MAG

TransPlan50

MOUNTAINLAND ASSOCIATION OF GOVERNMENTS 2019-2050 REGIONAL TRANSPORTATION PLAN

FOR THE PROVO/OREM URBAN AREA

PARTNERING AGENCIES

UTA | UDOT

CALL TO ACTION

A LARGER METROPOLITAN AREA NEEDS ADDITIONAL FREEWAY CAPACITY

As Utah County surpasses one million people over the next twenty years, the need for additional corridors and capacity grows too. Multiple freeways are planned, including the Mountain View freeway in Saratoga Springs, Lehi 2100 N, a potential freeway through south Lehi, U.S. 6 in Spanish Fork, and a combination freeway and frontage road system along SR-73 in Eagle Mountain. A Utah Lake bridge is planned. Even with all the improvements on I-15 that have occurred in the past decade— including the current I-15 construction project in Lehi—the freeway is predicted to fail before 2040. UDOT has proposals within the plan to improve the mobility and efficiency of I-15, but more is needed to accommodate the future demands placed on our most vital transportation corridor.

STATE & LOCALS BUILD A REGIONAL CONNECTED HIGHWAY GRID NETWORK

Utah County is projected to double to over 1.3 million people by 2050. To meet this challenge, TransPlan50 proposes to build a connected grid network of freeways, expressways, arterials, and collector roads based on the Institute of Transportation Engineers recommendation. Historically, the county grew outward from individual town centers with little thought of creating regional highway corridors that connect each city and town. The proposed highway system would create connections of roads of all types including new freeways. TransPlan50's connected highway grid creates a reliable regional network addressing future congestion. It allows better movement of vehicles, transit, bikes, and pedestrians. Utah County will grow more than the other three Wasatch Front counties combined, to have the highway grid constructed, careful attention to funding the highway projects in the plan is vital.

A GRAND VISION FOR TRANSIT AND CHOICE

As Utah County surpasses one million people, the demand for choice in transportation will increase. The complete public transit system of the future should include commuter rail serving regional trips, a combination of light rail and bus rapid transit lines serving high-ridership corridors and connecting major destinations, a dependable bus network, and innovative solutions like micro-transit to fill in the gaps. Transit service will be right-sized for each community's unique needs and will connect Utah County residents to jobs, education, shopping, and recreation. Transit, in conjunction with a robust bicycle and pedestrian system, creates a choice for healthier and less expensive transportation options. Major capital projects are costly and acquiring funding for these types of projects will need to be addressed. Our historic conservative transit funding projected forward will only fund half the needed transit projects. New and innovative revenue solutions will need to be developed to fund this transit system for the future urban population.

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MAG REGIONAL PLANNING COMMITTEE LIST

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Spanish Fork, Mayor

JIM MILLER, VICE CHAIR
Saratoga Springs, Mayor

TROY STOUT
Alpine, Mayor

BRAD FROST
American Fork, Mayor

DAVID GUSTIN
Cedar Fort, Mayor

JENNEY REES
Cedar Hills, Mayor

TROY WALKER
Draper, Mayor

TOM WESTMORELAND
Eagle Mountain, Mayor

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Utah County, Commissioner

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Utah County, Commissioner

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A PLAN FOR THE FUTURE

REGIONAL GOALS

REGIONAL GOALS

TransPlan50 focuses on building a robust, intermodal, urban transportation system. The primary goals within the plan have evolved to keep pace with our rapidly expanding population and travel demands. In developing TransPlan50, transportation summits were held in the north, central, and southern areas of the county. Transportation stakeholders were invited to share their plans and insights into what the future transportation system should become. Stakeholders included mayors, city council members, planning commissioners, city and agency staff, members of the business community, legislators, and citizens. Their ideas were modeled, and similar meetings were held to go over the results. From these efforts, five overarching goals have emerged.

> "THE **PRIMARY GOALS** WITHIN THE PLAN HAVE EVOLVED TO KEEP PACE WITH OUR **RAPIDLY EXPANDING** POPULATION AND TRAVEL DEMANDS."

GOAL 1

Update the Regional Highway System to a Metropolitan Grid-based Network

GOAL 2

Explore Additional Freeways, Add Capacity

GOAL 3

Create a Robust Regional Transit System

GOAL 4

Build a Regionally Connected Active Transportation System

GOAL 5

Preserve What We Have

INTRODUCTION and METROPOLITAN PLANNING

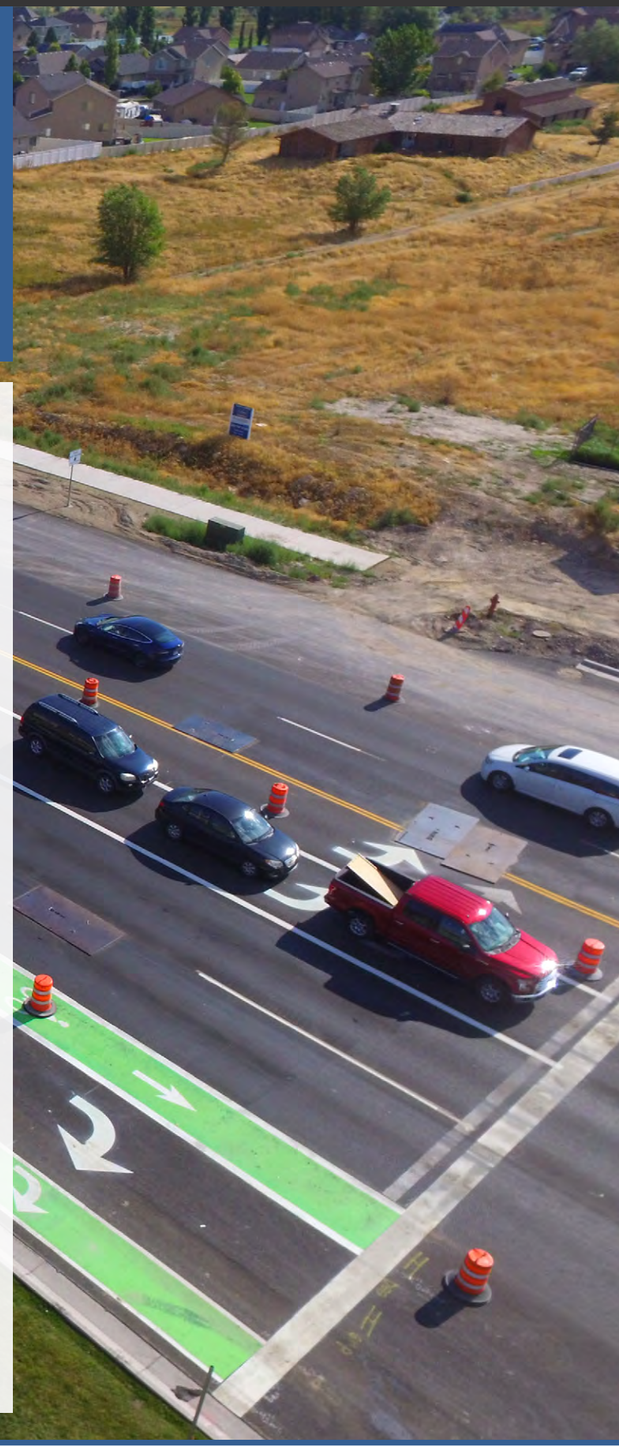
INTRODUCTION

TransPlan50 is the regional transportation plan for urbanized Utah County. The proposed projects and programs are a coordinated system of capital-intensive roadway projects, transit improvements, and pedestrian/bicycle facilities needed over the next thirty years. The plan attempts to minimize impacts on society and the environment while providing for enough transportation capacity and choices to ensure the region's economy continues to grow.

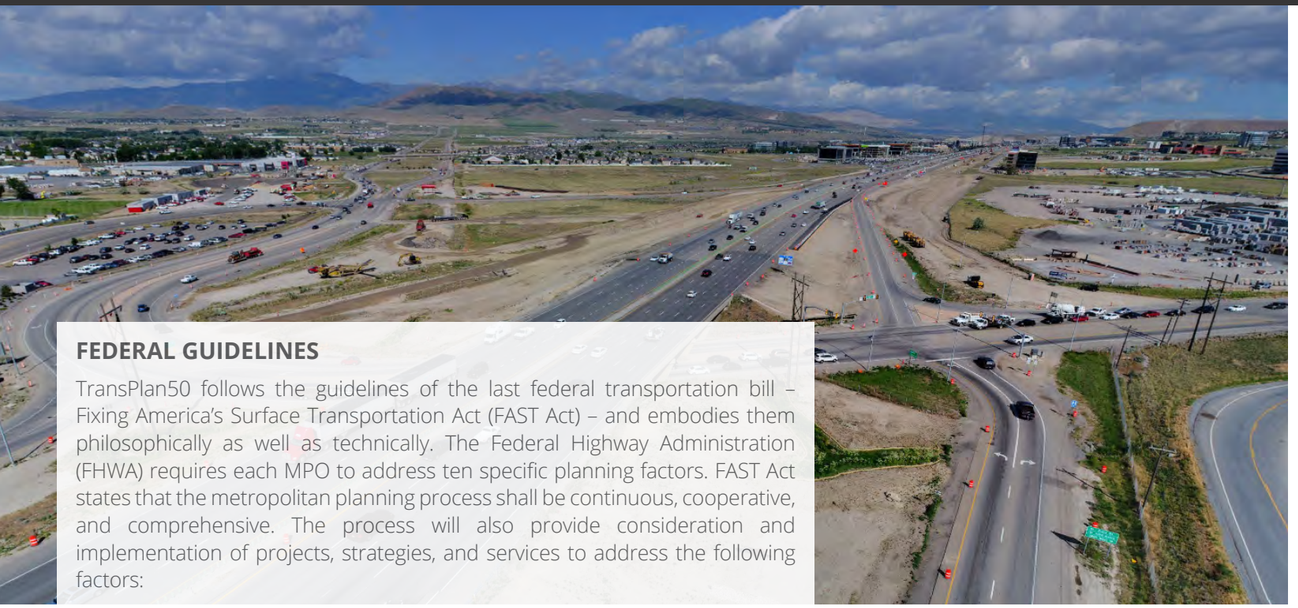
METROPOLITAN PLANNING

Mountainland Association of Governments (MAG) serves the governments and citizens of Summit, Utah, and Wasatch Counties. As part of this association, Mountainland Metropolitan Planning Organization (MPO) has the task of planning for the urban Utah County regional transportation needs. Located at the southern end of the Wasatch Front region of Utah, the MPO encompasses the rapidly growing Provo/Orem Urbanized Area and includes all 25 Utah County municipalities and contiguous unincorporated areas. Urbanization and the locations of major transportation facilities are constrained by physical boundaries including steep mountain terrain to the east and west and by the large, centrally located Utah Lake. The urban area is roughly bisected by I-15, the only freeway currently within Utah County. The MPO creates the forum, bringing together urban leaders with state and federal transportation officials, opening dialogue, and providing a process for all to be involved in planning and funding the transportation needs of the area. MAG has a strong history of working together with stakeholders and accomplishing results.

> "THE PLAN ATTEMPTS TO **MINIMIZE IMPACTS** ON SOCIETY AND THE ENVIRONMENT WHILE PROVIDING FOR ENOUGH **TRANSPORTATION CAPACITY** AND CHOICES TO ENSURE THE REGION'S **ECONOMY** CONTINUES TO GROW."



GROWTH and GUIDELINES



FEDERAL GUIDELINES

TransPlan50 follows the guidelines of the last federal transportation bill – Fixing America's Surface Transportation Act (FAST Act) – and embodies them philosophically as well as technically. The Federal Highway Administration (FHWA) requires each MPO to address ten specific planning factors. FAST Act states that the metropolitan planning process shall be continuous, cooperative, and comprehensive. The process will also provide consideration and implementation of projects, strategies, and services to address the following factors:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase accessibility and mobility of people and freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance travel and tourism.

A GROWING REGION

Historically, population growth in Utah County has been robust, rising by 40 percent in each of the last two decades, and surpassing one-half million people in 2009. More recently, the Provo/Orem area was the fourth fastest growing metro area in the country with the population now exceeding 630,000. While the mainly rural transportation system had been over-taxed and unable to sustain such rapid growth, early this decade, the state and county invested nearly $4 billion in highway and rail projects, making a significant impact towards easing congestion and creating better connectivity.

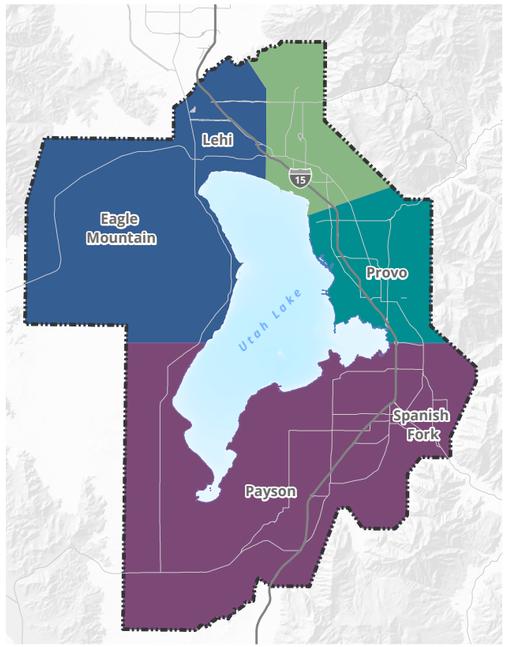
The cities of Provo and Orem have always been the urban core of Utah County, but this is changing. The two largest metropolitan areas in the state, Salt Lake City and Provo/Orem, converge at the Point of the Mountain, creating a natural center for high growth in both jobs and population.

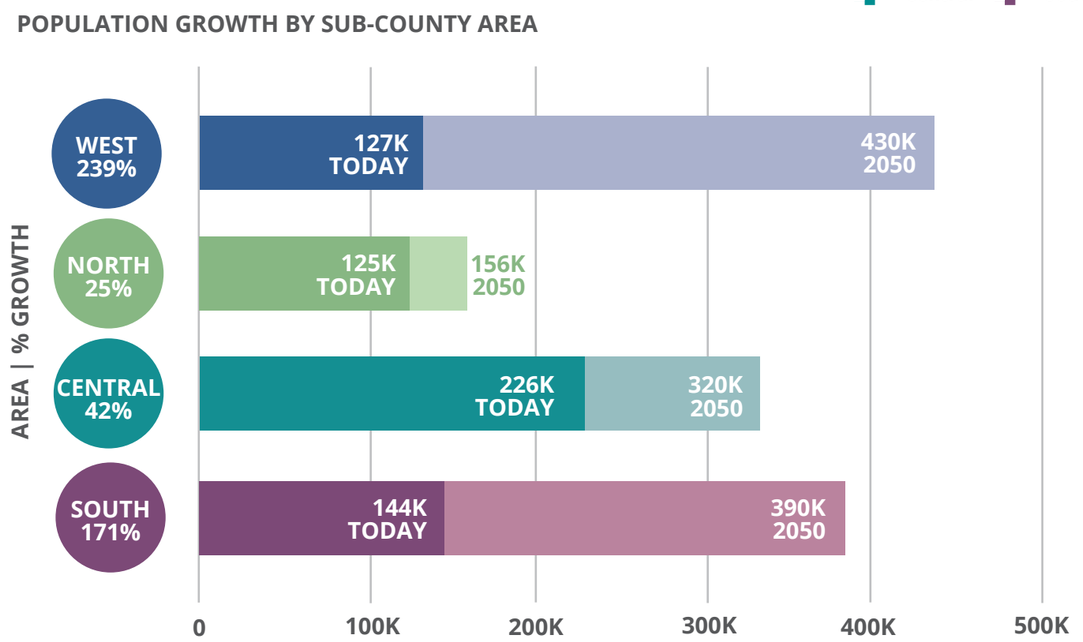
WEST AREA: Since the year 2000, the West Area (including Lehi, Eagle Mountain, and Saratoga Springs) has been the epicenter of statewide population growth, adding more than 102,000 people. Future growth explodes in the West Area. It is forecasted to add 303k more people reaching 430,000 population by 2050. All of Utah County was 430,000 in 2004.

NORTH AREA: This area includes American Fork, Highland, and Pleasant Grove. With less developable land and high real estate values, it still added over 49,000 new people since 2000 and is proposed to add another 31,000 by 2050.

CENTRAL AREA: Provo, Orem, and the high growth area of Vineyard encompass the Central Area. Most of Provo and Orem are developed established areas that have increased in density since 2000, adding 32,000 new people. Another 96,000 people are forecasted to move to the area, with increased density and Vineyard building up and out.

SOUTH AREA: The largest area geographically with densities mostly at rural values, the South Area is also growing. Most of the 55,000 new residents since 2000 pushed development outward from the historic city cores. The area is forecasted to add another 246,000 growing to 390,000 by 2050.



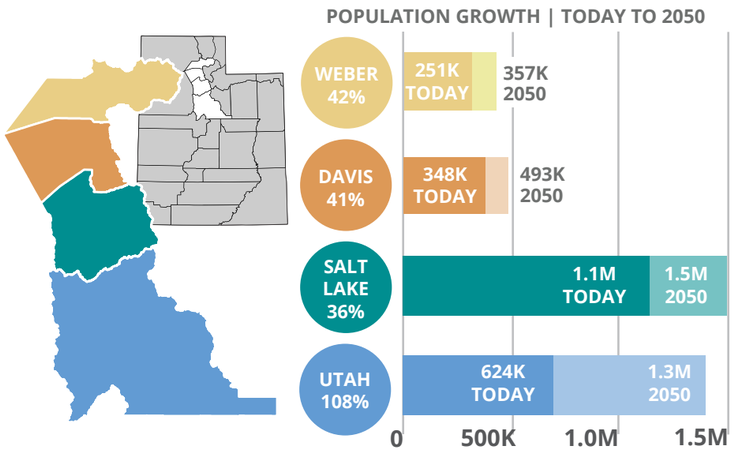


GROWTH and GUIDELINES

REGIONAL GROWTH TRENDS

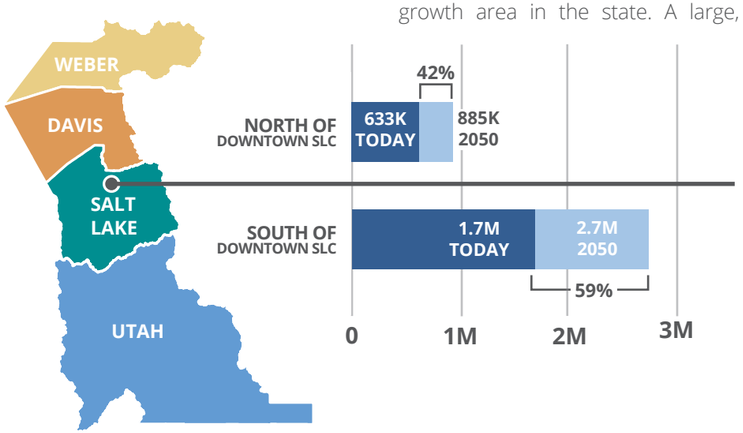
By 2050, Utah County will double in population adding over 660,000 more people, surpassing 1.3 million, slightly larger above the current population of Salt Lake County. This equates to 100 percent growth and is more than double any other Wasatch Front county. During this period, Utah County's growth is larger than the other three Wasatch Front counties combined. By 2065, Utah and Salt Lake counties will be near the same size.

POPULATION WASATCH FRONT COUNTIES



Development along the Wasatch Front has historically favored the areas south of downtown Salt Lake City. Today, 633,000 people live north of downtown, 1.7 million live south of it. By 2050, 885,000 people live north of downtown and 2.7 million south of it. Areas north of downtown add the population of current day Weber County through 2050. Areas south will add an equivalent of 11 Weber counties.

POPULATION GROWTH NORTH AND SOUTH OF DOWNTOWN SLC



Employment mimics population trends for all four Wasatch Front counties. Utah County's employment growth is projected to almost double from 300k jobs today to 600k in 2050. However, even with these additional jobs, Salt Lake City will remain the major urban employment center.

Prior growth trends show that Utah County's development had been tied to in-county employment, but over the last ten years, the two metro areas (Provo/Orem and Salt Lake City) have begun to converge, creating the highest employment growth area in the state. A large, highly educated workforce, abundant developable land, and convenient access to highways, rail, airports, and active transportation has drawn and will to continue to focus economic attention to the area. New job growth will reinforce the attraction of new residents, and with such growth, Utah County's importance in the region increases. Utah County's share of the total Wasatch Front population increases from 27 percent today to 36 percent in 2050.

As growth mounts, the population and employment distribution will continue to increase outside the historical center of Provo/Orem. In 2050, Provo/Orem will still be the urban core, but northward along the I-15 corridor and into Salt Lake County, similar densities begin to develop. Areas west of I-15 densify and become self-sustaining (more jobs, fewer long commutes), and show more urban characteristics. South of Provo, communities fill in with development and spread out from historic city cores, although densities remain low with suburban characteristics.

LAND USE and TRAVEL DEMAND

WASATCH CHOICE 2050

Utah is growing... and we have a plan. Our future quality of life depends on the choices we make today. Wasatch Choice 2050 is our communities' shared vision for transportation investments, development patterns, and economic opportunities. The Vision map and key strategies show how advancing the Vision can enhance quality of life even as we grow.

Key Strategies

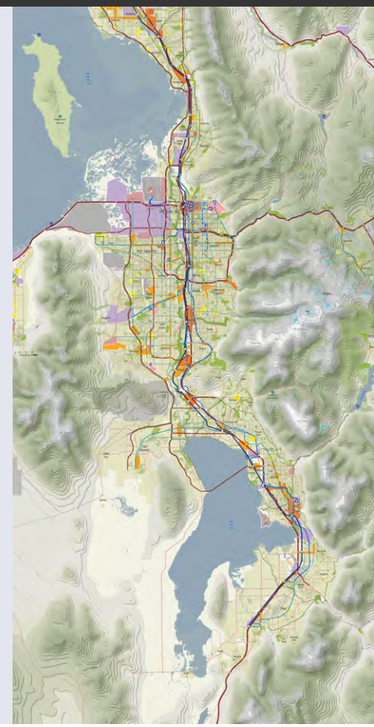
The Wasatch Choice 2050 Vision is built on four key strategies:

1. **Provide transportation choices**
2. **Support housing options**
3. **Preserve open space**
4. **Link economic development with transportation and housing decisions**

Benefits of the Vision

Implementing the Wasatch Choice 2050 Vision promotes high quality of life now and for generations to come.

- Livable and healthy communities
- Access to economic and educational opportunities
- Manageable and reliable traffic conditions
- Quality transportation choices
- Safe, user friendly streets
- Clean air
- Housing choices and affordable living expenses
- Fiscally responsible communities and infrastructure
- Sustainable environment
- Ample open space and recreational opportunities



TRAVEL DEMAND

Predicting where future transportation facilities are needed in high-growth areas is a continuous effort. Changes in political leadership, anticipated funding, land-use patterns, and many other factors change the dynamics of an area and require constant study. TransPlan50 is updated every four years to stay relevant. This frequency of updates allows the MPO to remain current with emerging trends and policy changes. The work is also collaborative, bringing federal, state, county and city agencies together into one deliberative body. The MPO uses a sophisticated travel demand model co-managed with Wasatch Front Regional Council (Salt Lake/Ogden MPO) that accounts for these adjoining metro areas to best predict where future transportation improvements are needed. Socio-economic data and land-use are two key inputs to the travel demand model. Socioeconomic data includes household and employment level forecasts for each city. The municipalities and the county produce general plans that influence future land-use growth. MPO staff develop models of region-wide development patterns from these local land-use plans.

Many land-use plans only project for the next 10 to 15 years, leaving a gap between local planning horizons and the needs of long-range regional transportation planning. MPO staff meet with each municipality and the county to review their plans and to gain additional insight into where future growth could occur. The local plans are used to gauge future development on vacant land, infill and redevelopment areas. Most local land-use plans continue historic low-density land-use policies leading to many of the core cities running out of buildable land by 2035. To address the long-range needs to 2050, a regional vision process called Wasatch Choice 2050 is on-going. It is a cooperative regional visioning effort, taking input from transportation stakeholders to coordinate key regional transportation, local land-use, and economic development strategies that aim to achieve regional goals of mobility, connectivity, transportation choices, and quality of life. The land-use outputs of Wasatch Choice 2050 augment TransPlan50 by fostering this creative thinking concerning land-use policies going forward. It proposes denser clusters of housing, retail, and employment in key strategic centers along the Wasatch Front.

FUNDING and COSTS

FUNDING AND COSTS

Funding assumptions for TransPlan50 are based on coordination between Utah MPOs (Cache, Dixie, Mountainland, and Wasatch Front), UDOT, and UTA. Utah follows an advanced practice in the development of a statewide Unified Transportation Plan (summary of all MPO, UDOT and UTA plans). To ensure consistency within the Unified Plan, each individual plan follows a standard set of demographics, financial revenue, cost estimating, and related assumptions.

TransPlan50 funding assumptions are developed for planning purposes only. Transportation funds are generated from several sources, including sales tax, tolls, bonds, and state, local, and federal excise taxes on various fuels, and credit assistance sources. The following planning assumptions are used to determine a "reasonable" future revenue assumption as required by federal law.

STATEWIDE FUNDING ASSUMPTIONS

1. ALL AUTO RELATED SALES TAX TO TRANSPORTATION
2. FEDERAL FUNDS GROWTH RATE OF 3.49% & 1.5%
3. 10-CENT MOTOR FUEL TAX IN 2030 & 2040
4. MOTOR FUEL GROWTH RATE OF 2.4% & 1.48%
5. SPECIAL FUELS GROWTH RATE OF 3.02%
6. $10 VEHICLE REGISTRATION FEE IN 2021, 2031, 2041

REGIONAL FUNDING ASSUMPTIONS

1. $5 VEHICLE REGISTRATION FEE IN 2026, 2036, 2046
2. VEHICLE REG. FEES FUNDS GROWTH AT 3.03%
3. NEW 1/4-CENT SALES TAX IN 2023, 2030, 2040
4. B&C FUNDS 30% TO LOCAL GOVERNMENTS
5. REGIONAL FUNDS GROWTH AT 5.52%

TOTAL REVENUE, CONSTRAINED COSTS, NEED

In summary, revenue expected within the MPO area through 2050 is proposed at $18.8 billion, $13.5 billion toward highway operations, preservation, and projects, and $5.3 billion for transit operations, maintenance, administration, and projects.

All highway capacity projects are placed in the phases when needed, with available funding and bonding used to fund construction. Highway capacity projects are fully funded in the plan when needed, as is state preservation and operation's needs (though there is a deficit for local preservation needs of $177 million.)

New capacity rail and other major projects are generally not funded when warranted leaving $4 billion unfunded. Preservation and operations are underfunded at $2 billion. For air quality conformity compliance, unfunded capacity projects are not considered a part of the fiscally constrained plan.

Funds showed in 2019 dollars

	2019-30 Phase 1	2031-40 Phase 2	2041-50 Phase 3	TOTAL
Highway				
Revenue	5.17b	4.10b	4.26b	13.53b
Need	5.23b	4.05b	4.15b	13.43b
Revenue minus Need **AMOUNT FUNDED**	-57m	+57m	+106m	+106m
Transit				
Revenue	1.74b	1.73b	1.80b	5.27b
Need	2.64b	4.18b	3.52b	10.33b
Revenue minus Need **AMOUNT FUNDED**	-902m	-2.45b	-1.72b	-5.06b
TOTAL				
Revenue	6.91b	5.83b	6.06b	18.80b
Need	7.87b	8.22b	7.67b	23.76b
Revenue minus Need **AMOUNT FUNDED**	-959m	-2.39b	-1.61b	-4.96b

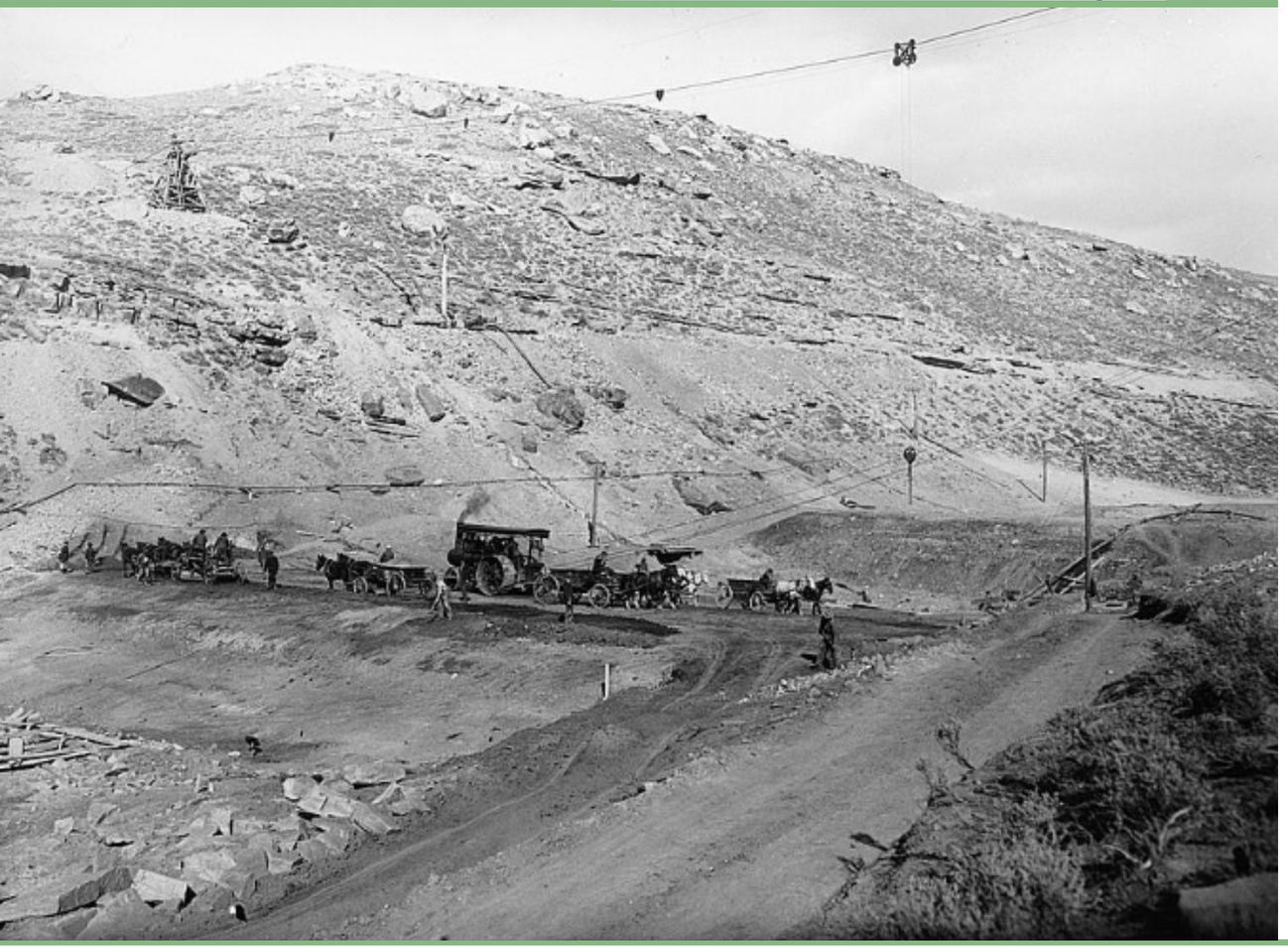
GOAL 1

UPDATE THE REGIONAL HIGHWAY SYSTEM
TO A METROPOLITAN GRID-BASED NETWORK

HISTORICAL CONNECTIONS and DEVELOPMENT

HISTORICAL REGIONAL CONNECTIONS

Utah County has a rural highway system. The county grew in a nodal, town by town form with each town focusing on its own road systems. The state built the main connecting highway between the cities. As the towns grew and began adjoining each other, the proper sizing and spacing of regional highway connections, in most cases, did not occur – the local street network was not complemented by a regional grid.



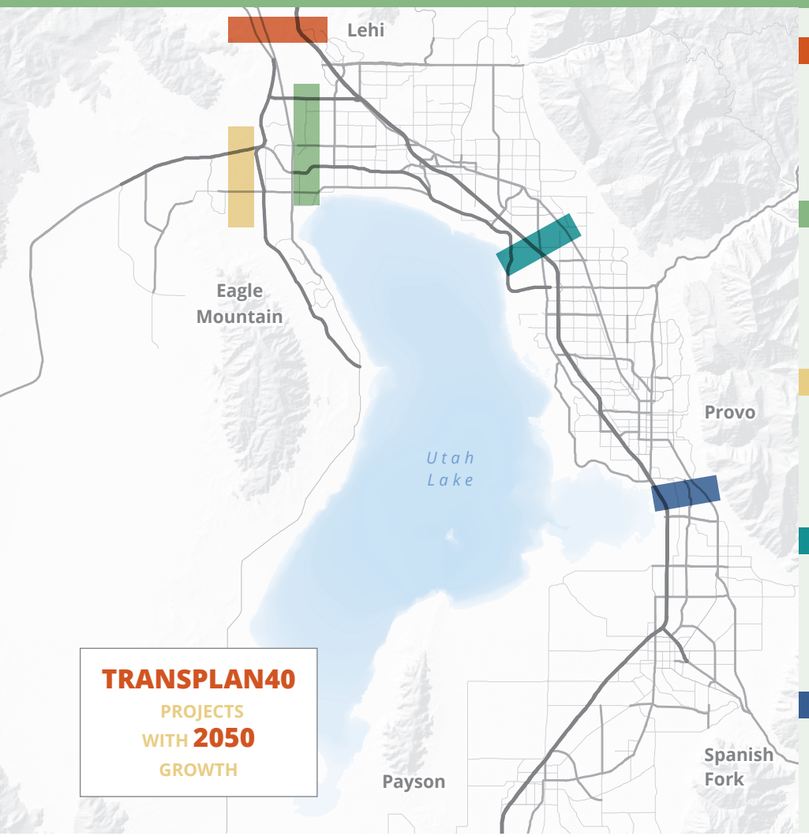
GREENFIELD DEVELOPMENT

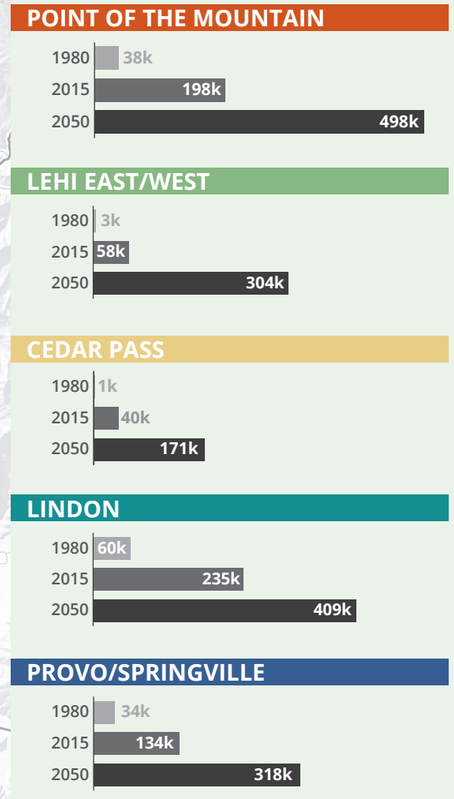
Rural, greenfield areas on the fringe urban development usually grow slowly, until seemingly overnight, they explode with new development that does not account for nor contribute to an efficient grid system. Congestion starts overwhelming the few existing through streets and highways. Immobility replaces mobility as congestion worsens. Vast areas end up saddled with the consequences of an uncoordinated transportation system. The North Area, for example, has experienced high growth with limited highway connections. East-west corridors between American Fork Main Street and Timpanogos Highway are non-existent. Main Street has a much higher than normal traffic burden. Timpanogos Highway had to be over-built to almost a freeway-type standard to compensate for the lack of an area grid network. With future growth pushing outward, the western and southern areas of Utah County are now at most risk for impacts on developed areas for not having a connected grid network built with growth.

> "WESTERN AND SOUTHERN AREAS ARE NOW **AT RISK** FOR IMPACTS ON DEVELOPED AREAS FOR **NOT HAVING** A CONNECTED **GRID NETWORK**"

TRANSPORTATION CHOKE POINTS

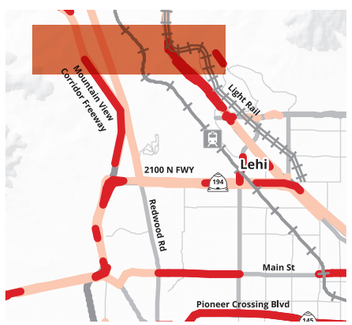
Utah County has a unique geography with its towering mountains, lakes, and wetlands. These features create a unique geographic environment making transportation connections a challenge. In the county, there are five areas where transportation corridors must traverse within narrow strips of land bordered by these features called transportation choke points. The following data represents the TransPlan40 projects with 2050 growth. Congestion increases expotentially without system improvements.





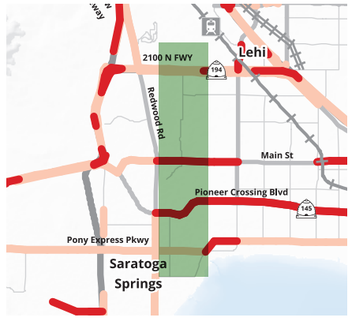
POINT OF THE MOUNTAIN CHOKE POINT

The Lehi area has some of the most challenging issues to transportation in the region. There are multiple choke points in Lehi impacting both north/south and east/west regional traffic. This coupled with high residential and commercial growth and being the center point of two metropolitan areas converging, only adds to the problem. The Point of the Mountain Choke Point is the narrow strip of land between Salt Lake and Utah counties. In the future, this area has more traffic, and more people traverse it than any other area in the region. Future projects proposed within TransPlan50 include improvements to I-15 and FrontRunner Commuter Rail, constructing the Mountain View Freeway, and Light Rail.



LEHI EAST/WEST CHOKE POINT

East/west travel through Lehi with its numerous wetlands, the Point of the Mountain to the north and Utah Lake to the south, all limit transportation, creating the Lehi Choke Point. In the future Lehi 2100 North becomes a freeway. South of Lehi Main Street, freeway volumes are projected requiring a future facility proposed in the plan. Future study will identify its location.

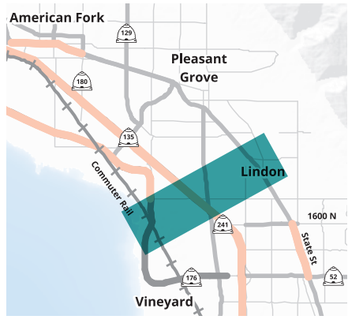


CEDAR PASS CHOKE POINT

The narrow connection between Lehi and the Cedar Valley through the mountains create the Cedar Pass Choke Point. The area bordering this choke point is projected to have over 200,000 people by 2050. Because of the limited options for transportation corridors, SR-73 is proposed in the plan to be converted into a freeway before 2040.

LINDON CHOKE POINT

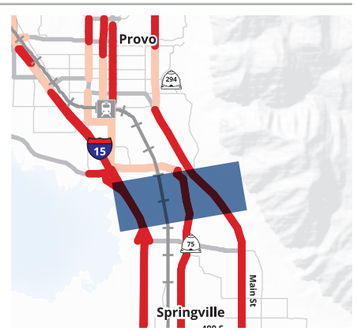
The Lindon Choke Point today has the highest traffic volumes in the valley with a significant commuter movement between the central and northern areas of the county. With only three highway corridors, State Street, I-15, and Geneva Road, as well as FrontRunner Commuter Rail, this is an important area to focus on relieving congestion. TransPlan50 proposes improvements to I-15 and commuter rail in this area as well as the addition of light rail and bus rapid transit along State Street.



PROVO/SPRINGVILLE CHOKE POINT

In the future, the area between Provo and Springville becomes the most congested choke point in the county. It currently only has two regional connections, State Street and I-15. There are very limited transportation solutions due to Provo Bay, wetlands, and the Wasatch Mountains.

Future solutions include a parallel freeway over Provo Bay, FrontRunner Commuter Rail, additional lanes on I-15, and light rail.

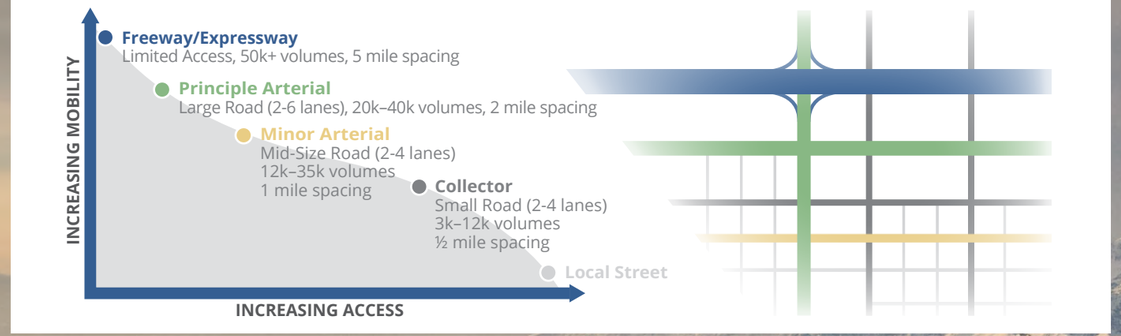


PROPOSED HIGHWAY GRID

REGIONAL HIGHWAY GRID SPACING

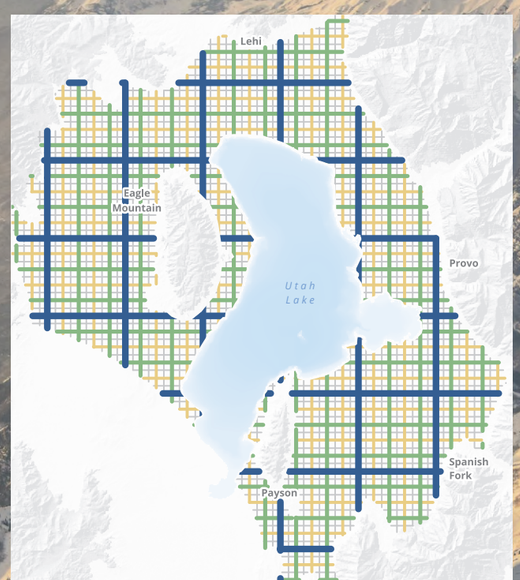
Recognizing the challenges greenfield areas face as they urbanize, the Institute of Transportation Engineers (ITE) created a Best Practice recommendation for macro-level network spacing, that if adhered to, would minimize congestion on any given facility. The thought is that having a grid of properly spaced roads that can handle different types of trips (local to sub-regional to regional), that traffic would be spaced out easing congestion and dispersing traffic more evenly throughout the area avoiding placing all traffic on just a few major corridors. The hierarchy of a regional highway network starts with Freeways and Expressways. These major corridors have characteristics that include grade-separated interchanges (Expressways can have signaled intersections), higher traffic volumes, higher speeds, and are ideally 5 miles apart. Principal Arterials are the major roads carrying regional traffic, high volumes, generally have controlled access (fewer driveways), and higher speeds. Minor arterials have lower speeds and more access points. Collectors have lower volumes and more access.

ROAD TYPES



TODAY

ITE RECOMMEND



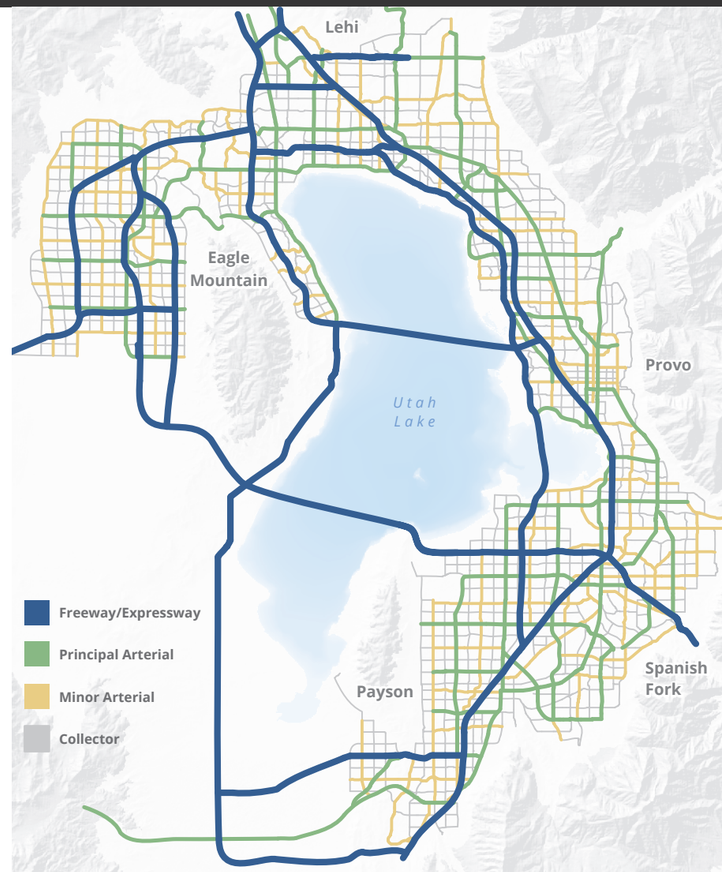
PROPOSED UTAH COUNTY GRID

To create a grid network of arterial and collector highways in Utah County, MPO staff worked with municipal staff to draft a plan that allows for properly spaced corridors within greenfield and developed urban areas. In many cases corridors within the developed areas are mostly complete. What is needed are connections to adjoining roads in neighboring municipalities. Some proposals would require little to no neighborhood disruption; others could be more complicated. The proposed grid plan is a starting place to begin the discussion. The proposal is to work with each municipality and the county through their planning processes to vet what corridors can work, what corridors would need adjustment, and what will not work.

UTAH COUNTY GRID POTENTIAL COSTS AND IMPACTS

It is estimated that completing the county-wide urban grid network as proposed requires an additional 1,000 miles of new lanes. A quarter of these lanes are in current built-up urban areas with the remainder in greenfield areas. The proposed grid also removes about 750 structures, more than half of which are located in rural areas and will most likely be incorporated into future developments. The total cost of the grid network is estimated at upwards of $2 billion dollars, not including projects already proposed and funded in TransPlan50. Of this cost, $500 million is anticipated within the built-up urban areas. Most of the $1.5 billion to build the grid in the rural areas will be funded by private development if properly planned for. Moving forward, MAG will work with our stakeholders to identify which projects can be adopted into municipal and regional plans. More importantly, funding to construct the collectors proposed in the grid network will have to be identified. Currently, only local and regional funds can be used in funding these types of facilities, with these funds already stretched thin.

State-wide solutions will most likely need to be sought to these regional non-state-owned roads in the future.



2 BILLION total cost of grid network

500 MILLION
within built-up urban areas

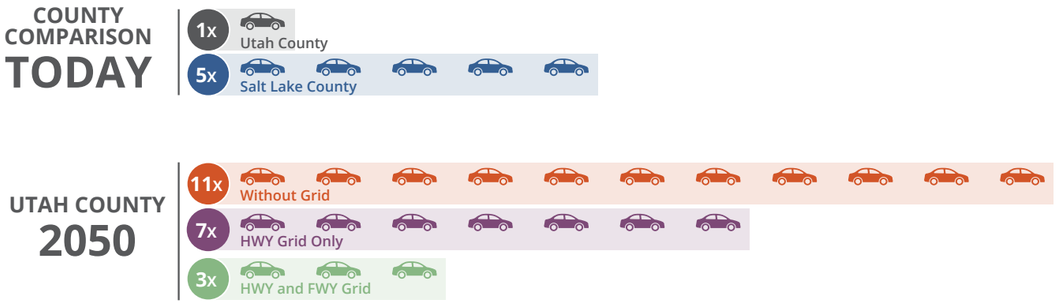
1.5 BILLION
within rural areas
(funded by public and private development)

BENEFITS OF A CONNECTED HIGHWAY GRID

CONGESTION RELIEF

The benefits of relieving regional congestion by completing the grid network and the projects listed in TransPlan50 are great. With the proposed growth to 2050, overall travel delay in the region increases elevenfold compared to 2018. To put this in perspective, Salt Lake County in 2018 had five times more congestion related delay than Utah County. Modeling shows that with a connected arterial and collector grid network with no additional freeways, the 2050 travel delay would only grow to seven times that of today. With the addition of the proposed freeways in the plan, congestion rises to only three times the current delay, well within acceptable limits of a metropolitan area of 1.3 million people.

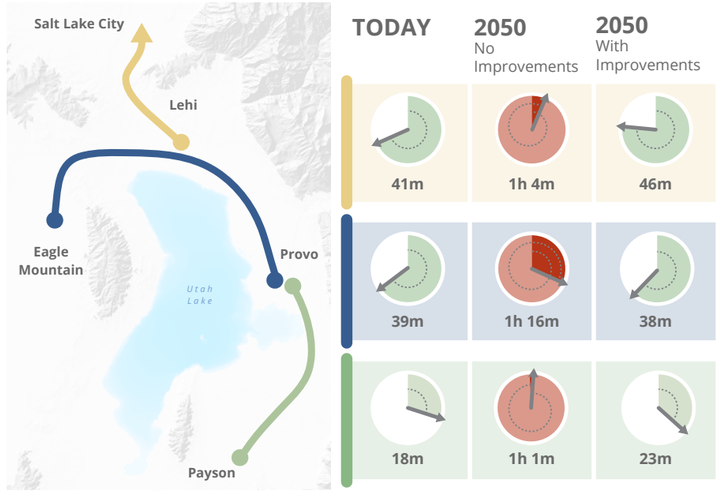
CONGESTION

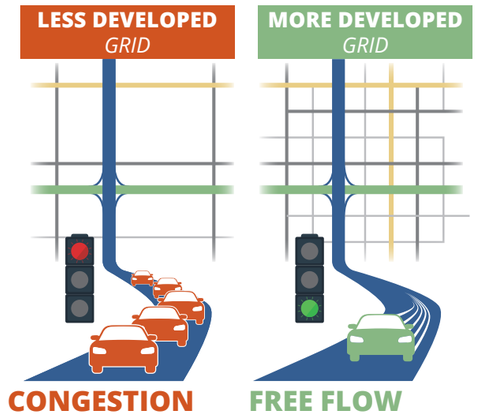


> "THE **BENEFITS** OF RELIEVING REGIONAL CONGESTION BY COMPLETING THE **GRID NETWORK** AND THE PROJECTS LISTED IN TRANSPLAN50 ARE **GREAT**"

TRAVEL TIME

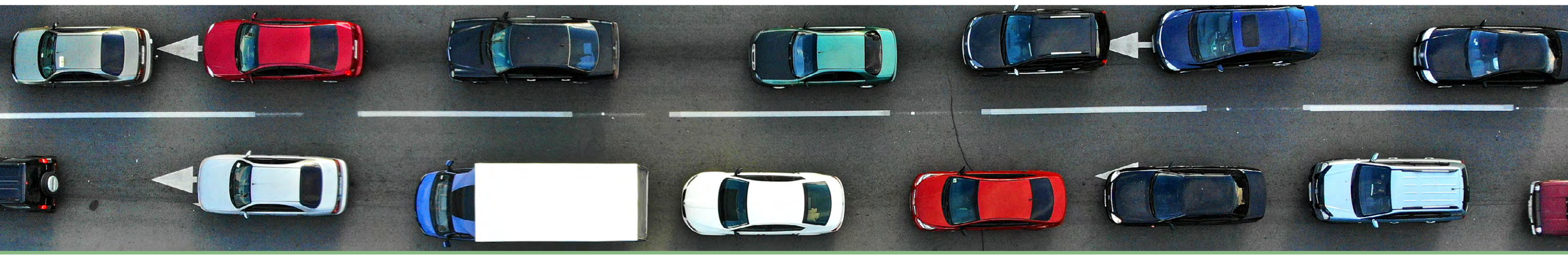
Another way to understand future network conditions is with travel time. In 2018 a trip by automobile between Eagle Mountain and Provo took about 39 minutes. With no improvements, by 2050 the same trip takes 1 hour and 16 minutes; Provo to Payson 18 minutes versus 1 hour, and Lehi to Salt Lake City 41 minutes versus 1 hour.





DISPERSING TRAFFIC

The reason a network of arterial and collector roads works is its ability to spread out traffic. Today the North and Central areas are connected by three main corridors, all state routes; I-15, State Street (US-89), and Geneva Road (SR-114). By creating additional connections of smaller roads in this area, localized trips would no longer be required to traverse the major roads, thereby reducing congestion. Connecting collectors and arterials do not necessarily lead to heavy traffic on these roads, rather, by spreading trips out, the total volumes of traffic on a single corridor can be reduced.



GOAL 2

EXPLORE ADDITIONAL FREEWAYS,
ADD CAPACITY

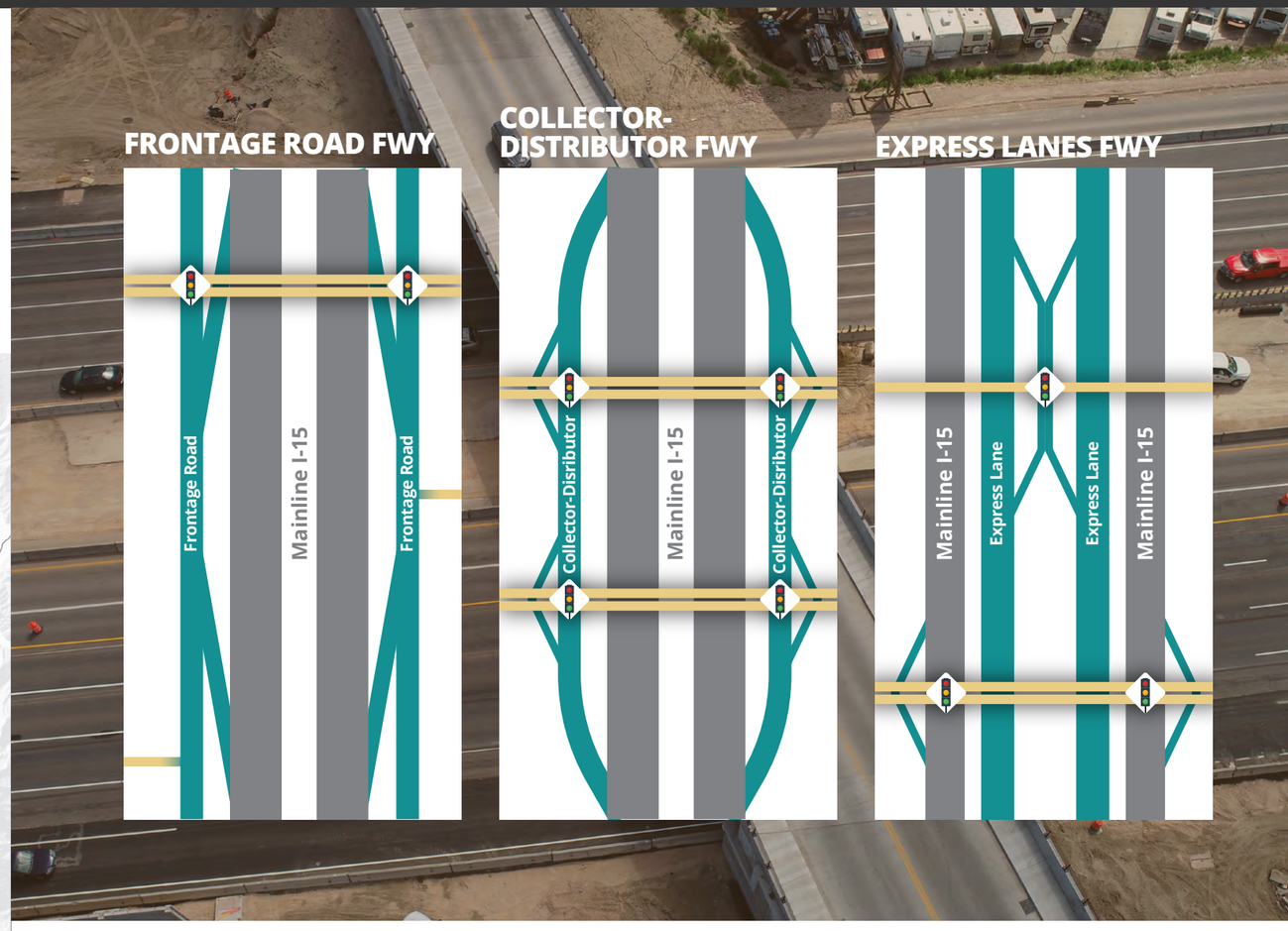
I-15 FREEWAY

INTRODUCTION

The I-15 freeway is the economic and mobility lifeline of Utah County and most of the Wasatch Front. Running from Canada to Mexico, our regional economy, as well as our quality of life, is directly tied to it. In 2012, the I-15 CORE project began a multi-year and multi-project effort to rebuild and widen the freeway from American Fork to Payson. Lanes vary from six lanes south of Spanish Fork, ten lanes between Spanish Fork and Provo, and twelve lanes between Orem and American Fork. In 2016 the freeway was widened to twelve lanes from north Lehi to Draper. Currently, the I-15 Freeway is being reconstructed through Lehi bringing a total of twelve lanes through this area.

I-15 FREEWAY

Due to the lack of a regional grid, the current system funnels all regional trips and many local ones onto I-15, increasing congestion. The practical maximum number of lanes of a freeway in each direction is six, or a total of twelve lanes. Beyond six, drivers encounter great difficulties maneuvering to exits and shoulders. By 2050, even at twelve lanes, anticipated growth reduces service levels on the freeway to highly congested during peak hours. The areas between Springville and Provo, Lindon, and the Point of the Mountain form geographic choke points in the system. These areas will experience the worst congestion.



POSSIBLE SOLUTIONS

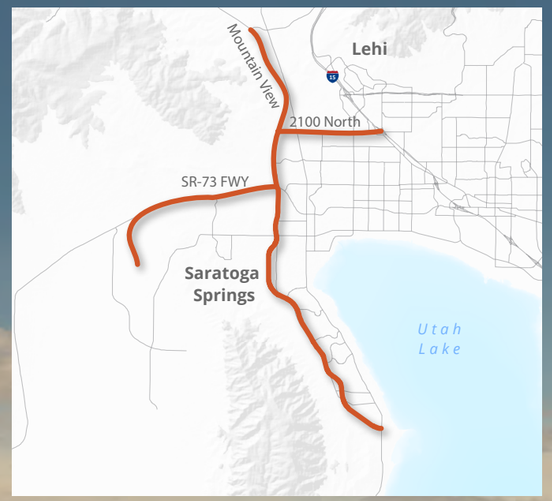
Options for the I-15 corridor include widening the freeway south of Orem to twelve lanes, building a frontage road system or collector-distributor system on each side of the freeway, or adding divided express lanes road down the middle of the freeway. Another option would be to construct a parallel facility along the corridor, like Legacy Parkway in Davis County. Each of these solutions has benefits and impacts. All require additional study and collaboration with the various transportation stakeholders along the corridor.

FUTURE STUDY

TransPlan50 proposes that improvements to I-15 occur sometime between 2031 and 2040, phase two in the plan. It does not identify a specific solution; instead, it recommends that a future study should be conducted to determine preferred solutions. Solutions could be one of the four options mentioned, a combination of them, or something completely different. I-15 is the lifeline and backbone of Utah County traffic and its economy. Improvements to I-15, creating a grid system of collector and arterial roads, and adequately spaced new freeways (see grid discussion in previous section), will help better handle future traffic volumes and spread traffic more evenly throughout the valley.

NEW FREEWAYS

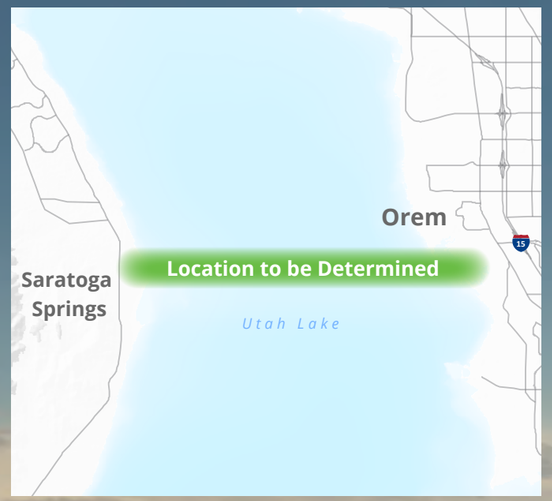
MOUNTAIN VIEW, LEHI 2100 NORTH, AND SR-73 FREEWAYS



The Mountain View Freeway and Lehi 2100 North Freeway were included in the past regional transportation plan, TransPlan40. They handle traffic and proposed growth in the far north of the county traversing the Point of the Mountain. With Utah County growing to 1.3 million in 2050 and 1.6 million by 2065, a more connected freeway network is required. TransPlan50 proposes multiple new freeways creating the five-mile spacing of a proper grid network.

The extension of the planned Mountain View Freeway south through Saratoga Springs, as well as converting SR-73 through Eagle Mountain into a freeway are included TransPlan50. Narrow strips of land connect these communities, making it difficult for a grid system, requiring larger facilities to take their place. Studies for both corridors have been completed, and the needed corridor preservation is ongoing. Around 2035, many of the I-15 corridor cities between Provo and American Fork are approaching housing capacity, leaving infill and higher density to fuel their growth. Most growth is forecast in the northwest and southern areas of the county.

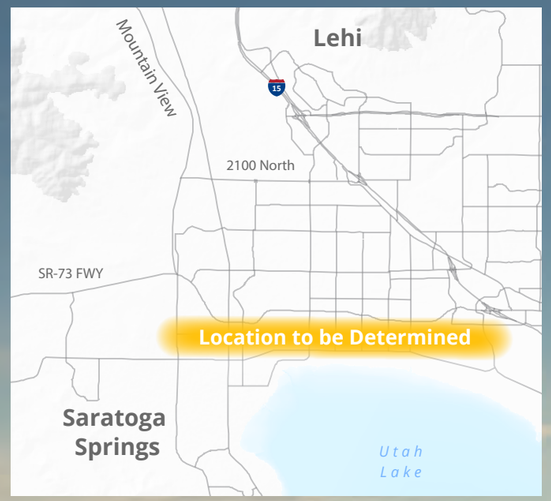
UTAH LAKE BRIDGE



Utah County is home to Utah Lake, a natural lake large in surface area but shallow, with an average depth of 10.5 feet. This body of water complicates creating the freeway grid. For many decades, a highway over the lake has been proposed, but the need has not been demonstrated until now. TransPlan50 proposes that the bridge be built after 2040. The location of the bridge/freeway, as shown in the plan, needs further study but is warranted based on projected traffic flows. One concern is that the freeway connection to I-15 not exacerbate congestion in already congested areas. The farther south toward Provo the eastern connection can go, the better, as traffic volumes are more easily dispersed. Design and construction of a bridge may prove challenging.

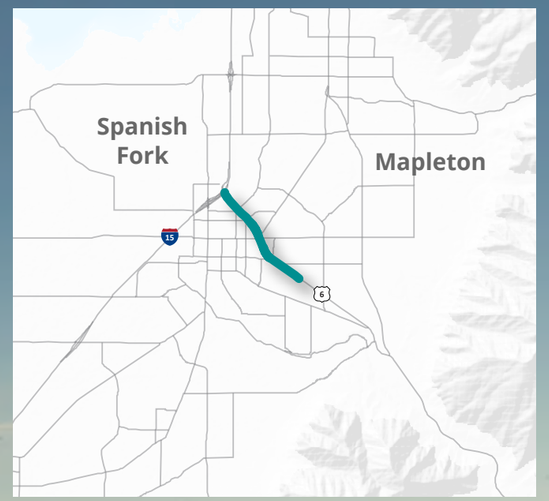
Can or should an earthen causeway be built? With the sediment in the lake, can a bridge be constructed? Could a floating bridge work? All these and more will be studied with future work.

SOUTH LEHI FREEWAY



Lehi sits at the confluence of the two metropolitan areas, Provo/Orem and Salt Lake City. It has become an economic powerhouse with the Silicon Slopes employment center and I-15. North/south traffic between the two metro areas, as well as east/west traffic connecting the high growth areas of Cedar Valley to Utah Valley, make creating the right regional transportation network paramount. At Lehi, there are distinct splits in the traffic flow. Today and in the future, traffic from Cedar Valley is split about 50/50, half traveling north into Salt Lake County and half south toward Provo. Lehi 2100 North Freeway and Mountain View Freeway handle the northern movement, but freeway volumes south of Lehi Main Street are projected. The current and planned arterials of Pioneer Crossing and Pony Express Parkway cannot accommodate these volumes. By 2050, Pioneer Crossing has over 50,000 trips a day. To put this in perspective, Bangerter Highway in Salt Lake County currently has 45,000 trips a day and is currently being converted into a grade-separated freeway with interchanges. The growth in the area and potential environmental and social impacts make widening the current corridors or creating a new corridor challenging. TransPlan50 proposes a freeway through this area. Further study is needed with extensive work with the stakeholders and citizens in the area.

US-6 FREEWAY



US-6 through Spanish Fork is proposed to be grade separated in the future. Today there is more traffic entering and exiting I-15 at US-6 at freeway volumes than there is continuing south on I-15 toward Payson. Many alternatives have been studied to by-pass this corridor, but with its direct access to Spanish Fork Canyon and on to Denver, as well as the high residential and commercial growth potential along the corridor, necessitate the planned improvements. Preliminary design work has shown a narrow freeway design with frontage roads to minimize disruption to surrounding businesses.

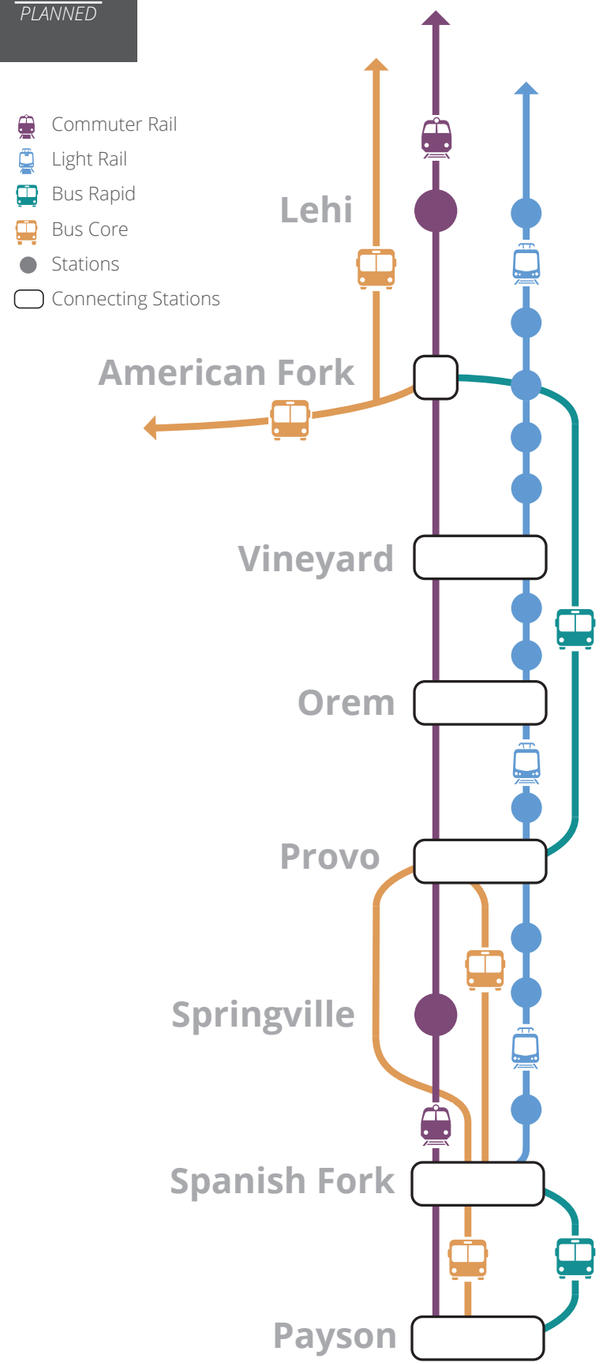
GOAL 3

CREATE A ROBUST
REGIONAL TRANSIT SYSTEM

PLANNED MAJOR TRANSIT SYSTEM | 2050 PLANNED

Currently, transit in Utah County is evolving. The bus system currently serves with both coverage and frequency in the Provo and Orem areas with less service in the north and south county. Low-density residential in the north and south areas and a lack of clustered job centers makes transit less efficient and underutilized. Future growth plans, especially in the north and west areas of the county, should provide for better efficiencies.

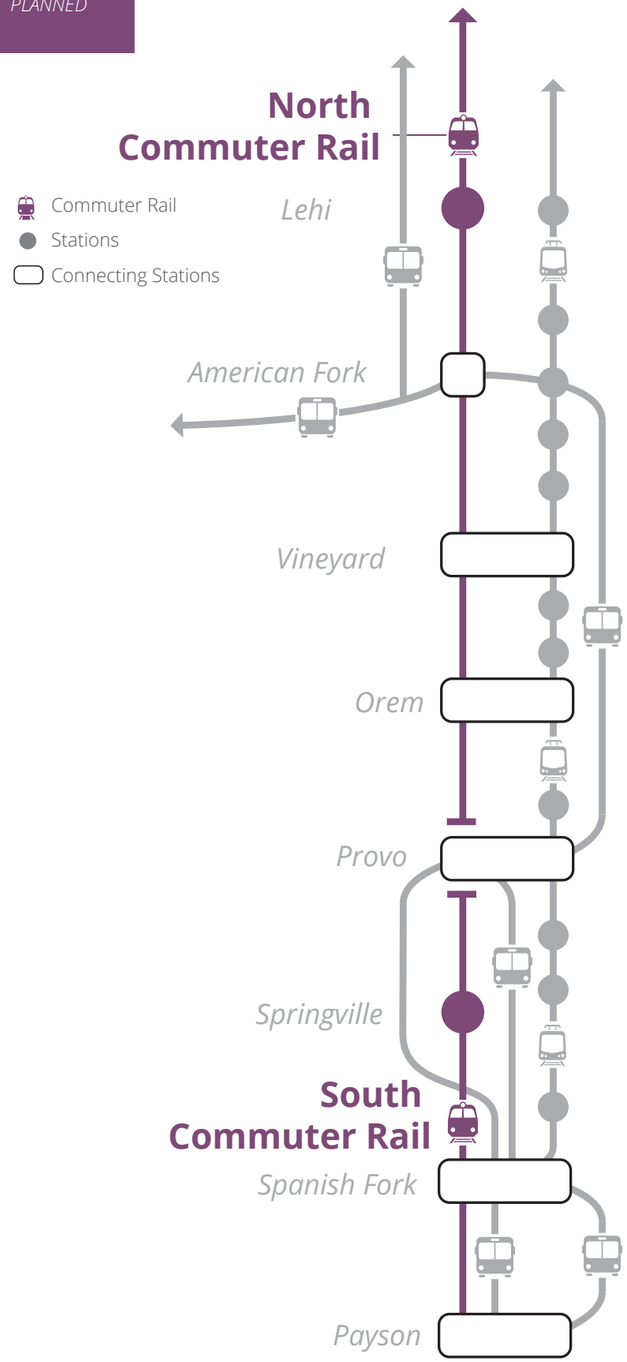
TransPlan50 shows two scenarios for transit: when service is warranted and when, with current funding projections, service can be added. The Utah State Legislature created a new funding account for transit called the Transit Transportation Investment Fund in 2018. This is the first time in Utah history that the state has allocated funding toward transit (all county and federal funding in the past). The only other funding sources include federal funds, local county funds, and fare collection. Even with this additional funding an assuming for federal and county funds to trend upward, funding for major rail expansion into Utah County is lacking. As the county continues to grow and densify, further discussion of how to fund a regional rail system will need to occur.



COMMUTER RAIL SYSTEM | 2050 PLANNED

The FrontRunner Commuter Rail line was constructed initially between Ogden and Salt Lake City and opened for passenger service in 2008. Service between Salt Lake City and Provo later opened in 2012. This 40-mile rail extension has added a secure transit backbone to Utah County. It currently carries over 10,000 riders a day with half hour services most of the day.

TransPlan50 prop oses constructing a double track system (currently most sections are single track) to allow for more frequent service. The plan also proposes an expansion of the system to the south county with stops in Springville, Spanish Fork, and Payson. A new station is proposed in Vineyard and is currently funded and planned to be opened in 2020. Another proposal in the future is electrifying the system and retiring the diesel trains. Electrification is cleaner for the environment, and the trains are faster, improving efficiency.

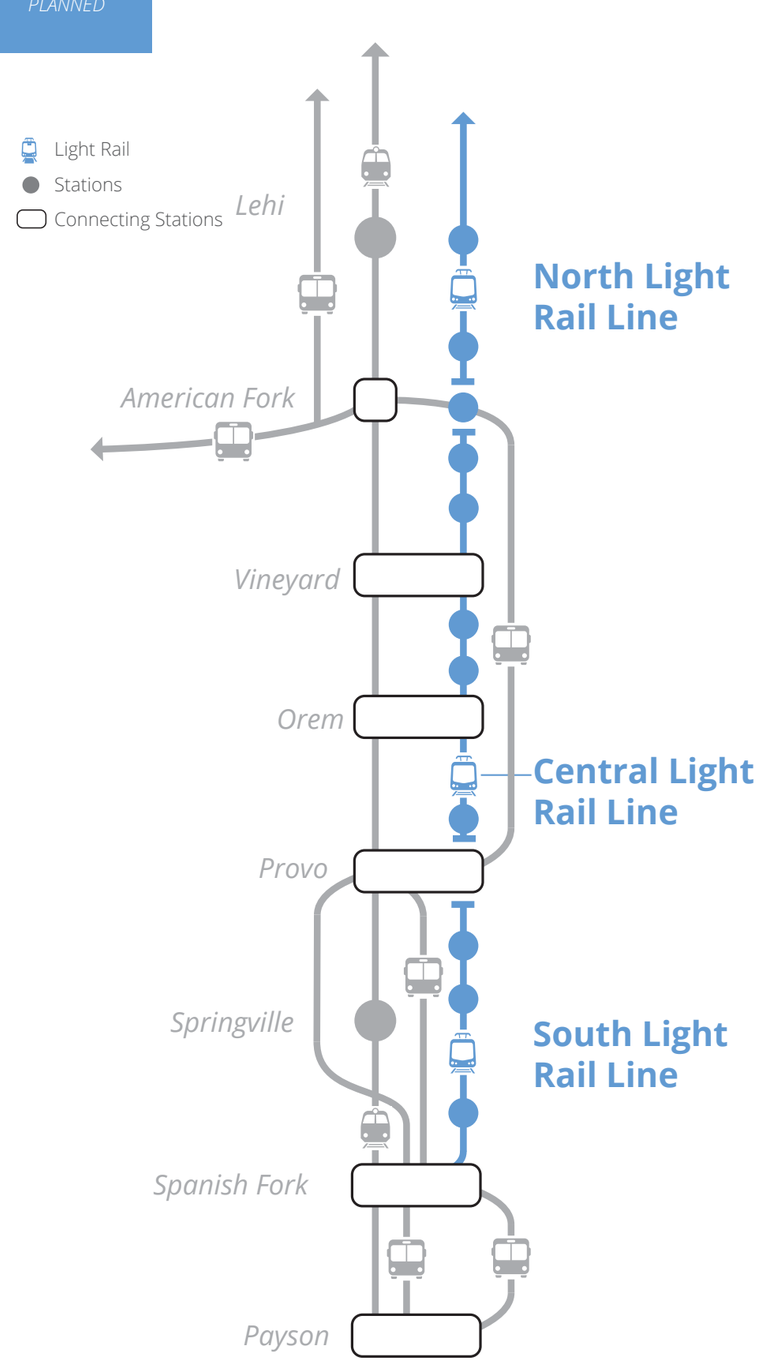


LIGHT RAIL SYSTEM | 2050 PLANNED

The Trax Light Rail System in Salt Lake County is a success, carrying over 100,000 people per day. Rail service can work well for Utah County with its linear development patterns (the narrow-developed area between lake and mountains) and planned denser population and job centers. In most cases, light rail can evolve from a bus-type service converting over to rail in the future.

Of note is the difference between light rail and commuter rail service. Both would parallel each other in Orem, but each service would facilitate different types of trips. Commuter rail is for long-distance trips such as Provo to Salt Lake City. Commuter rail stops every five to seven miles taking longer to stop and start than light rail.

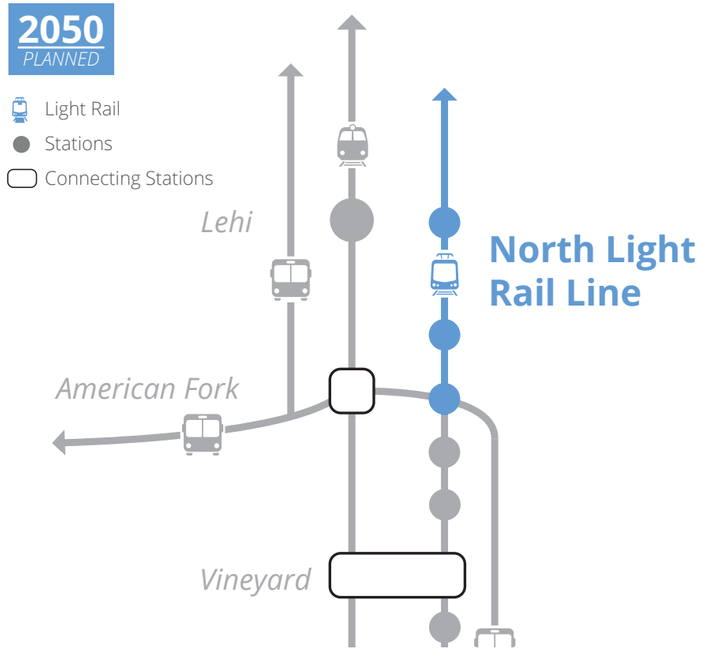
Light rail is for shorter intra-county trips such as Orem to Lehi. It has frequent stops (usually a mile apart) and is quicker at stopping and starting. TransPlan50 proposes three light rail lines.



NORTH LIGHT RAIL LINE - LEHI TO AMERICAN FORK:

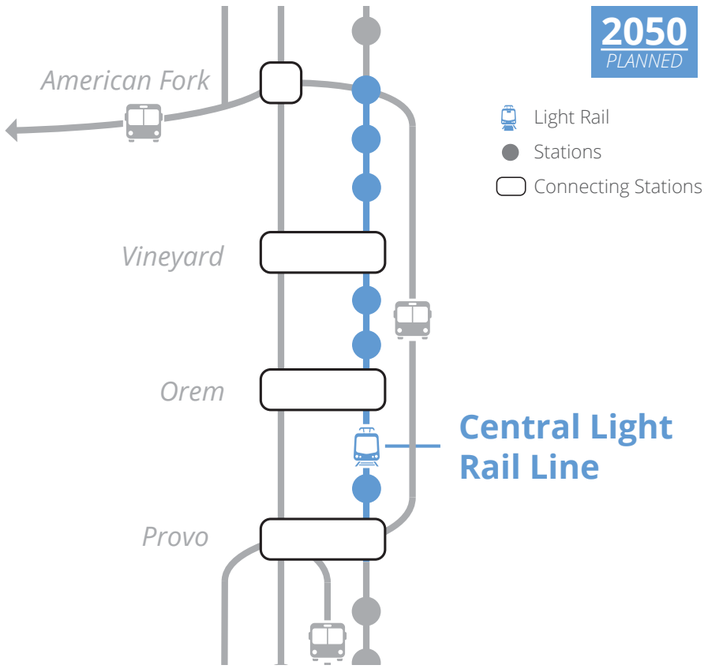
This line uses a mixture of current rail and new rail, connecting the high growth and high use areas of north and west county and Thanksgiving Point into Salt Lake County. This route would be an extension of the current Blue Line that ends in Draper.

There are proposals in Salt Lake County to realign the Draper portion of the Blue Line from the east side of the city to the west closer to I-15, connecting to the future prison site development, and back across the freeway near the county line. Further study will also be done on its alignment through Orem near UVU. This line is warranted within the next ten years. Current funding limitations limit its construction out 20 years, and only from Draper to Lehi.



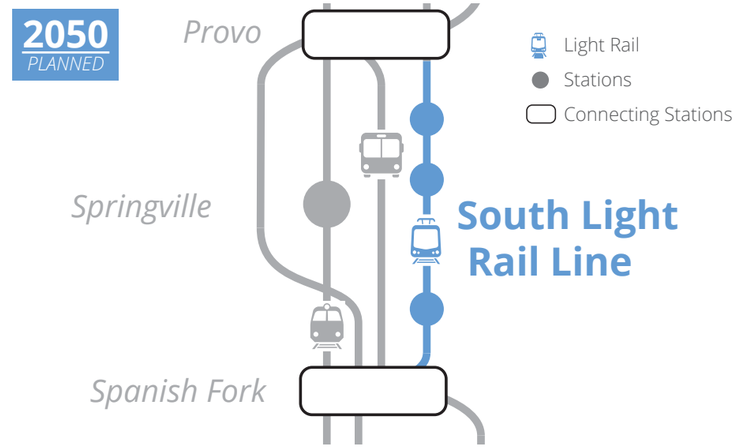
CENTRAL LIGHT RAIL LINE - AMERICAN FORK TO OREM

This line would extend light rail southward to Provo, converting the current Utah Valley Express (UVX) bus rapid transit line into light rail. The only deviation from the current UVX line staying on University Avenue rather than diverting to 900 E. Because BRT buses have lower capacity than a light rail, and future demand requires higher capacity, without light rail as proposed north and south of UVX, there would be a gap in the system. Further study will determine if the Blue Line will extend to Orem or if a break in the line (transfer from the Blue to a new line) will occur. This project is warranted in the next 20 years, although funding beyond today's assumptions would have to be identified.



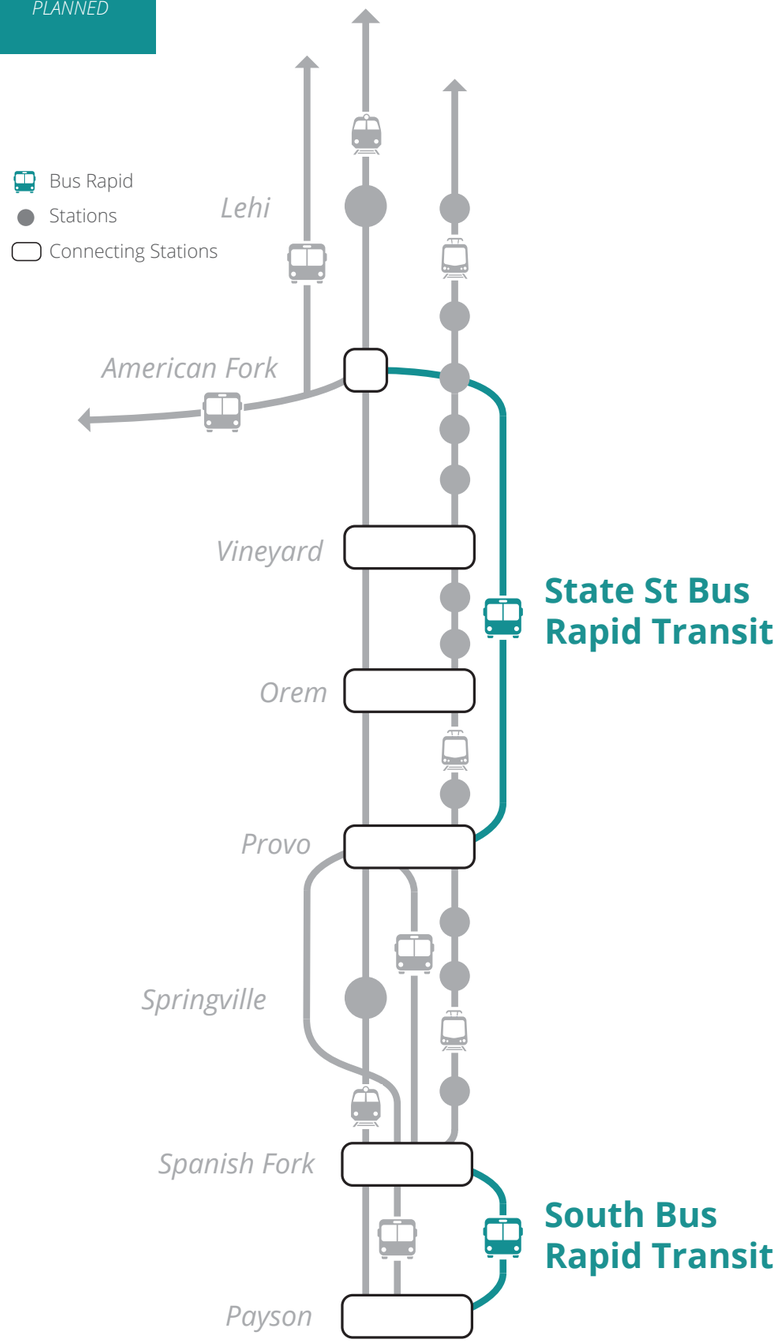
SOUTH LIGHT RAIL LINE - PROVO TO SPANISH FORK:

Nearing the end of the plan, light rail is warranted between Provo and Spanish Fork. A specific alignment is not proposed in the plan and will require further study. Though warranted by 2050, current funding assumptions do not account for constructing this line due to lack of funding.



BUS RAPID TRANSIT SYSTEM | 2050 PLANNED

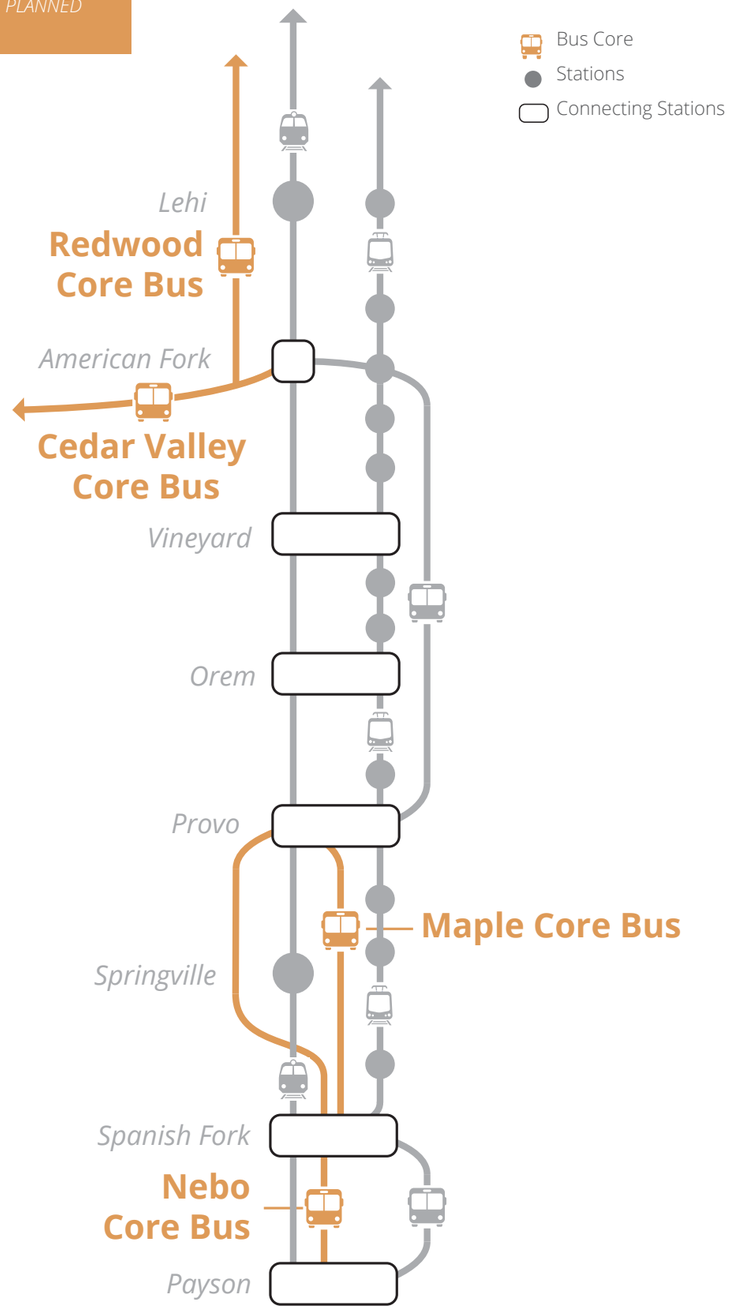
The Utah Valley Express or UVX is a bus rapid transit (BRT) system completed in 2018 connecting the most densely populated areas of Provo and Orem. The system opened successfully with average daily ridership near 10,000 surpassing by three times what the previous bus route did. One year later ridership was at 15,000. The system has dedicated stations, high frequency of service, dedicated bus lanes, and large accordion-style buses with high capacity. Part of this success is having the density of two universities on the line and offering free transit passes to students and faculty. A grant has allowed for the service to be free to all riders for the first three years, with discussions of extending this. Two bus rapid transit lines are proposed within TransPlan50. Most likely, the next corridor to have BRT would be the State Street corridor between Provo and the north county. Other planned service includes a line between Payson and Spanish Fork tying into the proposed South Light Rail Line between Orem and Spanish Fork. Most of the light rail lines proposed in the plan could potentially start off as BRT.



CORE BUS ROUTES SYSTEM | 2050 PLANNED

Core bus routes act similarly to bus rapid transit in frequency but generally share lanes with vehicle traffic and do not have dedicated stations. Routes are planned between Eagle Mountain and American Fork (Cedar Valley CB), Saratoga Springs into Salt Lake County (Redwood CB), Spanish Fork to Provo (Maple CB), and Payson to Provo (Nebo CB).

These types of routes could be the precursor to bus rapid transit or light rail service.



GOAL 4

BUILD A REGIONALLY CONNECTED ACTIVE TRANSPORTATION SYSTEM

THE ACTIVE TRANSPORTATION SYSTEM

INTRODUCTION

Utah County has over 200 miles of paved multi-use trails and 50 miles of regional bike facilities. Utah County leaders have placed a high emphasis on Active Transportation. Many regional facilities have been funded and TransPlan50 plans for many more. Because of our leadership, Utah County is well ahead of Salt Lake County in Active Transportation facilities.

ACTIVE TRANSPORTATION TODAY

50
MILES OF REGIONAL BIKE FACILITIES

200
MILES OF PAVED MULTI-USE TRAILS

BUILD A REGIONALLY CONNECTED ACTIVE TRANSPORTATION SYSTEM

Utah County leaders have acknowledged non-motorized transportation as an integral part of improving air quality, reducing congestion, and reducing travel costs. While major highway and transit facility construction consumes the vast majority of transportation dollars, bicycle and pedestrian access are low-cost and low-impact improvements to a truly multi-modal transportation system. Initial construction costs are low, especially where facilities are included in the design and construction of highway projects, typically less than 5% of the roadway project costs. The goal of the ped/bike system is to reduce vehicle trips and mitigate traffic congestion. During 2014, the MPO documented 2.2 million user trips on nine regional urban trails.

As Utah County continues to grow and urbanize, the need and demand for multi-use paths, neighborhood connections, on-street bike lanes, sidewalks, and pedestrian- friendly development increases. Walking and biking are viable alternatives to driving for short trips, typically under two miles. For longer trips, connections to transit are vital.

TransPlan50 identifies a network that connects population and employment centers, based on projected densities through 2050. One tool that planners have to help locate where regional trails are needed is the Active Transportation Latent Demand Model. This model uses population and employment densities, land use, demographic indicators, and proximity to schools, parks, transit and existing facilities to show where higher ped/bike uses are anticipated. Active Transportation projects proposed in TransPlan50 are based mainly on adopted municipal bike/ped plans.

> "THE **GOAL** OF THE PED/BIKE SYSTEM IS TO **REDUCE** VEHICLE TRIPS AND **MITIGATE** TRAFFIC CONGESTION."

ACTIVE TRANSPORTATION and TRANSIT

REGIONAL TRAILS

A The Murdock Canal Trail spans over 20 miles from Lehi to Orem, it is over 15 feet wide, and has only a slight elevation gain. It is wildly popular with between 3000 and 5000 persons using it per day. Other trails that make up our regional backbone include:

B Provo River Parkway Rail

C The College Connector Trail

D Mapleton Lateral Canal Trail

E Spanish Fork River Trail

F Utah Lakeshore Trail

G Historic Southern Rail Trail

H Jordan River Trail

I Pony Express Trail

J Lindon Heritage Trail

K SR-52 Trail

L Provo Westside Connecting Trail

M Hobble Creek Trail

N Highland Canal Trail

These trails constitute, along with multiple standard and buffered bike lanes, the primary backbone for the valley active transportation system totaling over 80 miles. In 2018 the MPO documented 1.6 million user trips on this backbone system. The MPO has funded pedestrian/ bicycle plans for many jurisdictions. These plans help to develop an interconnected network of both on-street and off-road facilities to enhance highway and transit.

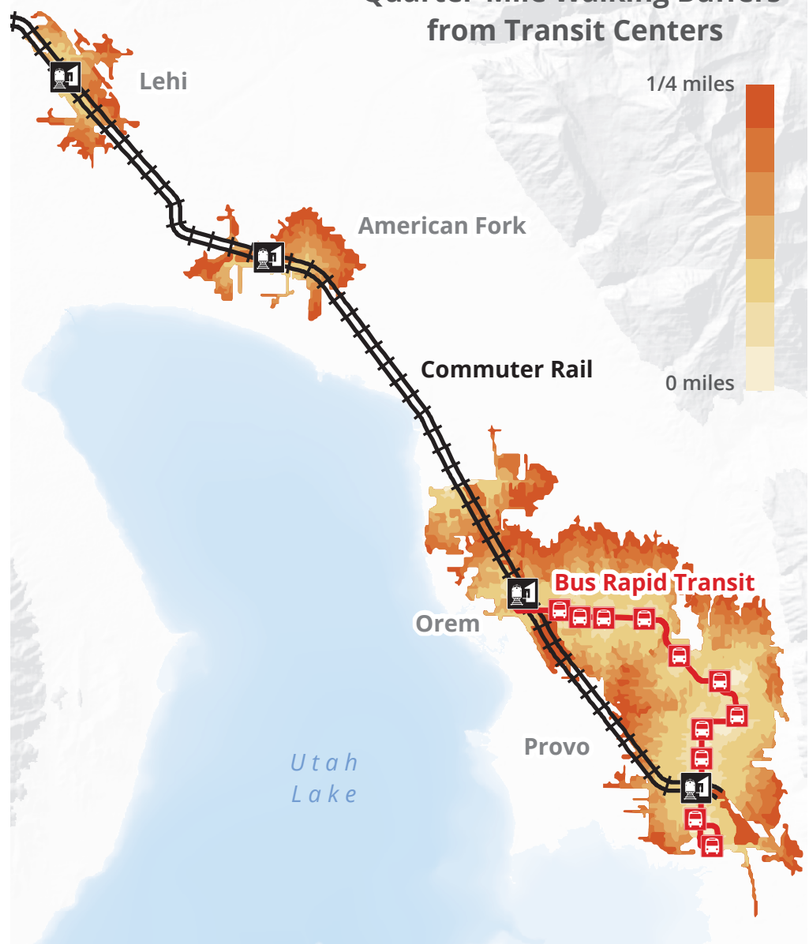
FUTURE ACTIVE TRANSPORTATION

Improvements to the on-street Active Transportation system such as buffered and protected bike lanes are underway and are planned to continue. These attract a wider audience of commuter and casual riders as users feel more protected and comfortable.

Active Transportation and Transit complement and reinforce each other. Safe and inviting bicycle and pedestrian facilities that connect directly to transit increases the geographic range of biking and walking from local, under 1-mile trips, out to the reach of the transit system. Commuting without a car from home in Provo to work in downtown Salt Lake City becomes convenient and doable.

Staff conducted a network analysis of all the stations for FrontRunner and for UVX to understand where connections and gaps between AT facilities and fixed transit centers existed. Filling those gaps has become a significant component of TransPlan50 project selection.

Also, developing technologies and businesses centered on 'Micro-Mobility' such as shared electric scooters and bicycles may significantly increase the market for active transportation, especially when paired with transit. It is vital that both systems design for flexibility in accommodating these and other not yet understood opportunities.



GOAL 5

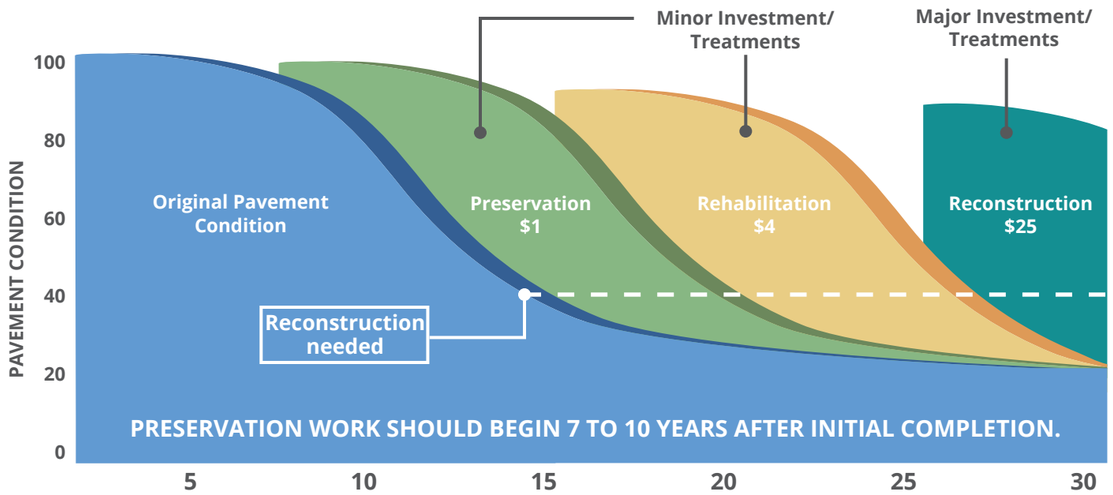
PRESERVE WHAT WE HAVE

HIGHWAY PRESERVATION

GOOD ROADS COST LESS

UDOT manages and preserves over 16,000 highway lane miles across the state, from multi-lane urban interstates to rural two-lane roads. State roads comprise most of the major highways and carry about 75 percent of all traffic. UDOT's philosophy, "Good Roads Cost Less," means that lower cost preservation and rehabilitation projects in the near-term delay more costly reconstruction. However, there is a deficit statewide in preservation funding. It is estimated that UDOT will have the adequate funding needed to preserve roads within Utah County, but will require an additional $93 million annually for statewide preservation needs. The local jurisdictions of Utah County require $6 million more annually to keep up on preservation needs, whereas the state needs $112 million more annually.

EXTENDING PAVEMENT LIFE



HIGHWAY SYSTEM PRESERVATION

By the year 2050, the grid network of highways, transit, pedestrian, and bikeways will evolve into an urban transportation network. Proper maintenance and preservation can maximize the useful life and effectiveness of the transportation infrastructure. Employing travel demand techniques like ridesharing, telecommuting, and active transportation limits wear and tear by reducing the number of vehicles using the system.

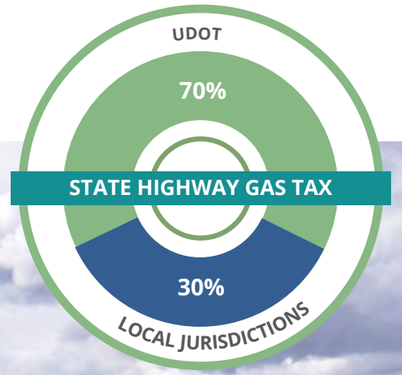
Upkeep of highway pavement provides public infrastructure that is efficient and long-lasting. One of the best ways to accomplish this is through a Pavement Management program. Maintaining pavement on an extensive regional highway system involves complex decisions about when to schedule resurfacing projects or when to apply other treatments to keep the highway performing. UDOT and most local jurisdictions employ many techniques to maintain their roadways in good condition, and such efforts represent one of the most substantial investments the transportation system.

LOCAL ROAD PRESERVATION

Preservation needs for local roads are harder to predict due to varying local needs, priorities, and many of the smaller localities not having the staff or means to collect data. The Utah Foundation surveyed Utah's cities and counties to gain a better understanding of local roads and what these entities would like to see in their transportation network in the future. Many respondents expressed a desire to increase funding to achieve better maintenance and build additional features for pedestrian and bike users. Of the survey findings, common threads emerged regarding local roads and their contribution to the quality of life. Adequate road capacity to handle traffic demands in urban areas was cited as a critical component of economic development, while better maintenance was a top reason for cost savings among all survey respondents.

Today 30% of the state gas tax goes to cities and counties for road maintenance. It is estimated that this tax covers only a third of local maintenance needs. This means the remaining funds must be made up through city general funds or other means, or that projects are delayed.

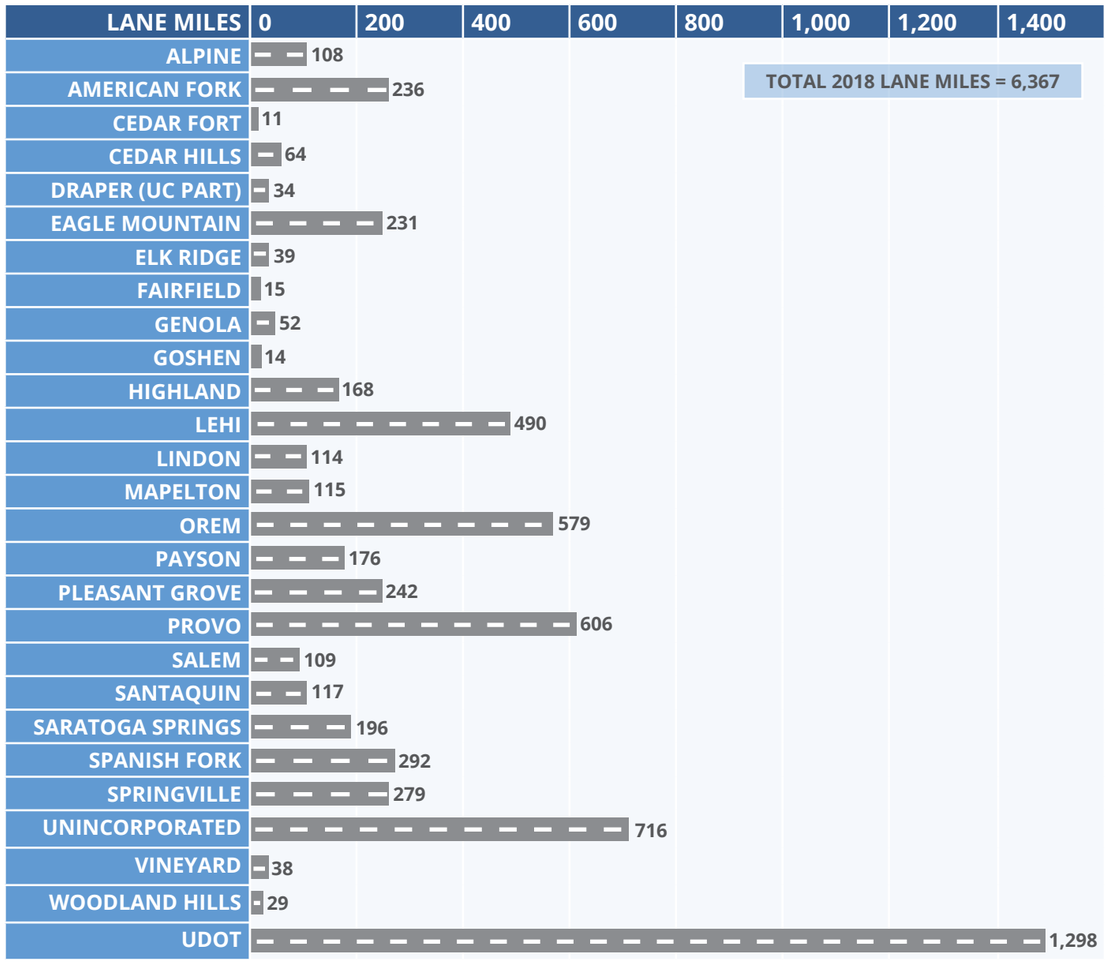
Over 75 percent of Utah roads are under local jurisdiction, and nearly 25 percent of vehicle miles traveled are on local roads, connecting Utahns with their communities, the region, and the interstate highway system. Local connections provide a framework on which cities and counties grow – with roadways being one of the longest lasting pieces of infrastructure that a community will build.



AREA HIGHWAY NETWORK

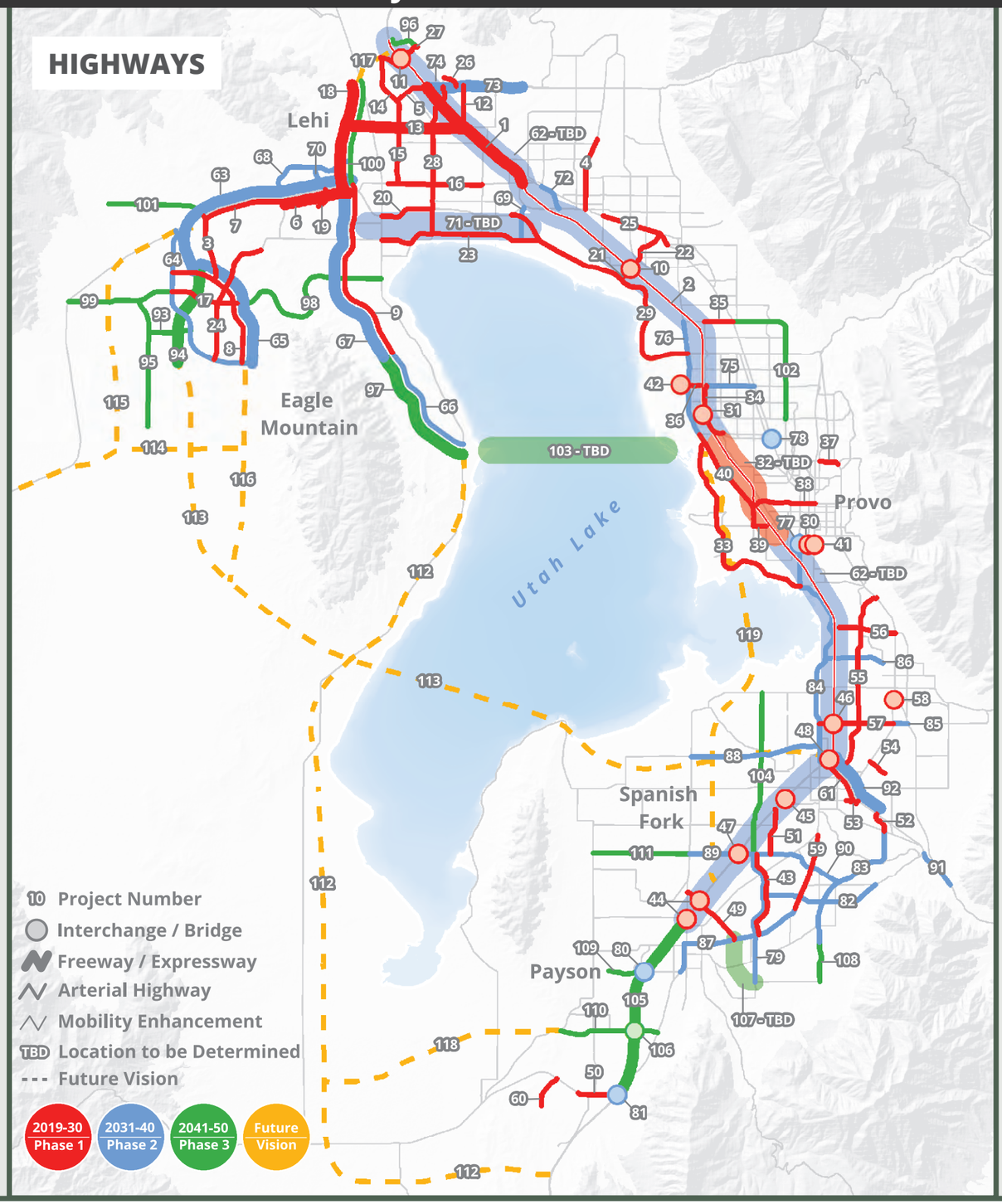
There are over 6,000 miles of roads in Utah County. Different routes serve different functions. Most travelers start a trip on a local street and work up to a collector road, to an arterial highway, on to a freeway. Local roads serve access to property and are usually the slower, less used roads. Freeways and arterials have limited access, which helps preserve higher speeds and traffic flow. Municipalities start with a grid network of local roads; the county and state highways create regional connections. The new projects in the last five years have begun the transformation of the regional transportation system from a rural to an urban network. There is still much to do, especially in the far north and south as they develop. Moreover, it all ties into the I-15 Freeway, like tributaries flowing into a large river. Forecasted population growth will place enormous demands on the transportation system.

2015 LANE MILES BY ROAD OWNERSHIP



BUILDING THE TRANSPORTATION NETWORK

HIGHWAYS MAP and PROJECT LIST



HIGHWAYS

2019-30 Phase 1

	Project	Description	Cost
COUNTY-WIDE PROJECTS			
1	I-15 Freeway	Timpanogos HWY to Lehi Main ST Reconstruction and Widen	$415 M
2	I-15 Freeway	US-6 to Salt Lake County Operational Improvements	$84M
NORTH PROJECTS			
3	Airport RD	Cory Wride HWY to East Expressway New 5 lane road	$15.3M
4	American Fork 100 E/Alpine	HWY State ST to Canal BLVD, Highland Widen to 5 lanes	$15.2M
5	Clubhouse DR	I-15 to Lehi 3600 W New and widen to 5 lanes	$29.6M
6	Cory Wride FWY	Mountain View Corridor to Ranches PKWY New freeway, frontage roads	$400M
7	Cory Wride HWY	Ranches PKWY to Airport RD Widen to 5 lanes	$6.4M
8	East Expressway	Eagle Mountain BLVD to Eagle Mountain BLVD New 3 lane road	$26.6M
9	Foothill BLVD	Cory Wride FWY to Stillwater DR New 3 lane road	$46M
10	I-15/PG BLVD Interchange	Interchange improvements	$85M
11	I-15/Traverse Mtn BLVD Interchange	New Interchange-Frontage Roads	$146.9M
12	Lehi 1200 W	I-15 to Timpanogos HWY Widen to 5 lanes	$6.6M
13	Lehi 2100 N FWY SR-194	Mountain View Corridor to I-15 New freetway	$311M
14	Lehi 3600 W/Point of the Mountain Connector	Lehi 2600 N to Salt Lake County New 5 lane road	$32.8M
15	Lehi 3600 West	Lehi Main ST to Clubhouse DR New and widen to 5 lanes	$16M
16	Lehi Main ST	Commerce DR to Lehi 500 W Widen to 5 lanes	$30.5M
17	Mid Valley RD	Eagle Mountain BLVD to East Expressway New 3 lane road	$4.4M
18	Mountain View FWY	Cory Wride HWY to Porter Rockwell PKWY New freeway	$250.9M
19	Mt. Saratoga BLVD	Talus Ridge RD to Cory Wride FWY New 3 lane road	$2.6M
20	Pioneer Crossing	Redwood RD to Lehi 2300 W Widen to 6 lanes	$5.9M
21	Pleasant Grove BLVD	Vineyard Connector to I-15 Widen to 5 lanes	$8.6M
22	Pleasant Grove BLVD	North County BLVD to State ST Widen to 5 lanes	$2.3M
23	Pony Express PKWY	Redwood RD to Vineyard Connector New and widen to 5 lanes	$107.5M
24	Pony Express PKWY	Sandpiper RD to Eagle Mountain BLVD Widen to 5 lanes	$10.1M

2019-30 Phase 1 HIGHWAYS

	Project	Description	Cost
25	State ST	American Fork 500 W to Pleasant Grove 200 S Widen to 7 lanes	$19.8M
26	Traverse Mtn BLVD	Timpanogos HWY to Triumph BLVD New 3 lane road	$4M
27	Traverse Mtn BLVD	West Point Connector to East Point Connector New 5 lane road	$19.8M
28	Triumph BLVD/Lehi 2300 W	Timpanogos HWY to Lehi 1900 S New and widen to 5 lanes	$24.3M
29	Vineyard Connector	Geneva RD to Pioneer Crossing New and widen to 5 lanes	$83M
CENTRAL PROJECTS			
30	Freedom BLVD	Provo 600 S RR Crossing New bridge	$22M
31	I-15/Orem 800 S Interchange	New Interchange	$130M
32	I-15 Improvements	Improvements to Freeway (location TBD)	$130M
33	Lakeview PKWY/Geneva RD	Provo 500 W to University PKWY New and widen to 5 lanes	$42M
34	Orem 1200 W	Sandhill RD to Orem Center ST Widen to 5 lanes	$8.9M
35	Orem 1600 N	Orem 1200 W to State ST Widen to 5 lanes	$20.5M
36	Orem Center ST	I-15 to Geneva RD Widen to 5 lanes	$6.4M
37	Provo 2230 N	Provo Canyon RD to Stadium AVE Widen to 5 lanes	$6M
38	Provo 820 N	Geneva RD to University AVE Widen to 5 lanes	$47.8M
39	Provo Center ST	Geneva RD to Provo 1600 W Widen to 5 lanes	$8.5M
40	Provo Geneva RD	Provo Center ST to Lakeview PKWY Widen to 5 lanes	$71.2M
41	University AVE/Provo 600 S	Repla ce UPRR Bridge	$27.5M
42	Vineyard Center ST RR Bridge	Vineyard Mill RD to Vineyard RD New bridge	$8M
SOUTH PROJECTS			
43	Elk Ridge DR	UC 8000 S to SR-198 New 3 lane road	$12.3M
44	I-15/Payson Main ST/Nebo	Belt RD Interchange New interchange	$96M
45	I-15/Spanish Fork Center ST Interchange	New interchange	$60M
46	I-15/Springville 1600 S Interchange	New interchange	$50M
47	I-15/UC 8000 S Interchange	Reconstruction	$40M
48	I-15/US-6 Interchange	Interchange improvements	$18M
49	Nebo Belt RD	Payson Main ST to SR-198 New 5 lane road	$62.5M

2019-30 Phase 1 HIGHWAYS

	Project	Description	Cost
50	Santaquin Main ST US-6	I-15 to Santaquin 500 W Widen to 5 lanes	$9.9M
51	Spanish Fork 1550 W	UC 8000 S to I-15 New and widen to 3 lanes	$18.7M
52	Spanish Fork 2000 E	US-6 to Canyon RD SR-198 New 5 lane road	$7.1M
53	Spanish Fork Center ST	Spanish Fork 900 E to US-6 Widen Fork 5 lanes	$4.1M
54	Spanish Fork PKWY	Mapleton Slant RD to SR-51 New 3 lane road	$0.9M
55	Springville 1200 W/Canyon Creek PKWY	Market Place DR to US-89 New 5 lane road	$81.7M
56	Springville 1400 N SR-75	I-15 to Springville Main ST US-89 Widen to 5 lanes	$49.3M
57	Springville 1600 S/Spanish Fork 2700 N	Spanish Fork Main ST to SR-51 Widen to 5 lanes	$42.9M
58	Springville Main ST/US-89	Interchange Reconstruction	$18M
59	SR-198	Arrowhead Trail to Salem 400 N Widen to 5 lanes	$17.8M
60	Summit Ridge PKWY	US-6 to Stone Hollow DR New 3 lane road	$6.1M
61	US-6	I-15 to Spanish Fork Center ST Widen to 7 lanes	$5.5M

2031-40 Phase 2

	Project	Description	Cost
COUNTY-WIDE PROJECTS			
62	I-15 Freeway	Timpanogos HWY to Lehi Main ST Reconstruction and Widen	$415 M
NORTH PROJECTS			
63	Cory Wride FWY	Ranches PKWY to East Expressway New freeway	$86.4M
64	Eagle Mountain BLVD	SR-73 to East Expressway Widen to 5 lanes	$11.6M
65	East Expressway	Cedar Valley FWY to Eagle Mountain BLVD Widen to 5 lanes	$9.8M
66	Foothill BLVD	Stillwater DR to Redwood RD New 4 lane road	$48.5M
67	Foothill FWY	Cory Wride FWY to Stillwater DR New freeway	$240.4M
68	Harvest Hills BLVD	Sunflower WAY to Spring Run DR New 3 lane road	$7.2M
69	Mill Pond RD	Pioneer Crossing to Pony Express PKWY New and widen to 3 lanes	$3M
70	Mt. Saratoga BLVD	Cory Wride FWY to Harvest Hills BLVD New 3 lane road	$2.2M

2031-40 Phase 2 HIGHWAYS

	Project	Description	Cost
71	North Lakeshore FWY	Foothill FWY to I-15 New freeway (location TBD)	$540.6M
72	State ST	American Fork Main ST to American Fork 900 W Widen to 6 lanes	$3.5M
73	Timpanogos HWY Express Lanes	Triumph BLVD to Lehi 1200 E Widen to 4 lanes	$32.6M
74	Timpanogos HWY Express Lanes	I-15 to Triumph BLVD New connection to I-15	$35.4M
CENTRAL PROJECTS			
75	Orem Center ST	Orem 1200 W to State ST Widen to 7 lanes	$10.8M
76	Orem Geneva RD	Orem 1600 N to University PKWY Widen to 7 Lanes	$14.7M
77	Provo 500 W	Provo 600 S RR Crossing New bridge	$22M
78	State ST/University PKWY Bridge	New bridge	$46.4M
SOUTH PROJECTS			
79	Elk Ridge DR	UC 11200 S to UC 8000 S Widen to 5 lanes	$8.6M
80	I-15/Payson 800 S Interchange	Reconstruction	$40M
81	I-15/Santaquin Main ST	Interchange Reconstruction	$40M
82	Salem 760 N	Elk Ridge DR to Powerhouse RD New and widen to 3 lanes	$9M
83	Spanish Fork 2300 E/Nebo Belt RD	Spanish Fork 2550 E to Salem 600 S New 5 lane road	$37.9M
84	Spanish Fork Main ST/Provo 500 W	Spanish Fork 1400 N to Provo 300 S New and widen to 5 lanes	$56.7M
85	Springville 1600 S	SR-51 to US-89 New 5 lane road	$39.8M
86	Springville 500 N	Springville 2250 W to Springville 400 W New and widen to 3 lanes	$25.5M
87	SR-198	Salem 400 N to Payson 800 S Widen to 5 lanes	$19M
88	UC 5600 S/Spanish Fork 1900 N	UC 3200 W to Spanish Fork Main ST New and widen to 3 lanes	$20.2M
89	UC 8000 S	I-15 to UC 3200 W Widen to 5 lanes	$7.5M
90	UC 8000 S/Woodland Hills DR	I-15 to Nebo Belt RD New and widen to 5 lanes	$21M
91	US-6	Powerhouse RD up canyon Widen to 5 lanes	$16.9M
92	US-6 FWY	I-15 to Spanish Fork 2300 E Convert to freeway	$93.6M

2041-50 Phase 3 HIGHWAYS

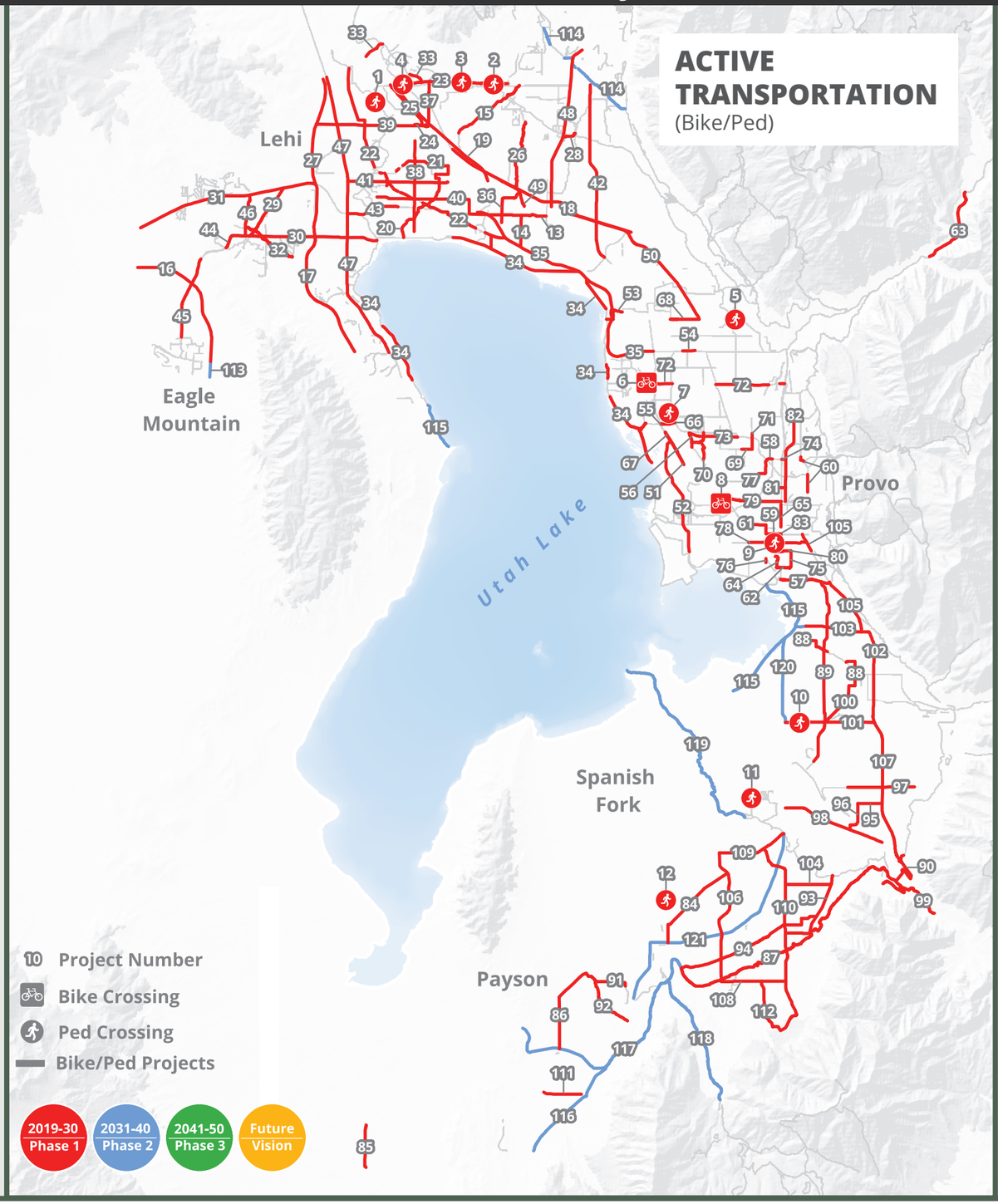
	Project	Description	Cost
NORTH PROJECTS			
93	Aviator AVE	Eagle Mountain BLVD to Cedar Fort RD New 3 lane road	$5.1M
94	Cedar Valley FWY	East Expressway to UC 4000 N New freeway	$103.2M
95	Central Valley RD	UC 2400 N to Mid Valley RD New 3 lane road	$10.6M
96	Draper Gravel Pit RD	Traverse Mtn BLVD to Salt Lake County New 5 lane road	$4.4M
97	Foothill FWY	Stillwater DR to Redwood RD Convert to freeway	$175.3M
98	Hidden Valley RD	East Expressway to Redwood RD New 5 lane road	$34.8M
99	Mid Valley RD	Eagle Mountain BLVD to Cedar Fort RD New 3 lane road	$6.8M
100	Mountain View FWY	Cory Wride HWY to Porter Rockwell Pkwy Widen to 8 Lanes	$74.4M
101	UC 8000 N	Cedar Fort RD to UC 17200 W New 3 lane road	$19.5M
CENTRAL PROJECTS			
102	Orem 800 E/Orem 1600 N	Orem State ST to Orem 800 S Widen to 5 lanes	$42.9M
103	Utah Lake Bridge	Redwood RD to I-15 New freeway bridge (location TBD)	$844.6M
SOUTH PROJECTS			
104	Elk Ridge DR/UC 1450 W	UC 8000 S to UC 4000 S New 3 lane road	$50.5M
105	I-15 Freeway	Payson Main ST to Santaquin Main ST Widen to 6 lanes	$111.2M
106	I-15/UC 12400 S Interchange	New Interchange	$40M
107	Nebo Belt RD	SR-198 to Elk Ridge DR New 3 lane road (location TBD)	$10.9M
108	Nebo Belt RD	Salem 600 S to Woodland Hills DR New 3 lane road	$8.6M
109	Payson 800 S	Payson 1700 W to UC 5200 W New 3 lane road	$24.4M
110	UC 12400 S	SR-198 to Mountain RD New and widen to 5 lanes	$29.6M
111	UC 8000 S	UC 3200 W to UC 5600 W New 3 lane road	$26.5M

HIGHWAYS

Future Vision

	Project	Description
COUNTY-WIDE PROJECTS		
112	Saratoga Springs to Santaquin	Proposed Freeway
113	US-6 to Cedar Valley	Proposed Freeway
NORTH PROJECTS		
114	Cedar Valley to Tooele County	Proposed Highway
115	Cedar Valley West Expressway	Proposed Expressway
116	East Expressway	Proposed Expressway
117	Point of the Mountain Connector	Proposed Freeway
SOUTH PROJECTS		
118	Santaquin to Elberta	Proposed Freeway
119	South Wasatch Corridor	Proposed Provo Bay crossing between Provo and Payson

ACTIVE TRANSPORTATION MAP and PROJECT LIST



2019-30 Phase 1 ACTIVE TRANSPORTATION (Bike/Ped)

	Project Name	Cost
COUNTY-WIDE PROJECTS		
Bike/Ped Crossing		
1	Jordan River Trail - Pedestrian Bridge Crossing	$640,080
2	Lehi SR-92 / 1200 E - Pedestrian Crossing	no planned cost
3	Lehi SR-92 / Center St - Pedestrian Crossing	$8M
4	SR-92 Pedestrian Bridge Crossing	$5.3M
5	Orem 1600 N / 400 E Roundabout & Pedestrian Crossing	$1.35M
6	Vineyard Center ST RR Bridge - Add Bike Lanes	$650,000
7	I-15/Orem 800 S - Add Multi-Use Path & Grade-Separated Crossing	*
8	I-15/Provo Bike/Ped Crossing - Add Buffered Bike Lanes	*
9	Freedom BLVD - Possible Bike/Ped Improvements	*
10	I-15/Springville 1600 S Interchange - Add Grade-Separated Crossing	*
11	I-15/Sp Fork Center ST Interchange - Add Grade-Separated Crossing	*
12	I-15/Payson Main ST/Nebo RD Interchange - Add Grade-Separated Crossing	*
NORTH PROJECTS		
Multiuse Pathways		
13	American Fork 200 S - Trail	$4.5M
14	American Fork 570 W - Trail	$985,000
15	Dry Creek Trail - Lehi to Highland	$2.6M
16	East Expressway Trail	*
17	Foothill Blvd Trail	*
18	Historic Utah Southern RR Trail - Lehi to PG	$6.5M
19	I-15; Improvements at crossing & New Trail	*
20	Lehi - Dry Creek South Trail	$3.5M
21	Lehi - Waste Ditch Trail	$1.7M
22	Lehi / American Fork - Power Line Trail	$7.4M
23	Lehi / Highland - SR-92 Trail	$3.1M
24	Lehi 2100 N / SR-194 - Trail	*
25	Lehi I-15 Frontage Road - Trail	*
26	Mitchell Hollow Trail	$2.4M
27	Mountain View Corridor - Trail & Buffered Bike Lanes	*
28	Murdock Connector Trail - American Fork	$637,000
29	Ranches Corridor Trail - Eagle Mountain	$1.85M
30	South Pony Express Pkwy Trail - Eagle Mtn / SSprings	$3.725M
31	SR-73 - Trail	*

* Project cost is associated with planned road project

2019-30 Phase 1 ACTIVE TRANSPORTATION (Bike/Ped)

	Project Name	Cost
32	Tickville Trail - Eagle Mountain	$2.130M
33	Traverse Mtn Blvd Trail	$1.2M
34	Utah Lakeshore Trail	$6.68M
35	Vineyard Connector - Trail & Buffered Bike Lanes	*
Bike Facilities		
36	American Fork Meadows - Buffered Bike Lanes	$206,550
37	Lehi 1200 W - Bike Lanes	*
38	Lehi 1700 W - Cycle Track	$1.5M
39	Lehi 2100 N / SR-194 - Keep existing Bike/Ped Facilities	*
40	Lehi 700 S - Cycle Track Connecting to 200 S American Fork	$2.06M
41	Lehi Main St - Buffered Bike Lanes	*
42	North County Blvd - Buffered Bike Lanes - Associated with Planned Highway Resurfacing Project	
43	Pioneer Crossing - Coordinate alternative Bike/Ped improvements with Saratoga Spgs & Lehi	$1.7M
44	Pony Express Pkwy - Bike Lanes / Cycle Trackt	$656,304
45	Pony Express Pkwy - Buffered Bike Lanes	$382,500
46	Ranches Pkwy - Bike Lanes / Cycle Track	$696,960
47	SR-68 / Redwood Road - Buffered Bike Lanes - Associated with Planned Highway Resurfacing Project	
48	SR-74 - Buffered Bike Lanes	*
49	State St / US-89; Lehi Buffered Bike Lanes	*
50	US-89 / State St - Buffered Bike Lanes - Associated with Planned Highway Resurfacing Project	
CENTRAL PROJECTS		
Multiuse Pathways		
51	Geneva Rd / SR-114 - Trail	$890,000
52	Lakeview Pkwy Trail	*
53	Lindon Heritage Trail	$440,000
54	Orem 800 N Trail	$395,865
55	Orem FrontRunner Station Trail - Geneva Rd to UVU Ped Bridge	$280,000
56	Orem Sandhill Rd - Trail	$410,000
57	Provo 1860 S - Trail	$1.58M
58	Provo 2230 N - Trail	$178,000
59	Provo 500 W / 300 S - Trail	$750,000
60	Provo 900 E - Trail	$770,000
61	Provo Center St - Trail	$560,000
62	Provo East Bay Blvd Trail	$425,000
63	Provo River Pkwy Trail	$2.63M

* Project cost is associated with planned road project

2019-30 Phase 1 ACTIVE TRANSPORTATION (Bike/Ped)

	Project Name	Cost
64	Provo Towne Centre Trail	$420,000
65	Provo University Ave / US-189 - Trail	$705,000
66	UVU Pedestrian Bridge	$30M
Bike Facilities		
67	Geneva Rd / SR-114 - Bike Lanes	*
68	Orem 1600 North - Buffered Bike Lanes	*
69	Orem 1600 S - Bike Lanes	$33,000
70	Orem 400 W / 1430 S - Bike Lanes	$130,000
71	Orem 800 E - Bike Lanes	$50,000
72	Orem Center St - Bike Lanes	$236,000
73	Orem University Pkwy - Bike Lanes	$154,000
74	Provo 2230 N - Bike Lanes	$14,000
75	Provo 350 E - Bike Lanes	$55,000
76	Provo 500 W - Bike Lanes	$12,700
77	Provo 550 W - Bike Lanes	$84,000
78	Provo 600 S - Bike Lanes and Trail	$1.98M
79	Provo 820 N - Buffered Bike Lanes	*
80	Provo 900 S - Bike Lanes	$52,000
81	Provo Cougar Blvd - Protected Bike Lanes	*
82	Provo Canyon Rd - Bike Lanes and Trail	$2.9M
83	University Ave / US-189 - Bike Lanes	*
SOUTH PROJECTS		
Multiuse Pathways		
84	Arrowhead Trail Rd	$3.04M
85	Goshen Center St - Trail	$1.34M
86	Goshen Valley Rail Trail	$2.75M
87	Highline Canal Trail	$9M
88	Hobble Creek Trail - Springville	$1.9M
89	InterCity Connector Trail	$5.86M
90	Mapleton Lateral Canal Trail - Springville to Sp Fork	$1.46M
91	Payson South Trail	$1.22M
92	Payson Trail	$1.84M
93	Salem Trail	$2.73M
94	Salem Canal Rd Trail	$4.8M
95	Spanish Fork / Mapleton Trail	$760,000
96	Spanish Fork 2550 E Trail	$1M

* Project cost is associated with planned road project

2019-30 Phase 1 ACTIVE TRANSPORTATION (Bike/Ped)

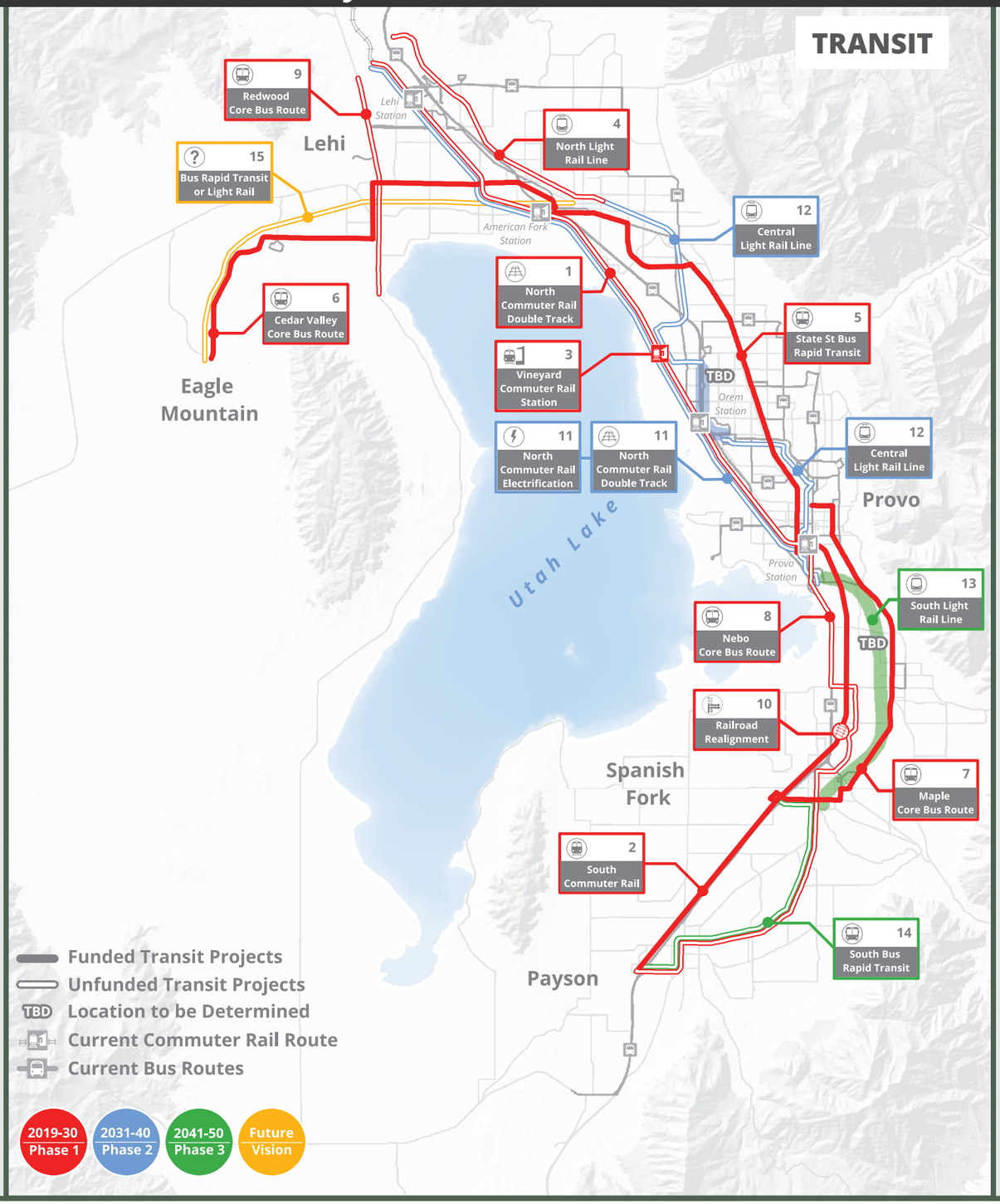
	Project Name	Cost
97	Spanish Fork 400 N Trail	$2.08M
98	Spanish Fork Canyon Rd - Trail	$3.26M
99	Spanish Fork Canyon Trail	$2.6M
100	Springville - Tintic Rails Trail	$1.65M
101	Springville 1600 S / Sp Fork 2700 N - Trail	*
102	Springville 400 E Trail	$3.1M
103	SR-75 - Trail & Bridge	*
104	UC 8800 S Trail	$1.43M
105	US-89 / State St - Trail	$2.48M
Bike Facilities		
106	Elk Ridge Dr; Salem - Buffered Bike Lanes	
107	Mapleton US-89 / 1600 W - Buffered Bike Lane	$688,500
108	Salem Loop; 11200 S - Bike Lanes	$200,000
109	Salem Loop; SR-164 - Bike Lanes	$220,000
110	Salem Loop; Woodland Hills Dr - Bike Lanes	$453,000
111	Santaquin Main St / US-6 - Extend existing Bike/Ped Facility	*
112	Woodland Hills Trail	$3.75M

2031-40 Phase 2

	Project Name	Cost
NORTH PROJECTS		
Multiuse Pathways		
113	City Center Corridor Trail - Eagle Mountain	$495,000
114	Powerline Trail	$3.2M
CENTRAL PROJECTS		
Multiuse Pathways		
115	Utah Lakeshore Trail	$6.7M
SOUTH PROJECTS		
Multiuse Pathways		
116	Highland Dr Trail - Santaquin	$3.55M
117	Highline Canal Trail	$9M
118	Payson Canyon Trail - Highline Canal to Four Bay	$4.35M
119	Spanish Fork River Trail - Spanish Fork	$7.23M
120	Springville 2600 W Trail	$2.7M
121	SR-198 Connector Trail	$8.1M

* Project cost is associated with planned road project

TRANSIT MAP and PROJECT LIST



TRANSIT

	Project Name	Phase Needed	Phase Funded	Cost
1	North Commuter Rail Intermittent Double Track	1	2	$113M
2	South Commuter Rail - Payson to Provo	1	1	$252M
3	Vineyard Commuter Rail Station at 800 N	1	1	$16M
4	North Light Rail Line - American Fork to Draper	1	3	$654M
5	State St Bus Rapid Transit - State ST; Provo to Am Fork	1	1	$313M
6	Cedar Valley Core Bus Route - Eagle Mtn to Am Fork	1	1	$31M
7	Maple Core Bus Route - Spanish Fork to Provo	1	1	$39M
8	Nebo Core Bus Route - Payson to Provo	1	2	$69M
9	Redwood Core Bus Route - Saratoga Spgs to SL Co on Redwood RD	1	2	$24M
10	Sharp - Tintic Railroad Realignment	1	1	$7M
11	North Commuter Rail Electrification & Double Track - Provo to SL Co	2	Unfunded	$689M
12	Central Light Rail Line - Provo to American Fork	2	Unfunded	$1.1B
13	South Light Rail Line - Spanish Fork to Provo	3	Unfunded	$834M
14	South Bus Rapid Transit - Payson to Spanish Fork	3	Unfunded	$196M
15	BRT or Light Rail - Eagle Mtn to Am Fork	Vision	Unfunded	

MAG

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Mountainland MPO certifies that transportation planning in the Provo/Orem Transportation Management Area is done in accordance with all applicable Federal requirements including: i) 23USC 134, 49USC 5303 and 23CFR Part 450; ii) Sections 174, 176(c) and 176(d) of the Clean Air Act as amended (42USC 7504, 7506(c), 7506(d)), and 40CFR Part 93; iii) Title VI of the Civil Rights Act as amended (42USC 2000d-1) and 49CFR Part 21; iv) 49USC 5332 regarding discrimination based on race, religion, national origin, gender or age; v) TEA-21 Section 1101(b) and 49CFR Part 26 regarding disadvantaged business enterprises; vi) 23CFR Part 230 regarding equal employment opportunity; vii) The Americans with Disabilities Act of 1990 (42USC 12100 et seq) and 49CFR Parts 27, 37 and 38; viii) The Older Americans Act as amended (42USC 6101); ix) 23USC 324 regarding gender discrimination; and x) The Rehabilitation Act of 1973 (29USC 794) and 49CFR Parts 27 regarding discrimination against persons with disabilities.

The MPO further certifies that transportation planning in the Provo/Orem Transportation Management Area is done in accordance with the requirements of the Mountainland MPO 2050 Regional Transportation Conformity Plan.

The preparation of this report has been financed in part through grant(s) from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this document does not necessarily reflect the official views or policy of the U.S. Department of Transportation.

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