-Use, Attached - A single structure, which provides retail/commercial or service use in the portion fronting the public or private street with attached residential, or office uses behind (Photo 3).
 - iii. Horizontal Mixed-Use, Detached - Two or more structures on one or more parcels of land which provide retail/commercial or service uses in the structure(s) fronting the public or private street, and residential or office uses in separate structure(s) behind the site.

1. Modifications with regard to certain Area Plans can be found in Appendix B of this document.

Photo 1: Mixed-Use

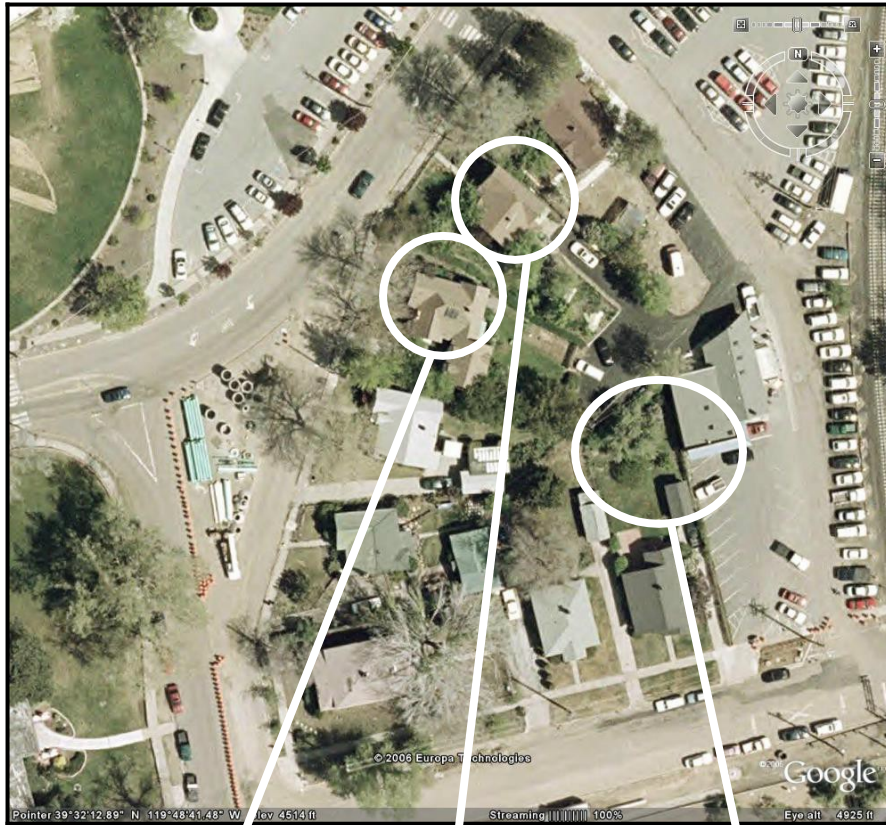


An example of existing unincorporated Washoe County mixed-use located at the Country Club Village development in Incline Village.

Photo 2: Vertical Mixed-Use



Photo 3: Horizontal Mixed-Use



Residential



Office



Commercial/Retail

An example of horizontal mixed-use located within the City of Reno located on the corner of 9th Street and Evans Avenue.

LUT.2.2

Allow flexibility in development proposals to vary lot sizes, cluster dwelling units, and use innovative approaches to site planning providing that the resulting design is compatible with adjacent development and consistent with the purposes and intent of the policies of the Area Plan. Development applications shall be evaluated with the intent to satisfy the minimum following criteria:

- a. Directs development away from hazardous and sensitive lands.
- b. Preserves areas of scenic and historic value.
- c. Provides access to public land.
- d. Retains agricultural uses, fire and windbreaks, wildlife habitat, wetlands, streams, springs and other natural resources. An adequate amount of prime resources must be retained in order to sustain a functioning ecosystem.

- e. Accommodates the extension and connection of trail systems and other active and passive recreational uses.
- f. Furthers the purposes and intent of the respective Area Plan.
- g. Prevents soil erosion.
- h. Encourages a minimum distance from residential dwellings to active recreation in parks.

LUT.2.3 Require existing suburban neighborhoods to integrate their street network with new development to create connectivity and promote walking and cycling as safe and desirable modes of transportation and recreation.

- a. Require appropriate buffers to mitigate conflicting land uses.
- b. Encourage development patterns and land uses that can coexist with existing noise generating activities such as high volume roadways, rail lines, flight paths and intense employment activities.
- c. Require transitioning techniques to preserve rural areas from suburban encroachment.
- d. Encourage existing neighborhoods to integrate their street network with the new development to create connectivity and fluidity.

LUT.2.4 Development reviews shall include a process to ensure that a safe and reasonable walking/biking route exists between all relevant land uses that promote these alternative transportation modes within a community or region.

- a. The addition of Class 1 and 2 bicycle lanes will be evaluated where appropriate within new suburban developments. The connection of all existing bikeway systems will help provide an efficient interconnected system.
- b. Class 1 bicycle lanes (full grade separation from roadway) are encouraged as much as possible to increase safety and promote cycling and walking as viable and desirable modes of transportation.

Photo 4: Class 1 Bicycle Lane



Photo 5: Class 2 Bicycle Lane



Goal Three: The majority of growth and development occurs in existing or planned communities, utilizing smart growth practices.¹

Policies

LUT.3.1 Require timely, orderly, and fiscally responsible growth that is targeted based on the Regional Land Designations outlined in Table 3.1 and Map 2 of the Truckee Meadows Regional Plan:

Tier	Minimum Density	Maximum Density (du/ac)
Mixed Use Core	14 du/ac	None
Tier 1	Existing	No Maximum
Tier 2	No minimum	30du/ac
Tier 3	No minimum	Existing
Rural Area	N/A	1 unit per 5 acres

LUT.3.2 In order to provide a sufficient supply of developable land to meet the needs of the population, Area Plans shall establish growth policies that provide for a sufficient supply of developable land throughout the planning horizon of the next 20 years, with considerations to phase future growth and development based on the carrying capacity of the infrastructure and environment.

LUT.3.3 New development in the Rural Area (RA) shall be limited to a minimum lot size of 5 acres unless clustering is approved as part of a Rural Development Area (RDA) as referenced per the 2019 Regional Plan policy RF7.

LUT.3.4 Strengthen existing neighborhoods and promote infill development.

- a. Identify and assist in revitalizing older maturing neighborhoods to ensure their long-term stability.
- b. Promote commercial revitalization.
- c. Capital Improvements Program (CIP) expenditures should be directed to infrastructure development in existing areas with inadequate services.
- d. Promote funding resources such as the Nevada Brownfields Program to redevelop properties.
- e. Create density bonuses and other innovative development tools to encourage infill in targeted areas.

LUT.3.5 Area Plans shall identify adequate land, in locations that support the regional form and pattern, for the residential, commercial, civic and industrial development needs for the next 20 years, taking into account land use potential within the cities and existing unincorporated centers, existing vacant lots, and resource and infrastructure constraints.

LUT.3.6 The requirement of cooperative planning as stated in the Truckee Meadows Regional Plan shall be implemented through notice of the two cities of Master Plan amendments within those areas of interest identified by each city no later than ten (10) working days of the anticipated action by the Washoe County Planning Commission.

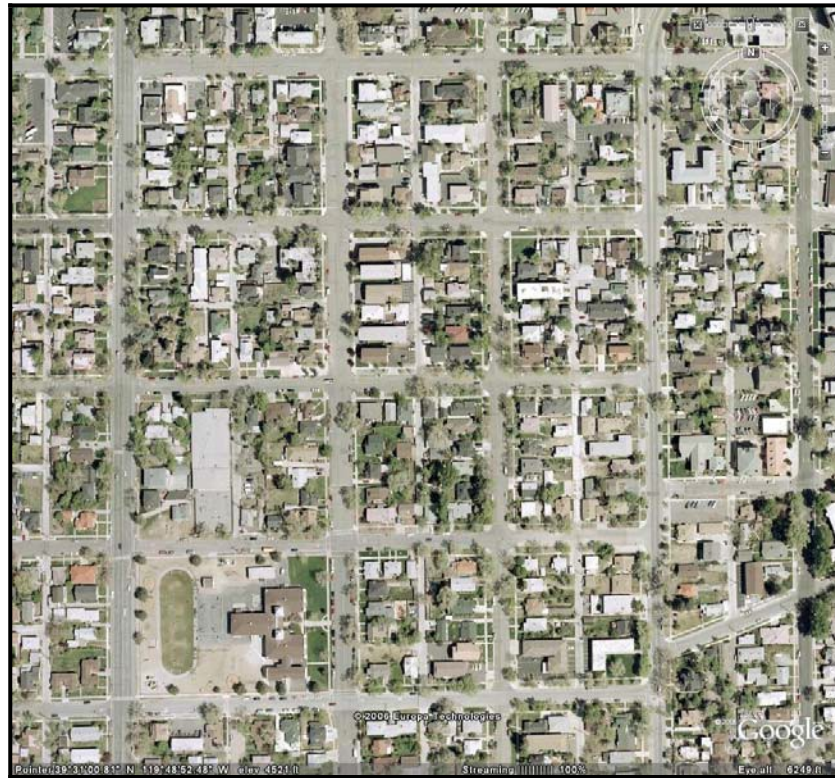
Goal Four: Land use patterns allow for a range of housing choices and interconnected streets.¹

Policies

- LUT.4.1 Maintain a balanced distribution of land use patterns to:
 - a. Provide opportunities for a variety of land uses, facilities and services that serve present and future population;
 - b. Promote integrated communities with opportunities for employment, housing, schools, park civic facilities, and services essential to the daily life of the residents; and
 - c. Allow housing opportunities for a broad socio-economic population.
- LUT.4.2 Encourage new developments to provide appropriate design to accommodate the needs of all users, including young, aging, handicapped and special needs populations.
- LUT.4.3 Encourage suburban developments to provide a mix of residential densities and housing types in close proximity to retail/commercial.
- LUT.4.4 Encourage new suburban developments to provide interconnected street networks (Photo 6) to improve fluidity between different land uses and encourage walking and cycling as viable and safe modes of transportation.

1. Modifications with regard to certain Area Plans can be found in Appendix B of this document.

Photo 6: Interconnected Street Network

**Goal Five: Development occurs where infrastructure is available.¹****Policies**

- LUT.5.1 Recognize the relationship between land use timing and the provision of adequate services and facilities.
- a. Provide an adequate facilities plan that meets the requirements described in the Development Guidelines section of the Land Use Groups.
 - b. Consideration should be given to the long-term inefficiency of development with individual systems as opposed to the possible formation and use of community facilities districts.

1. Modifications with regard to certain Area Plans can be found in Appendix B of this document.

- LUT.5.2 Proposed development plans shall be required to provide the minimum service standards as described in the Land Use and Transportation Plan.
- LUT.5.3 New development shall not reduce the quality of service for existing residents and businesses nor reduce the ability of public agencies to provide quality service.
- LUT.5.3.1 Pursuant to the provisions of Nevada Revised Statutes, Chapter 278, military installations shall be noticed of a proposed planning or development action initiated by Washoe County or applied for by a property owner.
- LUT.5.4 Locate more intense pedestrian and transit-oriented development along major roads, transit corridors, and in activity centers within village centers.

Goal Six: Land use and transportation decisions support a healthy economic base.

Policies

- LUT.6.1 Acknowledge the importance of Washoe County (including the incorporated cities of Reno and Sparks) in the continuing development of Northern Nevada's regional economic base.
- a. Strengthen and support the identity of the region by encouraging land uses that both contribute to the character of the community and enable the area to sustain a viable economic base.
 - b. Encourage land uses that preserve a quality of life and define a sense of place within the region.
- LUT.6.2 Promote development projects that direct resources to promote business attraction, retention and expansion.

Goal Seven: Development patterns in the unincorporated TMSA provide an alternative to the higher intensity land use patterns that are found in the higher tiers in cities as referenced in LUT 3.1.

Policies

- LUT.7.1 Village land use patterns may be developed in limited suburban locations.
- a. Villages should create secondary nodes of activity that complement larger city services rather than compete.
 - b. Higher density urban villages should be located at the center of the village to take advantage of infrastructure and to provide a more efficient means of providing services.
 - c. An urban village may include a mixed-use, higher density community located at the center of a suburban area.
- LUT.7.2 New tourist commercial development shall locate in areas designated or planned for such use, and shall provide unique opportunities that could not occur in existing tourist commercial areas (i.e. self-contained resort or preserve).
- a. Generally, these areas will be located:
 - i. In designated character areas, as shown on the Area Plan maps, where infrastructure exists or is planned;
 - ii. In areas where they complement the historical, recreational, cultural and civic resources of the community and region; and/or

- iii. Where they are compatible with and do not adversely impact existing and proposed residential areas.
- b. Tourist commercial development shall be designed to serve as a focal point in the community.
- c. Self-contained resorts, that are located outside urban/suburban service areas, shall contain a full range of private services, employment opportunities and adequate public services and facilities within the center. Provisions shall be made for employee housing and living needs within the boundaries of the development.

Goal Eight: Development patterns in the unincorporated General Rural (GR) or General Rural Agricultural (GRA) County designation, or, provide an alternative to the higher intensity land use pattern that is found within the TMSA.¹

Policies

- LUT.8.1 Outlying areas should provide lifestyle alternatives for rural land uses as defined in the land use plan.
- LUT.8.2 These rural areas will retain their present character.
- LUT.8.3 The Warm Springs Area Plan includes Area Modifiers for GRA (See Development Code Section 110.226.15).

Goal Nine: Natural resources are highly valued.

Policies

- LUT.9.1 Create, maintain, and connect usable open space for aesthetic, recreational purposes and natural resource protection.
 - a. Development assurances shall provide that the open space will be used as intended and will be adequately maintained. The following measures shall be used as applicable:
 - i. Designate open space areas to a classification consistent with the intended use.
 - ii. Record Conditions, Covenants and Restrictions (with the County as an interested party) or other contractual agreement with specification of the intended use and prohibition of future sale of the property without consent of the County.
 - iii. Specify use of the property (e.g. common area) on recorded maps.
 - iv. Dedicate easements (with the County as an interested party) that specify the intended use.
 - v. Provide financial assurances for any proposed improvements within the open space.
 - vi. Provide mechanisms to assure perpetual maintenance of the open space.
 - vii. When a density bonus or density transfer is proposed, the parcel that is proposed to be use-restricted should be included as part of the tentative map.

1. Modifications with regard to certain Area Plans can be found in Appendix B of this document.

- LUT.9.2 Use techniques for not developing parcels or portions of parcels, such as transfer of development rights, conservation easements and conservation subdivisions, in environmentally sensitive and aesthetically valuable areas.
- LUT.9.3 Use building envelopes and localized grading, to reduce balding and cut and fill, in environmentally sensitive areas.
- LUT.9.4 Reduce the impacts of development on water quality, land subsidence and fissuring, and riparian habitat.
- LUT.9.5 Require the connection of open space; trail access and bikeway systems with regard to a multitude of different trail uses.

Goal Ten: The public has access to open space resources.

Policies

- LUT.10.1 Facilitate the protection of view corridors within scenic corridors. A methodology (as determined within a public process) should be developed to identify and protect view shed corridors.
- LUT.10.2 Ensure protection of public access around existing regional parks and public lands from urban encroachment.
- LUT.10.3 Ensure that development proposals provide adequate public access to adjacent public lands. The access should be designed so it does not restrict development on adjacent private lands.
- LUT.10.4 Ensure compatibility between surrounding land uses and public lands. Ensure proper coordination among public agencies and adjacent private landowners in the management and planning of public lands.
- LUT.10.5 Preserve the views along roadways and established trails by designating scenic corridors along roadways and trails that have exceptional views (as defined in County Area Plans). Design guidelines should be developed to protect the view sheds.
- LUT.10.6 Promote an interconnected open space system that accommodates and provides efficient access to all reasonable trail uses.
- LUT.10.7 Participate in multi-jurisdictional projects that promote open space protection.

Goal Eleven: Public lands are a vital component of the community.

Policies

- LUT.11.1 Ensure that public lands are compatible with the environmental sensitivity of the area and with existing and planned uses on adjacent privately owned lands.
- LUT.11.2 Ensure compatibility between surrounding land uses and public lands. Ensure proper coordination among public agencies and adjacent private landowners in the management and planning of public lands.

Goal Twelve: Washoe County should implement policy to acquire and preserve open space.

Policies

- LUT.12.1 Where applicable, Washoe County should consider implementing transfer of development rights to acquire and preserve valuable pieces of open space.

- LUT.12.2 In reviewing development or other land use applications, the County shall consider open space values and other characteristics, which contribute to the open and rural character or unincorporated Washoe County.

Goal Thirteen: Washoe County should ensure appropriate resource management of open space designated areas.

Policies

- LUT.13.1 The County shall identify and work to assure the preservation of Environmental Conservation Areas, sensitive species habitats and corridors, riparian habitat, historical and archaeological sites, significant agricultural land, and visually important landforms.
- a. The foremost management objectives of individual open space lands shall follow directly from the purpose for which the land was acquired.
 - b. Management of the County open space lands shall consider the regional context of ecosystems and adjacent land uses.
 - c. Management of individual open space lands, including those under agricultural leases, shall follow good stewardship practices and other techniques that protect and preserve natural and cultural resources.
- LUT.13.2 Significant natural communities, rare plant sites, wetlands, and other important standard vegetation, should be conserved and preserved.
- LUT.13.3 The County will consider creating management plans and the means for the implementation of said plans for all open space within the County.
- LUT.13.4 Where necessary to protect water resources and/or riparian habitat the County shall ensure, to the extent possible, that areas adjacent to water bodies such as natural watercourse areas shall remain free from development (except designated aggregate resource areas). The County may preserve these open corridor areas by means of appropriate dedication during the development process, reasonable conditions imposed through the development process, or by acquisition.
- LUT.13.5 Washoe County will consider implementing environmental educational activities, which increase awareness, understanding, appreciation, and support for stewardship of the natural and cultural resources on open space.
- LUT.13.6 Preserve the public's use of linear recreational and recreational access facilities¹, e.g. bicycle and/or pedestrian paths, bridle/equestrian paths, hiking trails, vehicle trails that have been determined by Washoe County to be linear facilities that by law, ownership and dedication by a public entity, or grant of easement through deed or map dedication are open to access and travel by any members of the general public. Preservation of the public's use may be effected through actions that include, but are not limited to²:
- a. Prohibition of the placement of structures or uses that visually or physically impede or impair the use of these facilities;

-
1. The linear facilities to be preserved do not include fee property or easements the use of which is lawfully restricted to a particular group of private individuals, such as members of a property owners association.
 2. Preservation of the public's use of these facilities does not explicitly or implicitly imply that the County will accept maintenance or liability of facilities that are not owned by Washoe County in a fee-simple title.

- b. Notes on permits, approved maps and other planning documents specifying that permanent or temporary impediments on recognized facilities are not permitted;
- c. Optional acceptance of an interest in these facilities (other than fee-simple title) that permits Washoe County to prevent or remove impediments to the use of these facilities.

Goal Fourteen: Washoe County will, to the extent possible, create a cohesive interconnected trail network.

Policies

- LUT.14.1 Trails and trailheads shall be planned, designed, and constructed to avoid or minimize degradation of natural and cultural resources, especially riparian areas and associated wildlife habitats.
- LUT.14.2 Adverse effects on private lands shall be minimized insofar as possible by trail and trailhead placement, posting of rules and signs against trespassing, installation of containing fences where critical and any other appropriate measure.
- LUT.14.3 The County shall acquire trail right-of-way through purchase, lease, donation or dedication from any public or private entity. When appropriate and beneficial, existing roads and rights-of-way will be used.
- LUT.14.4 Trails shall be interconnected and provide for pedestrian, equestrian, bicycle, and motorized uses, where each use is warranted. Incompatible uses shall be appropriately separated.
- LUT.14.5 The County shall work through the Consortium of Cities to assure linkage of municipal and County trails and connections between communities.
- LUT.14.6 Where appropriate, new trails should be incorporated into and provided by new development and linked to established trails.
- LUT.14.7 Where appropriate, Class 1 bicycle lanes will be constructed.

Photo 7: Class 1 Bicycle Lane



Completed portion of the Tahoe/Pyramid Class 1 bicycle lane near Verdi

Goal Fifteen: Rural communities in outlying areas and in northern Washoe County are strengthened and protected from incompatible development.

Policies

- LUT.15.1 Washoe County shall, in consultation with affected municipalities, use open space to physically buffer Community Service Areas, for the purpose of ensuring community identity and preventing urban sprawl.
- LUT.15.2 Washoe County will work with TMRPA to ensure that growth within the RA does not exceed 2% of the region's 20-year residential growth.
- LUT.15.3 Preserve and promote the rural communities and rural area's natural, historical, scenic and recreational resources to visitors.
- LUT.15.4 Promote economic vitality for rural residents through the support of opportunities for renewable resource development and other development possibilities that provide economic benefit for a rural lifestyle without degrading the environment.
- LUT.15.5 Invest in infrastructure and services where required for health and safety reasons.
- LUT.15.6 The construction of new roads or highways in rural designated areas shall not predicate an increase in permissible density.
- LUT.15.7 Local roads designated as rural should be constructed and maintained in accordance with rural design standards.
- LUT.15.8 Area plans shall contain strategies to preserve the distinction between higher density urban and the rural areas (Evaluate Community Transect Model, Page 43).
- LUT.15.9 No development potential may be transferred from the Rural Development Area (RDA) and Development Constrained Area (DCA) as shown on maps adopted as part of the Truckee Meadows Regional Plan, nor from existing golf courses, existing parks, existing streets and railroad rights-of-way to property located within the Truckee Meadows Service Area (TMSA) as shown on maps adopted as part of the Truckee Meadows Regional Plan.
- LUT.15.10 South of T26N, schools with a projected population of 300 or more full-time students throughout any part of the calendar year shall not be located outside the Truckee Meadows Services Area.

Goal Sixteen: Realizing resource extraction provides a benefit to the region, efforts need to be undertaken to ensure limited degradation to the environment.¹

Policies

- LUT.16.1 Recognize the importance of mineral resource extraction operations (e.g. aggregate pit operations, gravel production areas, etc.) and provide standards for compatibility between adjacent land uses and extraction options.
- a. Operations should be sited in locations that are less visible from the surrounding valleys.
 - b. Operations should not be visible from major roadways or major community settlements.

1. Modifications with regard to certain Area Plans can be found in Appendix B of this document.

- c. A visual analysis shall be required for all new projects. Projects that create a negative visual impact, and are expected to be in operation for a period greater than one year, shall be required to provide landscaping or other natural screening to mitigate the visual impact. The screening should be designed to allow the project to blend into the surrounding area so the eye of the casual viewer is not drawn to the operation.

Photo 8: Example of Resource Extraction



An example of existing unincorporated Washoe County resource extraction located north of the Spanish Springs Airport.

- d. Operations shall maintain compatibility with adjacent land uses by providing mitigation. Noise, dust and lighting shall meet the minimum standards considered for compatibility. Additional standards may be initiated depending on the specific situation.
- e. Proposed developments shall recognize that even though the mineral extraction operations are considered temporary, the nature of the use may affect proposed development for a long period. Development projects within one mile of existing mineral resource extraction operations (including known operation routes) shall specifically address design techniques that will minimize incompatibility.

LUT.16.2 Resource extraction shall not be permitted in areas designated as critical environmental regions.

Community Design

Goal Seventeen: Future plans should begin to move away from traditional codes and begin to create and implement form-based codes and other sustainable design practices.

Policies

- LUT.17.1 Washoe County will begin to create and implement form-based codes or a hybrid of form-based codes and Euclidian codes upon drafting future Area Plans.
- LUT.17.2 Suburban neighborhoods should be created with a discernible center. This is often a square, green space, or memorable center. A transit station can be located at this center.
- LUT.17.3 A variety of dwelling units such as houses, townhouses, and apartments are all encouraged.
- LUT.17.4 Retail/commercial should be located within walking distance to homes and at the bottom floor of apartment complexes.

- LUT.17.5 The streets are narrow in width and shaded with trees. This type of street network is conducive to efficient cycling and walking.
- LUT.17.6 Setbacks are reduced to place building to the sidewalk creating an outdoor room.
- LUT.17.7 Parking lots and garage doors rarely front the street. Parking is relegated to the rear of buildings accessed via alleyways. In single-family-homes the garage is replaced with a front porch (Photo 9).

Photo 9: Parking Placement to the Rear of Buildings



Goal Eighteen: Suburban communities and neighborhoods, through design, will provide a safe and healthy environment.

Policies

- LUT.18.1 Design neighborhood circulation to balance the safe and efficient movement of local pedestrian and bicycle traffic with the need to accommodate vehicular traffic.
- Maximize the number of walking destinations in proximity to homes through interconnected street networks and the creation and improvement of more sidewalks. Promote safe routes to school incorporating sidewalks and graded interconnected bicycle lanes.
- LUT.18.2 Design neighborhood streets with proper widths that encourage walkable communities. Graphics represented in Figures 1 through 6 demonstrate six roadway design classifications, the suggested street and sidewalk width, speed limits and land use designations associated with each type of roadway system that promote a human scale walkable community.
- LUT.18.3 Limit auto-related business such as retail, service, or repair of automobiles within pedestrian-oriented districts.
- Consider retrofitting poor-functioning pedestrian ways in old neighborhoods.
 - New developments should create public places where people can gather.
 - Limit drive-through facilities and auto-related uses, such as the sale, rental, service, or repair of vehicles, in pedestrian-oriented districts. Banks, restaurants and pharmacies that provide in-car service should assure that the drive-through design will not conflict with pedestrian circulation or create stacking of vehicles that can degrade air quality.

- d. Wider walkways coupled with vegetation shall be provided in new development to facilitate pedestrian movement.

Figure 1: Lane Design Standards

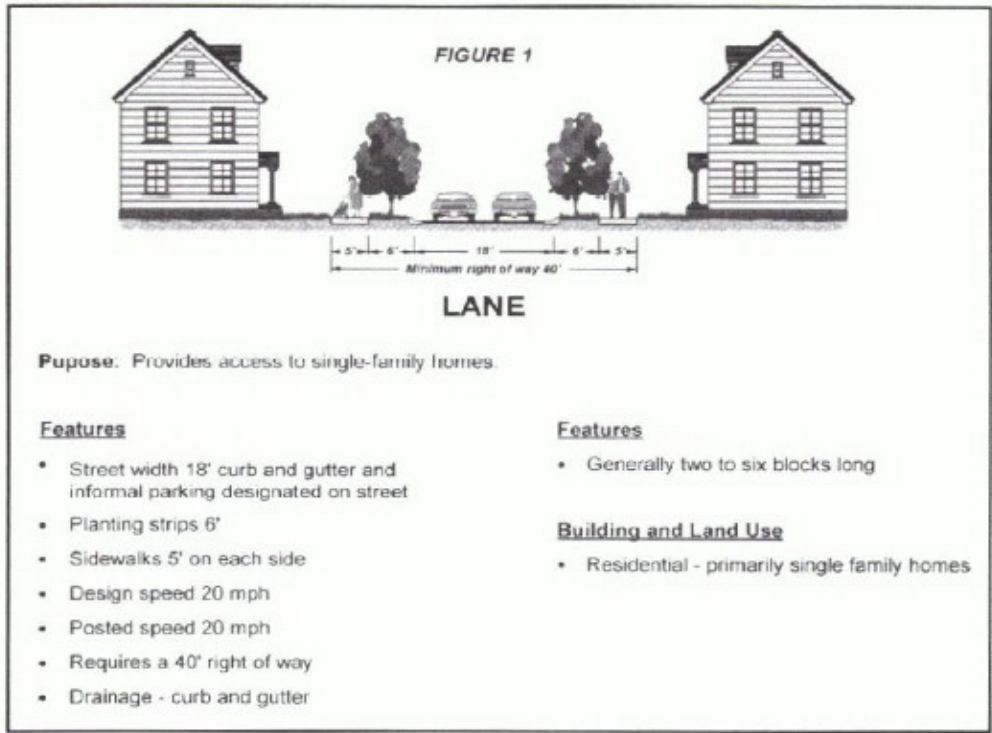


Figure 2: Street Design Standards

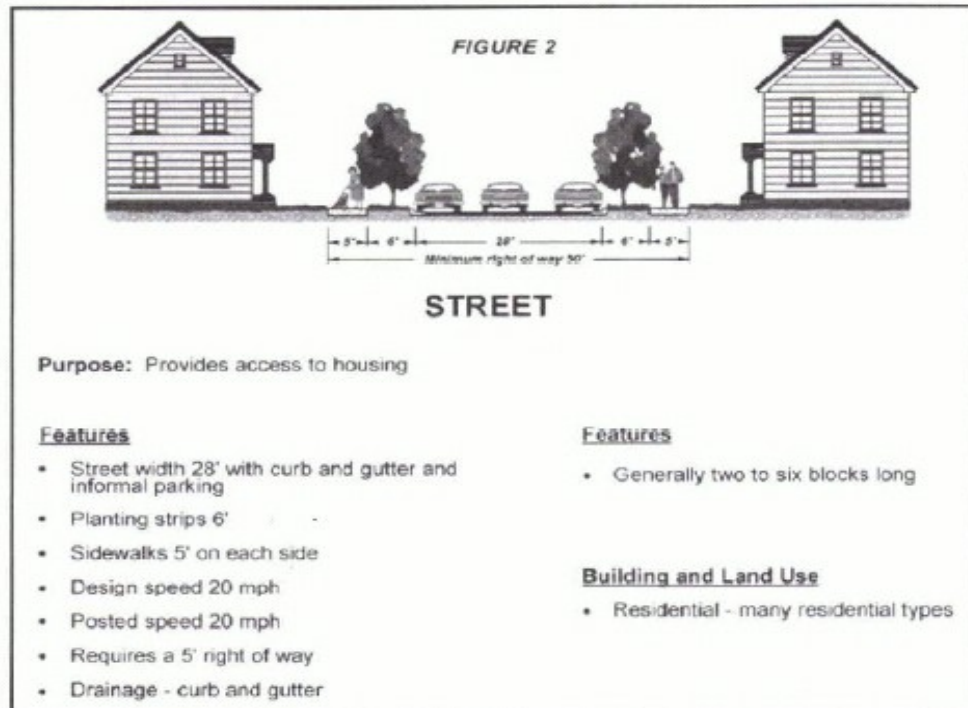


Figure 3: Avenue with Parking Design Standards

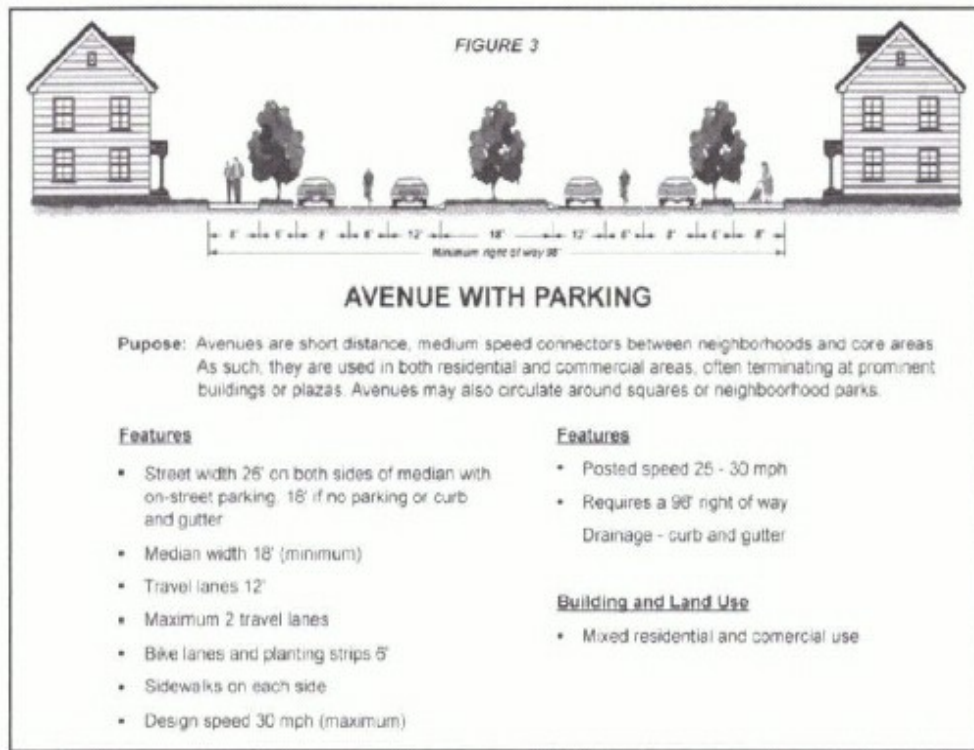


Figure 4: Main Street without Median Design Standards

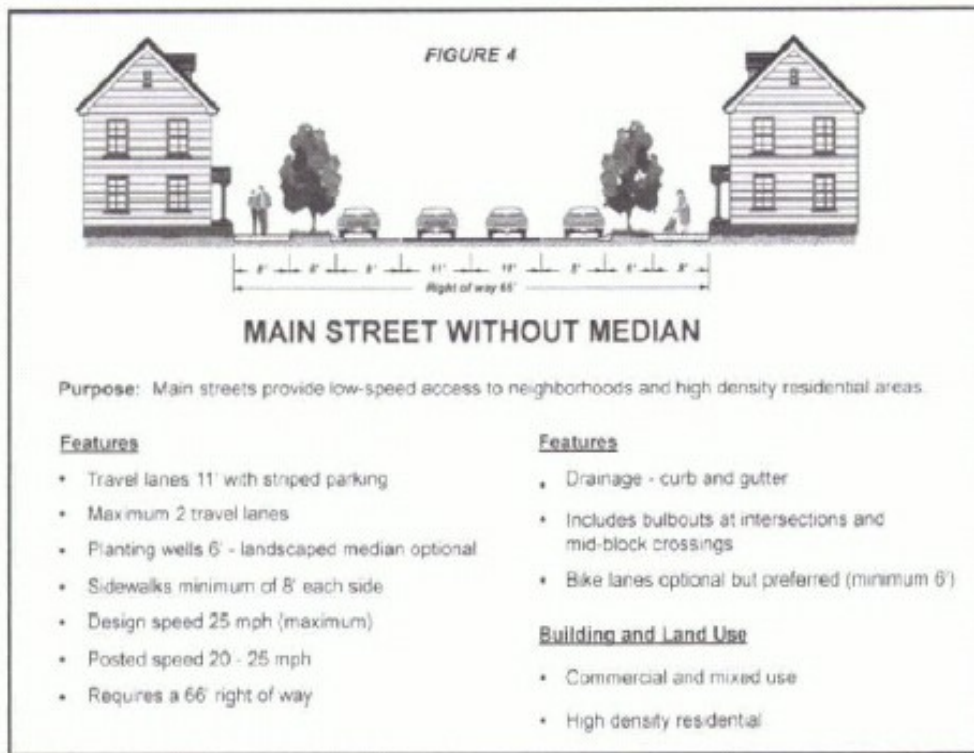


Figure 5: Boulevard Design Standards

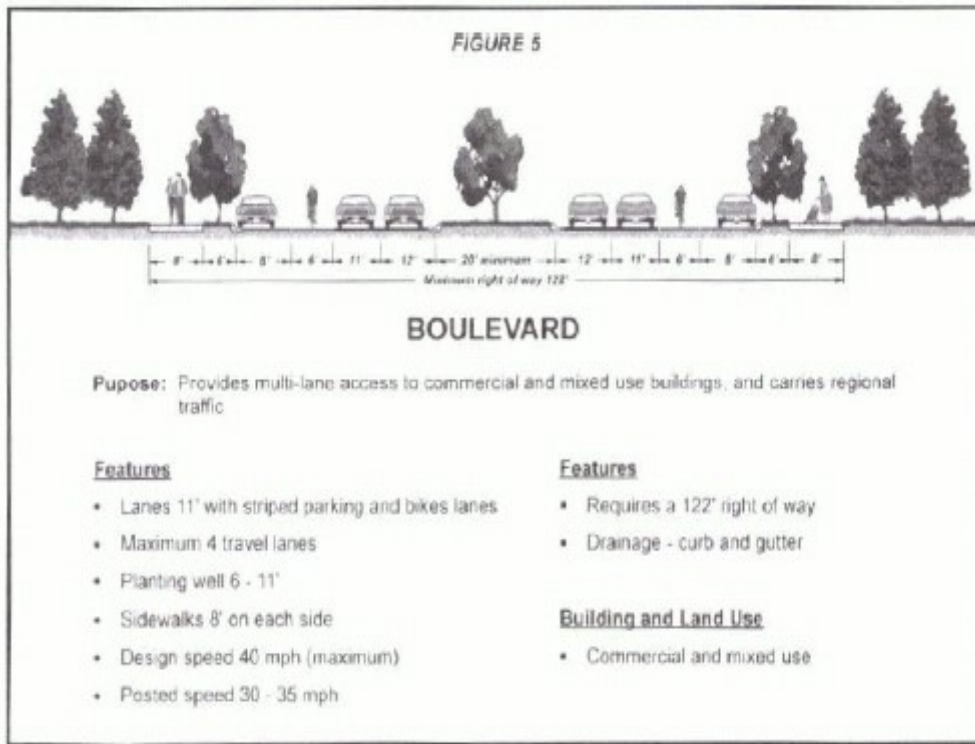


Figure 6: Parkway Design Standards

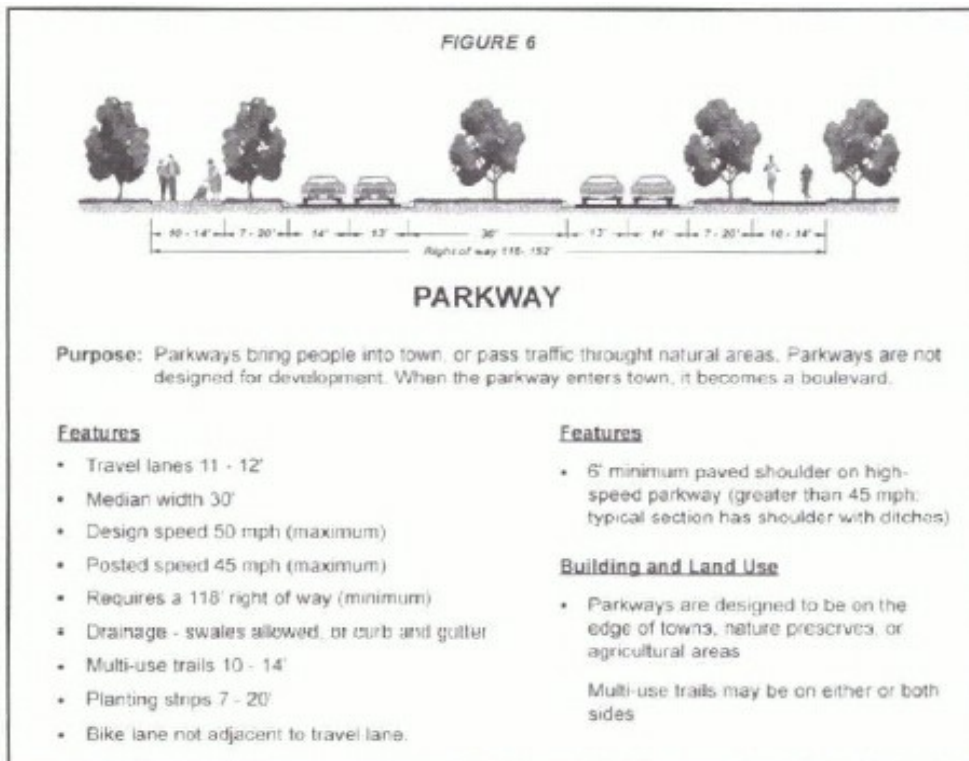


Photo 10: 12 Examples of Traffic Calming Techniques



Speed Hump



Speed Table



Raised Crosswalk



Raised Intersections



Textured Pavements



Traffic Circles



Roundabouts



Chicanes



Realigned Intersections



Neckdown



Turn-about



Neckdown

LUT.18.4 As appropriate, development reviews shall require an analysis of proposed sites through methods described in Crime Prevention through Environmental Design (CPTED) or similar methods that promote a safe environment. Such reviews shall include an analysis of:

- a. Natural Surveillance;
- b. Territorial Reinforcement; and
- c. Natural Access Control.

LUT.18.5 Promote the development of walkable communities that meet the daily needs of their residents and reduce the need for automobile trips.

Goal Nineteen: Incentives to promote more sustainable development.**Policies**

- LUT.19.1 Certain development practices provide broad benefits to the local community and to the public at large. In order to realize these benefits, residential units in addition to the base density may be earned by committing to one or more of the following development practices:
- a. The pursuit of a Green Building certification program such as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED). LEED certifications are available for multi-unit developments.
 - b. Water conservation including landscape techniques, materials, or equipment certified by the Department of Water Resources.
 - c. Low impact grading: Utilization of grading techniques that minimize the amount of cut and fill, use alternatives to large block retaining walls, and generally result in an appearance that mimics the natural slope.
 - d. Common open space development: In order to earn incentive units, development proposals must commit to the following practices in addition to any standards specified under Article 410 of the Washoe County Development Code:
 - i. Maintain viable habitat or wildlife corridors.
 - ii. Create viable passive recreational opportunities.
 - iii. Propagate an overall design that utilizes open space, parcel design, road design, and pedestrian facilities in a manner that is consistent with the community character and sensitive to the design of existing neighboring development.
 - iv. Utilizes low impact grading techniques
 - e. Mixed-use developments: Developments that incorporate employment and commercial service opportunities, utilizing integrated designs that stimulate pedestrian and bicycle use for access to internal and external services and amenities.
 - f. Affordable housing: Housing affordable to homebuyers or renters earning between 80% and 120% of Area Median Income.
 - g. Utilize Low Impact Development (LID) techniques as described in the LID Handbook above and beyond requirements of the LID ordinance.
 - h. The dedication of public Open Space.

Goal Twenty: Further direction and possible incentives for the utilization of Green Building Techniques.**Policies**

- LUT.20.1 Consider the whole life of development applications and design appropriately for location, functions, local climate and terrain.
- LUT.20.2 Use resources efficiently, minimize waste and use environmentally friendly materials in construction, operation and maintenance.
- LUT.20.3 Use renewable energy where possible.
- LUT.20.4 Design, utilizing green techniques, commercial centers that can accommodate a range of uses over time.

- a. When possible, discourage big-box development due to the extreme difficulty of reusing a building of that size and scale.
- LUT.20.5 Create incentives for new developments to incorporate solar panels that generate at least 30% of the power for the home by a given year.
- a. Offer incentives to homeowners when remodeling their home to incorporate solar panels that generate at least 30% of the power for the home.

Photo 11: Solar Panels



- LUT.20.6 Encourage developers to incorporate solar power, tankless, heat-as-you-use water heaters and other renewable energy sources.

Photo 12: Renewable Energy Sources



Tankless Water Heater

Solar Thermal Collector

Solar Hot Water Heater

- LUT.20.7 Require developers to establish xeriscaping Best Management practices and discourage lawns.
- a. Offer incentives to home/commercial/industrial property owners to remove grass from the property and replace it with xeriscaping.
 - b. Xeriscaping should incorporate vegetation native to Northern Nevada.

Photo 13: Xeriscaping



- LUT.20.8 Where possible, building should be situated on site to maximize energy efficiency from the sun.
- LUT.20.9 A percentage reduction or total removal of the Discretionary Review fees upon percentage of utilization of Green Building Techniques.
- LUT.20.10 A percentage reduction or total removal of the special use permit fees upon percentage of utilization of Green Building Techniques.
- LUT.20.11 A percentage reduction or total removal of fees associated with variances if the variance in question is approved by the reviewing Washoe County appointed body and upon percentage of utilization of Green Building Techniques utilized.

Goal Twenty-one: The design of communities and neighborhoods creates a strong sense of place.

Policies

- LUT.21.1 The design of new public facilities shall create a sense of community and connectivity among those who live, work and recreate within the community.
- a. Neighborhoods should be planned to provide emphasis on land uses such as parks, schools and other civic uses that are centralized and act as a community center and promote community interaction.
 - b. Where needed, expand existing public facility links such as trails, paths, open space, and streets to create connectivity between communities.
 - c. Enhance the long-term attractiveness and economic viability through architectural and other man-made features.
 - d. Encourage developers to use varying design strategies to begin to establish a sense of community.
- LUT.21.2 Nonresidential development shall be compatible with the nearby neighborhoods, service and facility capacities, and the surrounding environment.
- a. Compatible is defined as the proportional relationship of the physical environment to human dimensions, acceptable to the public perception and comprehension in terms of size, height, bulk, and/or massing of buildings or other features of the built environment.
- LUT.21.3 Require visual improvements to major entrances, as defined by the Area Plans, into the community and establishment of visual continuity of roadways through the various areas in Washoe County.
- LUT.21.4 Preserve the character of areas throughout the County as described in the Area Plans.
- LUT.21.5 Require facades and height variations around big-box commercial/retail and warehouse industrial complexes (Photo 14). Discourage blank facades around structures (Photo 15).

Photo 14: Facade with Height Variation

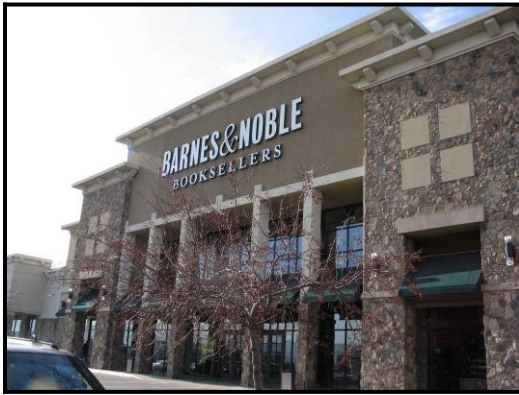


Photo 15: Blank Facade



Goal Twenty-two: Parking lots should be designed for everyday use and promote the utilization of other modes of transportation.

Policies

- LUT.22.1 To break up the parking lot (Photo 16), green space, walkways and bicycle lanes should be utilized to accommodate non-motorized travel through the parking lot (Photo 17) to facilitate safety.
- a. To break up the parking lot, green space, walking and bicycle lanes should be constructed to allow individuals utilizing modes of transportation other than the automobile, to walk separated from the automobile in safety to the use.

Photo 16: Parking Lot



Photo 17: Parking with Non-Motorized Travel Accommodations



- LUT.22.2 Parking lot requirements should be determined for everyday use and not for events that happen very few times throughout the year.
- a. Ordinances should establish parking maximums instead of parking minimums to avoid characterless empty parking lots that are left empty throughout most of the year.

Goal Twenty-three: Development respects natural constraints and available resources.**Policies**

- LUT.23.1 Assess all development individually and cumulatively for potential impact upon the natural resources of the specific area of Washoe County.
- LUT.23.2 Promote landscaping that enhances the natural environment, complements the surrounding architectural style and utilizes low water use. Details can be referenced within the Conservation Element.
- LUT.23.3 Promote Low Impact Development (LID) management practices by requiring both private and public development projects to incorporate low impact design practices. Details can be referenced within the Conservation Element.
- LUT.23.4 Where appropriate, ensure that public lands are retained for beneficial uses such as groundwater recharge, conservation of habitats, open space, recreation and other community uses.
- LUT.23.5 Encourage residential conservation developments as an alternative to conventional subdivision development where clustering will:
- a. Achieve permanent protection of ranch land or significant environmental resources.
 - b. Provide compatibility with surrounding areas.
- LUT.23.6 Promote natural processes to control pollution.
- LUT.23.7 Within all DCAs (Developmentally Constrained Areas) and outside of the TMSA, support the protection of sensitive environmental resources (as defined in the Natural Resources and Open Space Plan) and productive agricultural lands by working with conservancies and property owners to establish conservation easements.

Goal Twenty-four: Washoe County will evaluate the needs of affordable housing within the unincorporated county.**Policies**

- LUT.24.1 The housing needs for low and moderate-income families and senior citizens in Washoe County shall be determined periodically.
- LUT.24.2 Washoe County will evaluate affordable housing to ensure individuals have access to an employment center.
- a. When access to an employment center is not within walking/biking distance, Washoe County in conjunction with other governmental agencies, will evaluate providing public transit.
- LUT.24.3 Zoning, planned unit development regulations, and building codes should be promoted to provide quality residential developments of innovative design that offer a good social and economic mix of families through a broad range of prices and rents.
- a. Special attention should be directed to providing for dispersal of housing for low- and moderate-income families and low-income senior citizens throughout the residential areas of the County.
 - b. Developers may be allowed to exceed zoning codes to a certain allowance if the development guarantees a given amount of dwelling units for affordable housing.

- c. The affordable housing within these units/subdivisions shall be dispersed evenly throughout the development. Affordable housing cannot be segregated to one area of the subdivision.
- LUT.24.4 Legislation and policies that enhance equal housing opportunities shall be encouraged and supported, including but not limited to:
- a. The elimination of discrimination against any person because of sex, race, age, color, religion, marital status, or national origin with regard to the sale, financing of rental housing.
 - b. The elimination of exclusionary or discriminatory practices in zoning, development, and construction.
 - c. The development of programs to provide tax relief to families and low-income senior citizens.

Systems

Goal Twenty-five: Development review enforces the goals and policies of the Master Plan.

Policies

- LUT.25.1 Ensure that development proposals are in conformance with appropriate Master Plan policies and the relevant Area Plan policies.
- LUT.25.2 Early in the application process, staff shall provide applicants with relevant land use and transportation goals and policies.

Goal Twenty-six: Development plans complement plans from other departments and agencies.

Policies

- LUT.26.1 Transportation system plans shall be consistent with long-range land use plans.
- a. Amendments to the Streets and Highway System Plan maps, which are located in the Area Plans, shall be consistent with the 20-year planning horizon of the Washoe County Master Plan and standards established as part of the 2030 Regional Transportation Plan.
- LUT.26.2 Capital improvement plans shall be consistent with the adopted Regional Transportation Plan and Regional Road Impact Fee Capital Improvements Program.
- LUT.26.3 Community Development staff should work with the Regional Transportation Commission and Washoe County Public Works to provide a transportation system and planning process that is responsive to community needs and conditions. Washoe County shall encourage public participation in the planning and development of its transportation system.
- LUT.26.4 Ensure that roadway improvements are consistent with, and contribute to, the implementation of other adopted plans and policies.
- a. Transportation system development shall be responsive to environmental concerns, including attainment of National Ambient Air Quality Standards and energy conservation.
 - b. Improvement priorities and funding sources shall be established for individual transportation projects in the context of overall needs as detailed in the annual Washoe County Capital Improvements Program.

- LUT.26.5 Recognize that land use and transportation goals, policies and action plans are interrelated with the goals, policies and regulations of other Washoe County departments and other regional agencies. The goals, policies and action plan contained in the Land Use and Transportation Element should be reviewed annually for effectiveness and applicability.

Goal Twenty-seven: Public assets are optimized.

Policies

- LUT.27.1 Promote and encourage inter-jurisdictional partnerships.
- LUT.27.2 Apply cost-effectiveness guidelines for public investments in order to gauge intangible costs such as air and water pollution.
- LUT.27.3 Evaluate benefit/cost ratios on all public projects.
- LUT.27.4 Adopt and implement level of service standards for services such as parks, emergency facilities and operations to help promote consistency and certainty in the cost-sharing process.
- LUT.27.5 Adopt and periodically update level of service standards for new development to maintain their viability.
- LUT.27.6 Support the Regional Road Impact Fee (RRIF) program of assessing new development with an equitable portion of roadway improvement costs in order to maintain adopted level of service standards and to minimize the cost of new growth to existing residents. The financial responsibility for providing all local internal subdivision roads and all collector roads needed to connect new development to the regional arterial roadway network should be borne by the development(s) that benefit from their construction.

Goal Twenty-eight: Communication between other agencies, departments and the citizens of Washoe County and the Department of Community Development is valued.

Policies

- LUT.28.1 Continue participation with cities in joint and cooperative planning areas.
- LUT.28.2 Involve residents and other stakeholders in the review of future growth and development.

Transportation

Goal Twenty-nine: Transportation systems are seamless and efficient.

Policies

- LUT.29.1 Promote the connectivity of the neighborhoods within the larger community and region by:
- a. Reevaluating the carrying capacity of local collector streets.
 - b. Encourage block lengths that promote pedestrian, cycling, and vehicular circulation.
 - c. Where gated communities are created, require public pass-through (vehicular and/or pedestrian) as appropriate to minimize the travel distance.
 - d. Design new developments to contain stubs for connection to future adjacent developments.
 - e. Design new developments to utilize public transportation where it is planned.

- f. Development of Class 1 bicycle lanes that separate cyclists and pedestrians for the roadway is encouraged.
- LUT.29.2 Direct public transportation to the core of an area or to areas with more intense development.
- LUT.29.3 Establish a high-quality pedestrian-oriented street environment that is visually interesting, comprehensive and varied (Photo 18).

Photo 18: Visually Interesting, Comprehensive and Varied Pedestrian-Oriented Street Environment



Victorian Square, Sparks

- LUT.29.4 Minimize travel times for daily commuters within suburban areas.
- Acquire right-of-ways in new developments for car pool lanes and bus rapid transit lanes where appropriate when identified through adopted plans.
 - Promote the creation of mixed-use villages to allow individuals to walk to work, or utilize public transit.
- LUT.29.5 Identify any future regional bypasses or through routes. Care should be taken to ensure that any future travel routes do not bisect existing or planned neighborhoods and parks.
- LUT.29.6 Streets and bicycle lanes within the neighborhood shall form a connected network, which disperses traffic by providing a variety of pedestrian and vehicular routes to any destination.
- LUT.29.7 The addition of new lanes for transit will be promoted without eliminating existing lanes for auto traffic.

Photo 19: Examples of Addition of Transit Lanes without Removing Existing Auto Lanes

- LUT.29.8 Require that roadway facilities be maintained and constructed as needed to ensure high quality and safe travel.
- The Department of Public Works, with the cooperation of the Department of Community Development, should continue to maintain an acceptable level of service (LOS) for all County-maintained roadway facilities. At a minimum, LOS congestion standards will be at the level delineated in the 2030 Regional Transportation Plan, and the access management standards will be maintained.
 - Direct access to arterials shall be discouraged.
 - Parking shall be discouraged along arterials.
 - Siting of schools and other activities that have a high level of pedestrian activity are discouraged along arterials. New school sites shall not be located in such a manner that new speed controlled school zones are required along any arterial roadway, as identified in the adopted Regional Transportation Plan.
 - At a minimum, policies and standards recommended by the Washoe County Department of Public Works shall be used as the engineering and design criteria in the construction of new roadways.
- LUT.29.9 Employ Transportation System Management (TSM) strategies such as minor widening, improved channelization, improved signage, traffic signals, and other low-cost mitigation measures whenever warranted and possible. Encourage carpool lanes and work times to be staggered to allow fewer individuals from utilizing the road network during peak commute times.
- LUT.29.10 Protect roadway corridors through right-of-way acquisitions and dedications as development occurs. If property acquired or dedicated for roadway purposes is not needed, it may be abandoned or transferred to private ownership through the processes and terms set forth in NRS 278.480. Right-of-way is also encouraged by the County to be used, as appropriate, for non-motorized transportation, such as for pedestrian, equestrian and bicycle trails.

Goal Thirty: Transportation systems reduce dependence on automobile.

Policies

- LUT.30.1 Promote and create incentives for alternative modes of transportation before expanding the roadway network through the construction of new roads.

- a. All commercial development proposals that generate over 750 average daily trips should offer transportation services such as:
 - i. Park and ride programs;
 - ii. Employer-sponsored shuttles;
 - iii. Employer-subsidized bus passes;
 - iv. Employer incentives for carpooling;
 - v. Requiring employees to pay for parking, or
 - vi. Similar transportation demand management programs or policies.
 - b. Encourage existing employers to develop and implement transportation demand management programs and policies.
 - c. Require development of area public transportation services in the unincorporated portions of Washoe County to the maximum extent that is financially and operationally feasible.
 - d. Promote, encourage, support and implement the regional bikeway plan.
 - e. Explore and encourage options to increase pedestrian facilities.
 - f. Explore and encourage telecommuting and teleconferencing options.
 - g. Promote the development of market incentives for transit and vehicle reduction opportunities.
 - h. Explore the creation of express buses during peak hours from unincorporated Washoe County employment centers.
- LUT.30.2 Encourage the reduction of the proportion of trips made in single occupancy vehicles.
- a. Promote transit-oriented development in suburban areas.
 - i. Transit-oriented development is a mixed-use community within walking distance of a transit stop that mixes residential, retail, office, open space, and public uses in a way that makes it convenient to travel on foot or by public transportation instead of by car.
 - b. Explore and encourage options to increase and connect bikeways.
 - c. Explore and encourage options to increase and connect pedestrian facilities.
 - d. Explore and encourage telecommuting and teleconferencing options.
 - e. Require the development of market incentives for transit and vehicle reduction opportunities.
 - f. Explore connectivity between bicycle lanes and pedestrian paths with transit.
- LUT.30.3 Maximize connectivity of all transportation modes to enhance internal movement within and between individual neighborhoods, including appropriate connections to the regional circulation system.
- LUT.30.4 Create a maximum number of parking stalls for different uses that are based on average daily counts, not on outlier events.
- a. Discourage the creation of vast expanses of parking for strip mall development.
 - b. Create carpool parking stalls.

- LUT.30.5 Encourage large-scale commercial/retail development to incorporate a parking structure located behind the development that is also surrounded by retail/commercial space. The parking structure should have limited access points and should not be visible from the roadway.

Photo 20: Parking Surrounded by Retail/Commercial Space



Parking Gallery located at 2nd and Sierra Streets, Reno

Goal Thirty-one: Washoe County shall create a multimodal corridor along Sun Valley Boulevard to provide travel access to connect with the regional transportation system.

Policies

- LUT.31.1 The multimodal corridor will be created to accommodate auto, bus, bicycle and pedestrian traffic to facilitate the linkage between these different modes.
- LUT.31.2 Washoe County should consider proposing improvements along the Sun Valley Boulevard multimodal corridor for all the various modes of transportation.
- Roadway improvements should be considered that support multi-occupant vehicle use and priority corridors, while signal coordination is optimized based on current traffic flow patterns.
 - For pedestrians, segments of missing sidewalks should be completed to provide direct and continuous connections between destinations and to transit, to continue adding enhanced pedestrian crossings at strategic locations; and continue installation of pedestrian signals and crossing count-down heads.
 - Complete missing bicycle trails and lanes to provide direct and continuous connections; consider constructing needed underpasses at high volume locations to provide safe connections; and provide bicycle route signals.
 - Transit should construct enhancements at key high-frequency transit stops including shelters, benches and trash receptacles and operational system efficiency improvements, such as bus bypass lanes, bus signal prioritization and other improvements to increase the efficiency of the bus network.

Development Constraints Area

Goal Thirty-two: Washoe County shall recognize the Development Constraints Area (DCA) within the Truckee Meadows Regional Plan.

Policies

LUT.32.1 The Regional Plan defines the Development Constraints Area (DCA) as an overlay upon the Truckee Meadows Service Areas and the Rural Development Area.

LUT.32.2 The DCA consists of playas, significant water bodies, natural slopes over 30%, publicly owned open space, and properties that are deed restricted to prevent development. Constrained lands less than 1/3 acre in size will not be included in the DCA. The DCA overlay takes precedence over otherwise applicable policies describing the desired density and intensity of development within the Truckee Meadows Service Areas and the Rural Development Area.

Implementation

Goal Thirty-three: Policies adopted in the Land Use and Transportation Element shall be implemented through amendments to the Washoe County Code, design and other appropriately adopted standards, and/or through processes approved by the Washoe County Board of County Commissioners.

Land Use Plan

The vision of the Washoe County Board of County Commissioners (BCC) acknowledges the importance of the many resources that are found in Washoe County. The land use plan supports and expands on the themes described in their Vision and Mission Statements.

BCC Vision (2006-2007)

Our vision is that by preserving and enhancing our high quality of life, Washoe County will remain a healthy, safe and compelling place in which to live, work, recreate, visit, and invest through our:

- Excellent regional services;
- Open, informed, and collaborative decision-making;
- Valued staff that is accessible and accountable;
- Quality, sustainable facilities and infrastructure;
- Responsible growth management; and
- Preservation of our natural resources, open spaces and magnificent natural landscape.

The land use plan identifies policies that, along with other Elements of the Master Plan, further define the County's vision for physical development. Land use goals and policies guide future growth into patterns that create sustainable communities that seek to balance economic opportunities and environmental quality, promote efficient use of land and public infrastructure while offering a variety of lifestyle choices, support alternate modes of transportation, and create safe and well-designed communities.

Agency Roles

As a planning agency, the Washoe County Community Development Department is required to comply with the Nevada state laws regarding planning. Nevada Revised Statutes require that a land use plan contain "an inventory and classification of types of natural land and of existing land cover and uses, and master plans for the most desirable utilization of land. The land use plan may include a provision concerning the acquisition and use of land that is under federal management within the city, county or region, including, without limitation, a plan or statement of policy prepared pursuant to NRS 321.7355."

The Land Use and Transportation Element, in conjunction with the Area Plan section of the Master Plan, satisfies the land use plan requirements as set forth in the Nevada Revised Statutes. Plans and provisions for federal land management are also located in the land use section of the Master Plan. In addition, the land use plan focuses on community design and incorporates provisions found in the state statutes for community design. Per Nevada Revised Statutes, a community design plan requires "standards and principles governing the subdivision of land and suggestive patterns for community design and development."

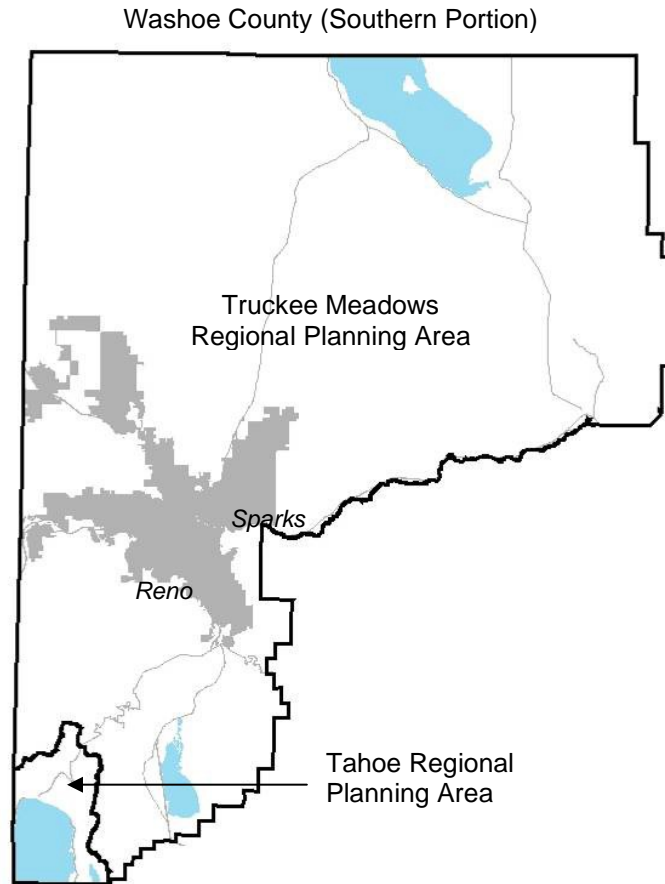
Nevada Revised Statutes also establish the authority and roles of planning agencies. Washoe County is required to collaborate with the associated regional agencies that operate within County boundaries. Two regional agencies directly deal with land use issues in Washoe County.

The Tahoe Regional Planning Agency leads a cooperative effort in which Washoe County is one of the participants. The land use efforts focus on preserving the natural features and resources of the Tahoe Basin. Washoe County has incorporated additional land use controls that address Tahoe Regional Planning Agency concerns within the Area Plan for the Tahoe planning area.

Remaining portions of Washoe County, with the exception of the Pyramid Lake Paiute Tribe land, falls within the jurisdiction of the Truckee Meadows Regional Planning Agency. The purpose of the agency is to promote coordination among the local jurisdictions in Washoe County. A regional plan guides the region in overall growth and land use issues. The Land Use and

Transportation Element includes land use policies that conform to the Truckee Meadows Regional Plan.

Figure 7: Regional Planning Areas



Source: Washoe County Department of Community Development

Washoe County also works with other local governments on joint planning ventures. The Reno-Stead area, University Farms and the southern portion of the Spanish Springs area is administered through a joint planning process. The County works with the City of Reno and/or the City of Sparks to create consensus on land use decisions.

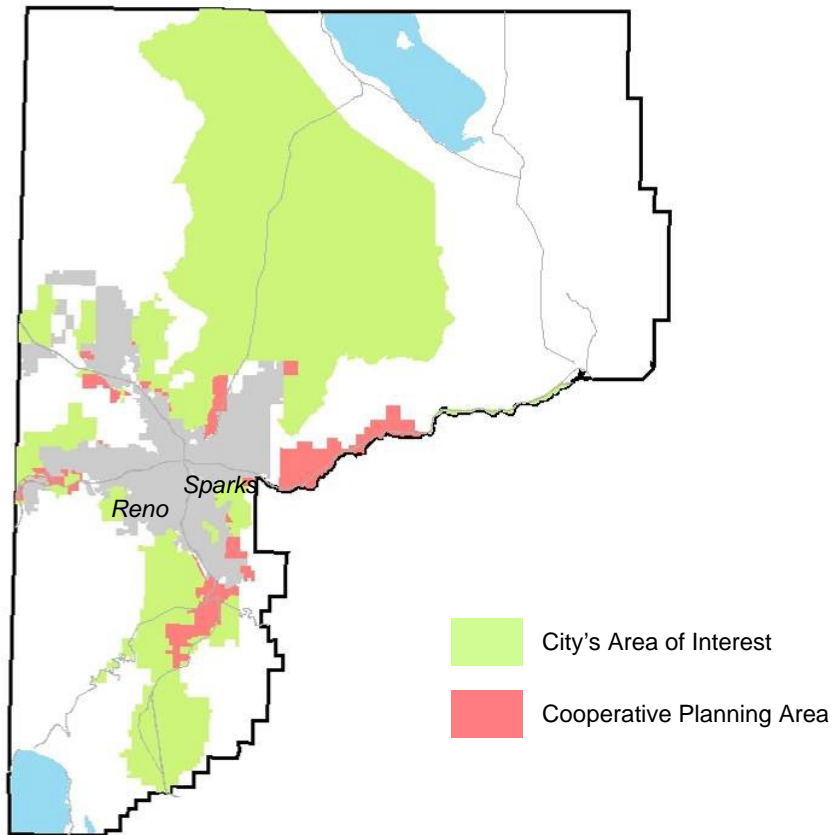
In areas agreed upon in Regional Plan Settlement Agreement Case CV02-03469, Washoe County participates in a cooperative planning process. Cooperative planning criteria and development standards help provide assurance about what, where, when and how development will occur within neighborhoods and to what standards or criteria these areas will be developed. The Washoe County master plan land use is used as a baseline for development in these areas. Any changes to the master plan designation requires conformance to cooperative planning standards. In addition, there are also areas of interest. In these areas, the County provides the Cities with information about any master plan changes and allows the Cities to review and comment on the possible impacts. If the Regional Plan Settlement is retained, it will sunset with the 2007 Regional Plan.

In the remaining unincorporated areas of the County, the Community Development Department is responsible for land use planning in the unincorporated areas of the County. The department works with citizens, boards and commissions to adopt and implement land use plans. The plans

aim to create, sustain and reinforce the character of unincorporated communities. Emphasis is on preserving resources through the implementation of plans and educational programs

Figure 8: Cooperative Planning Areas

Washoe County (Southern Portion)



Source: Washoe County Department of Community Development

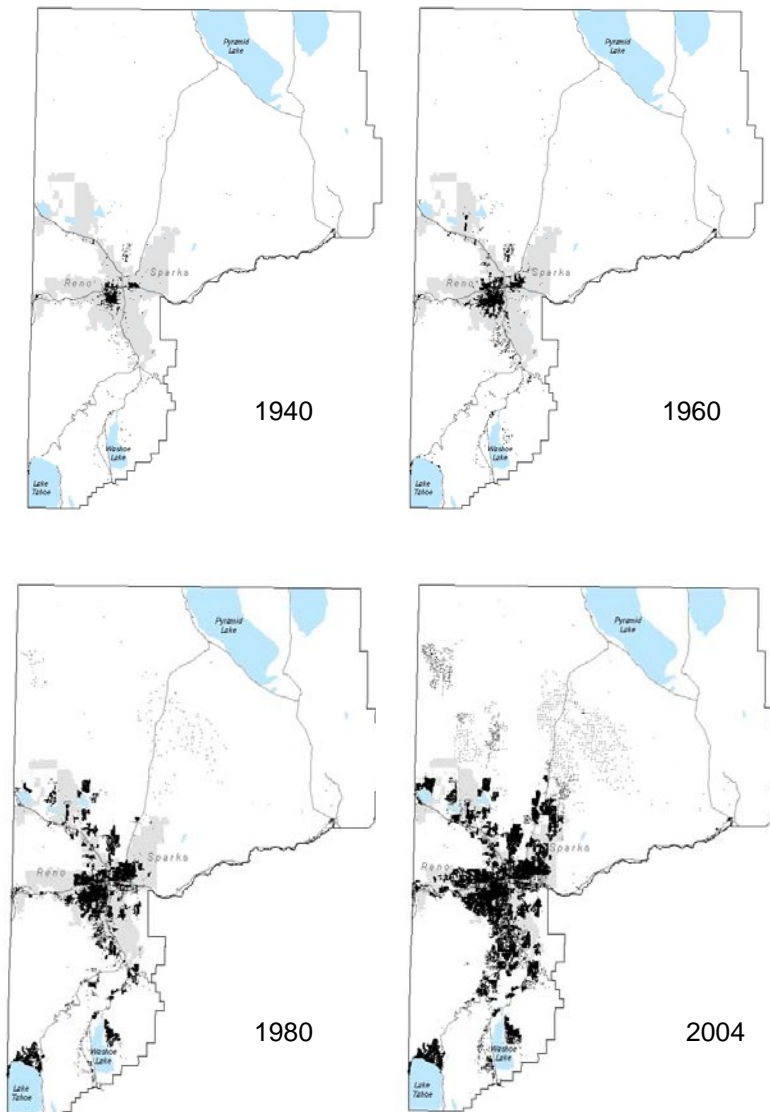
Existing Conditions

Growth Patterns

The earliest non-agriculture development in south Washoe County began as settlements at transportation crossroads in close proximity to the County's water and natural resources. Settlements developed at mining areas and at timber distribution centers. The railroad, trails and the Truckee River eventually caused the Reno/Sparks area (Truckee Meadows) to become the current metropolitan center for Washoe County. Over the last half of the 20th century, the popularity of automobile travel and improved transportation routes have aided in the spread of growth into the surrounding valleys.

Figure 9: Overall County Growth (1940 – 2004)

Washoe County (Southern Portion)



Key: Dots represent approximate building location.

Source: Washoe County Geographic Information Systems Program Planned Land Use

Physical constraints, such as terrain and hydrology, also influenced early settlement patterns. Steep slopes at the base of the surrounding mountains presented limits to the expansion. Several unincorporated valleys still reflect the pattern of low profile, low density residential development spread throughout valley basins. However, this pattern is changing quickly due to increased pressures on land resources.

Increased pressure on land resources, coupled with a continuing increase in population, has also led to intensification of land use throughout the southern portion of the County. It is estimated that many of the buildings that will be needed in 2025 still need to be built. Unincorporated communities are approaching densities that already have, or will require, urban services. These communities include Incline Village/Crystal Bay, Verdi, Wadsworth, Gerlach/Empire, East

Washoe Lake, Cold Springs, Lemmon Valley, Golden Valley, Sun Valley, Spanish Springs, Virginia Foothills/Toll Road area, and Pleasant Valley.

Table 1 illustrates the planned land use for the unincorporated portions of Washoe County.

Table 1: Planned Land Use (Unincorporated County)

Land Group	Percentage
Rural	89.79%
Suburban	1.03%
Urban	0.02%
Parks and Open Space	8.90%
Public and Semi-Public Facilities	0.12%
Commercial	0.06%
Industrial	0.08%

Source: Washoe County Geographic Information Systems Program Planned Land Use Dataset

Public Lands

Publicly owned lands encompass over 78 percent of land area of Washoe County. Public lands are owned by local jurisdictions, and state and federal agencies. Public lands have a variety of uses; and people often think of the lands as limitless community assets. However, not all lands will remain in public ownership. Pressures on land resources, as well as pressures of economy, may result in changing ownership to private entities. Nevertheless, planners anticipate that the majority of public land will remain under public control due to their overriding public benefit.

State Lands

When Nevada became a state, it received title to all lands submerged beneath navigable bodies of water. Washoe County water bodies that have been classified as navigable include Lake Tahoe, Washoe Lake and the Truckee River. Therefore, the state owns the beds and banks of these bodies of water. Generally, this is up to the ordinary and permanent high water mark. The exception is Lake Tahoe. In this case, the state owns the bed of the lake to an elevation of 6,223 feet.

State lands in Washoe County are under the jurisdiction of several state land agencies including the Division of Buildings and Grounds, the Division of State Parks, and the Division of Wildlife. Each agency is responsible for the management of the lands they are using. There are currently about 35,681 acres of state-controlled lands in Washoe County.

The Nevada State Parks also maintains two parks in Washoe County. They are the Lake Tahoe - Nevada State Park and the Washoe Lake State Park.

Tribal Lands

The Pyramid Lake Indian Reservation covers approximately 306,273 acres and is located in eastern Washoe County. The Paiute Indian Tribal Council administers its lands. Additionally, the Reno-Sparks Indian Colony owns approximately 160 acres of land in Lemon Valley and approximately 1,920 acres of land in Hungry Valley. The Reno-Sparks Indian Colony Tribal Council administers the land use in those areas. Land administered by the Bureau of Indian Affairs totals approximately 356,113 acres.

Federal Lands

Federal agencies administer approximately 3,320,483 acres of land in Washoe County. Each of the federal agencies has its own set of rules and policies for administration of its lands. Table 2

identifies the approximate number of acres in Washoe County managed by each of these agencies.

Table 2: Federal Lands

Federal Agency	Acres
Bureau of Land Management	2,682,204
Bureau of Reclamation	283
Department of Defense	1,732
Fish and Wildlife Service	185,756
Forest Service	94,395

Source: BLM 2005, DCNR Nevada Natural Resources Status Report 2002, and Nevada Division of State Lands 2005

BLM

The Bureau of Land Management (BLM) is an agency that is under the authority of the Department of Interior. This agency is responsible for managing acres of public lands, along with belowground mineral estates. Originally, these lands were valued principally for the commodities extracted from them. Today, the public also prizes them for their recreational opportunities and their natural, historical and cultural resources they contain.

An important part of the BLM's mission is to identify parcels for potential sale. Parcels are selected that fall into one of the following categories:

- Scattered and isolated tracts that are difficult or uneconomical to manage;
- Tracts acquired by the BLM for a specific purpose that are no longer needed for that purpose; or
- Land where disposal will serve important public objectives, such as community expansion and economic development.

UNITED STATES FISH AND WILDLIFE

The U.S. Fish and Wildlife Service is another agency that operates within the Department of Interior. Its mission is to work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing success of the natural environment and enjoyment of all the world's people. Although the majority of fish and wildlife habitat are on non-federal lands, Washoe County has two wildlife refuges. The Sheldon National Wildlife Refuge (Photo 21) is located in the far northern part of the County. Anaho Island (Photo 22) is located in Pyramid Lake on the Pyramid Lake Indian Reservation.

Photo 21: Sheldon National Wildlife Refuge



Photo 22: Anaho Island



UNITED STATES FOREST SERVICE

The United States Forest Service is an agency of the U.S. Department of Agriculture. In Nevada, the agency manages public lands through national forests designations. National forests are managed on a multiple-use, sustained-yield basis for production of forage, wildlife, wood, fish, water and outdoor recreation. The Forest Service manages the Humboldt-Toiyabe Forest (Photo 23), which is located in the southwestern portion of Washoe County. The Forest Service also established the Lake Tahoe (Photo 24) Basin Management Practices to protect the Lake Tahoe Basin.

Photo 23: Humboldt-Toiyabe Forest



Photo 24: Lake Tahoe



BUREAU OF RECLAMATION

The Bureau of Reclamation is a water management agency that establishes methods for competing entities throughout the Western United States to meet water needs and balance competing water interests. It's mission is to assist in meeting the increasing water demands of the West while protecting the environment and the public's investment in these structures.

Development Constraints

Numerous natural features influence the location and character of growth in unincorporated Washoe County. Included are soil type, geology, steep slopes, floodplains, water availability and others. These features are discussed in the Master Plan Conservation Element. The features having the greatest impact on development in unincorporated Washoe County are steep slopes, potential wetlands, water availability and floodplains. For example, the potential for flooding must be recognized through land use management and flood control improvements. Areas that are prone to floods will shape future development patterns.

Taken together, these natural features approximate the natural limits to the future development pattern. They represent determinants that can be affected by man-made improvements to a limited extent and at considerable expense. When lands in public ownership are also considered, as shown on the Development Suitability map in each Area Plan, it is apparent that the prime land that is easily developed is diminishing. This has three consequences on future development area: development is going to be more expensive, the direction of growth will be shifted to more easily developed land, and development will increase in intensity to compensate for the diminishing supply of land. Washoe County's goal is to discourage sprawled growth and encourage higher density, mixed-use, urban village development within any existing or planned suburban areas.

Vegetation and Wildlife Habitat

Abundant land resources in Washoe County provide a home to a broad range of species. In fact, various species of animals and plants in Washoe County are found nowhere else in the world. Identifying and protecting critical species and environmentally sensitive areas is an important part of the land-planning process. In addition to development restrictions imposed by Washoe County, there are also federal and state laws that protect biological resources. These acts include the Endangered Species Act, the Clean Water Act, and the National Environmental Protection Act (NEPA).

Issues Identification

New issues arise as communities grow and evolve. In an effort to understand the complexities of land use in Washoe County, Community Development staff and other development professionals have identified issues for possible inclusion in the plan. The issues are then further evaluated for inclusion as goals, policies and action plans.

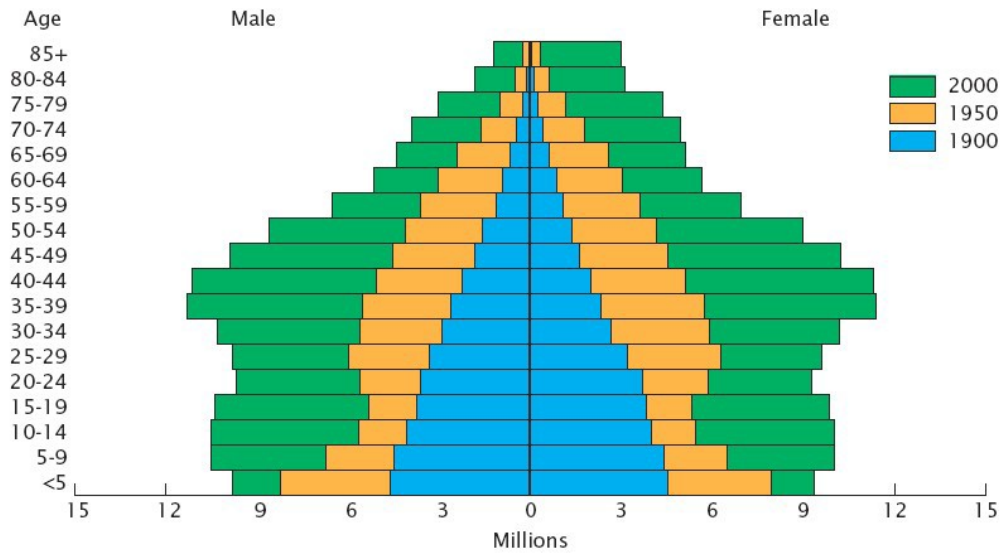
This Goals and Policies section of the Land Use and Transportation Element may not incorporate all of the issues identified in this section. Part of the purpose of identifying the issues is to bring the issues to the forefront for additional analysis. Some of the issues identified may be emerging and it may be premature to address them in the plan. However, by identifying them, decision makers become aware that these issues may need further evaluation as communities continue to grow. In addition, these issues may be reevaluated for incorporation in other County documents.

Mobility and Changing Demographics

Not everyone is capable of maneuvering through the built environment without well-planned accommodations. One factor that makes our environment more accessible is the ability to easily walk to points of interest, such as a neighborhood store, school or bus stop. This type of accessibility is obtained through mixed-use interconnected development. It is important to recognize the populations that reside in our communities and plan for them appropriately.

By the year 2025, 60 million Americans will be 65 or older. As people age, they often lose their ability to drive safely long before they lose their ability to walk. For the aging person, the safety and convenience of being able to obtain needed services makes a tremendous difference by allowing them to age with grace rather than depend on others for everyday needs. Communities and transportation networks need to be carefully designed to meet the needs of a rapidly growing senior population.

Figure 10: United States Demographic Age and Sex Distribution (1900, 1950 and 2000)



Source: U.S. Census Bureau, decennial census of population, 1900, 1950, 2000

Unlike the increase in the aging population, the youth have always been present in communities. However, the design of the community has not always paid attention to the importance of their needs. A safe environment is particularly important for children, who depend more heavily on walking to reach their destinations, than adults.

Advances in medicine and technology are also allowing many more people to live with disabilities. Past efforts through the American Disabilities Act have gone a long way in identifying issues and preparing standards to prevent barriers for people with handicaps. A recent and more encompassing approach is to design all environments to be usable by as many people as possible regardless of age, ability or situation without the stigma of being different.

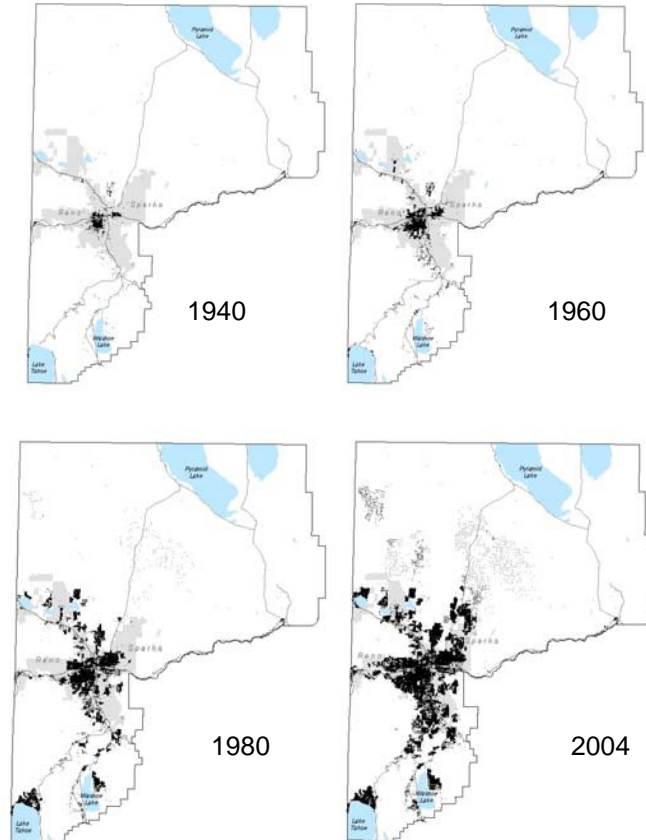
Sprawl and Use of Land

Inefficient land use has become a problem throughout the United States. From early 1980s through the last part of the century, the U.S. population grew by 17 percent, while urbanized land grew by 47 percent. The average acreage per person for new housing lots has almost doubled in that period. As the figure on the following page demonstrates, Washoe County has not been immune to this trend. In an effort to change the consumptive land use pattern, the 2002 Truckee Meadows Regional Plan focused on principles that sought to decrease our dependence on inefficient land use. Local jurisdictions, including Washoe County, must employ smart growth policies that complement the Regional Plan in order to have a true effect on the sprawl pattern.

Lack of Investment in Existing Communities

Lack of investment in existing communities is directly related to sprawl. During the last part of the 20th century, our priorities focused on investing in new suburban communities. Existing communities began to decay due to a decrease in funding and reinvestment. In the past, this trend was thought to be a natural occurrence. However, it is now known that this pattern of decline is the direct result of public policies that favor new development over redevelopment or infill opportunities. Washoe County must actively encourage revitalization and redevelopment of older existing communities, utilizing smart growth policies, while discouraging new sprawled development patterns.

Figure 11: Overall County Sprawl (1940 – 2004)



Key: Dots represent approximate building location.

Source: Washoe County Geographic Information Systems Program Planned Land Use

Preservation Efforts

During the last decade, there has been wide community support for the preservation of land for public use. Washoe County has been able to preserve large expanses of public open space. However, continued need for developable land and pressures from the federal level to transfer public land into private hands may put preservation efforts at jeopardy. To ensure the lasting preservation of land for public use Washoe County must create restrictions on development on environmental sensitive land and land utilized for public recreation. Washoe County must create ordinances that establish connectivity between public open spaces.

Safe Neighborhoods

Safety-related issues are often at the top of the list of concerns by neighborhood residents. This is true whether the resident lives in an inner city neighborhood, suburban enclave or rural agricultural area. People want to feel they are safe as they engage in common activities such as walking to a neighbor's, biking to a friend's house, walking to school or to the bus stop, going on a family bicycle ride, or traversing to the store in a wheelchair or with a stroller. The way in which communities are designed can hinder or enhance these types of activities. In turn, the way the community is designed can play an enormous factor in the perception of safety in a community.

Two major challenges related to land use are: (1) providing a greater emphasis on land use decisions that promote one's ability to engage in everyday activities within the neighborhood or

community; and (2) recognizing that the importance perception can play in how a neighborhood is viewed can reverse any ill effects that may cause neighborhood abandonment and decline.

Design techniques are being used in order to enhance areas where there are perceived safety problems. Such techniques include creating neighborhoods and communities that provide integration and balance of uses, viewing streets as an amenity, requiring front porches and other semi-public area to encourage community interaction. Planners and designers are also beginning to realize that public safety needs should be considered in development review.

Healthy Neighborhoods

Healthy neighborhoods or communities integrate the physical environment and retain the natural functions with economic vitality and human interactions to create spaces and relationships that foster the places where we live, work and play. These places have the continuing support and investment of time, energy and resources by residents and other stakeholders. They are typically characterized by stable or appreciating property rates, strong patterns of resident involvement, a set of shared values around property maintenance and public behaviors, and an image of the neighborhood that is positive.

Although initial design of the community aids in the creation of the community through the promotion of walkable and connected neighborhoods with adequate parks, there is much more at work in the development and sustainability of healthy neighborhoods. The larger community has to assume a role in the development of the neighborhoods. Often, this is through strategic investments of both time and economic aid. Typical programs include capital improvement investments, code enforcement, public education, and redevelopment opportunities, as well as monitoring and evaluation. Different neighborhoods have different needs and present different opportunities.

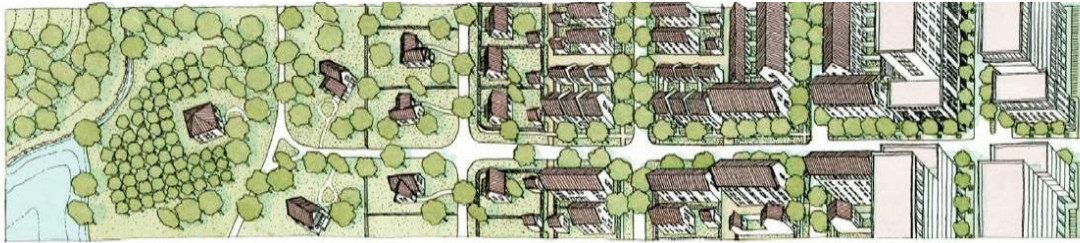
Diversity - Choice in Lifestyle

People choose various neighborhoods at different times in life. Urban environments typically offer close-in living conditions with a multitude of cultural activities and abundant amenities. Singles and empty nesters have typically been attracted to these areas because they offer a variety of places to socialize. Suburban areas appeal to a wide variety of people and include a range of lots sizes and housing choices ranging from large estate lots to townhouses. Rural areas are characterized by the lack of development. Crop production and animal rearing needs take precedence over residential activities. In fact, much of the rural landscape is devoid of permanent human activity.

An excellent tool that can delineate the change and transitions between the environments is the transect. A transect can be viewed as both a descriptive theory and a land use system. A number of communities have adopted a transect approach to retooling their development codes. The central notion is a gradient of habitats from rural wilderness to urban core. As one moves along the interconnected streets, differences in design, ecology and social structure are evident.

Each of these environments and related lifestyles contributes to the landscape of Washoe County. In order to preserve these important land use patterns and related lifestyles, not only do planners have to consider the land use patterns associated with the area but they also need to ensure compatibly between the edges of each area.

Figure 12: Community Transect Model



(Transect Zoning Categories)

T1 Rural Preserve				
T2 Rural Reserve				
	T3 Sub-Urban			
		T4 General Urban		
			T5 Urban Center	
				T6 Urban Core

Source: Duany, Plater-Zyberk & Co.

Regional Planning

The principles developed through the 2002 Truckee Meadows Regional Plan planning process set a new course for development in the Truckee Meadows portion of Washoe County. The central theme behind this plan is to intensify development in the urban core and designated regional centers while allowing less intense development in surrounding areas and secondary nodes throughout the region. Development outside of designated areas is discouraged through local regulation of density and land use.

The Tahoe Regional Planning Agency is also revisiting their planning process. This plan is heavily focused on environmental goals and established conformance standards for air and water quality, soil conservation, wildlife and fish habitat, vegetation, noise, recreation, scenic resources, land coverage and rate of growth.

National Planning Movements

Sustainable Development

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In more recent times, the issue of sustainable development was revived by the United Nations in their plight to help communities develop and survive.

Sustainable development takes into account the uncertainty of available resources in the future. Increased population and growth put a larger burden on our natural environment. To combat the stress placed on the natural environment, sustainable development attempts to mitigate current consumption patterns in an attempt to maintain current natural resource levels for generations to come.

A major tenet of sustainable development is the importance of analyzing all sources of information. Sustainable development decisions are carefully determined with input from a broad group consisting of policy makers to grass root organizations to the single individual. One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making.

Many different sustainable development methods have been discussed previously including:

- New-Urbanism
- Transit Oriented Development
- Urban Villages

New Urbanism

New urbanism encompasses a broad range of principles and is also known by such names as neo-traditional design, transit-oriented development, and traditional neighborhood development. New urbanism is based on pre-World War II urban form before the dominance of automobile travel when cities were walkable, contained mixed-use development rather than separation of uses, and relied on transit. The key principles state that:

- Cities, towns and neighborhoods should have discernable centers and edges.
- Development should be compact and preserve farmland and environmentally sensitive areas.
- Infill development should be favored over Greenfield use.
- Streets should be narrower, connected, and friendly to pedestrians and cyclists. Modified grids or web-like patterns are preferred due to better connectivity.
- Streets should be pedestrian friendly. Streets should be wider with vegetation separating the roadway from the sidewalk and bicycle lanes incorporated within every transit network.
- Mixed land uses and higher densities are encouraged over single-use pods.
- Neighborhoods should include housing opportunities for a rich diversity of people of many different groups including income, class, age, culture and race.
- A transit network should form the backbone of transportation needs.
- There should be a minimal environmental impact.
- Civic buildings and public gathering places should be well designed and centrally located.
- Architectural and urban design should respect local history and regional character. Emphasis should be on creating a sense of place.

Smart Growth

The intent of the smart growth movement is to provide a framework for communities to make informed decisions about how and where they grow. By utilizing smart growth principles, communities can grow in ways that create better neighborhood living situations; are more accessible; support economic development and jobs; create strong neighborhoods with a range of housing, commercial and transportation options; cost less and require less taxes; and achieve communities that provide families with a clean environment.

One of the most important ideas to understand when implementing smart growth practices is that no one policy or approach will do everything. The principles are meant to be used in conjunction with each other and new urbanism with an appreciation that each situation presents unique issues. The smart growth principles are embodied by the following precepts:

- Mix-land uses.
- Take advantage of compact building design.
- Create a range of housing opportunities and choices.
- Create walkable neighborhoods.
 - Through interconnected streets.
- Foster distinctive, attractive communities with a strong sense of place.

- Encourage front porch communities with garages in rear of homes.
- Preserve and connect open space, farmland, natural beauty and critical environmental areas.
- Strengthen and direct development towards existing communities.
- Encourage infill development and urban renewal.
- Provide a variety of transportation choices.
- Bus, bicycle, walk, employer shuttles, and carpooling.
- Make development decisions predictable, fair and cost effective.
- Encourage community and stakeholder collaboration in development decisions.

Form-based Codes

The technique of form based-codes provides detailed prescriptions of physical form in a well-illustrated, clear plan. The clarity and prescriptive nature of the plan allows developers to avoid the long, unpredictable review processes common to traditional zoning. Form-based coding often is implemented through a “parallel” approach where new codes are applied as an option to existing codes. Incentives for using the form-based option, including expedited permitting processes and tax breaks, can enhance its appeal to developers and lead to implementation. Developers and architects praise the clarity of a form-based code and the more predictable, streamlined review process. Also, citizens value the opportunity to shape their communities through public design charrettes.

Character Planning and Design

Character Planning

Successful plans involve more than just the physical layout of a development or the amount of certain uses proposed in a plan. Long-lasting plans understand the look and feel of a place - those characteristics that give an area a “sense of place” or an identity. These characteristics may be found by taking into account an area’s natural resources, or historic and cultural traditions. Other times, character is derived from more subtle elements such as an overgrown streetscape or an engineered solution to a past problem now embedded in the area. For instance, a tram that transports people up a steep incline may be the element that gives an area a particular character.

When evaluating future developments applications, approval of applications should only be granted if the applicant can demonstrate compatibility with the existing character of an area. Existing character of a community does not refer to low density, cul-de-sac sprawled development. Character refers to architectural style, historic and cultural preservation, and maintaining a sense of community.

Character planning forms the basis for the Area Plan sections of the Master Plan. Each Area Plan covers a unique geographical area that is based loosely on the area’s hydrographic basin(s). Planning studies for each Area Plan consider the overall community situation, the historical land use and transportation patterns, conservation goals, and natural and man-made resources. A great deal of public participation also occurs in the process to aid in uncovering the characteristics that make each area unique. The goal of each plan is to fashion a document that will preserve the community character, maintain the plan stability and manage the timing of growth.

Design Guidelines

An important element in character planning is creating standards or guidelines that will uphold the sense of place that the community desires. Typical land use tools such as land uses or zones are only part of the solution. A more comprehensive method is to combine the regulatory tools with design guidelines that address the aesthetic side of character. Design guidelines provide

clear and concise technical guidelines to enable professionals to prepare plans that more closely meet the desired outcomes. They typically describe such elements as form, mass, scale, material, landscaping, compatibility, detail and color. Design guidelines are incorporated in Washoe County Area Plans.

Master Plan

Master Plan Map

Washoe County will maintain official Master Plan maps that show the Master Plan category for each parcel in unincorporated Washoe County. The Washoe County Master Plan maps are a component of each Area Plan of Volume Two of the Washoe County Master Plan, and cover the planning area depicted in each Area Plan. These maps establish the Master Plan categories applicable to all properties located within the unincorporated area of Washoe County and are the basis for desired patterns of community design and physical development. A proposal to amend a Washoe County Master Plan map shall constitute an amendment to the applicable Area Plan and shall be processed in accordance with Development Code Article 820, Amendment of Master Plan.

Master Plan Categories

Master Plan categories provide the vision for the future development pattern in unincorporated Washoe County. Master Plan categories were determined by analyzing the typical intensity, location and distribution of land uses in Washoe County. The role that the unincorporated County will play in the regional development picture within the Truckee Meadows planning area, Tahoe planning area and outlying environs also contributes significantly to the creation of the Master Plan categories. It is expected that these Master Plan categories provide the opportunities for growth that are desired in unincorporated Washoe County and will dominate throughout the scope of this plan. The information contained in this section, along with information contained in the other elements and the Area Plans should be used as an aid in determining the appropriateness of major land use decisions.

Rural and Rural Residential Master Plan Categories

Intent

The Rural and Rural Residential categories recognize the important contributions that ranching and other rural activities make to Washoe County. These categories are intended to preserve areas where agriculture, grazing and/or open space, and large lot residential predominate; and to discourage suburban sprawl into areas that lack essential infrastructure and services for intensification, or that have resource constraints such as steep slopes. In limited cases, and in conformance with the Truckee Meadows Regional Plan, rural resorts may be appropriate.

These two Master Plan categories are typically applied to lands outside the Truckee Meadows Services Area (TMSA) as defined by the Truckee Meadows Regional Plan; however, they may from time to time be appropriate inside the TMSA. Through the Rural and Rural Residential designations, it is the County's intention to encourage more intensive land uses to locate in environmentally suitable areas and/or areas served by existing or planned infrastructure. Furthermore, other uses not specified here may be appropriate, provided they deal effectively with the limitations and constraints noted, and the development represents an overall benefit to the County (e.g. unique employment opportunity). Minimum lot sizes are typically 5 acres, ranging upward to over 40 acres.

The Rural and Rural Residential Master Plan categories are intended to identify those lands that are: (1) remote and will have no or very low density development (i.e. 1 dwelling unit per 40 acres), (2) remote but where unique developments may occur (e.g. destination resorts, conference centers, etc.), (3) in a remote location that does not have public infrastructure

adjacent to or near the site, (4) where agricultural, ranching, mining, or other similar uses predominate, and (5) where the County seeks to conserve the large lot residential lifestyle that has endured as a chief component of the region's overall character. The primary differences between these two categories are as described below.

Rural

The Rural Master Plan category is intended for areas of the County that are remote, have minimal infrastructure, contain significant amounts of open spaces, and which are suitable for commercial agricultural and grazing uses, extraction industries, natural resource conservation, energy production, rural commerce, and large lot residential uses. A residential density of 1 dwelling unit per 40 acres is allowed within the Rural Master Plan category. The following regulatory zones are allowed in and are consistent with the Rural Master Plan category: General Rural, General Rural Residential, Public and Semi-Public Facilities, Specific Plan, Parks and Recreation, and Open Space.

Rural Residential

The Rural Residential Master Plan category is intended primarily for larger lot residential uses, small scale agricultural uses, natural resource conservation, and rural commerce, with allowed densities ranging from 1 dwelling unit per 40 acres up to 1 dwelling unit per 5 acres. A density of one dwelling unit per 2.5 acres is allowed within the Rural Residential category provided the property is within the Truckee Meadows Services Area, as amended. Divisions of land and the provision of services outside the Truckee Meadows Services Area, as defined in the Truckee Meadows Regional Plan, must be consistent with the provisions of that plan. The following regulatory zones are allowed in and are consistent with the Rural Residential Master Plan category: Low Density Rural, Medium Density Rural, High Density Rural, Public and Semi-Public Facilities, Specific Plan, Parks and Recreation, and Open Space.

Development Guidelines

Development in the Rural and Rural Residential categories is appropriate under the following conditions:

- A. Housing: Single-family homes are the predominant housing type and may be clustered utilizing private or public open space to retain open spaces and agricultural or ranching use. Multi-family residences are not appropriate except if being used to provide housing to workers whose employment is dependent on a permissible use.
- B. Conservation: The natural terrain, groundwater recharge capabilities, scenic qualities, ranching and agricultural uses, and other natural surroundings shall be conserved. Xeriscaping landscaping practices should be implemented to conserve water.
- C. Land Use and Transportation:
 1. Land Pattern:
 - i. The predominate pattern in the unincorporated county shall be dispersed development.
 2. Land Use:
 - i. In the Rural Master Plan category, the predominant regulatory zones are General Rural (GR) and General Rural Residential (GRR).
 - ii. In the Rural Residential Master Plan category, the predominant regulatory zones are Low Density Rural (LDR) and Medium Density Rural (MDR). Consistent with the requirements of the Truckee Meadows Regional Plan, High Density Rural (HDR) is appropriate for transition between rural lands and suburban lands, or in rural enclaves within generally suburban areas.
 - iii. Public and Semi-Public Facilities (PSP), Open Space (OS), Parks and Recreation (PR), and Specific Plan (SP) regulatory zones may also be appropriate in these areas.

3. Transportation:
 - i. Transportation facilities shall be sized for an average trip generation as follows:
 - a. General Rural (GR) and General Rural Residential (GRR) shall be sized for 0.25 trip/acre/day and peak hour trip generation of 0.025 trips/acre/hour, or in the case of non-residential development sized consistent with the proposed use of the property.
 - b. Low Density Rural (LDR) shall be sized for 1 trip/acre/day and peak hour trip generation of 0.1 trips/acre/hour.
 - c. Medium Density Rural (MDR) shall be sized for 2 trips/acre/day and peak hour trip generation of 0.2 trips/acre/hour.
 - d. High Density Rural (HDR) shall be sized for 4 trips/acre/day and peak hour trip generation of 0.4 trips/acre/hour.
- D. Public Services and Facilities: These areas typically lack public services and facilities necessary to support widespread development. The following minimum standards are guidelines to be considered when existing capacity or facilities exist:
 1. Fire, EMS 10-20 minute response time
 2. Police 20-25 minute response time
 3. Water 2.02 acre feet/dwelling unit/individual well
 4. Sewer 32.5 gpd/acre (325 gpd/dwelling unit), individual sewage disposal system
 5. Schools 40 minutes one way (elementary)
55 minutes one way (junior high)
75 minutes one way (high)

Suburban Residential Master Plan Category

Intent

The Suburban Residential Master Plan category is generally composed of Low Density Suburban (LDS), Medium Density Suburban (MDS), and High Density Suburban (HDS) regulatory zones. The intent of the Suburban Residential category is to provide for a predominantly residential lifestyle with supporting mixed-use nonresidential and residential uses, including commercial, public and semi-public facilities; and parks and open space. A further goal of this group is to protect the stability of existing unincorporated neighborhoods and to encourage compatible smart growth development, while allowing diversity in lifestyle that is manifested in a variety of lot sizes, density, levels of mixed-use and land use patterns. Developments proposed within the Suburban Residential category must promote the development of walkable, mixed-use communities that meet the daily needs of residents, balance jobs and housing, offer a high quality of life, reduce the need for automobile trips, encourage the utilization of public transit and result in the creation of distinctive and attractive communities that create a strong sense of place.

Development Guidelines

Development in the Suburban Residential category is appropriate under the following conditions:

- A. Housing: Detached and attached homes are the predominant housing type. Detached and attached single-family homes with front porches and garages in the rear of home accessible via alleyways are encouraged. Multi-family residences with commercial/retail located on the bottom floor are appropriate throughout this area.
- B. Conservation: The natural terrain, groundwater recharge capabilities, scenic qualities and other natural surroundings must be conserved. Xeriscaping, landscaping practices should be implemented.

C. Land Use and Transportation:

1. Land Pattern:

- i. Conventional cul-de-sac development is discouraged due to lack of connectivity. Traditional and conservation interconnected development patterns are all appropriate for the suburban land group. Village centers that are secondary to city centers may also be fitting in conjunction with the other development patterns.

2. Land Use:

- i. High Density Suburban (HDS) is appropriate for transition between the Urban Residential, Commercial and Industrial Master Plan categories and the Suburban Residential category provided appropriate buffering is established. HDS is also appropriate for mixed-use area and to implement the village development pattern described earlier in this Land Use and Transportation Element.
- ii. Low Density Suburban (LDS), Low Density Suburban Two (LDS 2), Medium Density Suburban (MDS), and Medium Density Suburban Four (MDS 4) are appropriate throughout the area.
- iii. Public and Semi-Public Facilities (PSP), Open Space (OS), Parks and Recreation (PR) or Specific Plan (SP) regulatory zones may be appropriate as supporting uses in these neighborhoods.

3. Transportation:

- i. Public transit should be incorporated in all new developments
- ii. Transportation facilities shall be sized for an average trip generation as follows:
 - a. High Density Rural (HDR) shall be sized for 4 trips/acre/day and peak hour trip generation of 0.4 trips/acre/hour.
 - b. Low Density Suburban (LDS) shall be sized for 10 trips/acre/day and peak hour trip generation of 1 trip/acre/hour.
 - c. Medium Density Suburban (MDS) shall be sized for 30 trips/acre/day and peak hour trip generation of 3 trips/acre/hour.

D. Public Services and Facilities: The site shall be served by facilities that have existing capacity based on the following minimum standards:

1. Fire, EMS 5-10 minute response time
2. Police 10-15 minute response time
3. Water 2.02 acre feet/dwelling unit/individual well - High Density Rural (HDR) only;
1.12 acre feet/dwelling unit/connection with community water system for all others.
4. Sewer 325 gpd/dwelling unit, individual sewage disposal system for development with densities lower than 1.0 dwelling units per acre;
325 gpd/dwelling unit, connection with community sewage disposal system for development with densities equal to or greater than 1.0 dwelling units per acre. New development proposing lot sizes of 1 acre or smaller shall not be approved if it proposes to use on-site sewage treatment and disposal systems, unless it qualifies for one of the exemptions found in the Public Services and Facilities Element of the Master Plan.
5. Schools 15 minutes one way (elementary)
25 minutes one way (junior high)
35 minutes one way (high)

Urban Residential Master Plan Category

Intent

The Urban Residential Master Plan category is generally composed of the Low Density Urban (LDU), Medium Density Urban (MDU), and High Density Urban (HDU) regulatory zones. The intent of the Urban Residential category is to provide an overall mix, intensity and connection of uses that is much greater than the suburban form. A full range of urban services, such as public water and sewer, an extensive interconnected road and bicycle network, public transit incorporated in all new developments, safety and emergency response services, parks, schools, interconnected trails and open space should be available in this land use group. Development proposals for this Master Plan category should be of high architectural quality and encompass a mix of connected uses including a wide range of housing choices and densities, commercial and employment uses with public and semi-public facilities. New developments are expected to include amenities and recreational opportunities. Typically, design standards that encompass a minimum of setbacks, building heights, landscaping, lighting, parking and noise to minimize any conflict that may occur in compact form. Pedestrian needs will take precedence in the design of transportation and circulation systems.

Development Guidelines

Development in the urban lands group is appropriate under the following conditions:

- A. Housing: Detached and attached single-family homes with front porches and garages in the rear of the home accessible via alleyway and multi-family residences with commercial/retail located on the bottom floor are appropriate throughout this area. Affordable housing opportunities are encouraged in this land use group due to availability of public services.
- B. Conservation: The natural terrain, groundwater recharge capabilities, scenic qualities and other natural surroundings shall be conserved. Xeriscaping, landscaping practices should be implemented to conserve water.
- C. Land Use and Transportation:
 1. Land Pattern:
 - i. Smart growth, new-urbanist development patterns are greatly encouraged, while traditional cul-de-sac development is discouraged. Limited conventional and conservation development patterns may be appropriate in areas. Village centers that are secondary to city centers and mixed-use districts are appropriate.
 2. Land Use:
 - i. Low Density Urban (LDU), Medium Density Urban (MDU) and High Density Urban are appropriate throughout the area.
 - ii. Public and Semi-Public Facilities (PSP), Open Space (OS), Parks and Recreation (PR), or Specific Plan (SP) regulatory zones may be appropriate as supporting uses in these neighborhoods.
 3. Transportation:
 - i. Public transit must be incorporated now or in the future within all new developments.
 - ii. Transportation facilities shall be sized for an average trip generation as follows.
 - a. High Density Suburban (HDS) shall be sized for 70 trips/acre/day and peak hour trip generation of 7 trips/acre/hour for single family uses.
 - b. High Density Suburban (HDS) shall be sized for 90 trips/acre/day and peak hour trip generation of 5.31 trips/acre/hour for mobile home park uses.
 - c. Low Density Urban (LDU) shall be sized for 100 trips/acre/day and peak hour trip generation of 10 trips/acre/hour for single family uses.

- d. Low Density Urban (LDU) shall be sized for 120 trips/acre/day and peak hour trip generation of 7.08 trips/acre/hour for mobile home park uses.
 - e. Low Density Urban (LDU) shall be sized for 140 trips/acre/day and peak hour trip generation of 9.8 trips/acre/hour for multi-family uses.
 - f. Medium Density Urban (MDR) shall be sized for 210 trips/acre/day and peak hour trip generation of 14.7 trips/acre/hour for all uses.
 - g. High Density Urban (HDU) shall be sized for 420 trips/acre/day and peak hour trip generation of 29.4 trips/acre/hour for all uses.
- D. **Public Services and Facilities:** The site shall be served by facilities that have existing capacity based on the following minimum standards:
- 1. Fire, EMS 5 minute response time
 - 2. Police 10 minute response time
 - 3. Water High Density Suburban (HDS) shall require 0.56 acre feet/dwelling unit for single family; 0.42 acre feet/dwelling unit for mobile home parks; connection to a community water system required.

Low Density Urban (LDU) shall require 0.56 acre feet/dwelling unit for single family; 0.42 acre feet/dwelling unit for mobile home parks; 3 acre feet/dwelling unit, plus landscaping irrigation, for multi-family; connection to a community water system required.

Medium Density Urban (MDU) and High Density Urban (HDU) shall require 0.3 acre feet/dwelling unit; connection to a community water system required.
 - 4. Sewer High Density Suburban (HDS) shall require 325 gpd/dwelling unit, connection with community sewage disposal system.

Low Density Urban (LDU) shall require 325 gpd/dwelling unit for single family and mobile home parks; 250 gpd/dwelling unit for multi-family; connection with community sewage disposal system.

Medium Density Urban (MDU) shall require 250 gpd/dwelling unit; connection with community sewage disposal system.

High Density Urban (HDU) shall require 250 gpd/dwelling unit, connection with community sewage disposal system.
 - 5. Schools walk-in, one mile or less (elementary)
walk-in, two miles or less (junior high)
walk-in, three miles or less (high)

Open Space Master Plan Category

Intent

The Open Space Master Plan category is intended to create, preserve, and connect areas of natural, cultural, and scenic resources, including but not limited to, ridges, stream corridors, natural shoreline, scenic views, agricultural, or other land devoted exclusively to open space uses. The following regulatory zones are allowed in and are consistent with the Open Space Master Plan category: Open Space (OS), Public and Semi-Public Facilities (PSP), and Parks and Recreation (PR).

Designation of the Open Space Master Plan category is appropriate, but not limited to the following purposes:

- a. Natural and Scenic Resource Preservation;
- b. Sensitive Area Protection;

- c. Flood Control;
- d. Historic Cultural Resource Preservation;
- e. Recreation;
- f. Energy Production; and
- g. Federal Land Management

Development Guidelines

Development in the Open Space category is considered on a case-by-case basis with significant input from the federal, state or local agency managing the property, when applicable.

Commercial Master Plan Category

Intent

The Commercial Master Plan category is generally composed of the General Commercial (GC), Neighborhood Commercial (NC) and Tourist Commercial (TC) regulatory zones. The intent of the Commercial category is to create and preserve areas for businesses that provide a variety of wholesale and retail goods and services, which serve a neighborhood or community market and are created in conjunction with residential uses to create a mixed-use, new-urbanist community. The uses may include wholesale and retail stores, shopping centers, specialty shops, personal services and automobile services. Other uses include offices, restaurants, theaters and other compatible activities that serve the area. Business parks containing professional, medical, educational, financial and insurance services and supportive commercial activities are also appropriate under this classification. Facades around retail shall be required (Photo 14, Page 23), while blank facades (Photo 15, Page 23) around retail shall not be permitted.

Development Guidelines

Development in the commercial group is appropriate under the following conditions:

- A. Conservation: Groundwater recharge capabilities and scenic and aesthetic qualities shall be conserved. Development shall have slope, soil, geology and other physical conditions that make it suitable for the project being proposed. Xeriscaping, landscaping practices should be implemented to conserve water.
- B. Land Use and Transportation:
 - 1. Land Use:
 - i. Adjacent land uses shall be compatible.
 - ii. Strip commercial development is strongly discouraged unless the development is part of a mixed-use district, transit-oriented corridor or similar district, and designed for pedestrian use. If strip commercial development is allowed, strict parking requirements must be enforced to disallow vast expanses of parking that discourage walking and perpetuate the use of the automobile.
 - iii. Commercial/retail shall be encouraged at the bottom of every multi-family residence and within walking distance to single-family residence.
 - iv. Commercial uses in residential areas shall be in the form of neighborhood centers, which are within walking distance to single-family homes, or in mixed-used development where the commercial/retail is located below or abutting multi-family residence. Such centers are encouraged to use design that reflects the character of the area, is pedestrian oriented with limited parking and is complementary to the surrounding environment. The general ratio of commercial development to population served is 5 acres per 2,000 population.

- v. The Public and Semi-Public Facilities (PSP), Open Space (OS), Parks and Recreation (PR), or Specific Plan (SP) regulatory zones may be appropriate as supporting uses to the commercial uses.
2. Transportation:
 - i. Commercial property owners shall use the following access guidelines:
 - a. With the exception of shopping centers and other multi-use centers, each parcel will be allowed only one access point and adjoining properties will share a common access, which shall be constructed on or near the property line. Additionally, alternative access will be from the least impacted of the two streets.
 - b. Large or adjoining parcels shall, when practicable, construct a frontage road rather than allow multiple access routes to a roadway.
 - ii. Pedestrian connections to adjoining areas via walkways or bicycle lanes shall be required.
 - iii. Transportation and circulation systems shall allow for direct access by adjoining neighborhoods while discouraging cut-through traffic.
 - iv. Public transit shall be incorporated with all new, large-scale development.
 - v. The road network shall be interconnected to encourage fluidity between different uses.
 - vi. Transportation facilities shall be sized for the number of trips per day and peak trips per hour as determined from the latest edition of the Institute of Transportation Engineers Trip Generation Report.
 - C. Public Services and Facilities: The site shall be served by facilities that have existing capacity based on the following minimum standards:
 1. Fire, EMS 5 minute response time
 2. Police 10 minute response time
 3. Water Requirement will vary by individual development; connection to a community water system is required. For general area planning purposes:
 - 1.73 acre feet/year/acre (9.9 employees/acre) is estimated for General Commercial (GC) uses;
 - 5.63 acre feet/year/acre (32.2 employees/acre) is estimated for Neighborhood Commercial (NC) uses;
 - 7.2 acre feet/year/acre (41.2 employees/acre) is estimated for Tourist Commercial (TC) uses.
 4. Sewer Requirement will vary by individual development; connection with community disposal system is required. For general area planning purposes:
 - 780 gallons/day/acre (9.9 employees/acre) is estimated for General Commercial (GC) uses;
 - 2,536 gallons/day/acre (32.2 employees/acre) is estimated for Neighborhood Commercial (NC) uses;
 - 3,245 gallons/day/acre (41.2 employees/acre) is estimated for Tourist Commercial (TC) uses.

Industrial Master Plan Category

Intent

The Industrial Master Plan category is generally composed of the Industrial (I) regulatory zone. The intent of the Industrial category is to provide for activities such as manufacturing, warehousing, mining and construction. The industrial designation is intended to create an environment in which industrial operations may be conducted with minimal impact on the natural environment and surrounding land uses. To conform with the Regional Plan, in unincorporated areas within the TMSA, non-residential uses of appropriate scale to serve the community and not the greater region are allowed. The appropriate scale of non-residential development shall be based on generally accepted service standards for population, employment, service area, and market analysis. Industrial/warehouse uses are permitted only within existing or master-planned multi-use business parks found in conformance with the Regional Plan.

Development Guidelines

Development in the industrial group is appropriate under the following conditions:

- A. Conservation: Industrial uses, including mining, excavation and related activities, shall comply with the conservation, water quality and air quality policies in the Washoe County Master Plan and individual Area Plans. These uses shall also comply with applicable regulations established by Washoe County and state and federal governmental agencies.
- B. Land Use and Transportation: Industrial property owners shall use the following access guidelines:
 1. Each parcel will be allowed only one access point and adjoining properties will share a common access, which shall be constructed on or near the property line. Additionally, alternative access will be from the less impacted of the two streets.
 2. Large or adjoining parcels shall, when practicable, construct a frontage road rather than allow multiple access routes to a roadway.
 3. The proposal shall not have access to a local street that primarily serves residential uses.
 4. The proposal shall have direct access to an existing or planned arterial road. However, when 60 percent or more of a proposal's transport needs are served by rail, access to an existing or planned collector is acceptable.
 5. Public transit shall be incorporated with all large-scale industrial development.
 6. Transportation facilities shall be sized for the number of trips per day and peak trips per hour as determined from the latest edition of the Institute of Transportation Engineers Trip Generation Report.
 7. Public and Semi-Public Facilities (PSP), Open Space (OS), Parks and Recreation (PR), or Specific Plan (SP) regulatory zones may be appropriate as supporting uses to the industrial uses.
- C. Public Services and Facilities: The site shall be served by facilities that have existing capacity based on the following minimum standards:
 1. Fire, EMS 5-10 minute response time
 2. Police 10-15 minute response time
 3. Water Requirement will vary by individual development; for area planning purposes, a figure of 1 acre foot/year/acre (5.8 employees/acre) will be used; connection to a community water system required.
 4. Sewer Requirement will vary by individual development; for area planning purposes, a figure of 457 gallons/day/acre (5.8 employees/acre) will be used; connection with community disposal system required.

Table 3: Land Use Compatibility Matrix

LDR	MDR	HDR	LDS/ LDS 2	MDS/ MDS 4	HDS	LDU	MDU	HDU	PR	PSP	GC	NC	TC	I	GR/ GRR	OS
LDR	H	H	M	M	M	L	L	L	H	M	L	L	L	L	H	H
	MDR	H	H	M	M	M	L	L	H	M	L	L	L	L	M	H
		HDR	H	H	M	M	M	L	H	M	L	L	L	L	M	H
			LDS/ LDS 2	H	H	M	M	M	H	M	L	L	L	L	M	H
				MDS/ MDS 4	H	H	M	M	H	M	L	L	L	L	M	H
					HDS	H	H	M	H	M	L	M	M	L	M	H
						LDU	H	H	H	H	M	M	L	L	M	H
							MDU	H	H	H	M	M	L	M	L	H
								HDU	H	H	M	M	M	M	L	H
									PR	H	H	H	H	M	H	H
										PSP	H	H	H	H	M	H
											GC	H	H	M	L	H
												NC	H	M	L	H
													TC	M	L	H
														I	L	M
															GR/ GRR	H
															OS	H

H - High Compatibility: Little or no screening or buffering necessary.
 M - Medium Compatibility: Some screening and buffering necessary.
 L - Low Compatibility: Significant screening and buffering necessary.

Regulatory Zones

Residential

LDR - Low Density Rural
 MDR - Medium Density Rural
 HDR - High Density Rural
 LDS/LDS 2 - Low Density Suburban
 MDS/MDS 4 - Medium Density Suburban
 HDS - High Density Suburban
 LDU - Low Density Urban
 MDU - Medium Density Urban
 HDU - High Density Urban

Non-Residential

PR - Parks and Recreation
 PSP - Public and Semi-Public Facilities
 GC - General Commercial
 NC - Neighborhood Commercial/Office
 TC - Tourist Commercial
 I - Industrial
 GR - General Rural
 GRR - General Rural Residential
 OS - Open Space

Note: Plans for the amount of screening and buffering shall be made to the satisfaction of Washoe County Department of Community Development staff before completion of project review.

Source: Washoe County Department of Community Development

Table 4: Planning Area Minimum Service Standards¹

Service	Master Plan Designation			
	Urban, Industrial, and Commercial	Suburban	Rural Residential	Rural
Water	Connection w/community water system	Connection w/community water system; HDR – Individual well	Individual well	Individual well
Sewer	Connection w/community sewage disposal system	Connection w/community sewage disposal system ²	Individual sewage disposal system	Individual sewage disposal system
Fire, EMS	5 minute or less response time ³	10 minute or less response time	20 minute or less response time	20 minute or more response time
Police	10 minute response time ⁴	10-15 minute response time	20-25 minute response time	25 minute or more response time
Schools:				
Elementary	Walk-in; 1 mile or less	15 minutes one-way	40 minutes one-way	90 minutes maximum
Middle	Walk-in; 2 miles or less	25 minutes one-way	55 minutes one-way	90 minutes maximum
High	Walk-in; 3 miles or less	35 minutes one-way	75 minutes one-way	90 minutes maximum
Libraries	5 miles or less	5 miles or less	40 minutes one-way	75 minutes one-way
Community Parks	7 acres per 1,000 population	7 acres per 1,000 population	7 acres per 1,000 population	7 acres per 1,000 population

- Notes:
- 1 These standards are used for planning purposes and may be modified by the Washoe County Board of County Commissioners as deemed appropriate in response to budget constraints.
 - 2 Exemptions for HDR, LDS and MDS connection to community sewage disposal system may occur in specific cases
 - 3 Response time is measured from the time the initial call is received until the arrival of the first emergency vehicle.
 - 4 For a Class 1 Offense (a major incident or serious crime).
 - 5 Service levels for Open Space Master Plan category are determined on a case-by-case basis.

Source: Washoe County Department of Community Development

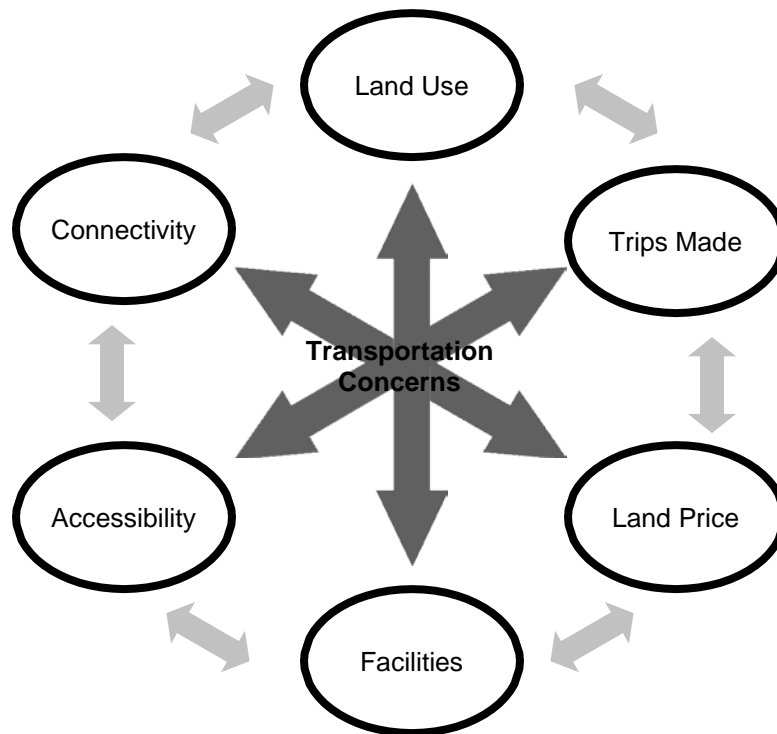
Table 5: Master Plan Categories and Regulatory Zones

Master Plan Category	Regulatory Zones Allowed
<u>Rural</u>	<ul style="list-style-type: none"> • General Rural • General Rural Residential • Public and Semi-Public Facilities • Parks and Recreation • Specific Plan • Open Space
<u>Rural Residential</u>	<ul style="list-style-type: none"> • Low Density Rural • Medium Density Rural • High Density Rural • Public and Semi-Public Facilities • Specific Plan • Parks and Recreation • Open Space
<u>Suburban Residential</u>	<ul style="list-style-type: none"> • Low Density Suburban • Low Density Suburban Two • Medium Density Suburban • Medium Density Suburban Four • High Density Suburban • Public and Semi-Public Facilities • Specific Plan • Parks and Recreation • Open Space
<u>Urban Residential</u>	<ul style="list-style-type: none"> • Low Density Urban • Medium Density Urban • High Density Urban • Public and Semi-Public Facilities • Specific Plan • Parks and Recreation • Open Space
<u>Commercial</u>	<ul style="list-style-type: none"> • Neighborhood Commercial/Office • General Commercial • Tourist Commercial • Public and Semi-Public Facilities • Specific Plan • Parks and Recreation • Open Space
<u>Industrial</u>	<ul style="list-style-type: none"> • Industrial • Public and Semi-Public Facilities • Specific Plan • Parks and Recreation • Open Space
<u>Open Space</u>	<ul style="list-style-type: none"> • Open Space • Public and Semi-Public Facilities • Parks and Recreation

Transportation Plan

A safe and efficient transportation system is an important indicator of the vitality and health of an area. Transportation needs are directly related to land use choices. Issues such as the growth, distribution and timing of land development determine the effectiveness of the transportation network. The transportation plan identifies issues that affect policies that, along with other Elements of the Master Plan, further define the County's vision for physical development.

Figure 13: Circular Dependency of Transportation Concerns



Source: Washoe County Department of Community Development

Agency Roles

In Washoe County, transportation planning is under the authority of several different agencies. Together, these agencies are responsible for complying with Nevada Revised Statutes regarding transportation planning. Nevada Revised Statutes break down transportation planning into several distinct categories that cover a broad range of information. The Statutes states that a transportation plan may contain “locations of rights-of-way, terminals, viaducts and grade separations. The plan may also include port, harbor, aviation and related facilities.” A transit plan may contain “proposed multimodal system of transit lines, including mass transit, streetcar, motor coach and trolley coach lines, paths for bicycles and pedestrians, and related facilities.” A streets and highway plan may show “the general locations and widths of a comprehensive system of major traffic thoroughfares and other traffic ways and of streets and the recommended treatment thereof, building line setbacks, and a system of naming or numbering streets and numbering houses, with recommendations concerning proposed changes.”

Much of this information can be found in the 2030 Regional Transportation Plan that was produced by the Regional Transportation Commission of Washoe County (RTC). The RTC was designated the Metropolitan Planning Organization (MPO) for Washoe County by the Governor of

Nevada. This agency is responsible, under federal law, for developing the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP). The RTC coordinates regional planning efforts for all modes of travel including automobiles, transit, bicycles, pedestrians, aviation, and rail and goods movement. The agency also addresses transportation management strategies to make the system more efficient. It is more efficient to have the RTC address transportation needs in both the cities and unincorporated county than several agencies working on the same issue. In the Tahoe region of the County, the Tahoe Regional Planning Agency (TRPA) has been designated as the Metropolitan Planning Organization. The Tahoe Regional Transportation Plan for 2030 addresses similar issues as the RTC with additional emphasis on the environmental impacts from transportation needs. Issues included in the document include traffic engineering, traffic systems management, traffic signal design, multi-modal transportation planning, transit planning and operations, parking analysis and parking feasibility reports, parking facility design, traffic impact studies, access planning and design, and bicycle/pedestrian circulation.

The Nevada Department of Transportation (NDOT) also plays a vital role in the management of the transportation network. Its mission is to efficiently plan, design, construct and maintain a safe and effective transportation system for Nevada. The agency is divided into three districts to better manage the vast highway system. Washoe County is located within District 2.

Washoe County coordinates activities with all these agencies. Using the evaluation criteria described later in this section, the street and highway system in the most populated portions of the County is regularly analyzed and evaluated for existing capacity deficiencies by County staff and by the RTC, or in the case of roadways in the Tahoe area, with the Train addition to the County staff and RTC and TRPA evaluations of the County's roadway system for existing capacity problems, the Washoe County Department of Public Works is engaged in an ongoing road surface management program. With the aid of computer analysis, the County routinely assesses the physical condition of all County-maintained roadways and programs repairs in an effort to ensure that these facilities remain in good condition and do not deteriorate to the point of requiring replacement. Major maintenance projects and priorities in each County planning area are identified annually in the County's Capital Improvements Program.

Existing Conditions

Functional Classification

Washoe County maintains over 1,000 miles of roadway. In order to plan for road construction and maintenance needs, a classification system is used to group roads by similar characteristics. Washoe County uses a well-known method to classify roads that is based upon function. Functional classification is a long-range planning tool that helps link land use with transportation. Functional classification further allows for the preservation of right-of-way in the future as properties are developed. A well conceived functional classification system also helps to ensure that roadway facilities, which are necessary to provide safe and smooth, interconnected transitions between roadways with different functional classifications, are planned, constructed and maintained.

Function is generally divided into the two competing purposes: mobility and access. Mobility is based upon the volume of traffic moving at the greatest unimpeded speed along a given thoroughfare and roadway network. Accommodating low-speed and low-volume roadways with intersections and driveways provides access. At one end of the functional classification spectrum, freeways and high access control arterials provide the greatest mobility but have limited access. At the other end of this spectrum, collector roads and local neighborhood streets provide a high degree of access but, due to speed and design restrictions, offer limited mobility.

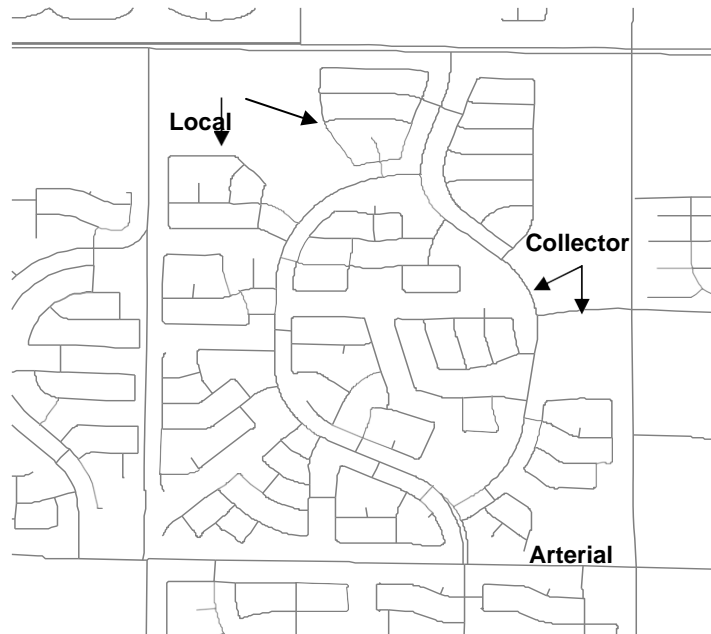
Freeways (i.e. interstates, expressways and other grade-separated, limited-access facilities) are the classification that characterizes roadways that offer the greatest degree of mobility. High access control arterials are designed to move large volumes of traffic through an urban area or region with minimum amounts of access, and moderate access control arterials are designed to

move moderately high traffic volumes within an area or region with moderate amounts of access. Low access control arterials move lower traffic volumes between smaller activity centers or between individual suburban areas. Arterials of all types generally make up approximately 15 to 30 percent of an urban/suburban roadway system.

Collector roadway is the classification that characterizes facilities that provide the necessary transitions between all types of arterial roadways and local roads. Collectors do not typically serve interregional movement. Rather, collectors usually provide connections to the regional roadway network (i.e. arterials) from clustered shopping areas, business parks or subdivisions. These roadways generally carry less traffic than arterials, but this can vary depending upon the overall hierarchy of roadways that exist as a part of any particular system. It also depends on the need for transitional roadways between local destination(s) and the roadways that provide greater mobility to other parts of a region. Collector roadways generally make up between 5 and 10 percent of an urban/suburban roadway system.

Local roadway is the classification that characterizes facilities that provide maximum access to individual properties. Typical examples of local roadways are internal subdivision roadways that provide access to individual homes, or roadways that provide a similar level of access to business or industrial parks. Although local roadways can provide direct access between nearby residences or businesses, they do not usually provide for direct or efficient movement from one part of a community or region to another. Between 60 and 80 percent of an urban/suburban roadway system is typically composed of local roadways.

Figure 14: Road Hierarchy Example



Source: Washoe County Department of Community Development

It is important to understand that as growth and development occurs, road functions may also change. It is not uncommon for a roadway that once served as an access road to distant ranches to now serve residential subdivisions and commercial land uses. These roadways should be reclassified as collectors or arterials depending on the intensity of development and the type of traffic generated by the development. Design standards or guidelines must change to meet actual or impending change in traffic character and road function. Actions taken by a local jurisdiction to control or direct the form and location of growth or to preserve the current physical and scenic characteristics of a highway corridor should also reflect the need for a reexamination of existing functional classification.

Level of Service

Washoe County evaluates the quality of travel on its roadways using Level Of Service (LOS) measures. Roadway LOS is a hierarchical classification of drivers' perceptions as to the quality of service provided by a roadway facility. Similar to the common report card system, LOS is represented by the letters A through F. An A generally represents the most favorable driving conditions and F represents the least favorable. Table 6 further describes LOS characteristics.

Table 6: Level of Service (LOS) Categories

LOS	Description
A	Relative free-flow. No restrictions to vehicle maneuverability or speed. Very slight delay.
B	Stable flow. Some slight reduction in maneuverability and speed. Slight delay.
C	Stable flow operation. Higher volumes. More restrictions on maneuverability and speed. Acceptable delay.
D	Approaching unstable flow operation. Lines develop. Little freedom to maneuver. Tolerable delays for short periods.
E	Unstable flow or operation. Low operating speed; momentary stoppages. This condition is not uncommon in peak hours. Congestion and lengthy delays.
F	Forced flow or operation. Gridlock occurs.

Source: Regional Transportation Commission of Washoe County

The operational standards used to determine LOS differ depending on the type of facility being analyzed. With the exception of the County's two major freeways (I-80 and US-395), the majority of the County's roadway system is composed of four basic types of roadway facilities:

- at-grade roadway segments that are not controlled by stop signs or traffic signals;
- at-grade roadway segments that are substantially restricted by stop signs or traffic signals;
- intersections that are stop sign controlled; and
- intersections that are traffic signal controlled.

When peak-hour volumes are expressed as an average percentage of total daily traffic, it is also possible to express LOS in terms of daily traffic volume. The LOS standard is based upon a roadway's functional classification posted speed, amount of access and the number of lanes provided.

Table 7: Adopted Streets and Highways System Level of Service Thresholds for Roadway Segments

Average Daily Traffic Level of Service Thresholds by Facility Type for Roadway Planning					
Facility Type	Maximum Service Flow Rate (daily) for Given Service Level				
Number of Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway					
4	≤ 28,600	42,700	63,500	80,000	90,200
6	≤ 38,300	61,200	91,100	114,000	135,300
8	51,100	81,500	121,400	153,200	180,400
10	63,800	101,900	151,800	191,500	225,500
Arterial-High Access Control					
2	n/a	9,400	17,300	19,200	20,300
4	n/a	20,400	36,100	38,400	40,600
6	n/a	31,600	54,700	57,600	60,900
8	n/a	42,500	73,200	76,800	81,300
Arterial-Moderate Access Control					
2	n/a	5,500	14,800	17,500	18,600
4	n/a	12,000	32,200	35,200	36,900
6	n/a	18,800	49,600	52,900	55,400
8	n/a	25,600	66,800	70,600	73,900
Arterial-Low Access Control					
2	n/a	n/a	6,900	13,400	15,100
4	n/a	n/a	15,700	28,400	30,200
6	n/a	n/a	24,800	43,100	45,400
8	n/a	n/a	34,000	57,600	60,600
Arterial-Ultra-Low Access Control					
2	n/a	n/a	6,500	13,300	14,200
4	n/a	n/a	15,300	27,300	28,600
6	n/a	n/a	24,100	41,200	43,000
8	n/a	n/a	33,300	55,200	57,400
Collector-Ultra-Low Access Control¹					
2	n/a	n/a	7,300	8,500	9,100
Rural Highway-Ultra-Low Access Control¹					
2	2,100	4,200	6,800	10,800	17,300

Note: ¹ Contact the RTC Planning Department for LOS thresholds for collector and rural highway facility types with access controls other than ultra-low access control.

Source: Regional Transportation Commission of Washoe County

Table 8 lists level of service standards for various roadways throughout Washoe County as adopted in the 2030 Regional Transportation Plan.

Table 8: Regional Level of Service Standards

Regional Roadways	
LOS C	<ul style="list-style-type: none"> All regional roadway facilities outside the McCarran Boulevard ring
LOS D	<ul style="list-style-type: none"> All regional roadway facilities inside the McCarran Boulevard ring All freeways and ramps North Virginia Street – North McCarran Boulevard to US395 Longley Lane – Double R Boulevard to South McCarran Boulevard
LOS E	<ul style="list-style-type: none"> McCarran Boulevard – entire length South Virginia Street – Moana Lane to Plumb Lane Intersection of South Virginia Street and Plumb Lane Mill Street – Terminal Way to Ryland Avenue Intersection of Mill Street and Kietzke Lane Terminal Way – Villanova Drive to Mill Street Interstate 80 westbound on-ramp from Rock Boulevard
LOS F	<ul style="list-style-type: none"> Plumas Street – Plumb Lane to California Avenue Rock Boulevard – Glendale Avenue to Victorian Boulevard South Virginia Street – Kietzke Lane to South McCarran Boulevard Intersection of North Virginia Street and Interstate 80 ramps

Note: Except as noted above, all intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersecting corridors.

Source: Regional Transportation Commission of Washoe County.

Access Management

Access management strives to ensure mobility of traffic in a safe and efficient manner while allowing access to surrounding developments. This is accomplished by controlling the amount of traffic interruptions caused by vehicles entering or exiting the roadway. The type of land use and volume of traffic are the key components in determining how the access will be managed. Although vehicles need access to the roadway, they do interrupt the flow of traffic. The greater the number of these interruptions, the more impact they have on flow. Access management controls the amount of these interruptions and is a tradeoff between the need for access and the maintenance of traffic flow. Improved coordination of traffic light signals can diminish the interruptions of automobiles entering and exiting the road network. Table 9 lists the access management standards adopted by the Regional Transportation Commission for future improvements to the Regional Road System (RRS).

Existing Streets and Highways System

A full range of street and highway types, from full-service freeways to local roads, exist in Washoe County. Interstate 80 is the major east-west highway in Washoe County, and U.S. 395 (also referred to as Interstate 580 for a portion of its length) is the major north-south highway. Maps of the principal roadways throughout Washoe County are included on each individual Area Plan Streets and Highways System Plan map.

Table 9: Access Management Standards – Arterials, Collectors, Rural Highways¹

Management Access Control	Posted Speeds	Signals per mile	Median Type	Left From Major Street? (spacing from signal)	Left From Minor Street or Driveway?	Right Decel Lanes at Driveways	Driveway Spacing ²
High Access Control	45-55 mph	2 or less	Raised w/ channelized turn pockets	Yes 750' minimum	Only at signalized locations	Yes ⁴	250'/500'
Moderate Access Control	40-45 mph	3 or less	Raised or painted w/turn pockets	Yes 500' minimum	No, on 6 or 8 lane roadways w/o signal	Yes ⁵	200'/300'
Low Access Control	35-40 mph	5 or less	Raised or painted w/turn pockets or undivided w/ painted turn pockets or two way left turn lane	Yes 350' minimum	Yes	No	150'/200'
Ultra-Low Access Control	30-35 mph	8 or less	Raised or painted w/turn pockets or undivided w/ painted turn pockets or two way left turn lane	Yes 350' minimum	Yes	No	150'/200' 100'/100' ³

- Notes:
- 1 On-street parking shall not be allowed on any new arterials per Policy 7 of the Congestion Management Systems (Chapter 9). Elimination of existing on-street parking shall be considered a priority for major and minor arterials operating at or below the policy level of service.
 - 2 Minimum spacing from signalized intersection/spacing from other driveways.
 - 3 Minimum spacing on collectors.
 - 4 If there are more than 30 inbound right-turn movements during peak-hour.
 - 5 If there are more than 60 inbound right-turn movements during peak-hour.

Source: Regional Transportation Commission of Washoe County

Bicycle and Pedestrian Facilities

Bicycling contributes to the federal goals for cleaner air, healthier people, reduced congestion, livable communities and more efficient use of precious land and resources. The current transportation law, the Transportation Equity Act for the 21st Century (TEA-21) continues to encourage and support the development of bicycle facilities. Bicyclists have the same origins and destinations as other transportation system users; and it is important for them to have safe and convenient access to places one might not think of such as airports, transit terminals and other inter-modal facilities, as well as to places of employment, recreation facilities and neighborhoods. In Washoe County, there are more than 100 miles of bikeways. The 2030 Regional Transportation Plan foresees a greater need for bicycle facilities that will offer alternatives to the single-occupant vehicle (SOV) and increase the mode split of non-auto travel.

Bicycle lanes are classified into three types: Class 1 bicycle lanes are bikeways that are physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Class 1 bicycle lanes allow cyclists to travel along routes that can decrease the amount of travel time because the path is able to traverse land that is not open to automobile travel and where cross motor vehicular traffic is minimized. In Washoe County, the majority of Class 1 bicycle lanes are located along the Truckee River. A Class 2 bicycle lane is a portion of the roadway designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. Bicycle routes share

the traveled way with motor vehicles and are designated by appropriate directional and informational markers. Class 2 bicycle lanes provide continuity to other bicycle facilities and designate preferred routes through high demand corridors. Class 2 bicycle lanes should promote interconnection along with roadway systems to allow the bicycle rider more destination options than is currently available. New developments should be required to establish a bikeway system along with the road network.

Photo 25: Class 2 Bicycle Lane



Bicycle lane with right of way, Pasadena, CA

Photo 26: Class 1 Bicycle Lane



Grade separated bicycle lane, Denver, CO

Table 10: Future Bicycle Facilities – Truckee Meadows

Street Name	From	To	Class
7th Ave	Biller Ln	Sun Valley Blvd	Bicycle Lane
Arrowcreek Pkwy	Thomas Creek Rd	S Virginia St	Bicycle Lane
Calle de la Plata	Eagle Canyon Rd	Pyramid Hwy	Bicycle Lane
Clear Acre Ln	N McCarran Blvd	Dandini Blvd	Bicycle Lane
Dandini Blvd	US 395	Clear Acre Ln	Bicycle Lane
Eagle Canyon Rd	Calle de Plata	Pyramid Hwy	Shared Use Facility
Eagle Canyon Rd	Sun Valley Ext	Pyramid Hwy	Bicycle Lane
Eastlake Blvd	.4 m N of Carson Co	S Virginia St	Shared Use Facility
Eastlake Blvd	US 395 (south)	US 395 (north)	Bicycle Lane
El Rancho Dr	Victorian Ave	Clear Acre Ln	Bicycle Lane
Foothill Rd	Thomas Creek Rd	S Virginia St	Bicycle Lane
Geiger Grade	S Virginia St	Storey Co Line	Bicycle Lane
Highland Ranch Pkwy	Sun Valley Pkwy	Pyramid Hwy	Bicycle Lane
Hills Dr	Lazy 5 Pkwy	Vista Blvd	Bicycle Lane
La Posada Dr	Pyramid Hwy	Cordoba Blvd	Bicycle Lane
Lemmon Dr	N Virginia St	Deodar	Bicycle Lane
Mt Rose Hwy	Tahoe MPO Boundary	S Virginia St	Bicycle Lane
Mt Rose Hwy	Tahoe MPO Boundary	S Virginia St	Shared Use Facility
N Virginia St	Truckee River	Stead Blvd	Bicycle Lane
North Connector	Sun Valley Blvd	Lemmon Dr	Bicycle Lane
Old US 395	Eastlake Blvd	S Virginia at Bowers Mansion	Bicycle Lane

Table 10: Future Bicycle Facilities – Truckee Meadows (continued)

Street Name	From	To	Class
Orr Ditch	Wedekind Park (proposed)	La Posada Dr	Shared Use Facility
Outer Rig Road	US 395	Vista Blvd	Bike Lane
Pyramid Hwy	Mill St	N Limit Warm Springs planning area	Bicycle Lane
Red Rock Road	US 395	N Limit North Valleys planning area	Bicycle Lane
S Virginia St	Bowers Mansion Rd	Truckee River	Bicycle Lane
Sky Vista Pkwy	Lear Blvd	Lemmon Dr	Bicycle Lane
Southeast Connector	Geiger Grade	Truckee River	Shared Use Facility
Sun Valley Blvd	Dandini Blvd	Highland Ranch Pkwy	Bicycle Lane
Sun Valley Blvd Ext	Highland Ranch Pkwy	Eagle Canyon Rd	Bicycle Lane
Thomas Creek	Mt Rose Hwy	Arrowcreek Pkwy	Bicycle Lane
Toll Rd	Geiger Grade	Ravazza Rd	Bicycle Lane
Toll Rd	Geiger Grade	Ravazza Rd	Shared Use Facility
Truckee River	CA Stateline	Pyramid Lake	Shared Use Facility
Truckee River	US 40 Hwy	Mesa Park	Shared Use Facility
US Hwy 40	I 80 (west)	I 80 (east)	Bicycle Lane
US 395 (north)	East of Red Rock	CA Stateline	Shared Use Facility
US 395 (south)	Bower's Mansion	Pagni Ln	Shared Use Facility
Village Pkwy	US 395	White Lake Pkwy	Bicycle Lane
Washoe Lake Park	US 395 (south)	US 395 (north)	Shared Use Facility
Wedekind Rd	Sutro St	Pyramid Hwy	Bicycle Lane
Wedge Parkway	Mt Rose Hwy	Arrowcreek Pkwy	Bicycle Lane
West Sun Valley Freeway	Outer Ring Rd	Eagle Canyon	Bicycle Lane
Western Truckee Meadows	Mt Rose Hwy	Truckee River	Shared Use Facility
White Lake Pkwy	US 395	Village Pkwy	Bicycle Lane

Source: Regional Transportation Commission of Washoe County

Table 11: Future Bicycle Facilities – Tahoe Planning Area

Street Name	From	To	Class
Country Club Dr	Village Blvd	Tahoe Blvd	Bicycle Lane
Country Club Dr	Tahoe Blvd	Lakeshore Dr	Bicycle Lane
Village Blvd	SR 28	Lakeshore Dr	Bicycle Lane

Source: Washoe County Department of Community Development

Although pending state legislation may make pedestrian facilities a higher priority, currently there is no regional effort to inventory the conditions and adequacy of pedestrian facilities in Washoe County. The Washoe County Development Code currently requires sidewalks both sides of the street along arterials, and on one side of the street along collector and local streets serving lot sizes of 0.5 to 1.5 acres. Streets serving lot sizes greater than 1.5 acres are exempt from providing sidewalks. To achieve an integrated, inter-modal transportation system by 2030, the Regional Transportation Plan projects a greater emphasis will have to be placed on constructing

more wider, tree lined, sidewalks, improving pedestrian access to transit on-site parking lots and implementing measures to increase pedestrian safety such as raised crosswalks and refugee medians.

Transit Service in Unincorporated Washoe County

Limited fixed-route transit service is currently available in parts of unincorporated Washoe County through the RTC Ride bus system. RTC Ride is the region's public transportation system and is operated by the Regional Transportation Commission (RTC). Although some RTC Ride routes do access portions of unincorporated Washoe County south of Reno, the primary RTC Ride service to the unincorporated portions of the County is provided in Sun Valley and the North Valleys.

RTC also provides demand responsive and limited demand-based fixed-route paratransit service to many parts of the unincorporated County through its RTC Access system. Transit service to the Lake Tahoe and Incline Village areas is through the Tahoe Area Regional Transit (TART). TART service is provided by RTC, in cooperation with Placer County, California. Since August 2000, RTC has partnered with the Nevada Department of Transportation to fund intercity service between Reno and Carson City.

Future Streets and Highways System

While some Regional Transportation Commission (RTC) and County planning resources are focused on assessing existing conditions, much of this joint transportation planning effort is devoted to forecasting future land use and transportation conditions and determining what improvements will be needed to accommodate the region's anticipated growth. In order to accomplish this task, a traditional four-step transportation modeling process is employed by the Regional Transportation Commission, with significant input from County staff.

The land use assumptions used in the modeling process reflect the land use plans contained in each applicable Area Plan. Before beginning the modeling process, it is necessary to divide the subject area into zones and then assign the land use assumptions to the zones. The essence of the modeling process is to determine the average trip generation associated with existing and forecasted land uses (by zone), distribute these trips between the established zones, determine what share of all trips will be made by what mode of transportation and, finally, to assign these trips to both existing and planned facilities.

Street widths should be created to encourage new-urbanist, transit-oriented development. Graphics represented on pages 16-18 demonstrate desired street widths to promote the mixed-use, pedestrian-friendly environment, which is the goal Washoe County's future development.

The 2030 Regional Transportation Plan and other relevant transportation analyses are updated periodically as changes in land use patterns and system infrastructure, or improvements in analysis techniques, warrant. Particular care is given to assessing changes in travel behavior characteristics and trip generation rates that result from the emergence of home-based occupations made possible through electronic communications. The effect of expanded transit service availability and other alternative transportation modes on system operations will also be closely monitored. A summary of the system improvements, which current forecasts indicate are needed to avoid future capacity problems, is outlined in the following text.

Streets and Highways System Improvement Needs

Roadway improvements shown in Table 12, include planned improvements for 2002-2030, based on 2030 Regional Transportation Plan (RTP) analysis of current land use assumptions. This list may change over time as land use assumptions are updated and as growth actually occurs.

It is important to note that only roadways which provide a regional benefit (i.e. roadways that provide transportation system improvement benefits beyond those directly received by any

individual development or closely arrayed group of developments) have been included in the 2030 RTP. This list does not include any planned maintenance projects (i.e. overlays, rehabilitations of existing structures, etc.). Minor projects, such as intersection improvements or signalizations, which will be implemented in support of a more significant improvement, such as a new roadway construction or major facility expansion or are implemented as part of a special project, have also been omitted from this list. However these projects do account for a certain percentage of the regional network financial plan. A more complete description of the projects listed, including cost and timing estimates, is provided in the FY 2005-2009 Regional Transportation Commission Transportation Improvement Plan and the Washoe County Capital Improvements Program.

Table 12: Streets and Highways Improvements – FY 2004-2030

Road	Segment	Phasing	Improvements
Arrowcreek Pkwy	Zolezzi Ln to Wedge Pkwy	2004-2012	Widen 2 to 4 lanes
Calle de la Plata Dr	Eagle Canyon Rd to Pyramid Hwy	2004-2012	New 2-lane road
Eagle Canyon Rd	Calle de la Plata to Pyramid Hwy	2004-2012	Widen to 4 lanes
Foothill Dr	S Virginia to Broken Hill Rd	2021-2030	Widen to 4 lanes
Geiger Grade	Toll Rd to Rim Rock Dr	2004-2012	Widen to 4 lanes
Highland Ranch Pkwy	Sun Valley Blvd to Pyramid Hwy	2004-2012	Widen 2 to 4 lanes
Huffaker Ln (West)	US 395 to Meadow Vista Ct	2004-2012	Widen to 4 lanes
Lemmon Dr	N Virginia to US 395	2004-2012	New 2-lane road
Lemmon Dr	Sky Vista Pkwy to Military Rd	2021-2030	Widen 4 to 6 lanes
Lemmon Dr	Limber Pine Dr to Deodar St	2021-2030	Widen 2 to 4 lanes
I 80	@ Garson Rd	2004-2012	Reconstruct interchange
I 80	@Patrick Interchange	2004-2012	Improve Interchange
I 80	@Tracy Clark Interchange	2004-2012	Construct Interchange
McCarran Blvd	Entire Length	2021-2030	12 grade separated intersections
Military Rd	Lemmon Dr to Lear Blvd	2021-2030	Widen 2 to 4 lanes
Mt. Rose Hwy	US 395 to Thomas Creek Rd	2013-2020	Widen 4 to 6 lanes
Mt. Rose Hwy	Timberline to Mt Rose Summit	2021-2030	Improve with intersection turn bays, additional truck passing lanes, operate as moderate access control
North Connection	Sun Valley Blvd to Lemmon Dr	2021-2030	New 2-lane road
N Virginia St	Business 395 to Golden Valley Rd	2004-2012	Widen 2 to 6 lanes
N Virginia St	Golden Valley Rd to Lemmon Dr (Heindel)	2004-2012	Widen 2 to 4 lanes
N Virginia St	Lemmon Dr (Heindel) to Seneca Dr	2004-2012	Widen 2 to 4 lanes
Old Hwy 40	I 80/Garson (E Verdi) to Gold Ranch	2021-2030	Widen 2 to 4 lanes
Outer Ring Road	US 395 to Sparks Blvd	2013-2020	New 6-lane freeway
Pyramid Hwy	La Posada Dr to Egyptian Dr	2004-2012	Widen 2 to 4 lanes
Pyramid Hwy	Egyptian Dr to Calle de la Plata Dr	2004-2015	Widen 2 to 4 lanes
Pyramid Hwy	Outer Ring Rd to La Posada Dr	2013-2020	Convert to 6-lane freeway
Red Rock Rd	Moya Blvd to Silver Knolls Blvd	2021-2030	Widen 2 to 4 lanes
Southeast Connection	Geiger Grade to Greg Street (Sparks Industrial Connector)	2013-2020	New 4-lane road
Sun Valley Pkwy	7th Ave to Arapaho Dr	2004-2012	Widen 2 to 4 lanes
Sun Valley Pkwy	Outer Ring Rd to 4th Ave	2004-2012	Widen 4 to 6 lanes

Table 12: Streets and Highways Improvements – FY 2004-2030 (continued)

Sun Valley Pkwy	4 th Ave to 5 th Ave	2004-2012	Widen 4 to 6 lanes
Sun Valley Pkwy	Highland Ranch Pkwy to Eagle Canyon Dr	2004-2012	New 2-lane road
Sun Valley West Arterial	Eagle Canyon Rd to Outer Ring Rod	2013-2020	New 4-lane road
Toll Rd	Geiger Grade to Scarlet Way	2021-2030	Widen 2 to 4 lanes
US 395	@Pagni Ln	2004-2012	Construct Interchange

Source: Regional Transportation Commission, 2030 Regional Transportation Plan, Table 3-7

RTC Non-Auto Modal Split Goal

A goal of the 2030 Regional Transportation Plan (RTP) is to increase the minimum non-auto modal split. The plan calls for a minimum non-auto modal split of 3 percent by 2012, 4 percent by 2020 and 6 percent by 2030. In order to accomplish this, there will have to be changes not only in the services provided, but also to the way in which land use decisions are made in the County. The RTP contains a public policy that states approximately 80 percent of RTC Ride service will be allocated to maximize productivity and 20 percent for coverage to provide service in less dense areas. Service will be focused on moving people for each dollar that gives the community greatest congestion relief and air quality benefits. To be effective, policy makers will have to weigh land use and transportation decisions based on opportunities for non-auto transportation.

There are essential land use changes that must be implemented to accomplish the non-auto modal split goal. There is a direct correlation between increased zoning densities created in conjunction with mixed-use development with diminished automobile usage. If individuals are able to walk to daily amenities, they are much less likely to rely on the automobile. These mixed-use, new-urbanist developments must be created in conjunction with transit stations that are within an acceptable walking distance from residence to make public transit more desirable. Zoning for parking should be greatly diminished to discourage vast expanses of blacktop and encourage the community to travel to and from daily uses utilizing alternative modes of transportation. Streets must be interconnected to increase access to destinations. Bicycle lanes should be implemented on older streets and incorporated in all new streets to increase the safety associated with biking, making it a viable option for transportation.

Issues Identification

New issues arise as the communities grow and evolve. In an effort to understand the complexities of transportation in Washoe County, Community Development staff and other development professionals have identified issues for possible inclusion in the plan. The issues are then further evaluated for inclusion as goals, policies and action plans.

This Transportation Plan section and the Goals and Policies section may not incorporate all of the issues. Part of the purpose of identifying the issues is to bring the issues to the forefront for additional analysis. Some of the issues identified may be emerging and it may be premature to address them in this plan. However, by identifying them, decision makers become aware that these issues may need further evaluation as communities continue to grow. In addition, these issues may be reevaluated for incorporation in other County documents.

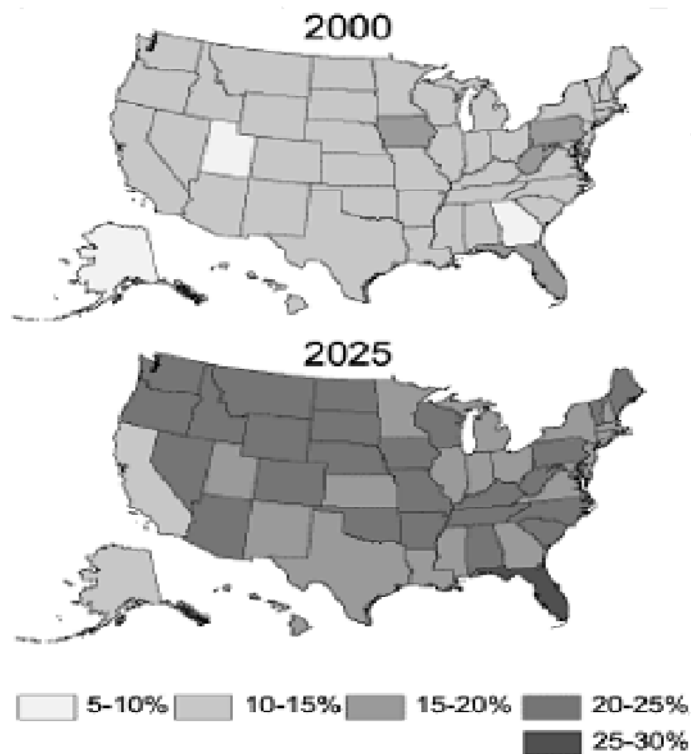
Graying Population

By the year 2025, 65 million Americans will be 65 or older. Our transportation network is not prepared to meet the needs of a rapidly changing population comprised of seniors. The lack of transportation options forces many people to rely on driving to get where they need to go. Physical limitations from aging force many older Americans to stop driving, which often leaves them isolated and without a means of transportation. In the report [Aging Americans: Stranded Without Options](#), the American Public Transportation Association reported on findings done by a

2001 National Household Transportation Survey. The following findings are significant in relation to transportation issues that will affect Washoe County in the next few decades.

- Less than one-third of Americans 65 or older has access to adequate public transportation to meet their daily needs.
- More than half of all non-drivers aged 65 and over stay at home in a given day, often because they do not have transportation options.
- Half of all adults cannot choose to take public transportation because service is not available in their area, particularly in rural and small towns.
- Seniors take an estimated 310 million trips per year on public transportation. Research shows seniors use public transportation when it is available, and access to goods and services reduces seniors' isolation and increases their mobility.

Figure 15: Population 65 or Older Categorized by State



Source: U.S. Census Bureau

Walkable Communities

During the second half of the last century, transportation systems focused on creating an efficient environment for the automobile. Civil engineers and planners alike shared in a common goal of building a transportation system that promoted the safety, convenience and comfort of those in vehicles. A secondary effect of this narrow goal was that basic human activity of walking was ignored. This was brought to the attention of representatives in Congress who commissioned studies on the issue. As a result of the findings, Congress passed the Intermodal Surface Transportation Efficiency Act (1991) and later expanded on it through the passage of the Transportation Equity Act for the 21st Century (1998). These acts promote walkable, livable and accessible communities. They reinforce the findings that people want to live and work in places

where they feel safe and conveniently walk or bicycle to daily amenities, work, and transit stops without having to deal with worsening traffic congestion.

Washoe County has established a clear definition of exactly what a walkable community consists of. A community where people of all ages and abilities have easy access to their community on foot, an automobile is not needed for every trip. Walking communities promote safer, healthier, and friendlier places where parents can feel comfortable letting their child play outside without fear of the automobile. Streets and highways are designed or reconstructed to provide safe and comfortable facilities for pedestrians, and are safe and easy to cross for all people. Pedestrians are given priority in neighborhood, work, school, and shopping areas. Motor vehicles speeds are reduced (and in some places motor vehicles have been eliminated entirely) to ensure compatibility with pedestrian traffic.

Table 13: ITE Sidewalk Installation Guidance

Land Use/(Roadway Functional Classification) and Dwelling Units	New Urban and Suburban Streets	Existing Urban and Suburban Streets
Commercial & Industrial/ (All streets)	Both sides.	Both sides. Every effort should be made to add sidewalks where they do not exist and complete missing links.
Residential/(Major Arterials)	Both sides.	Both sides.
Residential/(Collectors)	Both sides.	Multi-family—both sides. Single family—prefer both sides, require at least one side.
Residential/(Local Streets) More than 4 Units per Acre	Both sides.	Prefer both sides, require at least one side.
1 to 4 Units per Acre	Prefer both sides, require at least one side.	One side preferred, at least 4-foot shoulder on both sides required.
Less than 1 Unit per Acre	One side preferred, shoulder on both sides required.	One side preferred, at least 4-foot shoulder on both sides required.

- Notes:
- Any local street within two blocks of a school site that would be on a walking route to school—sidewalk and curb and gutter required.
 - Sidewalks may be omitted on one side of a new street where that side clearly cannot be developed and where there are no existing or anticipated uses that would generate pedestrian trips on that side.
 - Where there are service roads, the sidewalk adjacent to the main road may be eliminated and replaced by a sidewalk adjacent to the service road on the side away from the main road.
 - For rural roads not likely to serve development, a shoulder of at least 4 feet in width, preferably 8 feet on primary highways, should be provided. Surface material should provide a stable, mud-free walking surface.

Source: Institute of Transportation Engineers publication *Design and Safety of Pedestrian Facilities*

Creating walkable communities is not always an easy task. Much of the work involves retrofitting existing places on a block-by-block basis. In many communities, finding space for pedestrians and bicyclists is often rejected as impossible because of lack of space, funding constraints and a perceived lack of demand. There are also still many persistent, yet incorrect, perceptions that providing walking paths and sidewalks will take away space that could be devoted to vehicular lanes, and that providing pedestrian facilities is dangerous and will create liability issues. These perceptions are slowly beginning to fade as more communities are making a commitment to creating walkable communities. Designers are starting to see the advantages of designing roads

from the edge of the right-of-way inward rather than from the centerline outward which, in the past, lead to pedestrian facilities incorporated into design as an amenity, rather than a requirement, if additional space was left. The importance of creating a buffer between the walkway, bicycle lane or trail is being realized. Walking and bicycling are encouraged, and provide a safer, healthier mode of transportation.

Creating a walkable community begins with the creation of legislation, zoning, and ordinances that mandate this type of walkable community. The assumption is that people will walk. People want to walk in places that are inviting. If they aren't walking, it is probably because they are prevented from doing so. There are many reasons why this occurs, including insufficient or incomplete or unconnected infrastructure, cul-de-sac development, lack of sidewalks or bicycle paths, barriers such as walls or highways, lack of destinations within one-half mile walking distance, perception that the area is unsafe, or lack of visual interest along the route.

Walkable Communities and the Connection to Health

Walkable communities promote healthy living. In the last 25 years, the United States has been facing a new health epidemic, obesity. Following World War II and the creation of the 1956 Federal highway act, urban development has been geared to the automobile. Where people once walked, they now drive. This creates a situation in which individuals cannot obtain enough exercise to maintain a healthy lifestyle. The American Medical Association states "In the year 2000, obesity (the condition of being grossly overweight) resulted in 300,000 deaths. Obesity-related problems cost Americans \$117 billion. 14 percent of teenagers and 13 percent of children are overweight...People are driving more and fully 80 percent of auto trips are a distance of one mile or less." The American Medical Association highlights the critical connection between sedentary behavior and obesity finding that, in general, Americans are eating more food, more frequently. At the same time, opportunities to burn calories in daily life are diminishing. Children watch more television daily, physical education has been reduced in schools, many neighborhoods lack safe sidewalks, and the workplace is more automated. Walking and bicycling has been replaced by automobile travel for all but the shortest distances.

To combat the effects of sedentary lifestyles created through urban sprawled, cul-de-sac communities the Congress for New Urbanism suggests, "Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young." Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy. Schools should be sized and located to enable children to walk or bicycle. Streets and squares should be safe, comfortable and interesting to the pedestrian. Properly configured, they encourage walking.

It has been demonstrated that the design features of the places people live impact individual's ability to be physically active and can impact their health. There is also evidence that suburban sprawl [is related to increased] obesity. To decrease obesity, development must occur implementing new-urbanist smart growth practices that demand walkable communities to get individuals out of their automobiles, utilizing other modes of transportation that encourage exercise to begin to curb the health, social, and economic effects that obesity places on society.

Streetscape

Streets serve a number of functions, including providing the primary means of surface transportation routes for pedestrians, bicyclists, transit, automobiles and emergency providers; connecting the neighborhood and community; providing access to destinations; and uniting people through the common public space. Streets have their own sense of place and come alive as residents walk along, stop to chat or when children learn to ride a bicycle for the first time.

A key element in creating a great street environment is the creation of a good streetscape at human scale. Generally, good streetscapes are designed with the following principles:

- The essential characteristic to promoting a great streetscape varies in different setting. In urban settings streets should be alive with action. A mixture of uses that allows individuals to exit their homes above or abutting commercial/retail uses, walk to get a cup of coffee, the morning paper, or breakfast. While walking along these interconnected streets individuals walk past a myriad of inviting uses where individuals walk past and begins to associate with their neighbors, which will help to develop a sense of community.
- Great streetscapes respect the environment and are designed to integrate with the natural topography and local climate of the area. This reduces the environmental impact of the development and reduces the alteration of the site's natural drainage patterns which may lead to cost savings by eliminating unnecessary over-engineering of road systems. It provides natural ways to protect users from high winds, glaring sun and other elements.
- Greenery is present. The presence of trees and plants in the streetscape offers a valuable connection to nature.
- Alternative paving methods are used. Aside from providing visual interest, using alternative techniques, such as impervious paving, can aid in the natural replenishing of water as well as dilute toxins and pollutants.
- Streets are designed at human scale. Reducing road widths and curb radii has several positive effects to the streetscape. It reduces traffic speeds that make the street safer and more pedestrian friendly.
- Streets are designed for all uses.
- Bicycle lanes are associated with all road networks.
- Parking lots are not the dominant feature.
- Street patterns are designed to diffuse rather than concentrate. Conventional designed areas often have lots of residential streets often end in cul-de-sacs. This forces most traffic onto just a few streets, resulting in traffic congestion and an unpleasant pedestrian environment. Creating efficiently connected street grids and downsizing blocks de-emphasizes the use of primary arterials and creates a pedestrian-friendly environment.

Photo 27: Non-Landscaped Streetscape**Photo 28: Landscaped Streetscape**

No discussion of streetscape would be complete without a mention of the importance of gateways. Gateways are physical landmarks or features that indicate a change. In many cases, they are used to indicate a sense of arrival and celebrate the entrance into special districts or areas. They are also often used to identify the urban edge. To be most effective, gateways

should be designed in context to the place in which they will be placed. The importance of gateways becomes greater as development occurs and overtakes the subtle changes that occur naturally. Washoe County currently has few gateway features. However, given the increase in development and loss of an identifiable rural to urban edge, gateways may become a more important design feature in the future.

Connectivity

Connectivity is one of the most essential themes in achieving a sustainable, mixed-use, new-urbanist community. Connectivity refers to the directness of links and the number of connections in path or road network. A well-connected road network has many short links, numerous intersections, and a minimum number of cul-de-sacs. Connectivity is extremely important as the connectivity of the street network increases the average distance and travel time decreases. This decrease in travel time gives the community many more travel options. Where cul-de-sac development required the traveler to get in their automobile, navigate an incoherent street network to travel to the store that is a relatively short distance away. The connection of streets drastically decreases the travel distance and allows the individual an option to walk or bicycle, when before it was impossible because of the distance that was created due to the unconnected streets and cul-de-sac communities.

Traffic Calming

Washoe County has begun to use traffic-calming methods as a solution to traffic problems. Residents commonly request traffic humps because they were often used in early roadway treatment. However, there are many different methods available that can be used to retrofit current problem areas, as well as be used in initial design of new developments. Examples of traffic calming techniques are demonstrated in Photo 10.

Aging Communities/Crumbling Infrastructure

The recent report, *Infrastructure Report Card 2005*, by the American Society for Civil Engineers gave most of this nation's infrastructure a grade of D. Congested highways and decaying bridges are constant reminders of the looming crisis that jeopardizes our nation's prosperity and our quality of life. The findings below are specific problems that the report found in the state of Nevada.

- 44 percent of Nevada's major urban roads are congested.
- Vehicle travel on Nevada's highways increased 89 percent from 1990 to 2003. Nevada's population grew 86 percent between 1990 and 2003.
- The Nevada Department of Transportation has a \$387 million maintenance backlog.
- Nevada faces a \$2.8 billion shortfall in transportation funding over the next 10 years.
- Driving on roads in need of repair costs Nevada motorists \$120 million a year in extra vehicle repairs and operating costs—\$81 per motorist.

The study also reported that since the first report card in 2001, the nation's infrastructure has shown little to no improvement. In 2001, the nation was given an overall grade of a D+. This should come as no surprise as our communities are aging. In addition, many of our policies support infrastructure expansion in new areas with few funds going to areas that need rebuilding.

Efficient Funding

Many decisions are made based on the probability of a certain financial outcome. However, when it comes to land use and transportation decisions, it cannot always be ascertained that the decision will yield a favorable outcome. The idea of requiring additional analysis of development

proposals has been largely ignored by policymakers except to require a cursory look at fiscal analysis. It may be advantageous to the long-term sustainability of the county to require more in-depth reporting mechanisms that look at the overall ramifications of development policies and decisions. Included in any discussions should be the need for local governments to sustain real dollars per capita investments for transportation capacity improvements, maintenance and operations.

Street Patterns

Street patterns are a function of both land use and street layout. Topography plays an important role in determining how the street will be arranged; all streets should be placed in an interconnected pattern except where topography does not allow. Roads traversing steep slopes have to account for changes in grade and are limited in the design of a development. However, a greater force in determining how streets are designed related to an ongoing evolution over how best to design a neighborhood. The current thinking on street pattern design appears to be divided between concern for the efficiencies of infrastructure and traffic, in conjunction with the consideration of aesthetics. Opposed to development patterns which continue to build non-functioning, disconnected street networks that are not necessary aesthetically pleasing, nor functional. This type of disconnected development perpetuates transportation practices in which 80 percent of automobile trips are taken traveling less than a mile. The connection of the street network could encourage individuals to utilize different travel modes, creating an environment that in conducive to Washoe County achieving the RTC non-modal split goal.

The use of the rectangular grid pattern dates back to antiquity when the earliest cities were laid out in blocks of long buildings separated by streets. This type of city planning was essential to allow individuals to move throughout the city when the only transportation was on foot. The pattern was continued throughout the centuries with different regions making slight modifications. Using a grid pattern to lay out new developments in the United States had a particular advantage of efficiency and allowing the rapid subdivisions of large parcels of land into ones that could be sold to newcomers. This pattern continued to be the predominant street patterns in the United States up until the second half of the last century.

After the 1950s, several factors led a movement to a hierarchical structure for street design. One of the factors was the need to house the soldiers returning from World War II. The most important influence was the 1956 Federal Highway Act that allowed highways to be constructed throughout the United States. This, coupled with increased affluence and automobile ownership, began to create a situation where urban sprawl began to echo through the newly created landscape. This is evident in the evaluation of two cities, New York and Los Angeles; these are the two largest cities in the United States. New York's landscape is defined by towering skyscrapers, interconnected streets, and the highest utilization of mass transit in the nation and was largely developed before the 1950's. In contrast, single-family homes, sprawled communities, high reliance on the automobile, and little utilization of public transit define Los Angeles's landscape. Los Angeles in contrast was largely developed after the conclusion of World War II.

Another important factor was rooted in the mortgage lending institution, which favored development patterns based on Radburn's Garden City model (Photo 29). In this model, grid patterns were discouraged because they dispersed traffic evenly throughout the street system increasing traffic hazards, adding to construction costs, and creating a monotonous, uninteresting architectural effect. The Garden City model was based on a hierarchy of roads that included major thoroughfares to provide quick and convenient access to activity centers, local residential streets where traffic was significantly reduced, and cul-de-sacs, which eliminated traffic hazards, cut down on paving costs, and reduced the cost of laying water and sewer mains.

Photo 29: Radburn’s Garden City Model



Radburn, New Jersey, 1929 (From Greenbelt: History of a New Town 1937-1987)

Figure 16: Progression of Street Patterns Commonly Used in the United States

	Gridiron (c. 1900)	Fragmented Parallel (c. 1950)	Warped Parallel (c. 1960)	Loops and Lollipops (c. 1970)	Lollipops on a Stick (c. 1980)
Street Patterns					

Source: Unknown

In the last decade of the 20th century, there has been a move back to the original principles founding the Grid Pattern street network. This movement is commonly called Neo-Traditional Neighborhood Design (NTND). It calls for an interconnected network of streets and sidewalks to disperse vehicular trips and to make human powered modes of travel (such as walking and biking) practical, safe and attractive for short trips. The street pattern in an NTND can also have a hierarchy, with some roadways designed to carry greater traffic volumes. A basic assumption of NTND planning, however, is that neighborhood streets that serve local residential trips can also safely serve other neighborhood trips and some through traffic. By eliminating dead ends and designing all streets to be interconnected, neo-traditional street patterns provide multiple route choices for trips. By using narrow streets and by constructing more of them, more, yet smaller, intersections are created. In concept, therefore, overall network capacity is increased, traffic is dispersed and congestion is reduced in neo-traditional communities.

Table 14: Comparison of Hierarchical and Neo-Traditional Street Patterns

Street Design	Hierarchical	Neo-Traditional
Basic layout	Dendritic	Interconnected grid
Alleys	Often Discouraged	Encouraged
Design speed	Typically 25-30 mph	Typically 20 mph
Street width	Generally wider	Generally narrower
Curb radii	Selected to ensure in-lane turning	Selected for pedestrian crossing times and vehicle types
Intersection geometry	Designed for efficiency, safety, vehicular speed	Designed to discourage through traffic, for safety
Tree, landscaping	Strictly controlled	Encouraged
Street lights	Fewer, tall, efficient lights	More, shorter, closely spaced lamps
Sidewalks	4-ft minimum width, outside right of way and meandering	5-ft minimum, within ROW and parallel to street
Building setbacks	15 ft or more	No minimum
Parking	Off-street preferred	On-street encouraged
Trip generation	Developed from a sum of the users	Developed from a reduced need for vehicular trips

Source: Engineering News Record, May 9, 1994

By 2030, there may be new street patterns that emerge. It is difficult to determine the types of street patterns that should or will prevail in 2025 since they are dependent on many other factors. It is important, however, to understand that street patterns, like land use concepts, are ever changing.

Conclusion

The Land Use and Transportation Element of the Washoe County Master Plan is intended to serve as a guide to illustrate planning practices such as mixed-use, reduced parking requirements, and gateway communities to direct the Board of County Commissioners, the Washoe County Planning Commission, other boards involved in the planning process and the community on matters of land use and transportation within the unincorporated planning areas of the County. These planning practices are suggested and encouraged to promote proper and sustainable growth throughout Washoe County to utilize the County's majestic beauty and ensure a community that is at the forefront of planning and innovation for years to come. The growth in employment and population in unincorporated Washoe County through the year 2025 will have a broad range of impacts.

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Glossary

Definitions

Affordable Housing. “Affordable housing” is housing for a family with a total gross income less than 110 percent of the median gross income for the County concerned, based upon the estimates of the United States Department of Housing and Urban Development of the most current median gross family income for the County. (NRS 278.0105)

Affordable Housing. "Affordable housing" means housing, which is affordable to low-income households (not exceeding eighty (80) percent of the County median income) or moderate-income households (not exceeding one-hundred twenty (120) percent of County median income).

Annexation. “Annexation” is the process used by a municipality to add surrounding fringe areas to the city or town.

Bureau of Land Management (BLM). The “Bureau of Land Management’ is an agency within the U.S. Department of the Interior, which administers 264 million acres of America's public lands, located primarily in 12 Western States. The BLM sustains the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.

Capital Improvements Plan. “Capital Improvements Plan” is a plan for capital expenditures to be incurred each year over a fixed period of several years setting forth each capital project, identifying the expected beginning and ending date for each project, the amount to be expended in each year, and the method of financing those expenditures.

Collector. A “collector” is a highly accessible facility that functions to provide a moderate degree of mobility. A collector primarily serves local travel demand by providing a transition or link between higher design arterials and local access roads.

Collector. "Collector" means the highest order of residential streets.

Conservation Easement. A “conservation easement” (or conservation restriction) is a legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. It allows you to continue to own and use your land and to sell it or pass it on to heirs.

Conservation Subdivision. A “conservation subdivision” is a process to identify the most significant natural and cultural resources on a given tract of land, and thereby determine the most suitable “building envelope” for development to preserve the natural and cultural resources.

Cooperative Planning Area. A “cooperative planning area” is an area within the Truckee Meadows where more than one jurisdiction has an interest in the density, intensity or character of development as described in the Settlement Agreement in the case of Washoe County and the Sun Valley General Improvement District vs. the Truckee Meadows Regional Planning Governing Board (CV02-03469). These areas are shown on Map 7 of the Truckee Meadows Regional Plan.

Dendritic street pattern. A “dendritic street pattern” is a street pattern that resembles the form and disorganization of tree branches.

Density. "Density" or "residential density" means the number of dwelling units per gross acre for residential uses.

Emergency Access Route. An “emergency access route” is a facility intended to provide either primary or alternate ingress and egress to a specific area in case of emergencies. Emergency access route status may be assigned to an existing or planned full function facility that serves daily traffic demands. An emergency access route may also be a roadway designed specifically for the purpose of providing emergency access.

Freeway. A “freeway” is a limited-access, grade-separated facility that functions to provide the highest degree of mobility, in terms of travel time and traffic capacity, to area residents. A freeway serves interregional and interstate movement of people and goods.

Gateway Community. “Gateway Community” refers to the community that serves as an entrance or a means of access into the Truckee Meadows. These gateway communities will maintain Washoe County’s rural character.

Green Development Techniques. Green building is the practice of increasing the efficiency with which buildings and their sites use and harvest energy, water, and materials, and by reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal during the complete building life cycle. Green development: conserves natural resources, use energy wisely, improve indoor air quality, and plan for livable communities.

High Access Control Arterial. A “high access control arterial” is a minimally accessible facility that operates to supply a high degree of mobility. A high access control arterial primarily serves interregional travel demand between major population or activity centers and high volume traffic movements within individual urban/suburban areas.

Infill. “Infill” is development or redevelopment of land that has been by passed, remained vacant, and/or is underused as a result of the continuing urban development process. Generally, the areas and/or sites are not particularly of prime quality, however, they are usually served by, or are readily accessible to, the infrastructure.

Infrastructure. “Infrastructure” means the basic facilities such as roads, schools, power plants, transmission lines, transportation and communication systems on which the continuance and growth of a community depends.

Intensity. “Intensity” is any ratio that assesses the relative level of activity of a land use including, but not limited to, a floor area ratio, building coverage ratio or impervious surface ratio.

Land Use. “Land use” is the primary, or primary and secondary uses of land such as single-family residential, multi-family residential, commercial, and industrial or agriculture. The description of a particular land use should convey the dominant character of a geographic area and thereby establish the types of activities that are appropriate and compatible with primary uses.

Local Road. A “local road” is a local facility that operates to supply the highest degree of access and the lowest degree of mobility. Local roads exist solely to provide access to individual properties.

Low Access Control Arterial. A “low access control arterial” is a highly accessible facility that operates to provide a degree of mobility, somewhat less than that provided by moderate access control arterials. A low access control arterial primarily serves interregional travel demand between smaller population or activity centers, and low to moderate volume traffic movements within individual urban/suburban areas.

Master Plan. A “master plan” is a comprehensive long-term general plan for the physical development of a city, county or region, which includes analysis, recommendation and proposals for the geographic area, it covers.

Mixed-Use Development. A “mixed-use development” is a single building or land containing more than one type of land use or single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified complementary whole, and functionally integrated to the use of shared vehicular and pedestrian access and parking areas.

Moderate Access Control Arterial. A “moderate access control arterial” is a moderately accessible facility that functions to provide a degree of mobility, somewhat less than that provided by high access control arterials. Moderate access control arterial primarily serves interregional travel demand between smaller population or activity centers and moderate to high volume traffic movements within individual urban/suburban areas.

Municipal Services. “Municipal services” are services traditionally provided by local government and/or affected entities, including water and sewer, roads, parks, schools and public safety.

Neighborhood. A “neighborhood” is an area of a community with characteristics that distinguish it from other community areas and that may include schools or social clubs, or boundaries defined by physical barriers, such as major highways and railroads, or natural features such as rivers.

New-Urbanism. “New-Urbanism” is a design practice that utilizes mixed-use development, a variety of housing types, in close proximity to daily amenities and transit stops, narrow interconnected tree lined streets, reduced setbacks, where individuals do not have to rely on the automobile.

Open Space. “Open space” is property with free and legal public access that is generally in a natural state. Open space may include spaces that are inappropriate for access or development for any reason such as sensitive environments or hazardous areas (e.g. landslide areas). Open spaces provide native plant and wildlife habitat, passive recreational opportunities enhance the scenic character of the region and allow for preservation of significant cultural and archaeological resources.

Open Space, Common. “Common open space” means the total land area, not individually owned or dedicated for public use, which is designed and intended for the common use or enjoyment of the residents or occupants of the development. Common open space includes swimming pools, putting greens and other recreational-leisure facilities; areas of scenic or natural beauty and habitat areas; hiking, riding or off-street bicycle trails; and landscaped areas adjacent to roads, which are in excess of minimum, required rights-of-way.

Open Space, Private. “Private open space” means the outdoor living area directly adjoining a dwelling unit or building which is intended for the private enjoyment of the residents or occupants of the dwelling unit or building and which is defined in such a manner that its boundaries are evident.

Plan. A “plan” is a document adopted by an agency that contains, in text, maps and/or graphics, a method of proceeding, based on analysis and the application of foresight, to guide, direct or constrain subsequent actions in order to achieve goals. A plan may contain goals, policies, guidelines and standards.

Policy. A “policy” is a specific statement of principle or of guiding actions that implies clear commitment, or a general direction that a governmental agency sets to follow in order to meet its goals and objectives.

Public Lands. “Public lands” are any land area owned and managed by a public entity for the public good.

Regional Water Planning Commission. The “Regional Water Planning Commission” is a body of individuals from the local jurisdictions set up by legislation responsible for developing and maintaining the Regional Water Plan.

Right-of-Way. “Right-of-way” is a strip of land acquired by reservation, dedication, prescription or condemnation and intended to be occupied by a street, trail, water line, sanitary sewer and/or other public utilities or facilities.

Right-of-Way. “Right-of-way” is a strip of land occupied or intended to be occupied by a publicly dedicated street, including the pavement, sidewalks and parkways, crosswalk, railroad, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer main, shade streets or other special use.

Rural Highway. A “rural highway” is a moderately accessible facility that operates to supply a degree of mobility, somewhat less than that provided by high access control arterials.

Scenic Corridor. The “scenic corridor” classification, when applied to a specific road or road segment, requires that additional controls and design standards be employed to protect the roadway’s inherent aesthetic quality. Additional measures that must be taken on a roadway with the scenic corridor designation will vary on a case-by-case basis.

Scenic Corridor. "Scenic corridor" means a roadway with recognized high quality visual amenities that include background vistas of mountains, open country or city.

Sphere of Influence (SOI). A "sphere of influence" is an area into which a city plans to expand as designated in a comprehensive regional plan adopted pursuant to NRS 278.026 to 278.029, inclusive, within the time designated in the comprehensive regional plan. (NRS 268.623)

Sprawl. "Sprawl" is premature growth or outward expansion of development, or low-density land-use patterns that are automobile-dependent, energy and land consumptive, and require a very high ratio of road surface to development served.

Stewardship. Stewardship is related to the environment, the concept of responsible care taking; based on the premise that we do not own resources, but are managers and are responsible to future generations for their condition.

Sustainability. "Sustainability" refers to development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Transfer of Development Rights. In "transfer of development rights" a community identifies an area within its boundaries, which it would like to see protected from development (the sending zone) and another area where the community desires more urban style development (the receiving zone). Landowners in the sending zone are allocated a number of development credits, which can be sold, to developers, speculators, or the community itself. In return for selling their development credits, the landowner in the sending zone agrees to place a permanent conservation easement on his or her land. Meanwhile, the purchaser of the development credits can apply them to develop at a higher density than otherwise allowed on property within the receiving zone.

Transit-Oriented Development (TOD). "Transit-oriented development" is moderate and high-density housing concentrated in mixed-use developments located along transit routes. The location, design and mix of uses in a TOD emphasize pedestrian-oriented environments and encourage the use of public transportation.

Unincorporated Areas. "Unincorporated areas" are areas outside any city and under a county's jurisdiction.

Urban Village. "Urban Village" is a form of development that utilizes new-urbanist development practices that promotes mixed-use, high-density development that allows individuals to walk to daily amenities.

Village Land Use Pattern. A "village land use pattern" is a small compact community surrounded by a more rural area that characterizes the village land use pattern. Goods and services to support the daily needs of the residents are available within the village. Regional commercial uses that generate higher traffic and draw people from larger areas are generally too intense of a use for a village pattern of development.

Zoning. "Zoning" is a local ordinance that divides a community into districts and specifies allowable uses and development standards for each, consistent with the adopted community master plan.

Acronyms

BLM	Bureau of Land Management
CIP	Capital Improvements Program or Capital Improvements Plan
FAR	Floor Area Ratio
HOV	High Occupancy Vehicle
LEED	Leadership in Energy and Environmental Design
NDEP	Nevada Division of Environmental Protection
NRS	Nevada Revised Statutes
PUCN	Public Utilities Commission of Nevada
RDA	Rural Development Area
ROW	Right-of-Way
RPC	Regional Planning Commission
RPGB	Regional Planning Governing Board
RSCVA	Reno-Sparks Convention and Visitors Authority
RTC	Regional Transportation Commission of Washoe County
RTP	Regional Transportation Plan
RWMP	Regional Water Management Plan
RWPC	Regional Water Planning Commission
SHPO	State Historic Preservation Officer
SOI	Sphere of Influence
TAC	Technical Advisory Committee
TMRPA	Truckee Meadows Regional Planning Agency
TMSA	Truckee Meadows Service Area
TMWA	Truckee Meadows Water Authority
TOD	Transit-Oriented Development
UNR	University of Nevada, Reno
USFS	United States Forest Service
VMT	Vehicle Miles Traveled
WCDHD	Washoe County District Health Department
WCSD	Washoe County School District

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Appendix A – Action Plan

Effective plans include detailed implementation strategies. They specify follow-up actions, identify responsible parties, establish timelines and provide specific benchmark criteria for measuring success. Without strong implementation strategies, well-crafted and well-intentioned plans are left to gather dust on a shelf. To avoid such an outcome, the Land Use and Transportation Element includes an action plan.

Table A-1: Action Plan Responsibilities

No.	Task	Responsible Party	Year (TBD)				
			1	2	3	4	5
1	<ul style="list-style-type: none"> • Develop measurable criteria for determining the suitability of development projects and utilize computer applications that weigh the criteria against one another in order to analyze suitability or potential impacts. 	Community Development					
1A	<ul style="list-style-type: none"> • Monitor land supply and use on an annual basis. <ul style="list-style-type: none"> ○ Use the annual population estimate to help define land supply need. ○ Maintain accurate and up-to-date inventories of constructed and approved projects. ○ Evaluate development projects to ensure that they are sized and located to best serve the residents of the County. 	Community Development					
2	<ul style="list-style-type: none"> • Develop flexible development regulations, which encourage innovative design, varied uses, provision of open space and large-scale development. <ul style="list-style-type: none"> ○ Consideration should be given to offering bonuses in the form of increased density, reduced service and facility costs, or other incentives in relation to the enhancements achieved. ○ Adopt development regulations that encourage mixed uses while providing compatibility of uses. ○ Encourage the use of performance standards and the use of density regulations versus the traditional structure-type regulations to guide growth and development. Examine alternative development regulations (such as form based zoning) to determine if other methods would better promote the goals and policies of the Master Plan. 	Community Development					
3	<ul style="list-style-type: none"> • Establish gateway and design overlay districts that create a sense of arrival or sense of place in areas that have regional importance. 	Community Development					
4	<ul style="list-style-type: none"> • Develop overall standards for design, signage and other factors having aesthetic impacts as part of the planning and development review process. 	Community Development					
5	<ul style="list-style-type: none"> • Develop and adopt a plant list for vegetation that uses little water and is well suited for its environment with low maintenance. <ul style="list-style-type: none"> ○ Plants on the list should be the required vegetation for roadway right of ways, and public areas. Exceptions may be made for areas that are designated as special design corridors that require specific specimens to create desired effects. ○ Private landscaping packages for production residential developments should be given incentives to use plants on the low water list. 	Community Development					

Table A-1: Action Plan Responsibilities (continued)

No.	Task	Responsible Party	Year (TBD)				
			1	2	3	4	5
6	<ul style="list-style-type: none"> • Develop and use the following techniques to encourage the conservation of land: <ul style="list-style-type: none"> ○ Transfer of development rights, density transfers or related density techniques; ○ Building envelopes and localized grading, to reduce blading and cut and fill, in environmentally sensitive areas; ○ Incentives for clustered development patterns; and ○ Any other possible techniques to balance development techniques with environmental concerns. 	Community Development					
7	<ul style="list-style-type: none"> • Develop and implement a method to measure development's impact on natural resources. <ul style="list-style-type: none"> ○ Based on information obtained from measuring efforts, Community Development should develop any development standards to ensure potential impacts are minimized. 	Community Development					
8	<ul style="list-style-type: none"> • Cooperate with the United States Forest Service (USFS) and the Bureau of Land Management (BLM) to acquire private property for the development of trails, trailheads and acquisition of open space areas that connect with or are adjacent to and further the goals of the USFS or BLM in providing additional visitor facilities, public access and consolidation of federal lands. 	Community Development					
9	<ul style="list-style-type: none"> • Review projects for mineral resource extractions operation. In addition, Community Development will develop and provide additional review for all proposed development applications within ¼ mile of an existing mineral resource extraction operation or application adjacent to existing truck routes related to an operation to ensure the proposed projects are designed to minimize any potential problems related to the existing operation. 	Community Development					
10	<ul style="list-style-type: none"> • Work with Public Works and the Regional Transportation Commission to meet the goals, objectives and policies contained in the 2030 Regional Transportation Plan. <ul style="list-style-type: none"> ○ Develop and maintain congestion and access management standards included in the 2030 Regional transportation Plan for the engineering and construction of all County roadways. 	Community Development; Public Works					
11	<ul style="list-style-type: none"> • Implement an incentive program to encourage County employees to use alternative modes of transportation. 	Community Development; Public Works; County Manager					
12	<ul style="list-style-type: none"> • Require pedestrian circulation plans along with vehicle circulation plans as part of the development review process. 	Community Development					
13	<ul style="list-style-type: none"> • Incorporate Crime Prevention Through Environmental Design (CPTED) or similar methods to promote a safe environment method into the review process. 	Community Development					
14	<ul style="list-style-type: none"> • Consider offering incentives for well-designed safe and healthy communities. 	Community Development					

Table A-1: Action Plan Responsibilities (continued)

No.	Task	Responsible Party	Year (TBD)				
			1	2	3	4	5
15	<ul style="list-style-type: none"> Work with other departments involved in the development process, and those that provide services such as health services, police and fire agencies, to create a method to periodically review and evaluate the effectiveness of the policies in the built environment. 	Community Development; other departments involved in development process					
16	<ul style="list-style-type: none"> Require new developments that are adjacent to older neighborhoods to connect to existing roads and trails. 	Community Development					
17	<ul style="list-style-type: none"> Inventory vacant county properties for possible redevelopment. Temporary uses should be considered for properties that are in transition or being held for future uses that are not scheduled to begin within three years. 	Community Development					
18	<ul style="list-style-type: none"> Develop methods to assess the connectivity of new developments. 	Community Development					
19	<ul style="list-style-type: none"> Explore and encourage options to reduce trip reduction such as telecommuting and alternative work schedules for employees. 	Community Development; County Manager					
20	<ul style="list-style-type: none"> Develop design guidelines that promote attractive and context compatible designs that conserve resources, while still appreciating the need for flexibility and diversity in the development community. Design standards should incorporate the following: <ul style="list-style-type: none"> Street and building orientation to reduce the use of fossil fuels. Use of landscaping to minimize heat island effects. Shelter from intense winds. Directing development away from remote locations can increase the efficiency of water and electricity distribution and reduce infrastructure subsidization. Siting schools in an efficient location can increase walking and biking, lessening fuel usage and increasing opportunities for exercise. The 2030 Regional Transportation Planning standards for siting schools shall be included in any guidelines or standards development. Integrating land use and energy planning can increase opportunities to site smaller scale energy facilities closer to customer loads including cogeneration, solar, wind and fuel cells. 	Community Development					
21	<ul style="list-style-type: none"> Study the effectiveness of developing rural development standards. <ul style="list-style-type: none"> If applicable, develop standards or regulations. 	Community Development					
22	<ul style="list-style-type: none"> Develop methods to evaluate and promote compact pedestrian walking areas in the review of new subdivisions. Evaluate existing walkways and walking routes. <ul style="list-style-type: none"> Financial methods to build missing connections and replace poor functioning routes should be created. 	Community Development; Public Works; Finance					

Table A-1: Action Plan Responsibilities (continued)

No.	Task	Responsible Party	Year (TBD)				
			1	2	3	4	5
23	<ul style="list-style-type: none"> • Update existing Area Plans to determine appropriate growth areas and develop new County Area Plans as necessary. Work with residents and other stakeholders in the review of future growth and development. 	Community Development					
24	<ul style="list-style-type: none"> • Continue to evaluate development proposals for conformance with the Land Use and Transportation Element. 	Community Development					
25	<ul style="list-style-type: none"> • Study and, if feasible, implement universal design standards. 	Community Development; Public Works					
26	<ul style="list-style-type: none"> • Develop methods to relate development to provision of services. <ul style="list-style-type: none"> ○ Utilize the Capital Improvements Program in order to implement the policies and action plans, and land use plans of the Master Plan Elements and Area Plans. <ul style="list-style-type: none"> ○ Facility needs identified in the Area Plans shall be planned in the Capital Improvements Program. ○ Develop any additional mechanisms to assess the phasing, timing and location of infrastructure in accordance with adopted Area Plans. ○ Create a system to evaluate the fiscal implications of development. 	Community Development, Finance					

Source: Washoe County Community Development.

Appendix B – Area Plan Modifiers

The following Area Plan Goals and Policies provide language with directives contrary to those stated in the Land Use and Transportation Element. Where noted below, the language of the Area Plan shall take precedence as to the practices which are to be followed.

Land Use and Transportation Element Goal	Area Plan Modifier
<p>Goal One:</p> <p>Influence future development to abide by sustainable growth practices.</p>	<ul style="list-style-type: none"> ▪ Southeast Truckee Meadows Area Plan – Policy SETM.3.4
<p>Goal Two:</p> <p>Standards ensure that land use patterns are compatible with suburban development and incorporate mixed-use.</p>	<ul style="list-style-type: none"> ▪ North Valleys Area Plan – Policy NV.2.1 ▪ South Valleys Area Plan – Goal Seven
<p>Goal Three:</p> <p>The majority of growth and development occurs in existing or planned communities, utilizing smart growth practices.</p>	<ul style="list-style-type: none"> ▪ Cold Springs Area Plan – Goal Two ▪ South Valleys Area Plan – Character Statement, pp. 2, 11
<p>Goal Four:</p> <p>Land use patterns allow for a range of housing choices and interconnected streets.</p>	<ul style="list-style-type: none"> ▪ South Valleys Area Plan – Policy SV.1.4 – SV.1.8, inclusive
<p>Goal Five:</p> <p>Development occurs where infrastructure is available.</p>	<ul style="list-style-type: none"> ▪ South Valleys Area Plan – Policy SV.6.2
<p>Goal Eight:</p> <p>Development patterns in the unincorporated General Rural (GR) or General Rural Agricultural (GRA) County designation, or RCMA, provide an alternative to the higher intensity land use pattern that is found within the .TMSA.</p>	<ul style="list-style-type: none"> ▪ Cold Springs Area Plan – Policy CS.1.1
<p>Goal Sixteen:</p> <p>Realizing resource extraction provides a benefit to the region, efforts need to be undertaken to ensure limited degradation to the environment.</p>	<ul style="list-style-type: none"> ▪ Spanish Spring Area Plan – Policy SS.10.1 – SS.10.3, inclusive

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