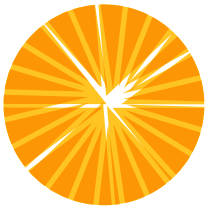
The West Lake Vision Land Use and Transportation Study is a representation of a possible "build-out" scenario for the western portion of Utah County. While community land use and transportation plans were used during the creation of this scenario, this does not necessarily represent what those plans will be in the future. No timeframe or officially adopted population projections were used in the creation of this scenario or at any point during the study process. This study is only a depiction of how the study area may develop at some point in time.



ACKNOWLEGMENTS

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Eagle Mountain City, City of Saratoga Springs, Goshen City, Fairfield, Cedar Fort, Utah County, SITLA - State Institutional Trust Lands Agency

Landowners & Individuals:

Steadman Brothers LLC; Pole Canyon Project, Oquirrh Wood Ranch; Central Valley Water Reclamation; Central Valley Water Reclamation; Gardener & Associates; Harward Associates; Holbrook Farms

Consultants

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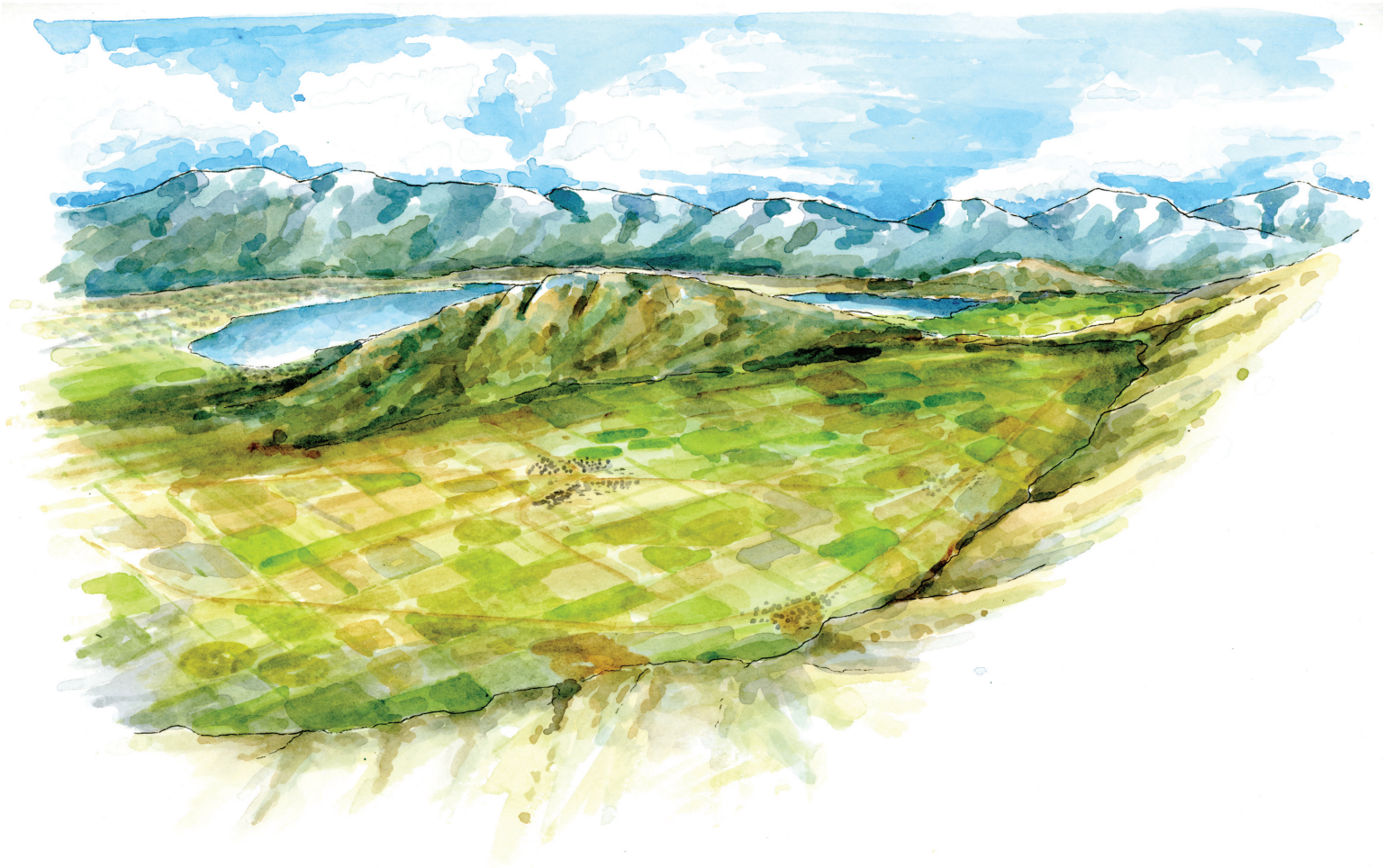
I. INTRODUCTION



Why Vision for the West Lake Area Now? The Wasatch Front is growing at a faster rate than most of the nation. The population of the State of Utah is expected to grow from about 2.7 million in 2008 to approximately 3.5 million by 2030, the majority of this growth will occur within the Wasatch Front metropolitan region. The Salt Lake and Utah Valleys are reaching capacity and development is expected to expand into new areas, including the Cedar and Goshen Valleys, collectively referred to here as the West Lake planning area. Rarely are communities given an opportunity to proactively prepare for growth on a regional scale. Too often growth and development occur before long range visioning and studies can take place, and communities are forced to make reactionary decisions to correct or mitigate the consequences of uncorrordinated actions.

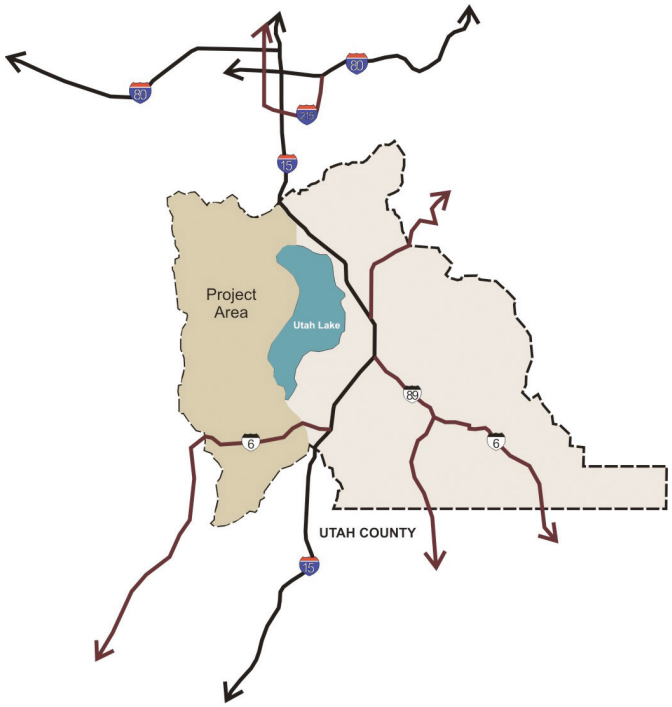
In creating the West Lake Vision Study, Mountainland Association of Governments wants to understand the potential for growth and transportation needs west of Utah Lake. The goal is not to promote or encourage development of this relatively pristine agricultural and natural area, but rather to identify a possible build out scenario and aid local communities to be prepared to when, and if, the West Lake area is eventually developed.

The West Lake Vision is an advisory document, and does not replace local general plans or ordinances.

It is however, intended to serve as an aid to Mountainland and local communities to develop long range transportation plans.

Planning on a regional scale is advantageous; in that it encourages economic, infrastructure, environmental and social efficiency through coordinated planning and development. The West Lake planning area is well positioned for a regional comprehensive planning; a rare chance compared to typical piecemeal planning of a series of unconnected local plans. This is also an opportunity to identify best practices and theory for land use and transportation planning.

The West Lake area, given its relatively flat terrain, is easily developable. The expansiveness of the area presents a nearly limitless canvas for multiple, and efficient planning approaches.



As the Wasatch Front region grows, land prices will increase. The West Lake area offers less extensive real estate, which is already attracting large developers and real estate speculators. The West Lake planning area also offers the advantage of an essentially blank canvas. These vast open lands, divided into relatively few land owners, create a unique opportunity for large scale visioning.

Planning for the area now will encourage the preservation of major right-of-ways and street networks for incorporation into future regional transportation networks.

Several land owners in the West Lake area are currently planning and undertaking large scale development projects. These projects should be interconnected and incorporated into the regional vision to ensure coordination with local governmental plans and one another.

WEST LAKE AREA OVERVIEW

The West Lake planning area is located to the west of Utah Lake in Utah County. The area is bounded by the lake on the east, and by the Utah County boundary line on the north, west, and south. A ridge of land divides the West Lake area into two distinct valleys; the Cedar Valley to the North, and the Goshen Valley to the South.

The Cedar Valley is punctured by the presence of Lake Mountain, which creates some unique challenges to both internal and external mobility. This, and other natural features of the area including benches of the surrounding mountains, wetlands and Utah Lake, create constraints to development.

This terrain creates a narrow strip of land to the North of the Lake, connecting the West Lake area to Lehi and the rest of the Utah County.

A large wetlands area exists near the southern tip of the Lake, which constraints access in and out of the Goshen Valley. Another, located near the current airstrip, limit development of both structures and roadways near the center of the Cedar Valley.

Overall, the West Lake area includes over 300,000

acres - the majority of which remains undeveloped. The developed lands that do exist within the West Lake area include the incorporated cities of Saratoga Springs, Eagle Mountain, Fairfield, and Cedar Fort, all located within the Cedar Valley. The Goshen Valley is home to both the Town of Goshen Townsite and the Elberta settlement.

In the heart of the Cedar Valley, Eagle Mountain is quickly becoming a significant presence in Utah County. Second to West Valley City, Eagle Mountian includes more land area within its boundaries than any other city in Utah. Much of the land in the City is controlled by a handful of property owners, making comprehensive master planning more easily acheivable. Eagle Mountain's population has grown steadily since its incorporation as a city in 1996; growing from approximately 250 people to an estimated 19,890 people in 2008.

A View of the West Lake Area

The City of Saratoga Springs, located at the northern tip of Utah Lake, has experienced similar growth rates. Since its incorporation in 1997, the City's population had grown to approximately 10,000 people by 2008. The City is issuing between 30 and 40 permits for residential dwelling units monthly, and is among the top ten highest growing cities in Utah. Because of its close proximity and easy access to Lehi and other cities closer to the Wasatch Front, Saratoga Springs is likely to continue to experience rapid growth rates in the future. Saratoga Springs is only partially developed and it is expected that the build-out population of the City will be over 100, 000 residents.

The Town of Fairfield is one of the original settlements in the Cedar Valley. It was established in 1855 and incorporated in 2004. The Town is closely linked to the historic Camp Floyd Camp and museum. This former military post quartered the largest troop concentration in the United States from 1858 to 1861. About 400 buildings housed the 3,500 troops sent West to suppress an assumed Mormon rebellion. The troops returned to the East in 1861 for Civil War duty. Only a cemetery and commissary building remain today.

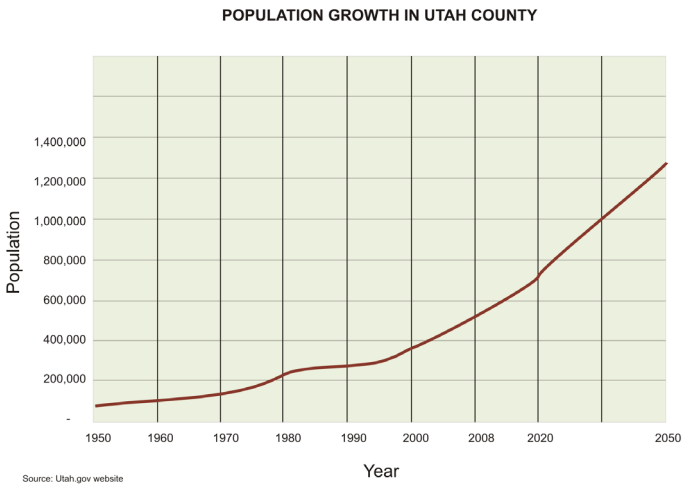
The Town of Goshen, settled in 1910, is located in the Goshen Valley of the West Lake area. At the time of the 2000 Census, Goshen was home to approximately 874 people. Its smaller neighbor, Elberta, has survived as an historic settlement, but has never formally incorporated. The Goshen Valley is poised to become a new area of growth within the West Lake area, as the area is currently being planned as the location for a major industrial center in the Utah County General Plan.

Eagle Mountain and Saratoga Springs serve as bedroom communities for the Wasatch Front, with the majority of residents commuting to both Provo and Salt Lake City for employment. The smaller communities of the West Lake area tend to be based on agricultural economies and development in these areas has been more limited.

WEST LAKE AREA POTENTIAL

The population of Utah County has grown steadily over the past few decades. The population in 1950 was 83,000 and increased steadily to a population of 519,632 in 2008. This number is expected to increase significantly into the future, with a projected population of 1,261,653 by 2050. *(Utah Governor's Office of Planning & Budget)*

The scale of the West Lake area is impressive – nearly the size of the Salt Lake Valley, for comparison. The West Lake area runs roughly the same distance in length (measured north to south) as the area from Lehi to Payson. Offering significant additional width (measured east to west) than the land east of Utah Lake, it is easy to imagine the capacity of this area for future development.



If the majority of developable land within the West Lake area were developed at densities similar to the rest of the Wasatch Front, the region could conceivably contain populations nearing 1.5 million. Many constraints and uncertainties can limit this potential. Specifically, a lack of developed water in the West Lake area is one of the major limits to development. However, as agricultural lands are converted to development, existing irrigation water could be transferred to municipal and industrial uses.

Other factors that can influence the growth potential include:

- **Regional Connections:** The entire Wasatch Front is considered as a major transportation hub, and a connection between the west and east coasts of the United States.

  The development of major transportation routes and arterials across the West Lake area could serve as a catalyst to development in this area. Bounded by the Wasatch Mountians and the Great Salt and Utah Lakes, the Wasatch Front has physical constraints that are directing the movement of development towards the north and south. Development is already jumping across Utah Lake and reaching into the West Lake area. The scale of the West Lake area is impressive – nearly the size of the Salt Lake Valley, for comparison. The West Lake area runs roughly the same distance in length (measured north to south) as the area from Lehi to Payson. Offering significant additional width (measured east to west) than the land east of Utah Lake, it is easy to imagine the capacity of this area for future development.

- **Employment and Commercial Opportunities:** Utah County is expected to see an increase of over a 100,000 new jobs by the year 2020, and a total projection of over 600,000 jobs in all sectors of the economy by 2050. The development of the West Lake area would likely be an element of this growth. Major incorporated cities like Saratoga Springs and Eagle Mountain can create opportunities for

commercial activity. Industrial and agricultural activity that currently exist in the area can also attract economic activity to the area.

- **Health of the Regional Economy:** The Intermountain West faces strong growth pressures with projections suggesting that the region will continue to boom well into the 21st century. The State of Utah ranked third in the United States for state growth between 2000 and 2007. The Wasatch Front saw a 17.5% population growth in the same period. This growth rate is affecting the regional economy and the Intermountain West is seeing a diversification of its economy with significant growth in the 'knowledge industry'.

  Unemployment in Utah has historically been much lower than the national average, and there is a great momentum for growth for the Intermountain West and the Wasatch Front.

- **Cost of Land and Development:** The availability and relatively undeveloped nature of the land in the West Lake area makes it less expensive to develop compared to the rest of the Wasatch Front. Large parcels can also be easily assembled for major development projects.

The undeveloped nature of the West Lake area also allows for the preservation of open space and the establishment of large scale agricultural and industrial uses. There is ample space for all anticipated growth and development, and preservation of open space should be a priority.

PLANNED IMPROVEMENTS

The West Lake area is on the radar of different stakeholders for planning and development. Some of these are transportation and infrastructure plans, comprehensive plans as well as large scale development projects.

The incorporated cities in the area all have comprehensive plans guiding their future development decisions, and are anticipating growth and expansion of their jurisdictions.

The Metropolitan Planning Organization for the West Lake area, the Mountainland Association of Governments (MAG), has long range transportation plans for the area. The 2007-2030 Regional Transportation Plan takes a comprehensive approach to transportation planning in the area. This Plan seeks to provide a future transportation system that minimizes congestion while addressing the environmental, social, and financial concerns of Utah County by integrating the local goals with federal guidelines. Major goals of the Plan include:

1. Funding of new capacity.
2. Reconstruction and Preservation of existing facilities.
3. Improvement of non-motorized transportation system.
4. Minimization of air pollution.
5. Maximization of accessibility to important services.
6. Coordination of all transportation elements into an inter-modal system.
7. Development of a transportation plan consistent with land use general plans.

The West Lake Visioning process is a part of MAG's process to develop a regional transportation plan.

MAG, in collaboration with all communities in northern Utah County, conducted an east-west transportation study from September 2007 to September 2008. Cities and communities included in the study included Alpine, American Fork, Cedar Fort, Cedar Hills, Draper, Eagle Mountain, Fairfield, Highland, Lehi, Lindon, Orem, Pleasant Grove, Saratoga Springs and Vineyard. MAG also coordinated with the cities, Utah Department of

Transportation (UDOT) and Utah Transit Authority (UTA) for technical and regional planning support.

The *Utah County East-West Corridor Study* was associated with House Bill 108 which provides funding to study east-west mobility along the Wasatch Front. The study identified transportation projects and strategies to satisfy travel demand, alleviate congestion, and promote long-term corridor preservation through the year 2040.

The study was comprehensive and was coordinated by incorporating growth projections and planned transportation projects for the area.

Planned Water Projects

The West Lake Area is part of the Bonneville Unit of the Central Utah Project (CUP). The Bonneville Unit develops the water resources in mountainous areas in northeast Utah for use in the Bonneville Basin (west of the Wasatch Mountains) and in the Uinta Basin (east of the Wasatch Mountains).

The CUP develops water supplies in this area by collecting and storing excess flows of the Duchesne River and its tributaries, by water rights purchased in Utah Lake, and return flows. Bonneville Unit facilities make a trans-basin diversion of water from the Colorado River to the Bonneville Basin and deliver water for municipal and industrial, irrigation, and instream flow maintenance in both basins.

The Utah Lake Drainage Basin Water Delivery System (ULS) is the final component of the Bonneville Unit of the Central Utah Project. The planning area for the ULS is the Wasatch Front of Utah, from Nephi in the south to Salt Lake City in the north. The goals of the ULS are to:

- Develop, convey and deliver the remaining Bonneville Unit water supply for municipal and industrial uses and temporary agricultural supply along the Wasatch Front.
- Address the remaining environmental commitments of the Bonneville Unit associated with previously constructed systems.

The ULS is intended to fill many needs, including completion of the Bonneville Unit by delivering an average annual 101,900 acre-feet of water from Strawberry Reservoir to the Wasatch Front area for municipal and industrial uses. The ULS will address a wide range of environmental commitments made during construction of features of other systems of the Bonneville Unit while continuing to provide Bonneville Unit water in accordance with existing contracts. Development of additional municipal and indistrial water to serve the West Lake area would fall under the ULS jurisdiction.

School District Plans

The Alpine School District serves the northern half of the West Lake Area and includes the cities of Saratoga Springs and Eagle Mountain. The School District has a total of about 58,740 students. Of this Eagle Mountain has about 3,727 students; Saratoga Springs has 2,989 students and Cedar Fort has 225 students. The School District is expected to grow to a student population of 64,334 students by 2010.

The schools in the Goshen Valley are run by the Nebo School District. The Nebo School District is the 6th largest district in the State and is also the 5th largest employer in Utah County. Nebo School District has enrollment of over 25,000 and has grown by approximately 1,000 students per year. The enrollment is likely to double in approximately 30 years. Several new schools in both the Alpine and Nebo School Districts will be needed to accomodate projected student population increases.

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II. PROCESS

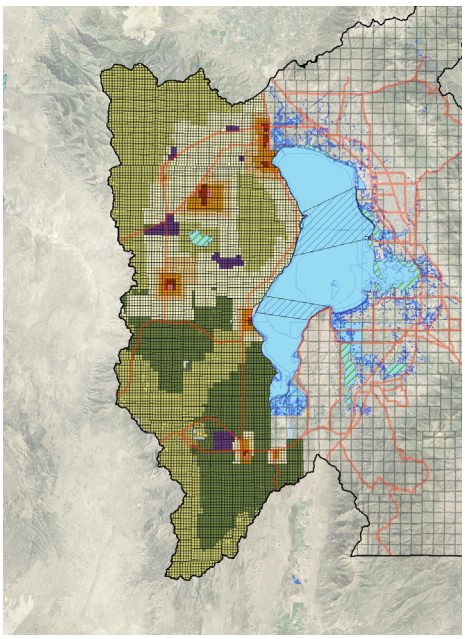
The West Lake Vision Study was developed through a collaborative process led by Mountainland Association of Governments, and the consulting team of CRSA, Fehr & Peers, and Lewis Young Robertson & Burningham. Stakeholder involvement was a critical element of the process and this was achieved through two stakeholder workshops and three public workshops.

Two stakeholder workshops were held for the West Lake Vision and set the ball rolling for brainstorming and planning. One workshop was held for communities in the Cedar Valley at the Eagle Mountain Town Hall. Another was held at Goshen Town Hall for communities in the Goshen Valley. Input from attendees was added to insight from the consulting team and MAG to develop draft scenarios for land use and transportation planning of the project area.

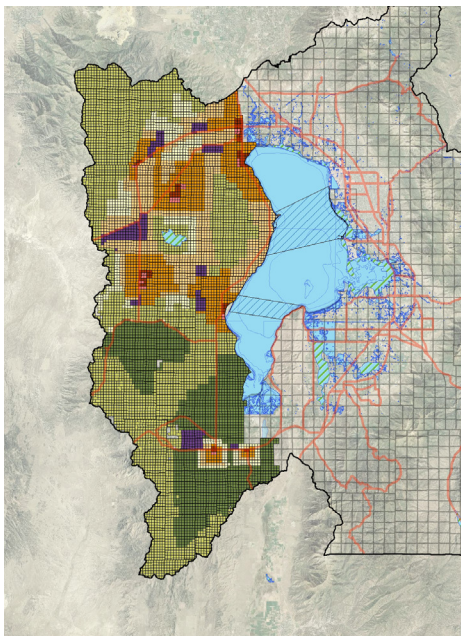
The draft scenarios created alternatives in population numbers and areas of development concentration, as well as in the number of acres assigned to agriculture and open space.

These draft scenarios were evaluated and analyzed using transportation models, and with additional stakeholder contribution, until a final scenario of development, was developed. This scenario is described in more detail under the final scenario section of this document.

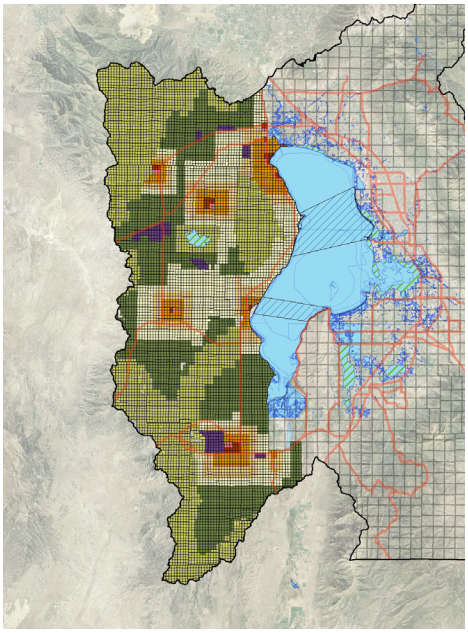
The West Lake Vision Study is an opportunity for regional long-range visioning. It creates a framework that ties transportation and land use place types creating opportunities for cities, communities, developers and regional authorities to discuss long range development scenarios.



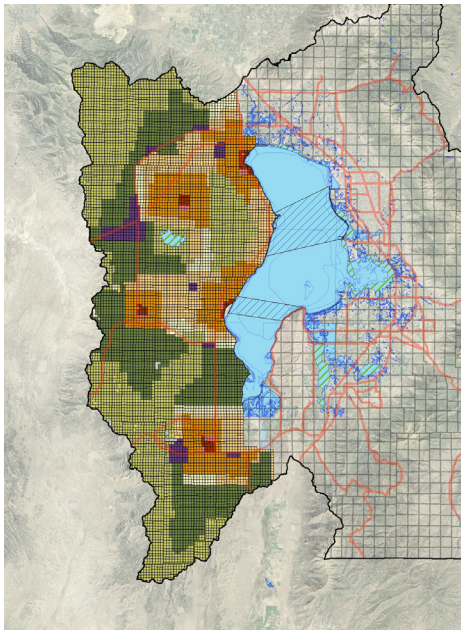
Scenario 1A - 500,000 population



Scenario 1B - 1,500,000 population



Scenario 2A - 500,000 population



Scenario 2B - 1,500,000 population

West Lake Vision DRAFT Scenarios

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III. GUIDING PRINCIPLES

Developing a vision or buildout scenario for the West Lake are demands a careful approach. Sound planning principles and best practices are incorporated into the vision to represent responsible and wise planning. During intial workshops, stakeholders regularly suggested such elements be incorporated into the vision scenario.

PLANNING TRENDS

Several principles and philosophies are being developed in urban planning forums which aim at making communities more transit and pedestrian oriented with a greater mix of housing, commercial and retail uses. These principles and philosophies also help to preserve natural open space by focusing on compact connected development over sprawling automobile developments. Some these principles applied in the West lake Vision include:

1. Creation of housing opportunities and choices;
2. Creation of walkable neighborhoods;
3. Encouragement of community and stakeholder collaboration;
4. Fostering distinctive, attractive communities with a strong sense of place;
5. Mixing of land uses;
6. Preservation of open space, farmland, natural beauty and critical environmental areas;
7. Provision of a variety of transportation choices;
8. Strengthening and direct development towards existing communities;
9. Taking advantage of compact building design; and
10. Incorporation of natural open space into built up communities.

The principles listed above were synthesized and

incorporated into the West lake Vision into four (4) major guiding principles:

1. Center-focused Development
2. Interconnected Mobility Network
3. Open Space Preservation
4. Sustainability

Center Focused Development

Center-focused development describes a development pattern organized around a hierarchy of activity centers. These range from intense urban centers that serve as major employment centers, to small-scale neighborhood centers that may be oriented around a school, church or park. The idea behind this patter of development is to ensure that residents have shorter commute times between daily destinations (school, work, shopping, recreation) and their homes.

Center-focused development has several advantages including reduced infrastructure costs, better air quality, and a renewed sense of community identity among others. In Section IV of this document, the West Lake Vision identifies five types of centers. The West Lake Vision intentionally avoids specifying land uses for particular locations, and instead identifies general locations for place types (centers).

Interconnected Mobility Network

Returning to the historical settlement patterns of Utah and many other communities around the nation, the West Lake Vision represents the development of an interconnected mobility network, which includes a fine grid of streets, pathways, and transit routes. Traditional grids, or modified street grids create communities with great connections, walkable blocks, and opportunities for multiple modes of transportation. More connections and routes through a community means increased navigability, reduced automobile dependence, and a healthier and more sustainable community. Chapter III of this document identifies a hierarchy of roadways, potential trail alignments, and possible transit connections throughout the West Lake area.

Open Space Preservation

The West Lake area has physical capacity to easily contain significant growth, well beyond future population projections and estimates. To represent responsible and sustainable development patterns, and to prevent development from sprawling throughout the entire area, preservation of open space is necessary. Open space preservation in the West Lake area is focused on lands of special consideration or agricultural value, and includes hillsides, wetlands, shorelands, and productive farming lands.

Sustainability

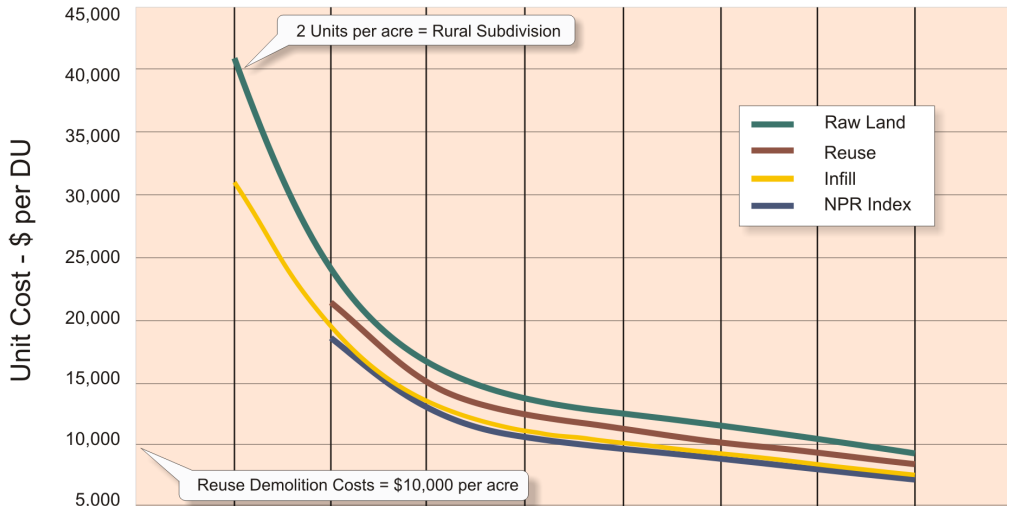
Sustainability is generally thought of as a three-legged stool of environmental, social, and economic sustainability, where the stability of the whole is dependant on all three being present. Chapter III of the West Lake Vision describes this philosophy in relation to the visioning of the West Lake area. It includes the ideas of center-focused development, interconnected mobility networks, and open space preservation, as well as creating a largely self-sustaining economy, ample opportunities for access to education and employment, and overall stewardship of the land.

WLV TARGET DEVELOPMENT DENSITY

Studies show that it costs more to provide and maintain water lines, streets, power and other infrastructure in low density developments. This makes higher density more economically viable for cities and developers.

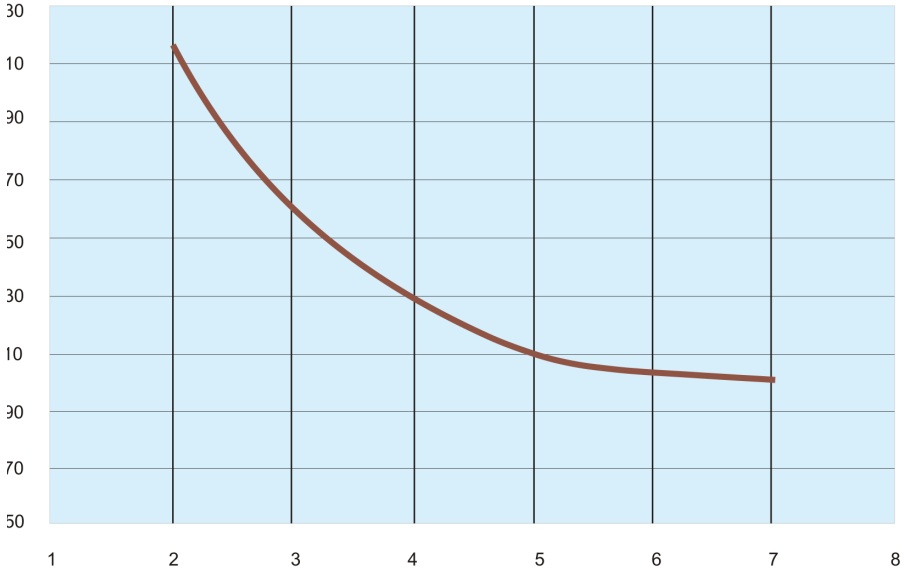
Advantages of higher density development also center around transportation. Higher density make it possible for mass transportation to be

RESIDENTIAL INFRASTRUCTURE COSTS vs GROSS DENSITY



The above chart shows that the cost of providing residential infrastructure decreases with increase in dwelling units per acre. The West Lake Vision aims at achieving an average residential density of 8.38, to maximize the use of infrastructure and lower costs.

HIGHER DENSITY = LOWER WATER USE



The above chart shows that higher residential density results in reduced use of water

cost efficient. Mass or public transportation leads to efficient fuel use as individual vehicle miles traveled is reduced. A reduction in vehicle miles traveled also reduces pollution through a reduced carbon dioxide emissions from vehicles.

Mixed use development can be achieved easily with higher density. The location of a wide variety of uses in proximity to each other makes other modes of transportation, such as cycling and walking, practical. In addition, mixed use development contributes vitality and interest for residents, added customers for neighborhood businesses, and a

variety of housing options.

The proposed average residential density for the West Lake Area is 8.38 dwelling units (DU) per acre at full build out. This average density is comparable to that of other major regional centers like Salt Lake City and Provo which had densities of 9.99 (in 2007) and 9.13 (in 2000) respectively. Other density comparisons are shown in this table.

The average residential density of 8.38 DU/ acre is comprised of low densities of about four (4) DU/ acre in residential neighborhoods, and a progressive increase climaxing at a density of 30 DU/ acre in the urban centers. A table showing proposed residential densities by place type is located in the next chapter of this document.

The mix of housing densities in the West Lake Vision provides housing choices for residents and also creates opportunities for people with diverse socio-economic and cultural backgrounds to find housing and living opportunities in the area.

IMPLEMENTATION

It is important to remember that the West Lake Vision is soley a study to developed to aide MAG and local communities in long range transportation planning and is not itself a plan. However, these Guiding Principles, suggested by stakeholders and used during the visioning process, can be a valuable resource to local communities. Each jurisdiction will determine to what extent it is used in its own planning efforts.

RESIDENTIAL DENSITY COMPARISONS

	RESIDENTIAL ACREAGE	TOTAL DWELLING UNITS	AVERAGE RESIDENTIAL DENSITY	DATA YEAR
WEST LAKE	35,800	300,000	8.38	N/A
PROVO	3,327	30,374	9.13	2000
SALT LAKE	8,032	80,217	9.99	2007
SANDY	10,245	28,065	2.74	2008
WEST VALLEY	6,796	39,011	5.74	2009
OREM	7,888	24,166	3.06	1998
LOGAN	2,873	14,727	5.13	2009

Acreage includes the sum of residential areas in all place types or land use designations. Sources: U.S. Census Bureau; CRSA; Provo City General Plan; Orem City General Plan; West Valley City; Long Range Planning Department; Sandy City; 2008 Statistical Report; Logan City General Plan; Salt Lake City; Community and Economic Development Department.

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IV. WEST LAKE VISION

INTRODUCTION & PROCESS

The West Lake Vision Study is an effort to evaluate several build-out scenarios in the western portion of Utah County. Based on interviews and workshops with local property owners, city staff, and elected officials, the project team developed a final land use scenario that encompasses approximately 380,000 acres of land, most of which is currently agricultural or undeveloped land.

To help understand transportation demand of the final land use scenario, the project team developed a local travel demand model using the MAG regional model. Because much of the West Lake area is currently undeveloped, the standard regional model features little or no detail in the area south of Eagle Mountain. For this visioning exercise the regional model was substantially modified to include future land use, a transit system, and a roadway network capable of serving a build-out land use scenario.

In an effort to be consistent with previous planning efforts, the road network was developed based on:

- Master transportation plans from Eagle Mountain and Saratoga Springs

- Northern Utah County East-West Transportation Corridor Study
- Lake Mountain Transportation Study
- Goshen Valley Specific Area Plan, Utah County

For areas without specific plans or previously developed vision documents, the project team designed scenario-specific road networks. These networks feature a range of functional road types and transit systems that could meet the projected travel need and provide a framework for long range planning in the region.

The visioning process evaluated several land use scenarios and ultimately arrived at a final alternative – one with a reasonable estimation of build-out population and location of activity centers.

The Vision aims at incorporating and implementing key concepts addressed in the Guiding Principles chapter of this document. These Guiding Principles address best planning practices that are being utilized regionally, nationally and globally.

The final scenario represents a population of 1.0 million people or 303,000 households.

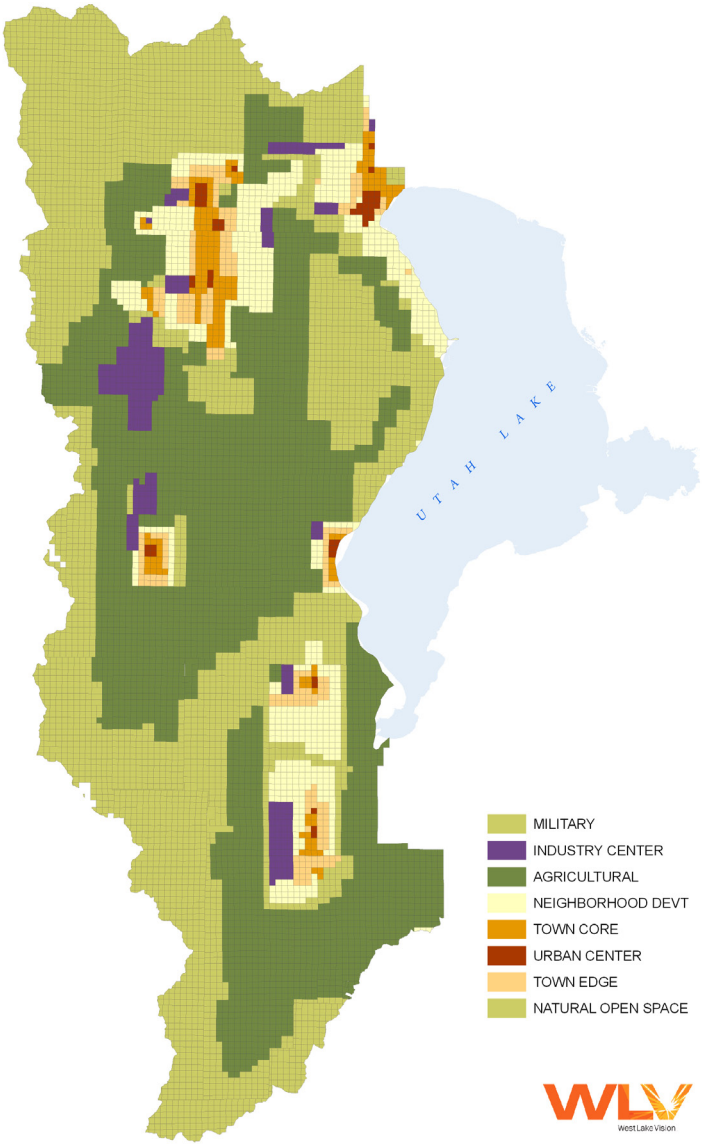
Target employment ratios were modeled on those of the Salt Lake valley to ensure the area is self-sustaining. This resulted in the in the square foot per household numbers shown in the tables below.

WEST LAKE VISION HYPOTHETICAL POPULATION	
POPULATION	1,000,000
HOUSEHOLD SIZE	3.3
HOUSEHOLDS	303,030

WEST LAKE VISION COMMERCIAL AREA				
	FLOOR AREA RATIO	SQUARE FOOTAGE	SQUARE FT PER HOUSEHOLD	ACRES
RETAIL	0.2	33,939,394	112	3,896
OFFICE	0.3	27,575,758	91	2,110
INDUSTRIAL	0.2	101,515,152	335	11,652

WEST LAKE VISION MAPS

The following pages provide a detailed illustration of the West Lake Vision scenario. Individual pages have been dedicated to identifying proposed place types and land use ratios, open space and trail alignments, existing and potential transportation systems, and projected travel demand.



The West Lake Vision identifies a number of future Urban Centers, with the largest located in Saratoga Springs and Eagle Mountain. Significant centers will emerge in the Goshen Valley and throughout the Cedar Valley over time. The entire West Lake area is encouraged to be developed as a series of centers of varying scale and intensity. Urban and Town Centers have been identified in the above diagram. Town Edges and Neighborhood development areas have been identified loosely, and it is expected that these areas will include a series of village and neighborhood centers in addition to residential development. This vision document assumes that identifying specific locations for town and neighborhood centers will is best done at the local level.

Open space preservation is a key component of the West Lake Vision, and the final scenario sets aside roughly 80% of the project area for natural open space and agricultural uses. A mix of residential densities and types are envisioned, ranging from high-density urban centers to very low density agricultural areas. The average density of all residential areas within the West Lake area is just over eight dwelling units per acre.

TOTAL AREA BY PLACE TYPE		
	ACRES	PERCENTAGE
URBAN CENTER	**2,000**	**100%**
RETAIL	800	40%
OFFICE	600	30%
RESIDENTIAL	300	15%
ROADS AND INSTITUTIONAL	300	15%
TOWN CORE	**8,000**	**100%**
RETAIL	2,000	25%
OFFICE	1,200	15%
RESIDENTIAL	3,600	45%
ROADS AND INSTITUTIONAL	1,200	15%
TOWN EDGE	**10,000**	**100%**
RETAIL	1,000	10%
OFFICE	500	5%
RESIDENTIAL	7,000	70%
ROADS AND INSTITUTIONAL	1,500	15%
NEIGHBORHOOD DEVELOPMENT	**30,000**	**100%**
RETAIL	300	1%
OFFICE	300	1%
RESIDENTIAL	24,900	83%
ROADS AND INSTITUTIONAL	4,500	15%
INDUSTRIAL	**11,650**	**100%**
INDUSTRIAL	11,650	100%
RESIDENTIAL	0	0%
AGRICULTURAL	**166,350**	**100%**
AGRICULTURAL	165,310	99%
RESIDENTIAL	1,040	1%
NATURAL OPEN SPACE	**145,025**	**100%**

It is important to note that the West lake Vision categorizes uses by place type rather than by land use areas. Defining areas by place type describes its overall character, and includes a mix of land uses within it.

TOTAL AREA BY LAND USE		
USE	ACRES	PERCENT OF TOTAL
NATURAL OPEN SPACE	152,000	
AGRICULTURAL OPEN SPACE	166,350	
TOTAL OPEN SPACE ACRES	**318,350**	**85%**
URBAN CENTER OFFICE	600	
TOWN CORE OFFICE	800	
TOWN EDGE OFFICE	500	
NEIGHBORHOOD OFFICE	300	
TOTAL OFFICE ACRES	**2,200**	**0.59%**
URBAN CENTER RETAIL	800	
TOWN CORE RETAIL	1,600	
TOWN EDGE RETAIL	1,000	
NEIGHBORHOOD RETAIL	300	
TOTAL RETAIL ACRES	**3,700**	**0.99%**
INDUSTRIAL	11,650	
TOTAL INDUSTRIAL ACRES	**11,650**	**3.13%**
AGRICULTURAL RESIDENTIAL	1,040	
URBAN CENTER RESIDENTIAL	300	
TOWN CORE RESIDENTIAL	3,600	
TOWN EDGE RESIDENTIAL	7,000	
NEIGHBORHOOD RESIDENTIAL	24,900	
TOTAL RESIDENTIAL ACRES	**36,840**	**9.88%**
TOTAL	**372,740**	**100%**

AVERAGE RESIDENTIAL DENSITY BY PLACE TYPE			
	RESIDENTIAL ACRES	DWELLING UNITS PER ACRE	AVERAGE NUMBER OF UNITS
URBAN CENTER	300	30	9,000
TOWN CORE	3,600	24	86,400
TOWN EDGE	7,000	15	105,000
NEIGHBORHOOD RESIDENTIAL	24,900	4	99,600
TOTAL	35,800	8.38	300,000
Average density excludes agricultural areas which have residential densities of 1 DU/ 160 acres Source: CRSA			

POTENTIAL REGIONAL CONNECTIONS

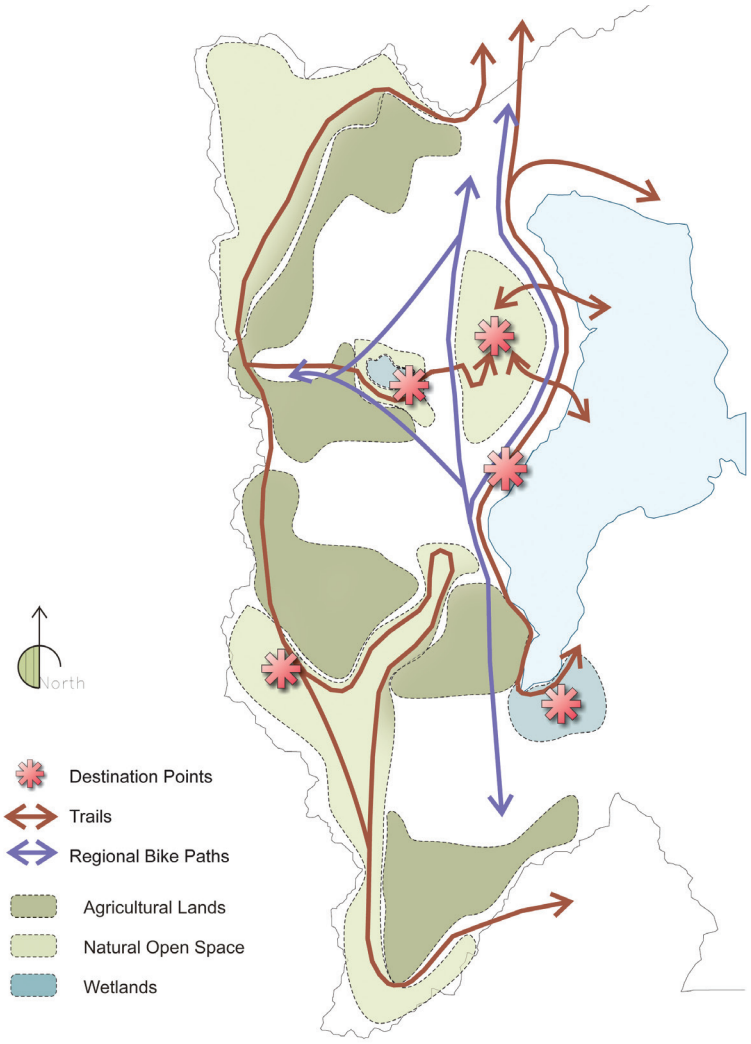
Major transportation routes that link the West and East coasts of the United States travel close to the area. The West Lake area highways linking I-80 to I-70 have potential to make the West Lake area a major hub.

This proximity to major connections also means that businesses and industrial activity can be well serviced.

Potential connections that can traverse the area may include a northward connection to I-80, a southward connection to I-15 and eastward connections across and around the Lake to I-15, and state Highways 6 and 89.

The area also has the potential for commuter rail connections through the major centers to other centers to the east of the Lake and north to Salt Lake City. Light rail systems can also be developed within the centers connecting to the commuter rail.

POTENTIAL TRAILS & OPEN SPACE



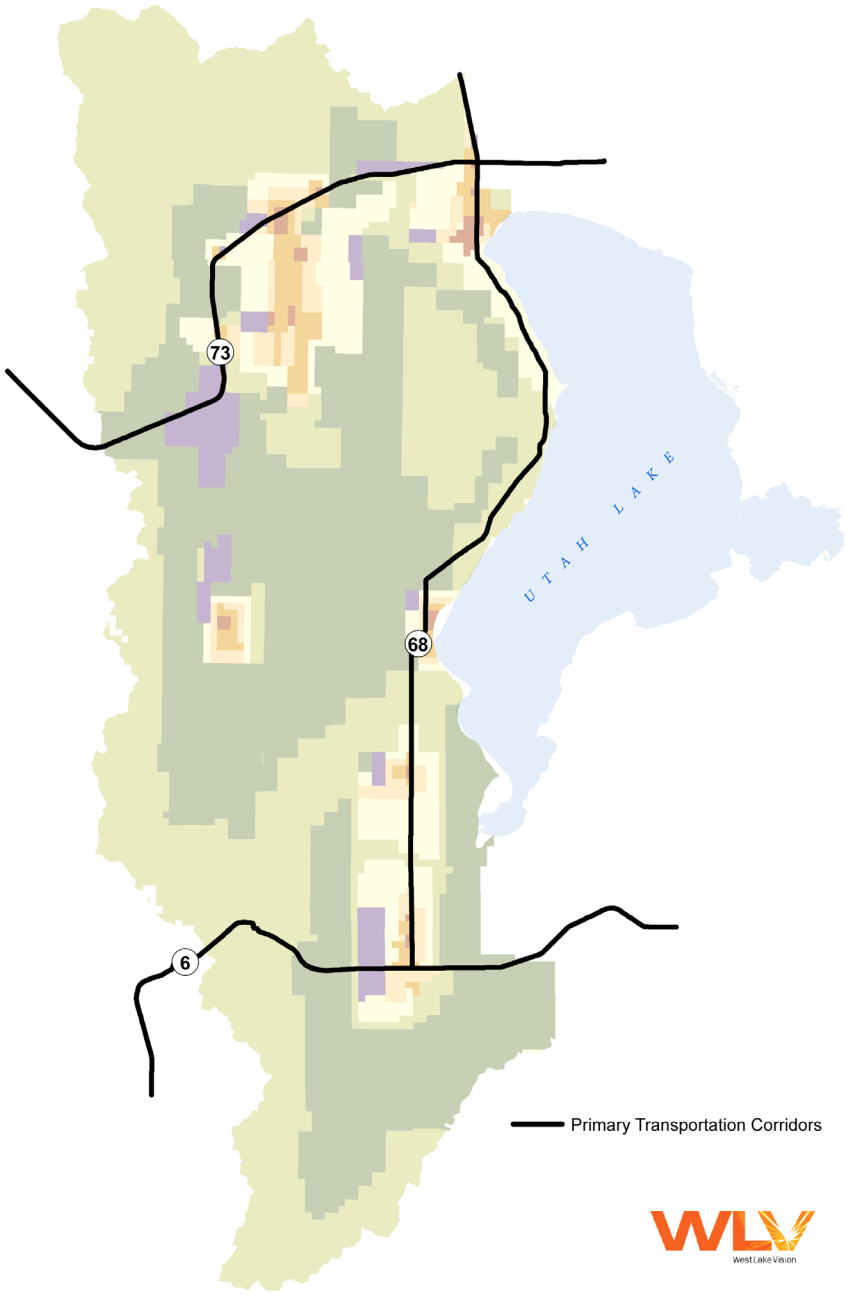
A regional trail system could be developed in the West Lake area. This trail system would take advantage of preserved natural open space. The area is surrounded with hillsides, and the foothills can serve as scenic routes for trail developments. The elevations will also create opportunities for views to landmarks and natural features. Major destination points can also be developed along the trails some of which have been identified in the diagram above.

Regional bike paths would also be developed to serve as transportation and recreational alternatives for enthusiasts. These can be developed alongside the trails or as independent systems where feasible.

Agricultural lands occupy about half of the open space in the West Lake area. Some of these are currently existing and others may be developed where feasible.

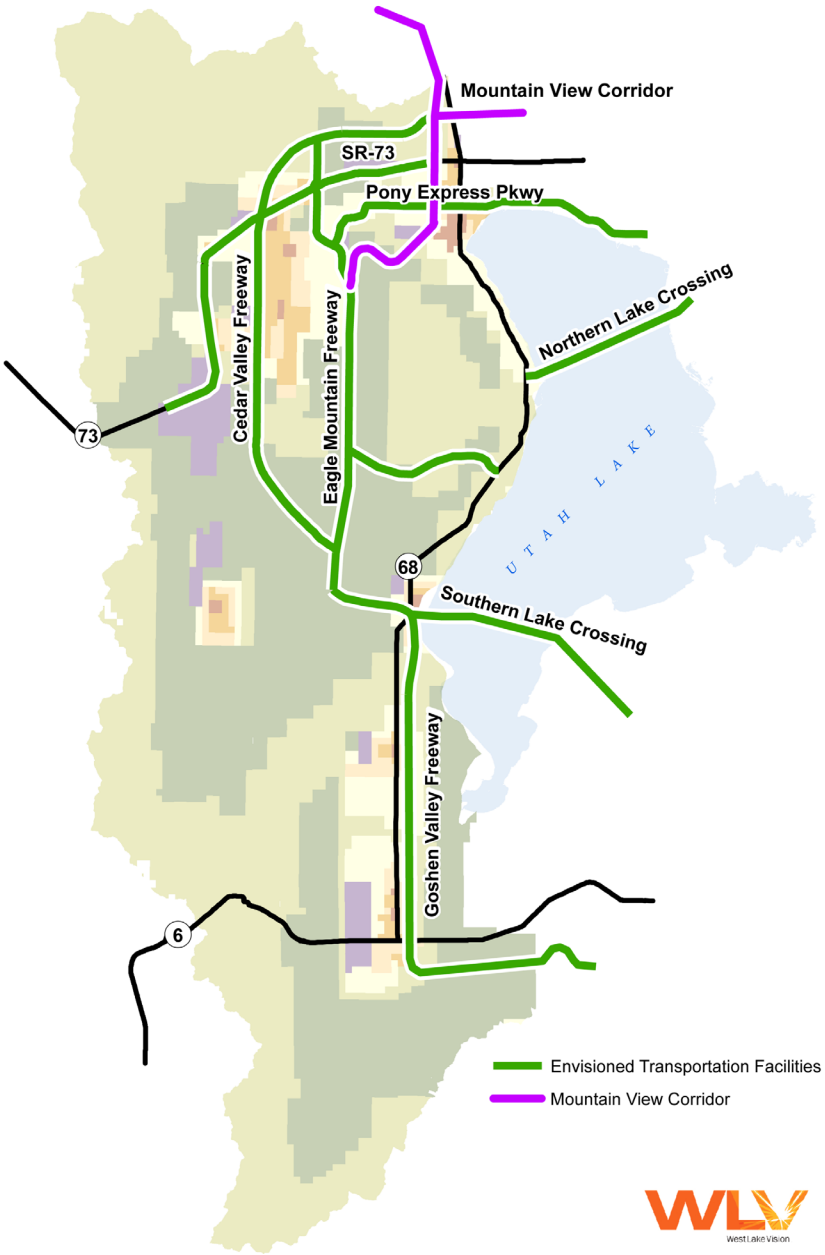
Natural open space is generally located around the foothills and benches and also around the sensitive wetlands and waterbodies.

EXISTING REGIONAL NETWORK



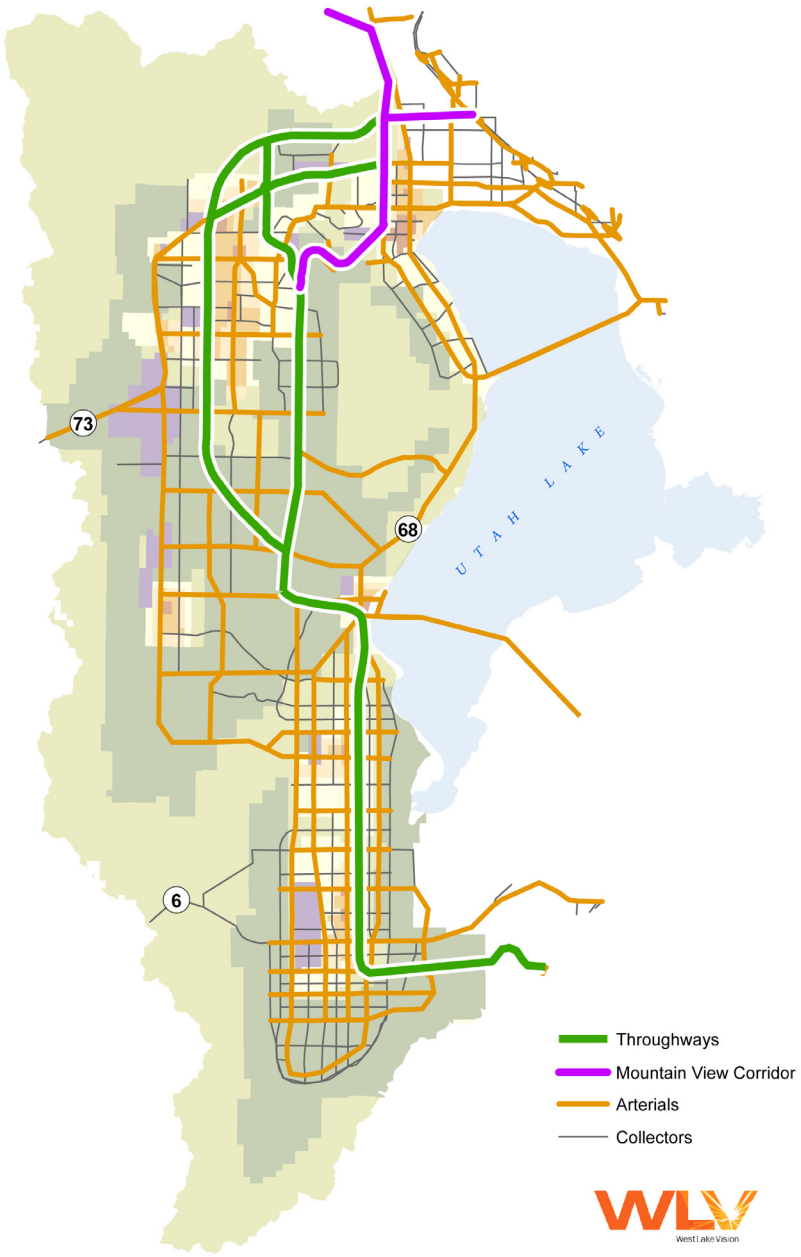
The existing highway network providing regional mobility to the study area includes SR-73, SR-68, and US-6. Presently these roads are two-lane highways in rural areas; near town centers these roads have at-grade intersections and reduced speed limits. As regional population and land use increases, travel demand would require expansion of these facilities in addition to construction of new roadways.

POTENTIAL FACILITIES



In 2007-2008 the Northern Utah County East West Transportation Corridor Study identified numerous potential transportation projects in the West Lake study area. These transportation elements have been included in the West Lake Vision study, with the exception of the tunnel projects at Rose Canyon and Lake Mountain. In addition, Utah County recently approved a Specific Area Plan for Goshen Valley that includes a conceptual freeway element that has also been incorporated into the West Lake Vision study.

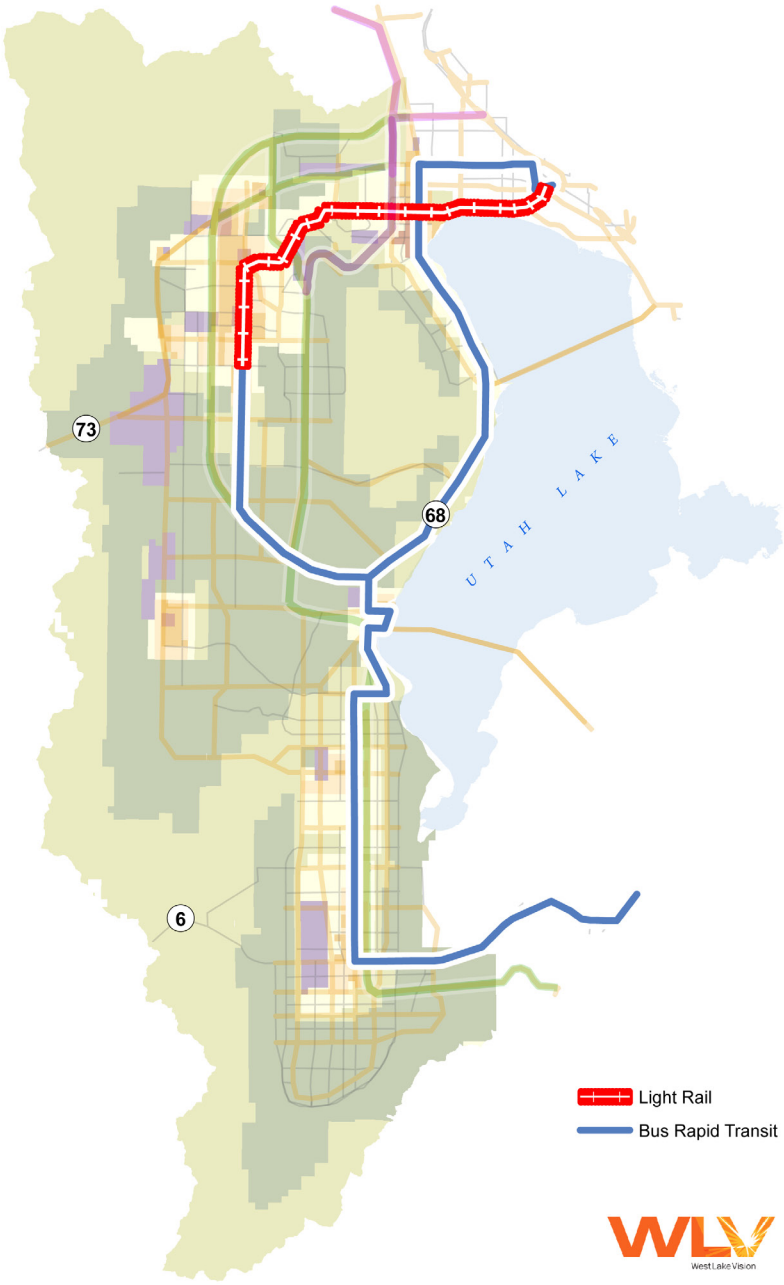
POTENTIAL TRANSPORTATION NETWORK



An expanded SR-73 is assumed to function as a high-speed controlled access arterial with three vehicle travel lanes in each direction between SR-68 and Cedar Fort. Linking with Mountain View Corridor to the north, a new Cedar Valley Freeway will serve western Cedar Valley as a high capacity freeway. A future Eagle Mountain Freeway will complement the Cedar Valley Freeway by providing a high capacity roadway in eastern Cedar Valley. East-west connections are provided by expansion of Pony Express Parkway, Northern and Southern Mountain Passes, and Northern and Southern Utah Lake Crossings. The future Goshen Valley Freeway links with Cedar Valley Freeway, and parallels-SR 68 to Elberta where it turns east and provides a high capacity link to Interstate 15.

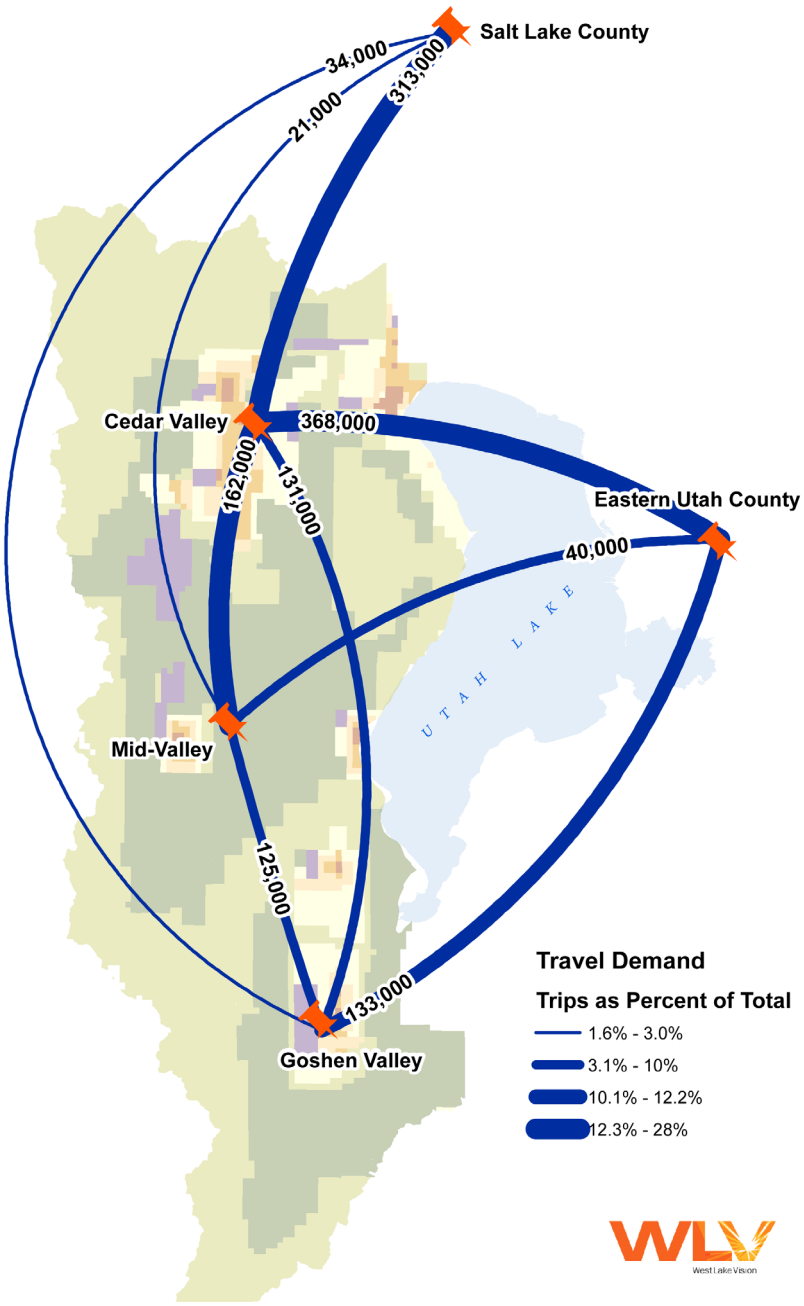
An overall one-quarter mile local street grid is envisioned to connect the entire West Lake area.

POTENTIAL PUBLIC TRANSIT FACILITIES



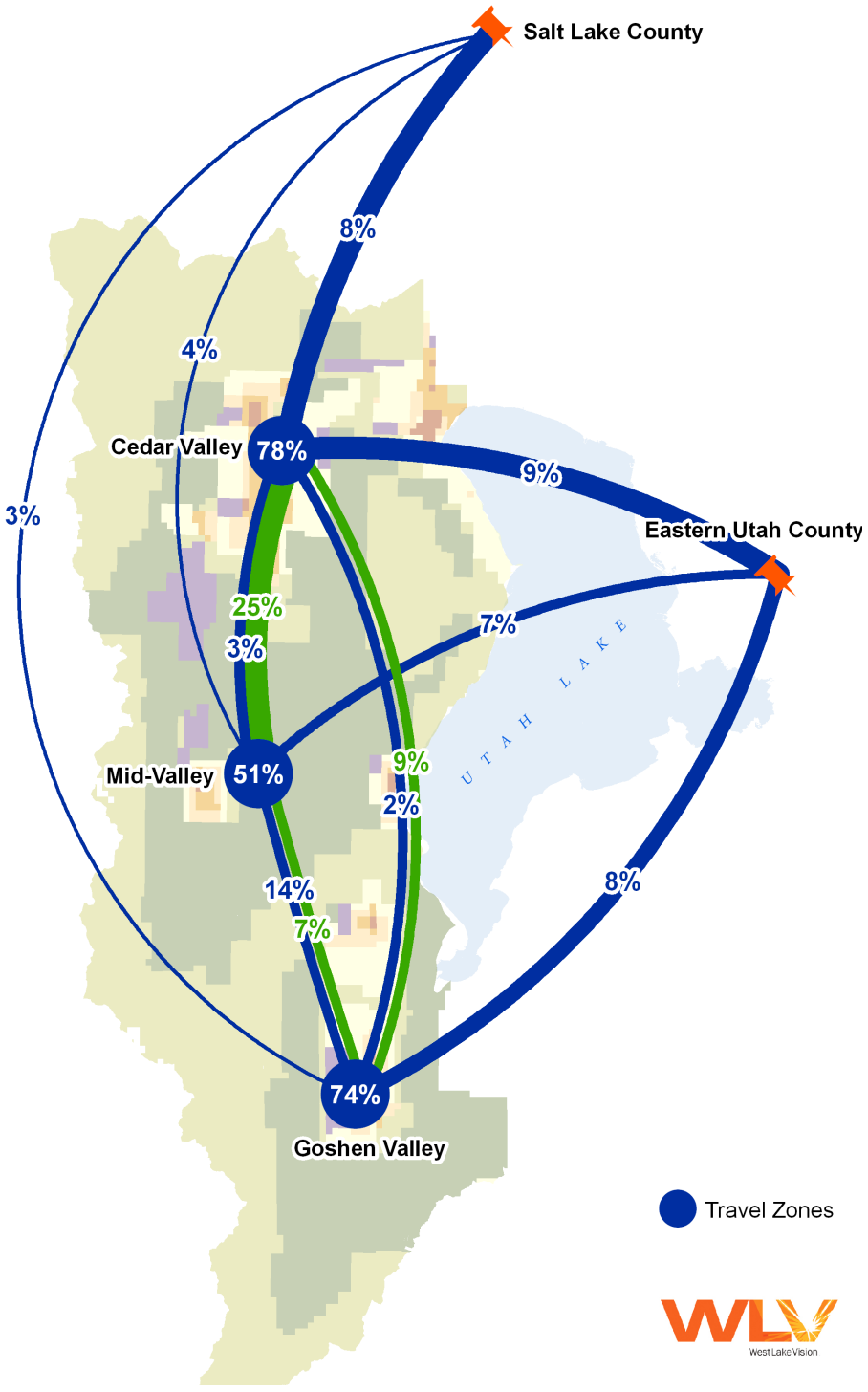
A robust transit system is also envisioned for the West Lake study area. A light rail line from Lehi to the higher intensity urban centers in Eagle Mountain and Saratoga Springs will provide a high capacity transit link into the regional transit network. Additional transit routes will connect city centers and provide intra-regional circulation. Under the land use assumptions in the preferred scenario, the transit system shown accommodates roughly 75,000 daily trips and captures 5% of the region's home-based work trips.

PROJECTED TRAVEL DEMAND



Demand on the transportation network reflects the intensity of land uses and their proximity to other major activity centers. In Cedar Valley, where the majority of growth is expected to occur, there is a strong demand for travel to both eastern Utah County and north to Salt Lake County. East-west connections to Interstate 15 through Lehi City would require capacity improvements to meet the projected travel demand. The proposed four-lane Pony Express Parkway project, projected to carry 30,000 to 60,000 vehicles per day, will provide an alternate to Lehi's SR 73 Main Street and supplement the Mountain View Corridor on 2100 North.

PROJECTED TRAVEL DEMAND BY PLACE



Throughout the visioning process, MAG and the stakeholders understood that the west lake area will eventually transistion from bedroom communities, to be more self sustaining with a better job to household ratio. One measure of this is the map above representing trips generated in each sub region and the percentage of those trips that stay within the sub region. the large dots indicate each sub region and the percentage of trips that stay within that sub region.

COMPONENTS OF WEST LAKE VISION

The four (4) key components to the Vision are:

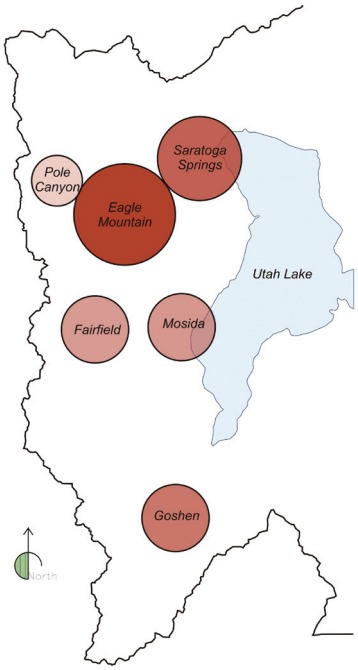
1. Center-focused Development
2. Grid and Mobility
3. Open Space
4. Sustainability

The Vision represents the creation of places that are well connected, functional, economically viable, environmentally friendly and aesthetically pleasing.

The following pages provide detail on how each element has been incorporated into the West Lake Vision.

CENTER-FOCUSED DEVELOPMENT

Historically, cities have developed with distinct centers. These centers have served as the civic, commercial, and political hubs. A city's center became its identity and also a destination for its residents and visitors. The Greek agora, the medieval town square and the American city's "Main Street" are historical examples of centers within cities that people identified with and that become places of social interaction. These centers were close-knit with businesses and residential activity within walkable distances.This oppportunity for social interaction strengthened societies and established community pride and identity.



The suburban patterns of development that emerged in the middle of the 20th century gradually eroded the center and led to the creation of sprawling communities with no identifiable centers.

The absence of centers in today's patterns of development have led to spotted and scattered development that require automobile access.

Daily tasks can only be achieved by driving; which is made worse by curvilinear street patterns that are disconnected and terminate in cul-de-sacs.

The creation of a center-focused pattern of development in the West Lake Vision will be an attempt to restore the importance of the center to communities and to create walkable, dense and vibrant places.

The West Lake Vision identifies major urban centers throughout the Cedar and Goshen Valleys. Development in centers represents concentration of activity and the freeing up of open space for preservation and agricultural purposes within the Valleys. Major centers identified may occur around current developments of Eagle Mountain, Saratoga Springs, Fairfield, Goshen, and Mosida.

Within the major centers addressed above will be a hierarchy of activity centers of varying use intensity. These will include urban centers, town cores, town edges, and village and neighborhood centers.

The creation of a hierarchy of activity centers and the distribution of services and land uses throughout a city ensures that residents have shorter commute times between daily destinations and needs. It also encourages walking and the use of transit, eliminating the use of a personal vehicle.

A mix of land uses ensures that residential and commercial activities complement each other preventing dead commercial and business zones at night.

WEST LAKE VISION PLACE TYPES

The following pages describe the various place types, which are encouraged to make up the development of the West Lake area.

URBAN CENTER

Map Symbol

URBAN CENTER	ACRES	PERCENTAGE
RETAIL	800	40%
OFFICE	600	30%
RESIDENTIAL	300	15%
ROADS AND INSTITUTIONAL	300	15%
TOTAL	2,000	100%

The urban centers are the highest intensity and density places within the West Lake area. These function as the financial, commercial, civic, and social centers of the region, and range in scale from that of downtown Salt Lake City, Ogden, or Provo, to smaller communities such as Murray, Sandy, or Orem. Serving as the primary economic hubs of the region, these activity centers contain a mix of uses ranging from office, governmental, higher education, high density housing, as well as cultural spaces like museums, theaters, and sporting arenas. Maintaining a substantial residential population within the urban center is critical to their long-term success. Ensuring the area is populated in the evenings and on weekends will support a lively, active, and vibrant core.

Map Symbol

TOWN CORE	ACRES	PERCENTAGE
RETAIL	2,000	25%
OFFICE	1,200	15%
RESIDENTIAL	3,600	45%
ROADS AND INSTITUTIONAL	1,200	15%
TOTAL	**8,000**	**100%**

The town core is a transitional space between the urban center and the primarily residential neighborhoods in the town edge and neighborhood development areas. Scaling down in intensity, the town core provides a fairly equal balance between commercial and residential land uses. These areas are able to rely upon the activity occurring in the urban core for support, but the types of commercial uses are more geared towards daily needs and services rather than being major employment hubs. Residential uses range in density and each neighborhood should include a variety of housing types, styles, and price points.

TOWN EDGE

Map Symbol

TOWN EDGE	ACRES	PERCENTAGE
RETAIL	1,000	10%
OFFICE	500	5%
RESIDENTIAL	7,000	70%
ROADS AND INSTITUTIONAL	1,500	15%
TOTAL	**10,000**	**100%**

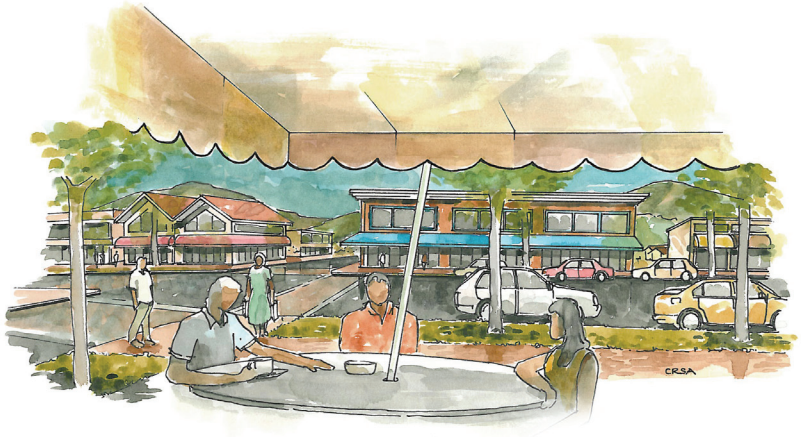
The town edge is a further transition in decreasing intensity and density, the majority of town edges are residential of a single-family nature, but will still contain commercial centers and uses. These commercial centers are located in village centers.

Interspersed throughout town edge areas, and spaced approximately three to four miles from one another, the village center is the employment, civic, cultural, and residential core of the local community. The village center core includes a mixture of unique shopping, dining and office spaces. The village center is also the site for public and quasi-public functions including city halls, police stations, libraries, fire stations, schools and churches. The village center also has a variety of mixed uses located within the same structure.

Map Symbol

NEIGHBORHOOD DEVT.	ACRES	PERCENTAGE
RETAIL	300	1%
OFFICE	300	1%
RESIDENTIAL	24,900	83%
ROADS AND INSTITUTIONAL	4,500	15%
TOTAL	**30,000**	**100%**

The neighborhood areas of the West Lake Vision are primarily residential areas, and represent a further transition in decreasing intensity and density from the town edge. The character of residential housing surrounding and within the core of a neighborhood center is that of a close-knit, mixed-density community. Residents identify themselves with a particular neighborhood, and have close access to the community services located within the core.



With spacing reflecting church and elementary school capture areas, approximately a 1.5 mile radius, neighborhood centers bring daily destinations and services within walking distance of most residents. Neighborhood centers are typically focused on a community space, such as a school or community center, parks, churches, and higher density housing, and neighborhood-scaled commercial space, but the mix varies by neighborhood. Neighborhood centers should be supported by a hierarchy of street types and pedestrian pathways to promote safe, walkable, neighborhoods.

INDUSTRY CENTER

Map Symbol

INDUSTRY CENTER	ACRES	PERCENTAGE
INDUSTRIAL	11,650	100%
RESIDENTIAL	0	0%
TOTAL	**11,650**	**100%**

Specific areas within the West Lake Vision are set aside as major industrial and light industrial centers. These are envisioned as locations for light and moderate manufacturing, large corporate offices, call centers, and in some cases heavier industrial uses. These industrial areas are envisioned to be functional and attractive. Landscaping, lighting and attractive signage will create pleasant environments for both employees and visitors. Convenient accesses to greenways and trails will also foster a healthy working environment and alternative commuting options.

WLV

INTER-CONNECTED MOBILITY NETWORK

The West Lake Vision intends to make streets of all types efficient conduits for vehicular and non-vehicular movement. At the same time streets will also act as a social space for daily activity.

A complete street is one that enables all users to move safely along and across it. It is designed to safely accommodate pedestrians, motorists, bicyclists, and transit riders of all ages and abilities. A complete street also works as a social space for community interaction, activity and identity.

Street systems and right of ways have been a city's spine or structure that supports all other forms of development. Streets laid out since antiquity in major cities around the world largely exist to date, even though land uses and buildings along them have changed over time. The layout, connectivity, size and character of streets thus becomes a very important and almost foremost component of city design. The advent of the automobile also changed the meaning of the street for many people. Streets became the domain of cars and was for quick movement of people and goods in cars.

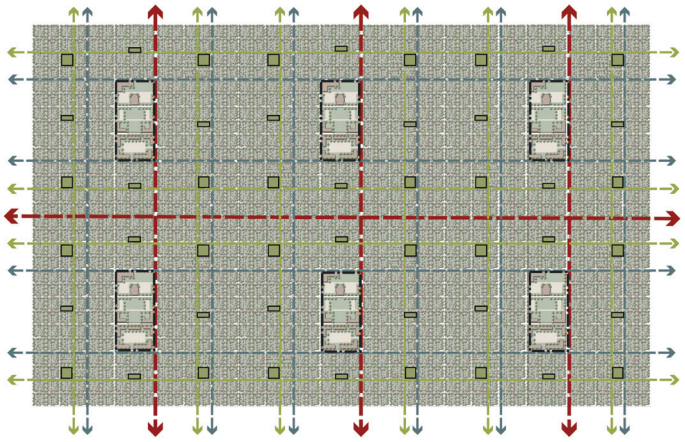
History however, tells us that streets were created for pedestrian traffic and for the movement of slow moving traffic like horse drawn carts and carriages. This made streets lively places that became natural extensions of indoor activity. Commercial activity and storefronts merged seamlessly with the street offering opportunities for public discourse and engagement.

The West Lake Vision restores some of the fundamental functions of the street. Efficient use of the street right of way will ensure that needs of pedestrians as well as that of motorists are addressed and met. This will make streets sustainable, walkable and lively.

GRID DEVELOPMENT

Use of grids in planning cities has been a common practice since medieval times and earlier in some cases. In the United States, the grid system was widely used in most major cities and their suburbs until the 1950s. However, during the 1950s, the rapid adoption of the automobile caused a panic among urban planners, who claimed that speeding cars would result in too many pedestrian deaths. They called for an inwardly focused "superblock" arrangement that minimized through automobile traffic and discouraged it from traveling on anything but arterial roads; traffic generators, such as apartment complexes and shops, would be restricted to the edges of the superblock, along the arterial.

In the 1960s, traffic engineers and urban planners abandoned the grid virtually wholesale in favor of curvilinear streets designed to slow and discourage vehicular traffic. This is a thoroughly "asymmetric" street arrangement in which a residential subdivision, often surrounded by a noise wall or a security gate, is completely separated from the road network except for one or two connections to arterial roads. Virtually all traffic is funneled onto a few main roadways. This practice has resulted in many problems including: increased traffic congestion on arterial roadways, separation and isolation of neighborhoods and commercial centers, loss of "community", impacts to human health, slower emergency response times, and higher expenditure of public resources to maintain roadways and infrastructure, and many more.



Grid Pattern of Development

Traditional Development vs. Sprawl

Benefits of a gridded street network include:

• Increased ease of navigation as addressing can be easily tied to the grid.

• Faster emergency response times.

•Promotes options for multiple modes of transportation including transit, walking, and driving.

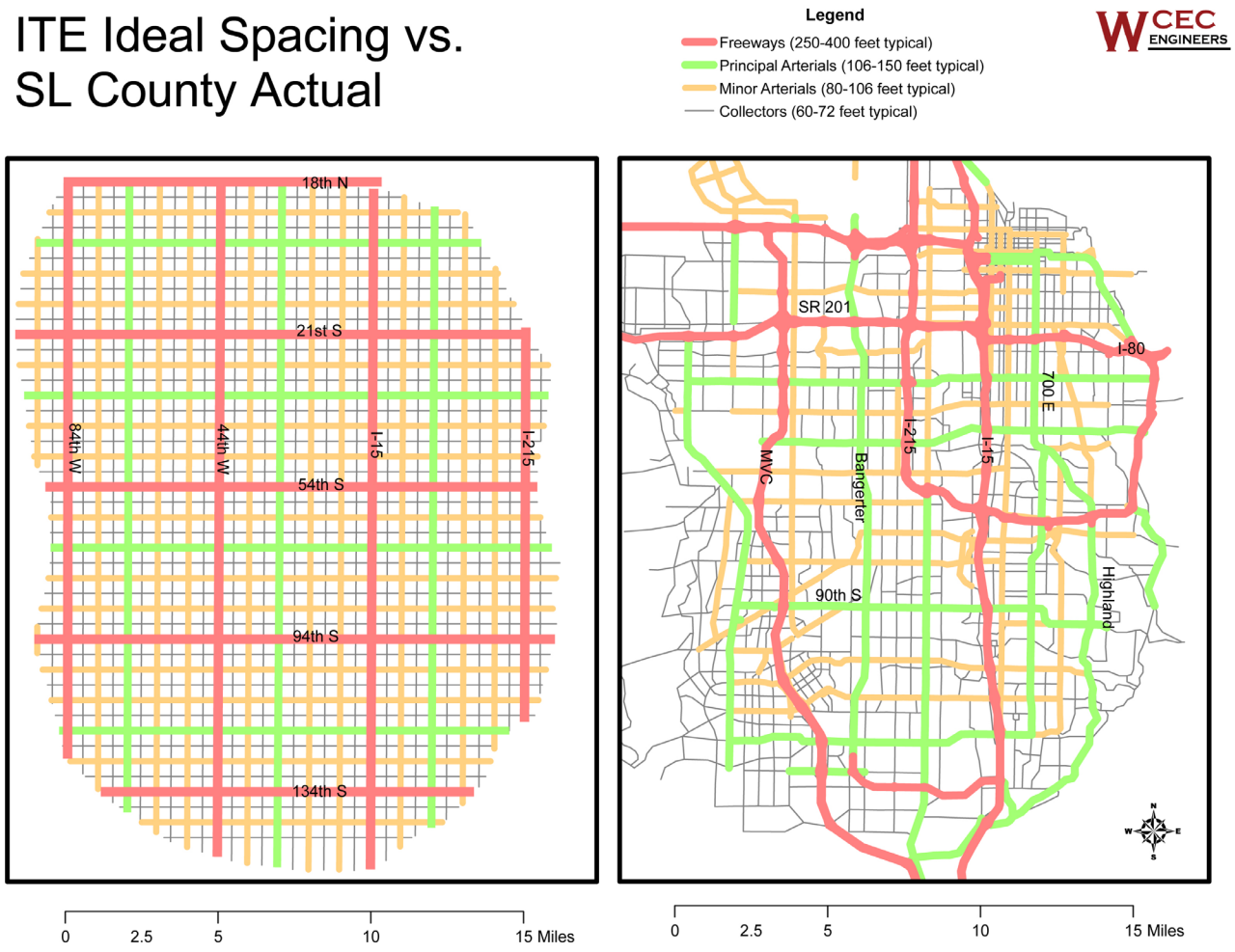
• More intersections mean shorter walking distances to commercial districts and transit for pedestrians.

• Minimizes and reduces the potential for traffic congestion by dispersing traffic onto multiple roadways for daily travel.

• Promotes efficient use of infrastructure systems.

• Lower traffic fatality rates than in outlying suburban areas.

ITE Ideal Spacing vs. SL County Actual



ITE Diagram for Ideal Spacing in Salt Lake County

STREET CLASSIFICATION

In the 1990s, the Institute of Transportation Engineers (ITE) published the first edition of the Transportation Planning Handbook. It held that most auto-oriented suburban environments could generally handle their traffic loads without significant congestion if developed with five-lane arterials spaced every mile, and two and three-lane collector streets between arterials at the half mile mark.

The street network in the West Lake Vision is generally developed with this concept in mind creating an efficient grid system for efficient traffic management.

COMPLETE STREETS

The Complete Streets movement is a relatively new approach to modern transportation planning.

Complete Streets advocates push for changing policies and practices of transportation planning agencies to provide mobility to all members of society, not merely those able financially and physically to own and operate an automobile.

Developing complete streets on important corridors ensures that the entire right of way is designed and operated to enable safe access for all users.

For a number of reasons decision makers must consider creating complete streets when issues along corridors are evaluated.

Complete Streets are successful in well preserved right of ways. Street right of ways should be preserved and be designed to complement different land uses along it. Right of ways should also be flexible enough to accommodate more of a specific mode of transportation as needed.

Thus a street can become more pedestrian oriented or auto oriented within the same right of way as demanded by adjacent land uses. This makes the street context-sensitive. Context-sensitive street design enables any street, regardless of classification, to vary in section, features, and size, in relation to its urban context.

For example, a connector street may have a different sidewalk dimension, street tree treatment, pedestrian crossing, and lane width as it moves from a neighborhood into a center. Elements that can vary include: design speed; sidewalk size; landscaping form and size; on-street parking; bike lanes; traffic calming treatments; transit facilities; pedestrian crossing treatments; and types of street furniture.

WEST LAKE VISION ROADWAY TYPES

The following pages describe the various roadway types that make up the transportation network of the West Lake Vision:

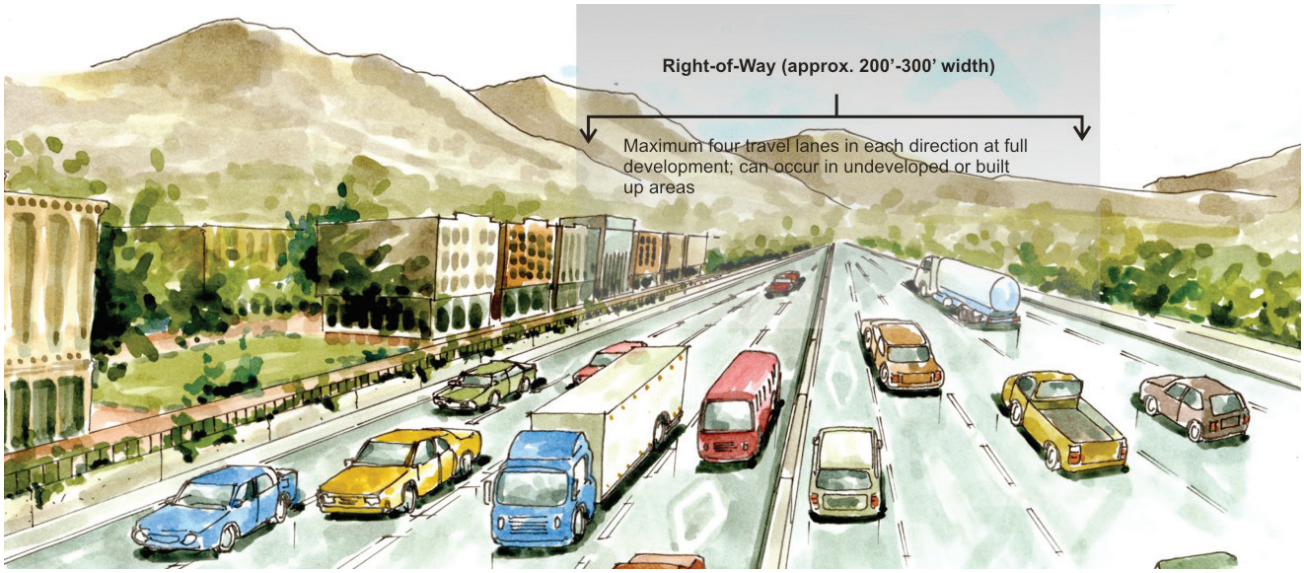
- Throughways
- Principal Arterial
- Minor Arterial
- Collector
- Local

THROUGHWAY

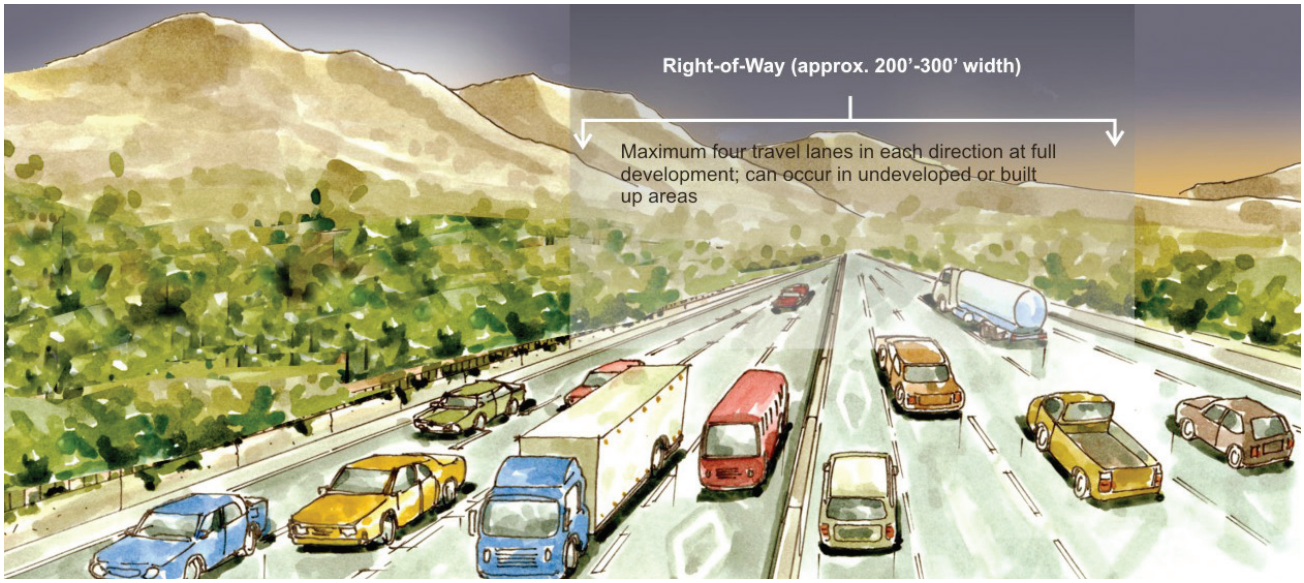
Map Symbol

FREEWAY	
RIGHT OF WAY	~300’
NUMBER OF LANES	4 - 8

HIGHWAY	
RIGHT OF WAY	~200’
NUMBER OF LANES	2 - 6



Urban Freeway with Buffer



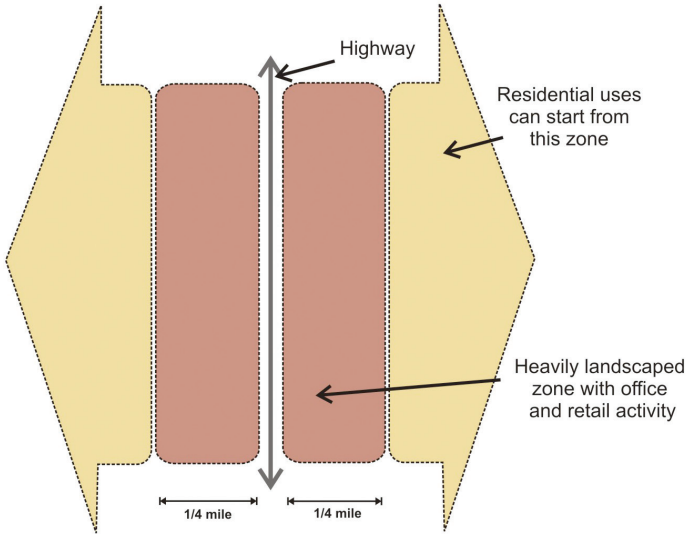
Rural Highway

Throughways provide inter-regional and inter-state mobility by serving longer distance trips at high speeds. These facilities connect key activity centers such as city centers, regional centers, and industrial areas. Additionally, throughways are usually primary freight routes.

In urban areas throughways are referred to as freeways and are characterized by grade-separated interchanges and center medians that separate opposing traffic and restrict turn movements. Freeways generally have four to eight vehicle travel lanes and operate at high travel speeds. There are no bicycle or pedestrian facilities on freeways. Access points are limited to interchange locations that provide acceleration and deceleration lanes.

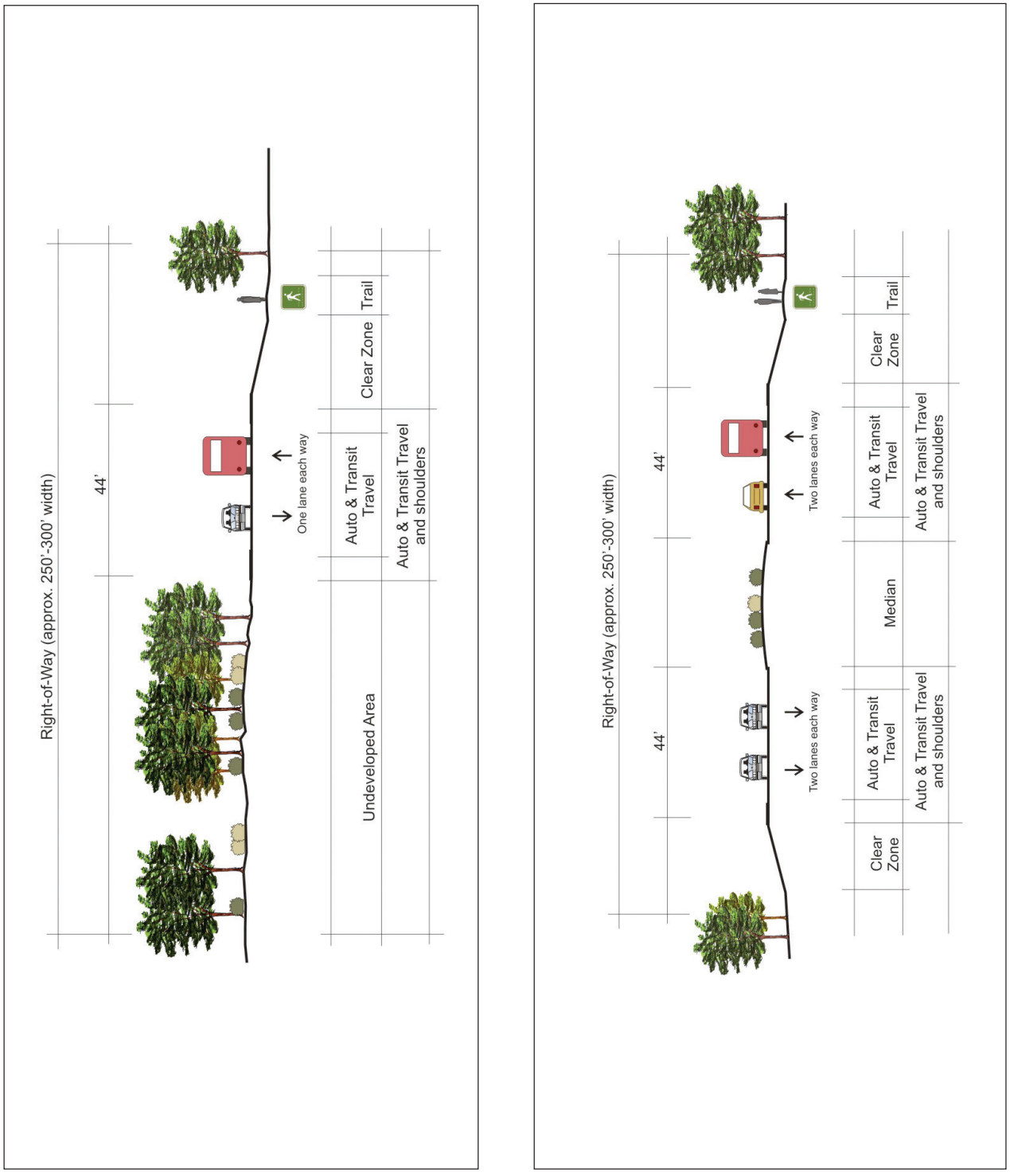
Common in less urbanized areas, highways provide a similar function as a freeway but can have at-grade intersections and less access restriction. Highways have two to six vehicle travel lanes with high design speeds. Highway corridors can provide bicycle and pedestrian facilities with proper landscape buffering.

As shown on the following page, rural highway expansion can be done in phases as vehicle volumes increase over time due to changes in demand. Preserving the full width of transportation corridors limits the need to expand right of way though expensive property acquisitions at a later time.

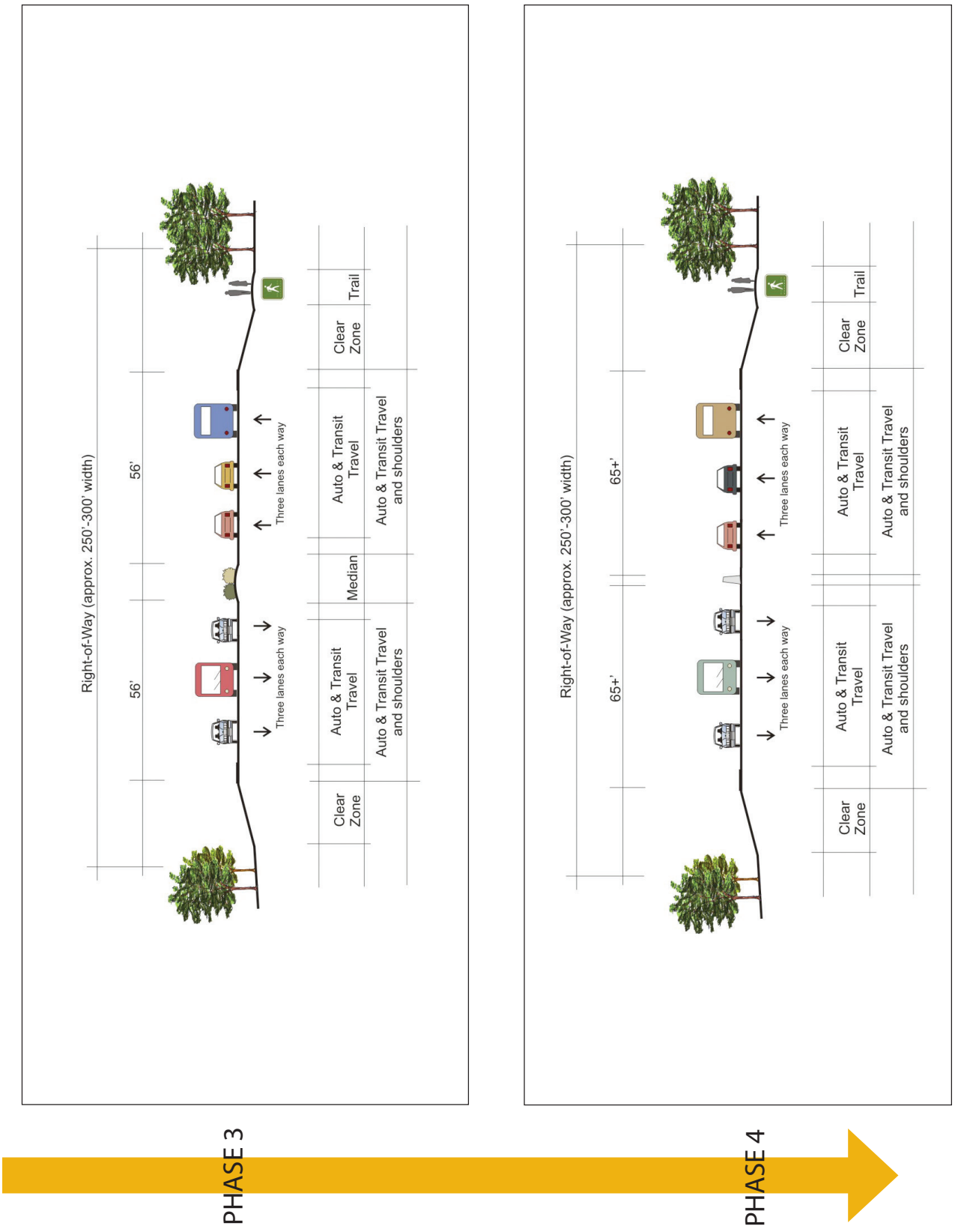


Highway Buffer Considerations

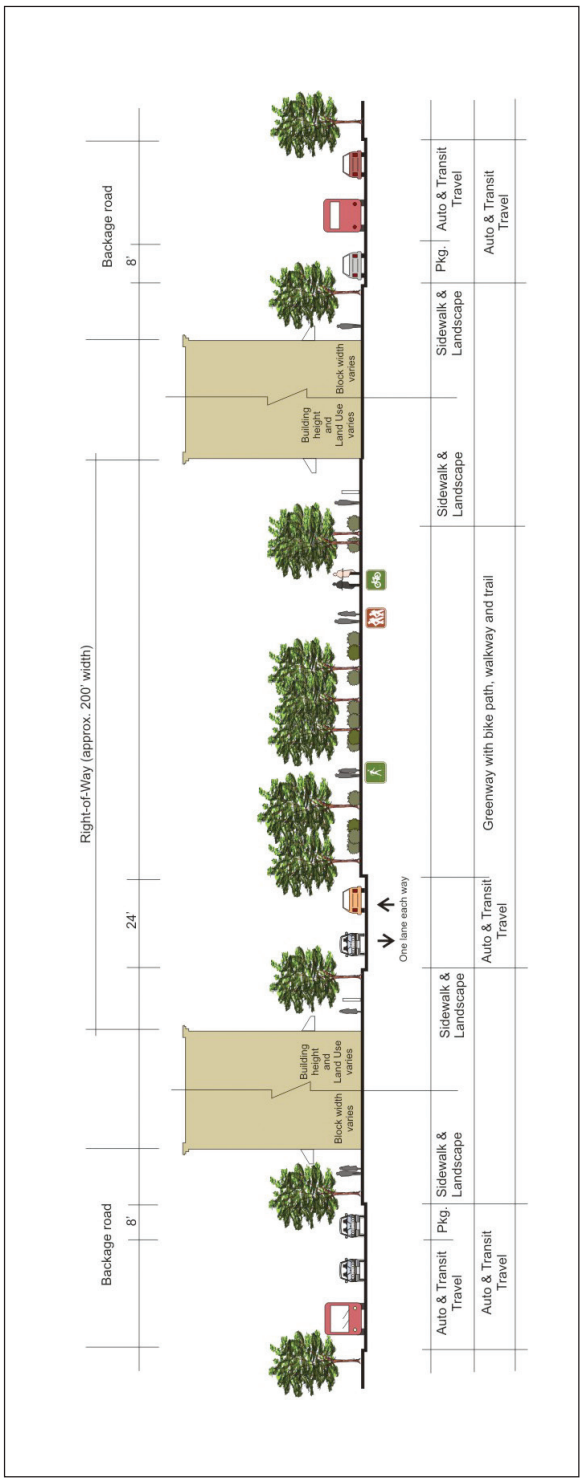
Rural Highway Phase Development



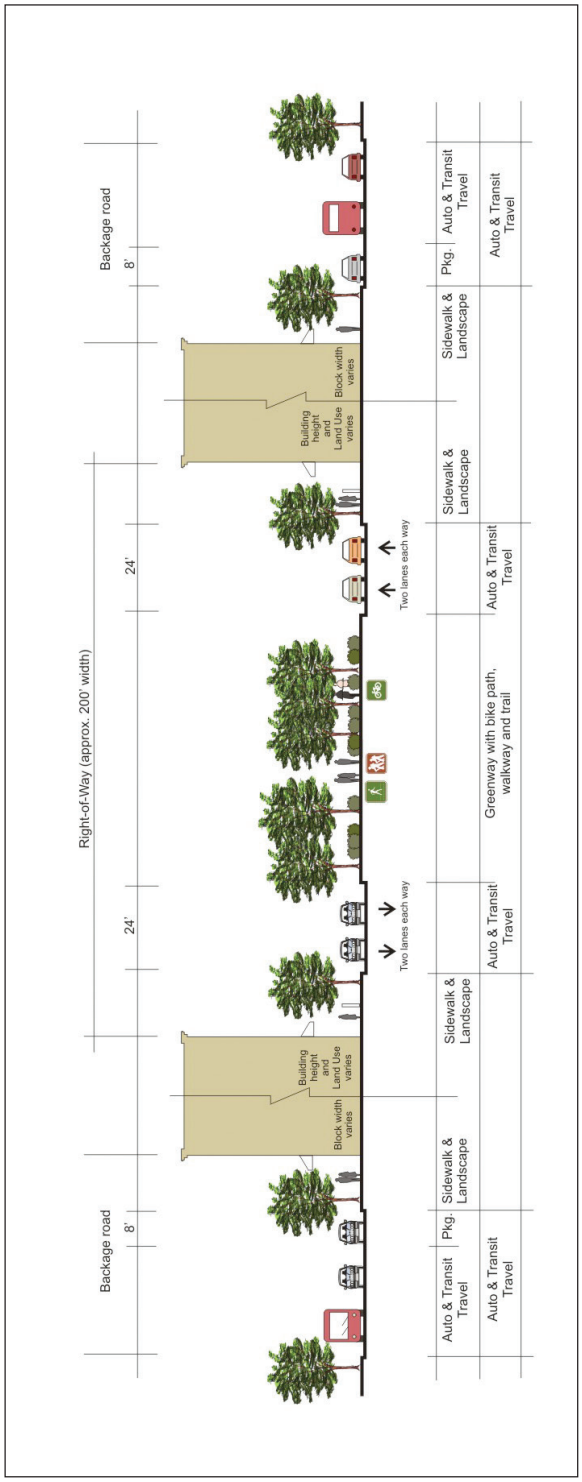
Rural Highway Phase Development



Urban Highway Phase Development

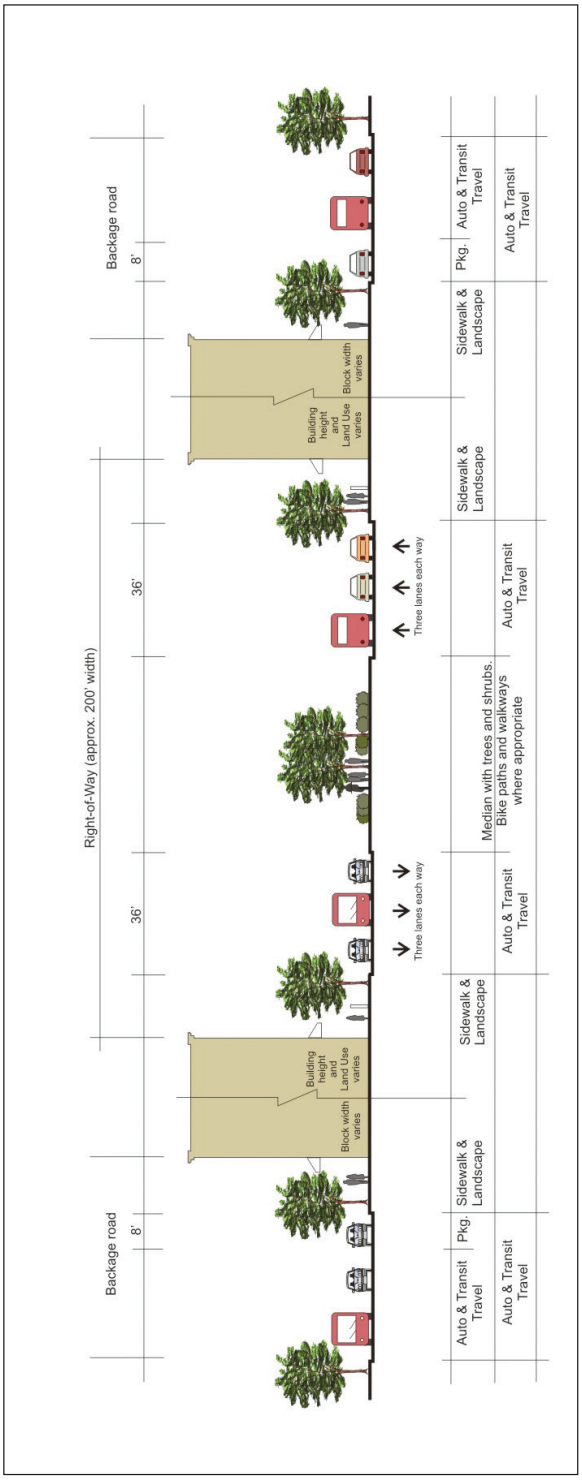


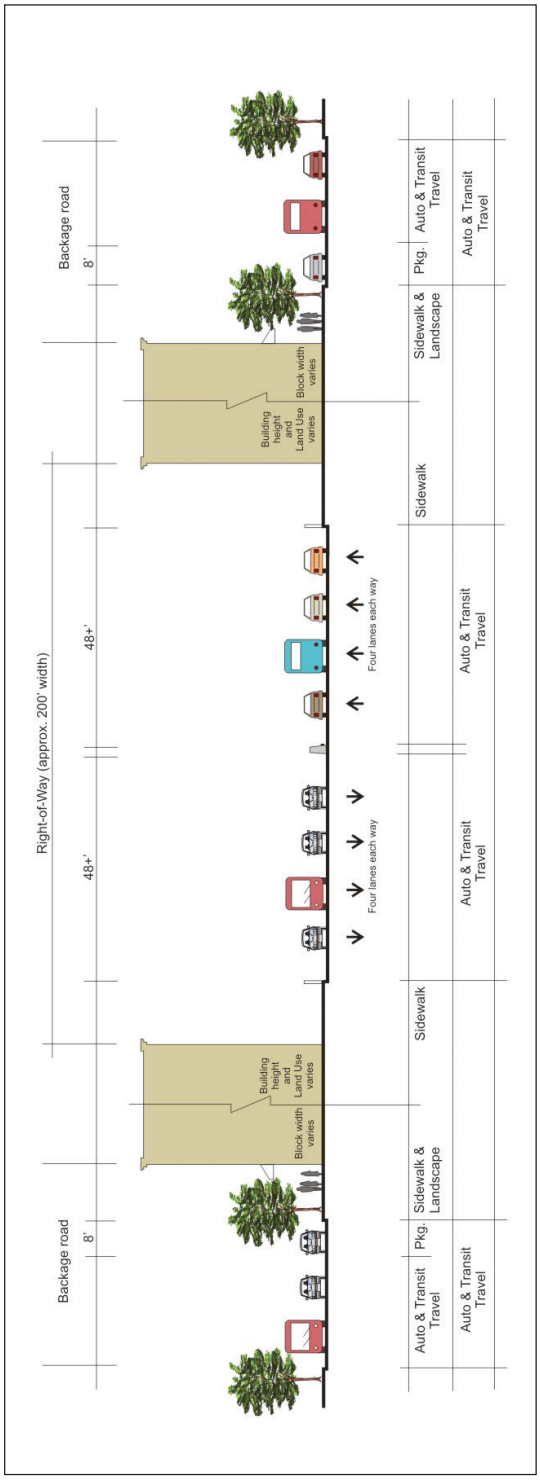
PHASE 1



PHASE 2

Urban Highway Phase Development





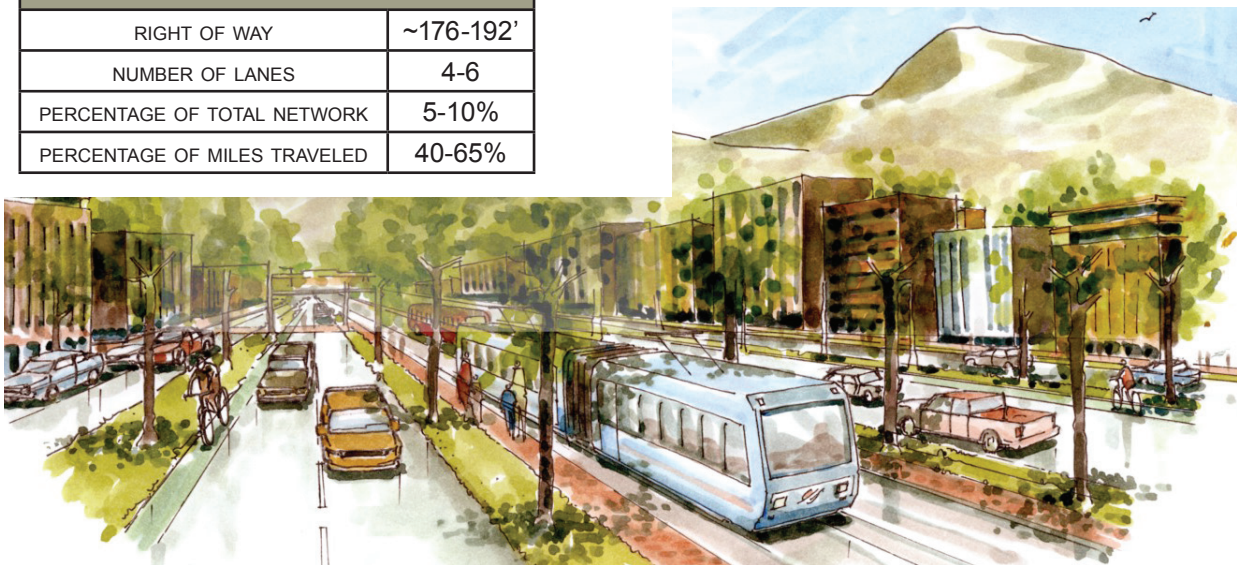
PHASE 3

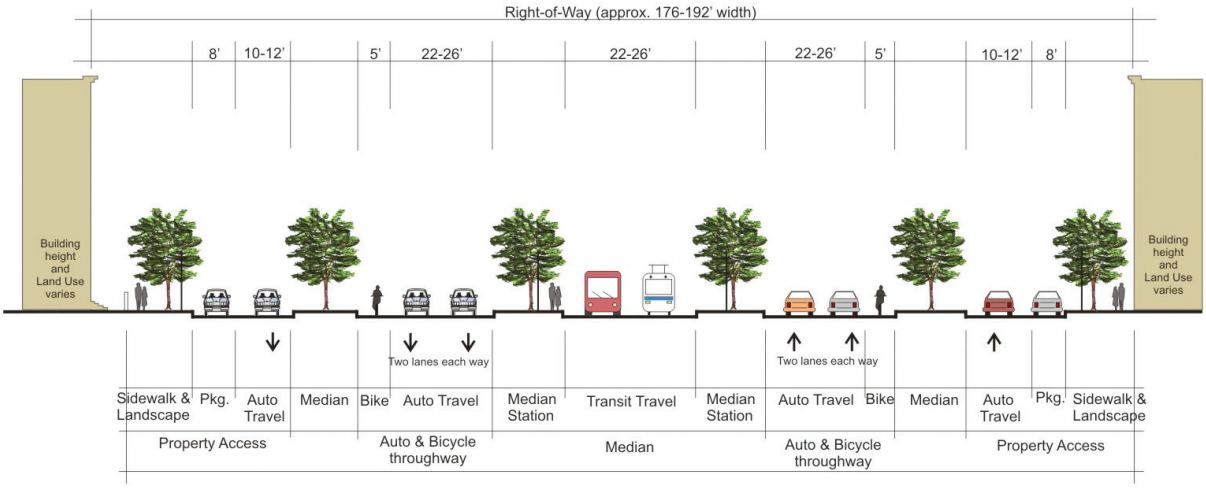
PHASE 4

PRINCIPAL ARTERIAL

Map Symbol

PRINCIPAL ARTERIAL	
RIGHT OF WAY	~176-192’
NUMBER OF LANES	4-6
PERCENTAGE OF TOTAL NETWORK	5-10%
PERCENTAGE OF MILES TRAVELED	40-65%





In urban areas the principal arterial system serves major activity centers, provides access to the freeway and highway systems, and carries a high proportion of overall travel despite constituting a relatively small proportion of total roadway network.

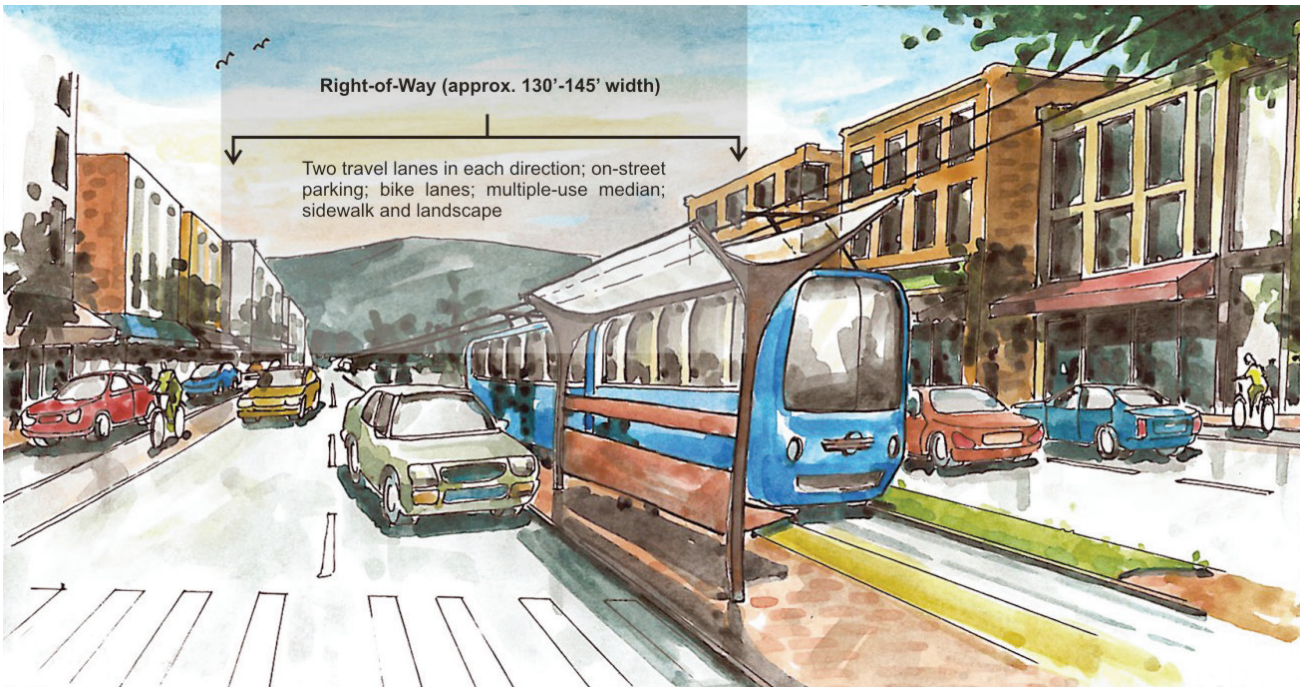
Principal arterials carry longer distance trips entering and leaving urban areas, through movements bypassing city centers, and provide continuity for rural arterials that intersect the urban boundary. Some degree of access control is desirable since access to adjacent property is not the primary purpose of principal arterials.

The cross-section illustrated in the diagram above presents a boulevard concept appropriate for high-intensity urban areas. The central roadway areas are designed to accommodate through traffic and transit. The outer edges provide access streets that are more conducive to local-scale activities.

MINOR ARTERIAL

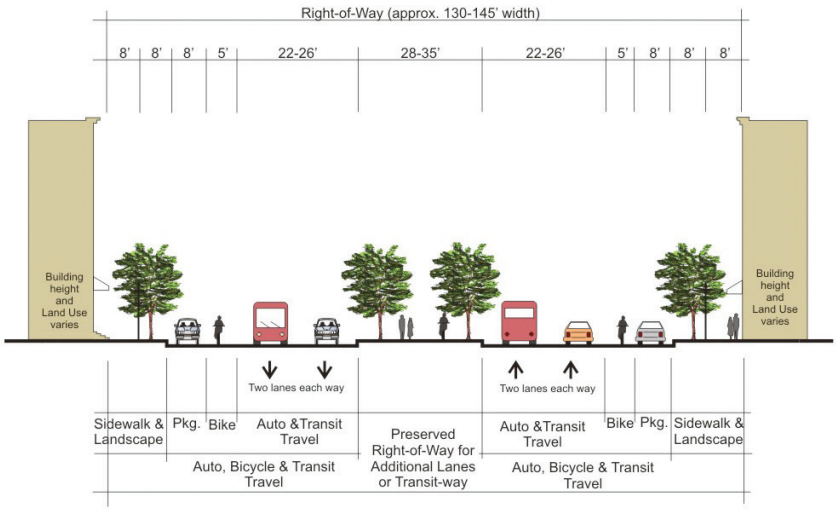
Map Symbol

MINOR ARTERIAL	
RIGHT OF WAY	~130-145’
NUMBER OF LANES	2-4
PERCENTAGE OF TOTAL NETWORK	15-25%
PERCENTAGE OF MILES TRAVELED	65-85%

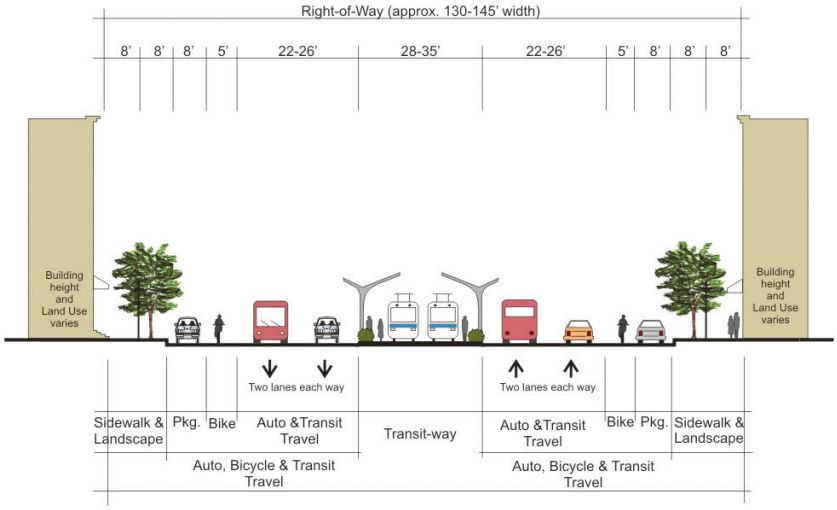


Minor arterials complement the principal arterial system by supporting medium length trips. With greater of balance land access and traffic mobility, minor arterials connect town centers, main streets, and neighborhoods. Three possible cross-sections are provided on the following page. Other options exist.

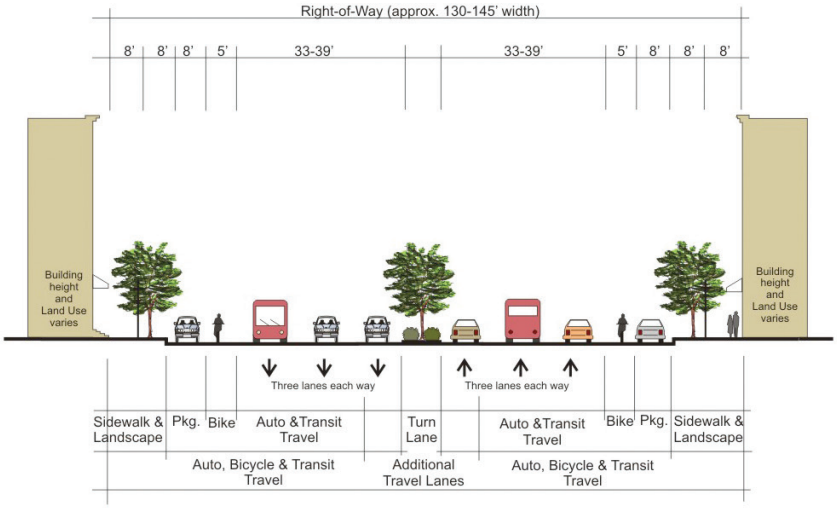
OPTION 1



OPTION 2



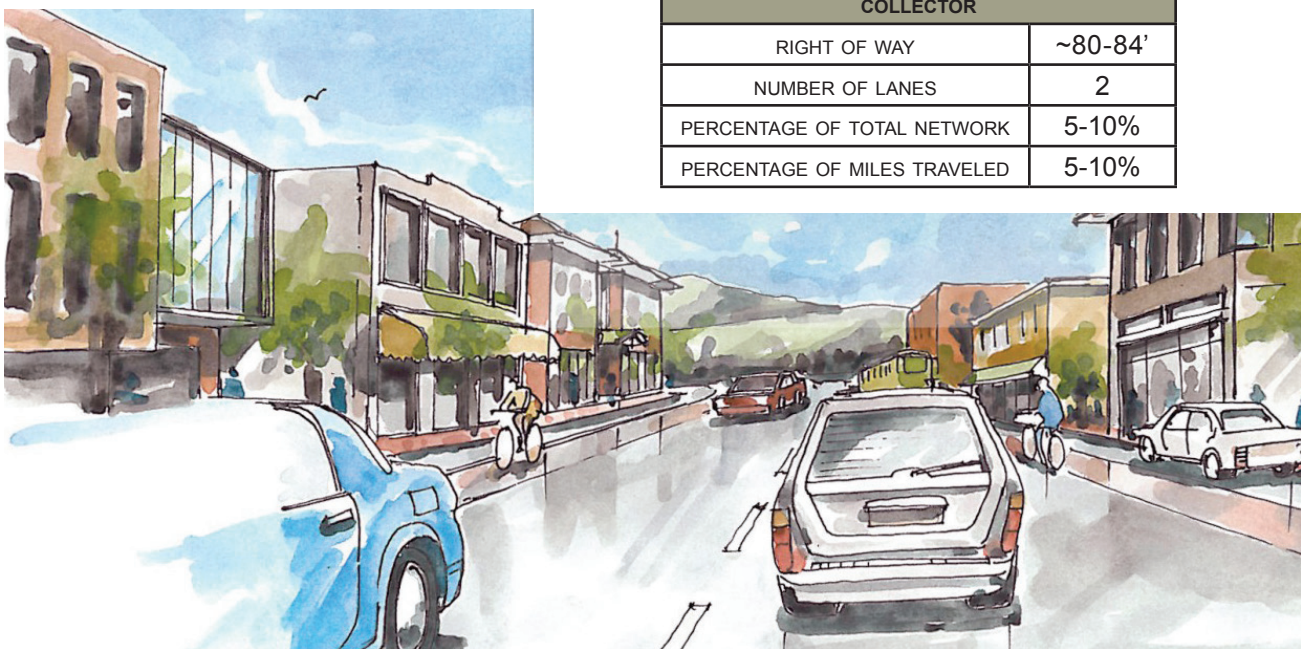
OPTION 3

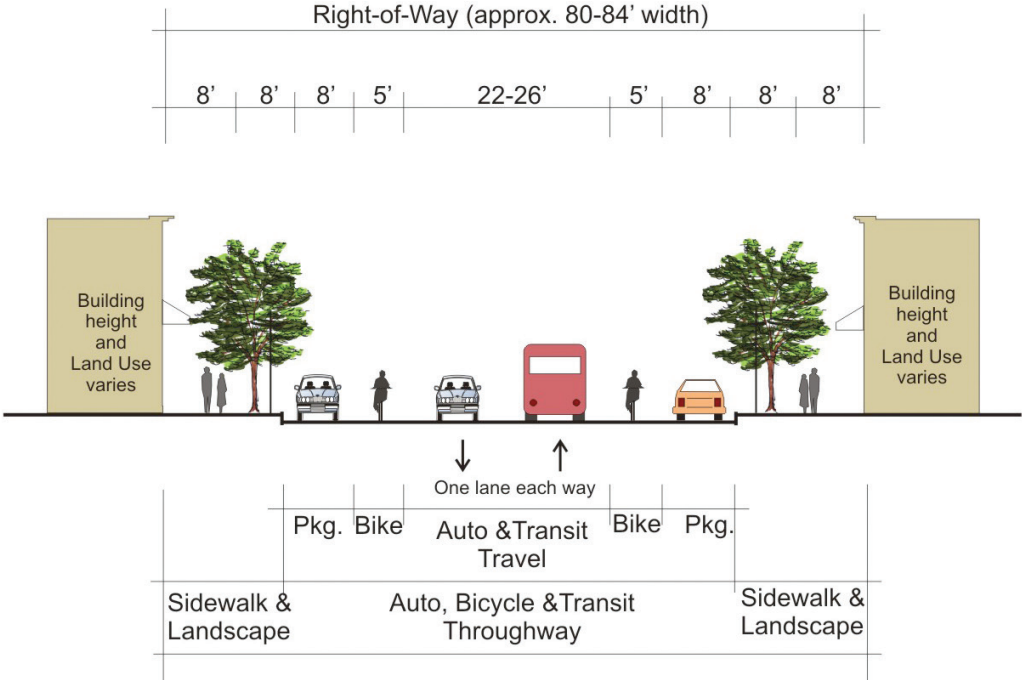


COLLECTOR

Map Symbol

COLLECTOR	
RIGHT OF WAY	~80-84’
NUMBER OF LANES	2
PERCENTAGE OF TOTAL NETWORK	5-10%
PERCENTAGE OF MILES TRAVELED	5-10%

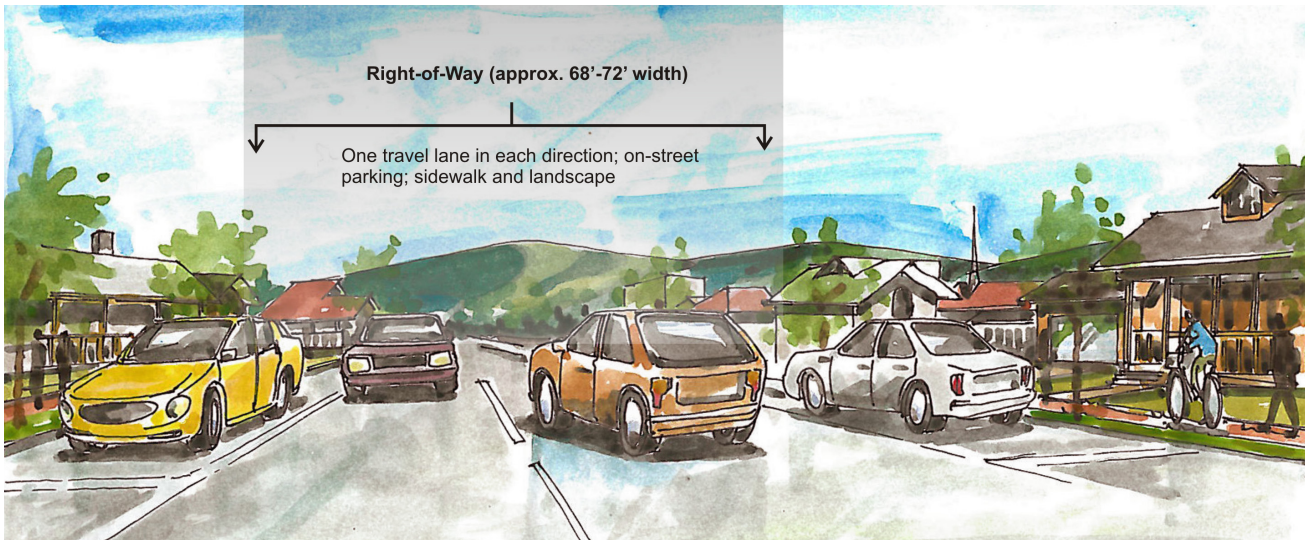




Collectors operate at the community level, providing access and circulation in residential neighborhoods and commercial/industrial areas. Collectors also provide links between local neighborhood streets and the arterial network system. With lower traffic volumes and reduced travel speeds, collector networks should offer balanced multi-modal facilities that include transit, bike lanes, and sidewalks.

Map Symbol

RESIDENTIAL AND LOCAL STREETS	
RIGHT OF WAY	~68-72’
NUMBER OF LANES	2
PERCENTAGE OF TOTAL NETWORK	65-80%
PERCENTAGE OF MILES TRAVELED	30%



Local streets provide direct access to homes and circulation within residential neighborhoods. Since local streets are intended to provide access rather than mobility, low traffic volumes and travel speeds are desirable. Emerging concepts in neighborhood street design encourage design elements such as narrow pavement width (24 to 32 feet) short blocks, grid patterns instead of cul-de-sacs, landscape stripes, and sidewalks. The local street network should comprise 65 to 80 percent of the total road network and carry ten to 30 percent of the total vehicles miles traveled.

OPEN SPACE

Open space preservation is critical for sustainable development of towns and cities. Open space preservation creates opportunities for cities to co-exist with natural ecological environments. Preservation of open space also ensures that agricultural lands, wetlands and sensitive lands are protected. Proximity of natural open space to developed areas also creates oppportunities for city dwellers to enjoy the natural environment. Open space preservation also offers opportunities for multiple outdoor recreation activities.

The West Lake area is endowed with several acres of agricultural and undeveloped land and offers a great template for open space development in conjunction with built up cities, towns and centers.

Current planning trends are very much concerned with infill and brownfield development aimed at preserving green fields and natural open space. Since the West lake area is relatively under developed, it will be essential to develop in and around existing cities and towns to minimize encroachment on productive farmlands, greenfields, wetlands and natural open space. To this end, major centers in the Vision are developed around the cities of Eagle Mountain, Saratoga Springs and Goshen.

Preservation of open space will create opportunites for residents and visitors to enjoy the natural environment while sustaining the natural habitat of wildlife.

TYPES OF OPEN SPACE

Agricultural Land

Several agricultural lands currently existing in the West Lake area will be preserved in the Vision plan. Agricultural land is a significant part of open space and it should be protected from development encroachment.

Urban Food Production

It is intended that the cities in the West lake Area will take advantage of surrounding agricultural lands to promote urban food production. Open space will also be dedicated in the built up areas to agricultural production. These will lead to community generated food to supplement outside sources. The food production process will also lead to social interaction and general community well-being.

Community Gardening

Utah Lake

Water Bodies, Wetlands and Sensitive Areas

The Utah Lake, its shoreline and wetlands in the area should be protected from encroachment. Buffer zones should be created to keep development and transportation systems at a distance from these sensitive areas

It should be noted that the relative lack of water in the area may affect urban food production necessitating the use of irrigation and water retention systems.

Foothills and Ridgelines

The foothills and ridgelines on all sides of the Cedar and Goshen valleys will also be preserved as open space. Viewsheds to unique natural features should also be preserved in the planning of the area. These will include mountain peaks, water bodies and wetlands. Wildlife habitats should be protected and plans should identify these areas for open space preservation.

SUSTAINABILITY

Sustainability is generally thought of as a three-legged stool of environmental, social, and economic sustainability, where the stability of the whole is dependant on all three being present. Natural systems such as watersheds, soils, landforms, wind, air masses etc. traverse political boundaries and affect regions larger than the boundaries of any one jurisdiction. A coalition between cities and regions is essential. A coalition based on bio-regions would focus on natural systems rather than political boundaries for building effective and sustainable policies.

ENVIRONMENTAL SUSTAINABILITY

Density

Strategically increasing density in key population centers can increase walkability and reduce the environmental impacts of vehicular travel. Higher population densities can lead to the increased use of mass transit systems and boost the local economy with better access to local retail stores. Increasing population density also allows more transportation options to schools and other services closer to residential areas.

Focusing growth within higher-density areas permits the preservation of farmland, riparian and natural habitat areas, in addition to other key uses on the edges of the community. Dense development and multifamily residences can be significantly more energy efficient than single-family homes as they share walls and often support more efficient building-scale heating systems.

Also, through the use of green roofs, courtyards, and other exterior elements, well-designed density can provide strategic opportunities for outdoor space and urban locations to grow food. In addition, many of the "green" system technologies such as district heating systems are highly dependent on higher densities and can not be used for single family homes.

Food Systems

A sustainable community includes food stores and restaurants, along with the provision of community garden space in neighborhoods. Some studies have suggested that as much fuel is used in a year to get a family's food to the table as is used by that family for all their other activities put together. Furthermore, the visibility and celebration of food in a neighborhood is an excellent source of social and cultural vitality—an important aspect of sustainability that should not be overlooked.

Dense developments support local food stores and restaurants, community gardens, and other creative food-producing ventures, thereby offering residents convenient access to basic provisions.

Heat Islands

It will be important to minimize the "heat island" effect common to urban areas through tools such as light-colored paving and roofing to reflect solar radiation, and trees and landscaping in parking lots to provide shade and improve air quality. Lowering ambient air temperatures will reduce the amount of energy needed to cool structures, both public and private.

Infrastructure

Encourage compact development and infrastructure systems in the West Lake Area. In addition to providing low impact and on-site means of providing necessary infrastructure and creating jobs within the community, these systems reduce fossil fuel usage and minimize impacts to air quality.

Open Space

The preservation or creation of open space within a community has implications for the quality of life for its residents, the health of local and regional ecosystems, as well as the economy of the area. Open space in a sustainable community should accommodate both community and ecological needs, including protecting key environmental areas or functions, enhancing habitat through urban landscape design, offering significant recreation opportunities for people of all ages, and providing places to grow food in the city.

Site Grading

Design developments to respect the existing topography and historic drainages, and conserve existing mature trees and significant vegetation.

Transportation

The transportation systems in a community can have far reaching impacts on the natural environment it occupies. Transportation systems should make efficient use of land, as well as other natural resources, while ensuring the preservation of habitat and maintaining biodiversity. Transportation plans must reduce the need for travel while protecting social and economic needs for access by changing urban form and promoting new communications technologies.

Communities can improve the environmental sustainability of transportation systems by minimizing transportation-related air emissions as

well as discharges of contaminants to surface and ground water. Toxic emissions from transportation systems threaten public health, global climate, biological diversity, and the integrity of essential ecological processes. Communities should seek to reduce the amount of pollution generated throughout the lifecycle of transportation vehicles, vessels, and infrastructure, and should also seek to follow land use patterns that reduce the need for travel to meet daily needs.

Walkability

Diverse transportation options such as better walkability and bicycle infrastructure can give community members more choices in their travel mode, which can minimize introduction of waste and contaminants into natural areas. Improving walkability in a community can be especially effective in reducing demand for transportation infrastructure, as well as reducing a region's air pollution from vehicle emissions. A neighborhood that gives priority to pedestrians and allows residents a place to work, live, play, shop, and learn within walking distance can significantly reduce the overall impacts of travel on the area's natural systems.

Waste Management

A comprehensive "Green" infrastructure waste management strategy should be created for every sustainable community to address the reduction, re-use, recycling and disposal of wastewater, storm water, as well as solid and toxic wastes. Minimizing the quantity of waste produced is the first and most effective tier in the waste management hierarchy. Reducing waste saves not only on disposal costs but also reduces the use and cost of raw materials. The adoption of wide ranging education on waste minimization and awareness of how waste disposal impacts the environment is crucial to the reduction of waste.

Water efficiency

The West Lake Area faces a potential water problem. It will therefore be important to encourage conservation strategies for potable water in common or public landscaped areas through techniques such as water-wise or native plants, minimal turf areas, high efficiency irrigation technology, or the use of rainwater harvesting and water recycling.

SOCIAL SUSTAINABILITY

The principles of social sustainability clarify the role of the individual and the organization in society. These principles are also directed towards the goal of a stable present society, as future generations also profit from the preservation of social order.

Culture & Education

Cultural and educational aspects play a significant role in sustainability. Culture embodies the basic principles of society and its way of living. Education helps individuals to strengthen their intellectual and social capabilities; in this manner, it enables people to solve problems, behave autonomously, and secure their existence. In the end, education has proven to be the foremost prerequisite for social and political engagement. Sustainability of community life and planning processes will depend on the public's understanding of the political, economic, environmental, and socio-cultural landscape.

Early Childhood and Adolescent Development

Solid education in the early years is the prerequisite for later fulfillment of one's needs, social engagement, and sustainable behavior. Society bears the never-ending responsibility of educating its youth well and ensuring their development. Adequate room to develop includes appropriate structures for children, a minimum standard of living, attention, solidarity, justice, tolerance, and freedom from aggression. Basic social values, such

as freedom, tolerance, justice, and solidarity, must be anchored in the entire society, and in particular are to be conveyed to children and adolescents. The fundamental order and function of society must be conveyed, including the existing correlations to all members of the community.

Employment Opportunity

Create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national, or global environment. Ensure that employment opportunities are inclusive and not based on racial, ethnic, age, income or other like factors. Make sure that industrial, business and retail activity today does not jeopardize opportunities for future generations to secure jobs or continue to make income for basic needs.

Services And Mobility

A socially sustainable community must be well connected, with good transport services and communication linking people to jobs, schools, health and other services in a way that minimizes the need for and impacts of the car. Opportunities for culture, leisure, and recreation need to be readily available to all as well as access to the skills and knowledge needed to play a full part in society. The community should also be well run - with effective and inclusive participation, representation and leadership.

In addition, it is important to protect human health and amenity through safe, clean, pleasant environments and ensure access to good food, water, housing and fuel at reasonable cost.

ECONOMIC SUSTAINABILITY

Self-sustaining Region

The West Lake Vision foresees the area as a self-sustaining region that has a variety of land uses. This will seek to orderly combine different land uses on the same or adjacent lots or within the same building. An overlap of commercial, office and residential uses will foster the creation of vibrant, walkable and livable communities. The flexibility created by mixed-use will create a variety of dwellings affordable to different segments of the population. Mixed-use also makes a community or region self-sustaining by providing a customer base for the businesses in the area, while enhancing the appeal of the community.

Infrastructure Investment

Appropriate sites for employment must be preserved while residential and retail uses are developed. Employment sites should be near public transit and high-technology infrastructure, and should capitalize on the educational resources of the region. Economic development opportunities can be enhanced by linking jobs with good transportation and by offering a variety of housing options.

Infrastructure investment can be financed through a combination of public and private investment. A community needs to establish clear policies regarding its level of assistance for various types of projects.

Educational Attainment

Regional economic planning requires that educational levels and vocational training correspond to the demands of the job market. Several communities in Utah have created councils to better understand and correlate the needs of the job market with educational programs offered. Members of these councils include representatives from community colleges, local school districts, workforce services, and members of the business community.